



BITCOIN

SEPARATION OF MONEY
AND STATE

Author: **JOSEF TĚTEK**
Foreword: **STEPHAN LIVERA**

BRAVINS Insights

BITCOIN: SEPARATION OF MONEY AND STATE

Josef Tětek

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Bitcoin: Separation of Money and State

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ABOUT THIS BOOK AND THE AUTHOR

Individual chapters of this book were previously published between May and August 2020 on the website of Alza.cz, a bitcoin-friendly Czech e-commerce store.

Josef Tětek is an economist and author. He has dedicated his career to studying the nature of money. Josef works as a bitcoin analyst at Trezor, the maker of the first hardware wallet. Notably, he also contributes his insights to Bitcoin Magazine and is a regular speaker at bitcoin conferences. Josef is the host of the Stackuj Podcast. Follow him on Twitter where he shares his bitcoin wisdom under the handle @SatsJoseph.

FOREWORD

Money is an incredible tool for enabling human prosperity and advancement, giving rise to massive coordination across the world. But some elements of human social theory are timeless and appear time and time again through history. A continual cycle plays out where people adopt a money because of the benefits it provides, but then as empires decline, currency debasement becomes common. Why do we see economic boom and bust cycles play out over history? With reference to a wide range of books, Josef Tětek shows why in this book.

Learning about Austrian economics helps, because it provides clear and logical answers as to how we got here, with economic and sociological reasoning to explain why. Why is it that the state wants control over the money and banking system? What are the impacts on society and culture?

It is the Austrian economists in particular who acknowledge that money is actually a bottom-up creation of the market, and not solely the creation of top-down states. Private property rights and sound money are important protections against systemic abuse.

As we acknowledge that the society is not the same thing as the state, we can step out of a 'legality equals morality' stance, and instead focus on what protections society should stand for. Separating money and state is surely one of the most important protections for our general well being.

When it comes to bitcoin, Josef offers some interesting ideas on the way adoption will occur. Bitcoin will permeate across economic activities from wage payment, to online shopping, to in person payment systems. But perhaps most relevant for our time, bitcoin brings back a renaissance in savings.

Monetary socialism will not be brought down by lobbying the government for it, but rather a peaceful transition and upgrade from the old to the new. The new money will be adopted by people who over time, simply prefer bitcoin to the alternatives.

In the end, bitcoin is an important answer to the problems that plague us with fiat currency.

Stephan Livera

May 16, 2023

Dubai, UAE

INTRODUCTION

Bitcoin. It's been around for over 14 years now. Most people have heard of it; some own it, but few truly understand its benefits. Many believed the naive view that bitcoin is only a better version of PayPal – a global payment system without regulation. This confusion is partly due to the widespread indication of bitcoin as “cryptocurrency” – currency is something you use to pay for things, for crying out loud! Most of the criticism levied against bitcoin is therefore based on precisely this mistaken understanding: bitcoin is criticized for its low transaction capacity, its price volatility, and its low rate of adoption among merchants. Some of the original supporters of bitcoin even went as far as to establish their own cryptocurrencies, which have a significantly higher transaction capacity (alas, to the surprise of their creators, these cryptocurrencies are used for payments even less than bitcoin).

Bitcoin isn't a cryptocurrency. Bitcoin is money. If we start to look at bitcoin through this lens, everything falls into place. The long-term growth of its value (or rather, purchasing power), the tendency of its users to hold it rather than spend it, and its “boring” monetary policy.

But what's more, bitcoin is non-state money. It is a brazen attempt to establish a new monetary standard without anyone asking the government for permission. Money and the state are seemingly inseparable. At various points throughout history, however, the church, production and trade, education, and the media also seemed equally inseparable in relation to the state. Although it may not seem so in recent years, the state is losing its power over institutions in the long term.

In the future, January 3, 2009, will be cited as the turning point in the monetary history of humanity. The state, described by Frédéric Bastiat as the “great fiction by which everyone tries to live at the expense of everyone else,” is losing its most potent instrument of power. Meanwhile, society is in the process of reclaiming it.

This book is divided into five parts. The first part introduces the Austrian school of economics, which is justifiably popular among bitcoin supporters – it is one of the few schools of economics that does not revere any sacred state cows. Most of the economic treatises on non-state money come from the ranks of proponents of the Austrian school of economics. The second part explains time preference and its relation to the nature of money. The third part introduces the reader to the monetary history of civilization and the age-old tendency of rulers to devalue and redefine money to suit their interests, culminating in the establishment of a global standard of pure fiat money. The fourth part discusses the nature of the state, the separation of various institutions from the state, and the impact of monetary separation. And finally, in the fifth part, we address the question of why only bitcoin has a chance of success, while the thousands of other “cryptocurrencies” do not.

The book’s final section contains recommendations on working with bitcoin and references for further study.

I would like to thank Elkim from Alza.cz for the initial nudge to write the series that became the basis of this book. Many thanks also go out to Kicom for spreading awareness of my writing on his Youtube channel. Finally, I would like to thank my wife Alena for her support and valuable insights, and my daughters for their many motivational bitcoin-themed pictures.

“This is the darkest hour before dawn and we should never underestimate monetary authorities’ ability to deal with the adversity.”

– Gideon Gono

Gideon Gono, the then governor of the Central Bank of Zimbabwe, at a press conference in 2005. At the time, price inflation in Zimbabwe was 400%; over the next three years, it increased to 90 trillion percent.

GLOSSARY OF TERMS

Hodl – a slang term for holding bitcoin for the long term. It came about through an accidental typo, misspelling the word “hold” in a now legendary comment on the BitcoinTalk forum. A hodler, then, is someone who holds onto their bitcoin over the long-term.

Satoshi (sats for short) – the creator of bitcoin was Satoshi Nakamoto. It is after Satoshi that the smallest bitcoin unit is named: 1 bitcoin is 100,000,000 satoshis, and 1 satoshi is 0.00000001 bitcoin.

DCA – Dollar Cost Averaging, or the strategy of regular purchases of bitcoin regardless of the current price.

Stacking sats – the slang synonym for DCA. It means adding more and more miniscule units of bitcoin to your wallet. In contrast to DCA, stacking need not be regular (stacking is good during price drops, that is, *buying the dip*) and may not even involve actual purchases (people can stack by earning bitcoin for their work).

Fiat – money issued by government decree. From the Latin *fiat*=let it be. Most frequently used to refer to paper money not backed by precious metals.

Citadel – *Bitcoin Citadel* originated as a joke in 2013 on Reddit. In a post on this forum, a “traveler from the future” predicted that by 2025, hodlers will be living in closed communities, while the rest of the world's economies will end in ruins. The term was just taken to be a funny meme at first, but in recent years it has come to represent a bitcoin dissent – a gradual turning away from fiat money and societal power structures and instead organizing one’s own life around voluntary action and decision-making with a long-term mindset.

I. THE AUSTRIAN SCHOOL OF ECONOMICS: WHAT DOES IT HAVE TO DO WITH BITCOIN?

Bitcoin advocates often reference the Austrian school. Some of the foremost bitcoin advocates even refer to themselves as “Austrians”. What are the main ideas of the Austrian school, and what does it have to do with bitcoin?

Why Is it Referred to as the “Austrian” School?

The Austrian school of economics paradoxically no longer has anything to do with today's country of Austria. The beginnings of this school of economic thought date back to the latter half of the 19th century, when Carl Menger published his *Principles of Economics*. Menger's book and the ideas contained in it were revolutionary. Literally. They stood at the beginning of the marginal utility revolution. This was no Molotov cocktail-tossing revolution, however, but a fundamental change in how economists analyze human behavior. Earlier economists explained the value of goods and services through the costs it took to produce the goods and services. At the same time, within this cost theory of value, the early economists considered goods as whole classes, not as individual items. However, this approach produced obvious paradoxes: how is it that diamonds are more expensive than water, even though water is much more useful? How is it that a raw gold nugget can buy its lucky finder an entire, painstakingly built house?

Enter Carl Menger, who explains that people value goods not according to their cost of acquisition or production but based on how well those goods satisfy subjective needs. And that people do not value classes of goods but rather the marginal utility of goods. In other words, one does not compare water and diamonds as a whole but instead compares an additional liter of water with an additional carat of diamond. Water as a class is very useful; however, it is not very scarce, and it is quite easy to satisfy thirst under normal

conditions. Diamonds as a class are not as useful compared to water; however, as distinct units, they are very scarce and highly sought after to satisfy the needs of aesthetics, investment, and industrial use.



Austrian economics is what happens when you try to understand the underlying laws of human action and cooperation. Not to be confused with the Australian economy, which is what happens when people try to survive in a huge spider colony.

Other authors of Austrian origin—Eugen von Böhm-Bawerk, Ludwig von Mises, and Friedrich August von Hayek—built on Menger’s ideas. Mises and Hayek subsequently emigrated to the United States and England before WWII, and this school of thought disappeared in Austria but was kept alive elsewhere, especially in the United States (by institutions such as the Mises Institute and at some universities). It also has a strong base in the post-revolutionary Czech Republic.

What is remarkable is that three economists working independently of each other each came up with the marginalist theory of value: Carl Menger, Léon Walras, and William Jevons. It is an excellent example

of so-called convergent evolution, when, with the same inputs, scientists (or natural forces) independently arrive at the same result. The marginalist theory of value subsequently became the basis of modern economics, and the cost theory of value was widely abandoned as invalid.

Methodological Individualism

i The Austrian school is characterized by its strong emphasis on individual action. Individual people, not social institutions, have preferences and strive to fulfill them. “That there are nations, states, and churches, that there is social cooperation under the division of labor, becomes discernible only in the action of certain individuals. Nobody ever perceived a nation without perceiving its members,” states Ludwig von Mises in *Human Action*.

Analysis of all economic phenomena, from consumer decisions to inflation to the economic cycle theory, always begins by exploring the preferences and motivations of individuals (for example, entrepreneurs or central bank officials). True, individuals can be influenced by a mob or an ideology, but in the end, they always remain distinct individuals who put their bodies in motion and let their own thinking guide them. This, as Mises points out, applies even when someone acts in the name of the state: “It is the executioner, not the state, that executes criminals.”

Essence of the Austrian School

The Austrian school of economics can be characterized as a body of knowledge on the nature of human action and the nature of the world in which this action takes place.

Firstly, **human action** is the purposeful behavior of an individual aiming to satisfy a subjective preference. In contrast to animal action, human action is characterized by intent; humans act with a conscious goal in mind, while animals act based on instincts and the straightforward satisfaction of physical or emotional needs.

Let's not, however, confuse action with "rationality." The subjective needs of a certain individual and action to satisfy them may seem "irrational" to others; nevertheless, an irrational action is still purposeful from the viewpoint of an individual.

The acting individual must constantly contend with the **factors of scarcity**. In this world, resources, space, and time are scarce. Economic activity is, in essence, a constant effort to satisfy the most urgent needs while using as few resources and as little space and time as possible.

The market is a system for the mutual coordination of all economic actors (consumers, producers, investors, and traders). One of the incidental consequences of the market is that factors of scarcity are allocated efficiently (satisfying the most urgent needs with the least waste) due to the existence of profits and losses.

Government interventions in the market usually unbalance this coordination mechanism and result in inefficiencies and the waste of factors of scarcity. Government management of the economy—socialism—has a consistent problem in the form of the impossibility of **economic calculation**. This means that without freely arising prices and information in the form of profit and loss, factors of scarcity cannot be efficiently allocated, leading to mere "groping in the dark" (Mises) and the gradual decline of society into poverty, burning through capital accumulated in a more sane period.

The time factor gives rise to a **time preference**. If a person prefers to satisfy needs as quickly as possible, this is a high time preference. If, on the other hand, a person is willing to postpone the satisfaction of needs into the future, we're talking about a low time preference. The concept of time preference is one of the reasons why the natural interest rate is positive – the creditor has to postpone the satisfaction of his needs, and for this he demands compensation from the debtor in the form of interest. In this respect, the recent decade of zero and negative interest rates is completely absurd.

Bitcoiners like to talk about low time preference, often in connection with minimizing consumption in the present, putting the saved funds into bitcoin, and then waiting for future appreciation (with the vision of significantly higher consumption in the future).



The image shows a screenshot of three tweets from a social media platform. The first tweet is from Joseph Stackerman (@SatsJoseph) dated Sep 6, discussing his outlook on life and Bitcoin. The second tweet is from BitcoinSandy (@SandyBitcoin) dated Sep 6, replying to others and stating that Bitcoin with low time preference is the way. The third tweet is from surferjim is more stoked than you- regularly. (@surfe...) dated Sep 5, replying to @ZeroShitCoins and discussing the adoption of Bitcoin.

Joseph Stackerman @SatsJoseph · Sep 6 ...
As of today, I am closer to 50 than 20. But I enjoy life much more than in my 20s and am more optimistic about the future than ever. Having a meaning in life, **low time preference** outlook, loving family and a Trezored sats are the ingredients.

3 1 98

BitcoinSandy @SandyBitcoin · Sep 6 ...
Replying to @DatCryptoBoi @glennhodl and 2 others
Bitcoin with **low time preference** is the way

1 1

surferjim is more stoked than you- regularly. @surfe... · Sep 5 ...
Replying to @ZeroShitCoins
This is both a great asset to those who understand, as well as a thorn in our sides because of the slow pace of ubiquitous adoption we know is inevitable.

This is why strong hands, a long vision, and a **low time preference** will be our lifeboats.

1

Low time preference is a phrase often bandied about among hodlers.

The Austrian school also concluded, importantly, that **human institutions such as law, morality, business customs, and language develop evolutionarily** through the independent action of thousands of motivated individuals, and when state power intervenes in this evolution, it usually produces unexpected and harmful consequences. These are “matured” institutions that are impossible to replicate or improve through “rational intervention,” just as the pricing mechanism, the market, and even other coordinating social institutions are the result of human action but not of human design. Friedrich Hayek illustrates this spontaneous order using the example of a crystal. Despite knowing

its structure, it is impossible for us to create a crystal by stacking individual atoms. However, we can create the conditions under which the process will take place, resulting in crystal formation. Understanding this principle is the key to what an economic policy consistent with the free market should look like: it should only create the right conditions (rule of law, protection of private property) and beyond that, leave people alone (such a policy is also referred to as *laissez-faire*, meaning “leave us alone” in French).

Prices: An Information Transmission System

One of Friedrich Hayek’s groundbreaking texts is *The Use of Knowledge in Society*. In this article, Hayek addresses the problem of information transmission in a complex, ever-changing, decentralized system such as human society. Efforts to aggregate information within a central point, which would use it for a centrally planned economy, must necessarily fail.

According to Hayek, every economy is faced with the question of “how to secure the best use of resources known to any of the members of society, for ends whose relative importance only these individuals know. Or, to put it briefly, it is a problem of the utilization of knowledge, which is not given to anyone in its totality.”

This problem is addressed by a coordination mechanism called a price system. Producers, investors, traders and consumers can coordinate their actions to achieve the most efficient satisfaction of needs through the interplay of relative prices. If it is necessary to economize on a certain resource in one sector due to its relative scarcity or more valuable use in another sector, all that is needed to convey this information is a change in its price. If it becomes necessary to meet different needs than those that needed to be met before, the price system will communicate this information across traders, investors, producers, and other relevant agents. Businessmen pay attention to the price mechanism to make a profit, while consumers do so to satisfy as many of their needs

as possible. No central coordination or coercion is required. Such central coordination or coercion would only disrupt this coordination mechanism and render it inefficient.

The Use of Knowledge in Society is also referenced by Jimmy Wales, the founder of Wikipedia. He cites it as the main inspiration for building an encyclopedia where everyone can contribute their own small part.


The Austrian Business Cycle Theory

One of the Austrian economists' best-known contributions (especially of Hayek and Mises) is the so-called Austrian business cycle theory. This is a theory that combines most of the above conclusions (time, scarcity, subjective preferences, price mechanism). Given the complexity of this theory, to best understand it, we'll split it up into component statements:

1. Today's money is based on debt and enters the economy through credit; the price of a loan is expressed in the form of interest.
2. Central banks usually implement monetary policy by regulating interest rates.
3. Interest rate regulation usually pushes interest below the level that would occur in the free market (without interest regulation); if the central bank were to set an interest rate higher than the market rate, then it would not actually be regulating anything (banks would simply borrow from each other and from depositors at a lower rate than the central bank's operations would target).
4. Because the interest rate is lower than what would prevail in the market, more investors and companies borrow, and more business enterprises are launched. This leads to an expansion of credit which kicks off an economic boom.

5. The boom is fueled by artificial credit expansion, not higher demand for new projects (for example, new houses). This results in completed projects dealing with lower sales, projects in progress running into problems—often there is a shortage of real capital to complete them—and businesses driving up input prices. Higher consumer price inflation (due to more money in the economy) forces the central bank to raise interest rates in the name of fighting inflation. Cheap financial capital was only an illusion; the boom is followed by a bust, that is, a decline in economic activity and a recession.
6. The central bank often “cures” recessions by once again cutting rates, and the cycle begins all over again (note: now, after decades of this monetary policy, central bank rates are at or below zero, so there's nowhere left to cut).

The issue of the business cycle goes much deeper, of course, but the above explanation at least roughly outlines why we have these constant cycles. In short, as long as we have central banks, there will be long periods of capital misallocation, followed by cleansing periods. Monetary policy is thus a source of considerable waste of capital.



Vijay Boyapati
@real_vijay

...

"If you don't make stuff, there is no stuff" --
[@elonmusk](#) explaining why more money is NOT the same as more wealth.

You can't solve a production crisis by printing more bit of paper, sorry [@federalreserve](#).

4:52 PM · May 30, 2020 ·

Elon Musk (on the Joe Rogan Experience podcast) on the modern illusion that real goods can be substituted by money printing.

Private Money

Unsurprisingly, Austrian economists were not exactly fans of state monetary monopolies. Both Mises and Hayek experienced Weimar hyperinflation and correctly identified its origins in the central bank's limitless money printing. In 1976, Hayek published a book called *The Denationalization of Money*, in which he argued in favor of privately issued monies that compete with each other, and within this competitive environment, there would be no laws on the forced circulation of money.

Also noteworthy is Murray Rothbard's *What Has Government Done to Our Money?* (1963), in which he analyzes the history of the monetary system of the United States, from the creation of the Federal Reserve System (1913) to the paper dollar without any convertibility to gold (post-1971). Rothbard, like most other Austrian economists, considered the only true money to be gold, verified by history and the market. Nevertheless, both Hayek and Rothbard's arguments are very well applicable to bitcoin, which—similarly to gold—is characterized by a verifiable scarcity and does not need any central authority to function.

Economics as an Indispensable Framework

Unlike the mainstream school of economics (nowadays a mix of Keynesianism, the neoclassical school, and monetarism), the Austrian school does not rely on mathematical formalization, does not depend on unrealistic assumptions, and does not reduce economic phenomena into aggregate macroeconomic indicators.

Its divergent methodology also makes the Austrian school of economics an analytical framework that brings many valuable insights. By analyzing individual action and incentives, it is able to explain why central planning, wherever applied, inevitably leads to failure, no matter if the subject of planning is the labor market, urban development, or money itself.

An uncompromising approach to the analysis of human behavior can lead an economist to findings that come across as controversial or even heretical. If coercion always leads to harmful results, what do we really need the state for? Admittedly, this is a question not for economists but for political philosophers; it is therefore not surprising that Mises, Hayek, Rothbard, and other “Austrians”, in addition to being prime economists, also explored the philosophies of classical liberalism and libertarianism. Their works, such as *Liberalism* (Mises), *The Road to Serfdom* (Hayek), and *For a New Liberty: The Libertarian Manifesto* (Rothbard), thus expanded on the economic criticism of socialism and supported these economic insights with advocacy for freedom and human rights.

Besides providing solid economic analysis, this also makes the Austrian school of economics an important argumentative apparatus for all opponents of the coercive power of the state. This is because the Austrian insights reveal that the seemingly good intentions of the central planners are a mere smoke screen, behind which other, much more shallow interests of their promoters usually lie.

For more than 150 years, economists of the Austrian school have been proving that the market system is the only conceivable system compatible with a prosperous and civilized society. Efforts to control society through coercion always fail and lead to poverty, hunger, and war. But a truly free market also requires money that originates outside the state power. Bitcoin increasingly appears to be such money.

II. BITCOIN AND TIME PREFERENCE

Why do some people have a short decision horizon? What effect does inflationary money have on decision-making over time, and what effect, on the other hand, does deflationary money have? Time preference is one of the most interesting areas in the study of human behavior. And the concept of time preference is also very useful on the path to understanding the value of bitcoin.

What is a Time Preference?

Man lives in a world of scarcity, and every action undertaken must deal with scarcity. This is true even for an individual with unlimited money and material wealth; even a rich man faces the scarcity of space (he physically cannot be in multiple places at once) and time (he only has 24 hours in a day and is mortal). In this chapter, we will discuss time and its influence on human action.

“Satisfaction of a want in the nearer future is, other things being equal, preferred to that in the farther distant future. Present goods are more valuable than future goods.”

– Ludwig von Mises

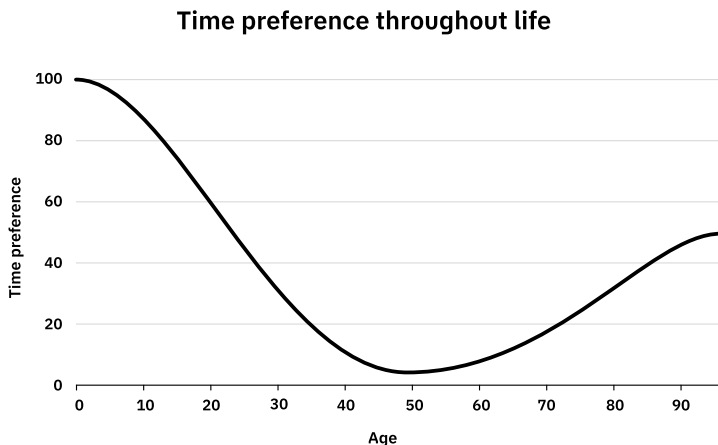
The basic aspect of decision-making within a time constraint is this: A person generally prefers to satisfy his or her needs sooner rather than later. This is especially true under the assumption of “ceteris paribus” – other conditions remaining the same. If I have a choice to have a beer today or tomorrow, everything else being equal, then I will choose to drink a beer today. This statement applies universally, that is, to all possible consumption. How is that possible? Well, every man is mortal and faces the same unstoppable passage of time. Preference satisfaction occurs in an environment of uncertainty and limited time, and therefore it

must be true that, *ceteris paribus*, it is always better for a person to satisfy their need sooner rather than later.

However, the real fun begins the moment *ceteris paribus* ceases to apply – as soon as the circumstances of the decision change over time, time preference begins to manifest. A simple example: you can choose whether you get 100 dollars today or 100 dollars a year from now. Under the same circumstances, you will always prefer 100 dollars today. However, if the offer is 100 dollars today or 105 dollars a year from now, you may prefer to wait. For some individuals, 5% annual interest is unconvincing, but 20% is. The degree to which we prefer present goods over future goods is the essence of time preference.

High time preference means that I prefer to satisfy today's needs and I discount the future significantly (I don't consider it as important as today's consumption).

Low time preference means that current consumption does not figure that importantly in my actions, and I discount the future only slightly.



The development of time preferences over the course of the life of a productive individual. This is only to give an idea, and is not based on any precise data.

Time preference evolves over the course of a person's life. Young children do not yet understand the passage of time and do not have much patience; consumption in the immediate present holds the highest value for them. With age and wisdom, a person begins to understand the necessity of saving and planning for the future; their time preference decreases. And in the final decades of a person's life, they catch a "second wind", buy a convertible, and embarrass their children (on the other hand, a parent usually wants to leave some inheritance, so one's time preference never fully drops to the level of one's childhood years).

High Time Preference, Its Causes and Consequences

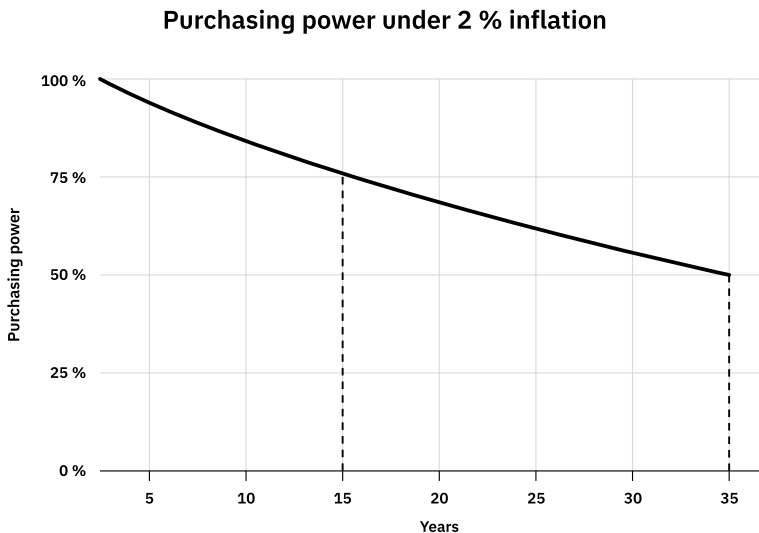
Picture this. You're crawling through the desert, dying of thirst. You come across a lemonade stand selling a glass of dewy lemonade for 10 million satoshi. Would you buy it? I think yes, because at the moment you have a very high preference to satisfy your thirst in the shortest possible time. At that moment, a glass of lemonade is worth more to you than the obscene amount of money you spend on it.

High time preference is characterized by prioritizing an immediate need over the costs involved in satisfying that need. Besides acute physical needs such as dehydration, mental weakness in resisting temptation can also be the cause of this: alcoholism, drug use, or infidelity are typical examples of high-time preference behaviors; the listed activities can bring intense short-term pleasure, but at the price of high long-term costs (ruined health or a broken family).

While mental weakness may affect specific individuals, it is not the main cause of higher time preference at the societal level. On a society-wide level, uncertainty regarding the future—especially concerning property rights, currency stability, and the overall rule of law—is the factor responsible for higher time preference. As Hoppe writes in his book *Democracy: The God That Failed*, private crime (thievery, mafia activity) is, paradoxically, not the main threat

to property rights; rather, the main threat is a systematic violation of property by the state. Taxation, inflation, and ever-changing legislation are, according to Hoppe, the main causes of the society-wide increase in time preference.

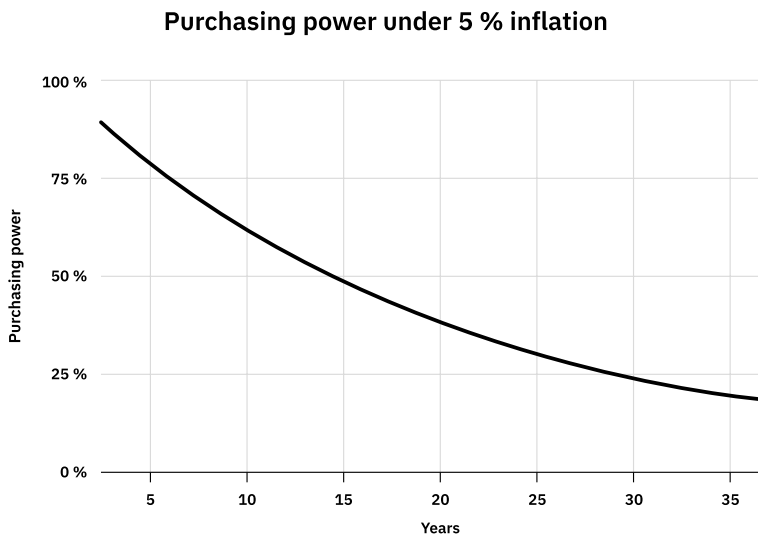
Let's now focus on the issue of inflation. The reader may be aware that most of the world's central banks have set so-called inflation targets, which, as the term suggests, represent a target for what consumer price inflation should be (the year-on-year increase in the price of a typical consumer basket). The most widely applied inflation target is 2% per year. What will such inflation do to the purchasing power of money?



Two percent annually doesn't sound like much. Over the long term, however, it results in strong erosion of purchasing power.

Within 15 years, this level of inflation will reduce purchasing power by a quarter, and within 35 years, it will cut it in half. That would be bad in and of itself, but today's inflation is nowhere near that low. At the time of writing, the inflation rate ranges from 5% (US) to 7% (Eurozone) to 100% (Argentina). But let's be conservative

and put the 5% inflation rate on the chart. While the difference between a 2% and 5% inflation rate might not seem that large at first, in reality it is quite devastating, as the graph below illustrates.



Such an inflation rate steals a quarter of our purchasing power within 6 years and cuts it in half in 14 years. In other words, if inflation rates around the world normalize at these levels, the impact on society’s time preference would be severe, and the future would be discounted at a much higher rate than ever before, leading to even more consumerism, higher levels of debt, less prosperity, and a loss of hope among the younger generation.

Low Time Preference, Its Causes and Consequences

Hoppe equates low time preference to a “process of civilization”: lower time preference and the savings associated with it lead to investment in production processes, long-term planning, cooperation, and peace. This is because conflict increases the level of uncertainty about the future, and people with a lower time

preference try to reduce this uncertainty as they place a high value on prosperity in the future.

In practice, low time preference means that we are happy to wait for the future satisfaction of our needs if, as a reward for our patience, we receive either more goods or goods of higher quality in the future. As production capacities increase and investment is made in higher-quality production, real wages and real wealth also increase; people have better healthcare, better-quality food, more free time, a cleaner environment, and other factors that they increasingly value as they get richer.

It will come as no surprise to the attentive reader what the prerequisites are for a society-wide low time preference:

- Protection of property rights – effective defensive means against private criminals and a minimum and predictable level of taxation by the state.
- The rule of law – countries with a higher level of contractual certainty and decentralized judicial system in the form of common law, like England and its colonies (including the United States) had been for centuries.
- Non-inflationary money – in the past this mainly concerned commodity money consisting of gold and silver (for example, Switzerland did not drop the gold backing of the franc until 1999).

Countries in which these three aspects came together have experienced a golden era of prosperity in the past; a good example is the American Gilded Age, from 1870–1900, when America rapidly transformed from a predominantly agricultural economy to an industrial power.

The nature of money is quite possibly the most important factor influencing society's time preference. One of the most unfair taxes

is the inflation tax, as it is mostly borne by the poorest members of society, who cannot protect themselves against inflation by taking advantage of the financial markets. Inflationary money also enables record levels of government debt since central banks are among the largest holders of government bonds.

In other words, if we want to live in a society based on a low time preference, we need to take control of the money out of the hands of the state.

Time Preference, Gold and Bitcoin

Economists of the Austrian school have been urging a return to sound money for decades. Rothbard's *What Has Government Done To Our Money?* from the 1960s or more recently, Jesus Huerta de Soto's *Money, Bank Credit, and Economic Cycles* (1998) both call for a return to gold as historically proven money on which states have only minimal influence.

The main argument for non-state money is to prevent the destructive cycle of credit expansions and subsequent recessions that are the direct result of state monetary policy. These cycles cause massive capital waste and motivate society to adopt shorter decision-making horizons, increasing the society-wide time preference. Conversely, monetary policy outside of state control is in line with a lower time preference.

In other words, we need money with a predictable and unalterable monetary policy. For thousands of years, gold was such money. However, gold has its downsides, which ultimately led to its abandonment as a monetary instrument.

Compared with gold, bitcoin has the following fundamental advantages:

- **Portability:** Bitcoin is intangible, which makes it possible to use it to move any value across the globe.
- **Verifiability:** The average person cannot easily detect fake gold, whereas fake bitcoin (e.g. bitcoin cash) can be detected by anyone within a few seconds; the operation of a bitcoin node gives everyone the ability to fully oversee the rules in the network.
- **Scalable sovereignty:** A gold coin is easy to keep in one's own custody – a ton of gold bricks not so much; bitcoin's intangible nature makes it possible to retain sovereignty even at scale – whether one holds small change or billions.
- **Unconfiscatability:** When fleeing Nazi and Communist countries, gold sewn into a coat was often the only way to save family savings – such a method is of course highly prone to confiscation; bitcoin is unconfiscatable if adequate procedures are used (multisig transactions, Shamir backups, timelock transactions, etc.).
- **Antifragility:** As an ecosystem, bitcoin is an example of a remarkable phenomenon called “antifragility” – this refers to something that is strengthened by constant attacks, hacks, and internal disputes. Gold, meanwhile, was “merely” robust – it served its purpose satisfactorily for thousands of years but eventually came under state control (you can read more about bitcoin's antifragility in the article by *Parker Lewis: Bitcoin is Antifragile* – available on the website unchained-capital.com).
- **Environment:** Modern gold mining and processing is a real, full-scale environmental disaster (I recommend watching the lecture entitled “Bitcoin vs. Gold” from the Baltic Honeybadger conference, available on YouTube), while bitcoin mining merely consumes electricity – and increasingly electricity generated from renewable sources (if you'd like to know more, I recommend the resource site endthefud.org).

To be fair, we must also mention one fundamental disadvantage of bitcoin: it does not have thousands of years of history behind it. It does not have the benefit of the so-called Lindy effect, which rests on the fact that concepts and technologies that have survived for a long time will continue to remain relevant for a long time because, in short, they simply work. No one can claim with 100% certainty that bitcoin will not encounter a serious problem as it becomes more widely adopted; the issue of sovereign management of private keys by a general population or the sustainability of mining rewards are aspects that we will reliably solve only in the longer term.

Lindy effect

i

The Lindy effect is a rule popularized by philosopher Nassim Nicholas Taleb. In short, it says that technologies or institutions that have already survived for x years are likely to survive for another x years. That is, if bitcoin has been with us for 14 years, it will probably be with us for another 14 years. Gold has a very strong Lindy effect, which is the main advantage of gold over bitcoin.

Essential Question: What Effect Does Bitcoin Have on Time Preference, Here and Now?

Bitcoin is deflationary in the long term: from a certain point, the number of units in circulation will not increase, nor will it stagnate; it will fall. Due to the occasional loss of private keys and transaction bugs, at least 1.5 million bitcoin have already been lost for good. Although the rate of bitcoin losses decreases as its price goes up (people are more careful and have solutions such as Trezor and Shamir backups available), in the long run, the total amount of bitcoin in circulation can only decrease.

Such predictable dynamics in the overall supply of bitcoin understandably have the effect of lowering the time preference of those who are accumulating bitcoin. I use the word *accumulate*

in the continuous tense intentionally here. “OG hodlers”, who were lucky enough to have bought bitcoin years ago for 5 dollars and who since then have only been holding and gradually selling off, cannot be considered individuals with a low time preference in the true meaning of the term. This is because time preference in the context of savings determines what percentage of their income a person saves, and if the hodler in question does not continue saving in bitcoin but just watches the value of already previously purchased bitcoin go up, that person is not actually demonstrating a low time preference.

Hodlers: we have low time preference!

Economist:



The early bet on bitcoin may have paid off for pure hodlers, but that's not what the concept of time preference is about. Low time preference is manifested by long-term modification of action, for example, in the form of long-term "sat stacking"—continuously saving in bitcoin—or investing in long-term projects that improve the prospects for worldwide bitcoin adoption.

On the contrary, those who keep saving in bitcoin over the long term and are always thinking about how to keep accumulating (for example, by working directly in exchange for satoshi) can be

characterized as individuals with a lower time preference since they consistently choose to postpone their consumption until the future.

The fact that we can expect appreciation in the value of bitcoin over a longer time horizon has a very positive effect on the level of time preference of those who go down the bitcoin rabbit hole: existing holders mull over how to satisfy their short-term needs without having to sell off their satoshis, and those who are just discovering bitcoin are looking into ways to increase their productivity and decrease their consumption in the interest of accumulating as much bitcoin as possible at a time before it becomes generally widespread.

Bitcoin as Salvation from Degeneration

The concept of time preference may seem like just a nice theory that doesn't have much impact on real life. However, that would be an impression that was far from the truth. In life, it sometimes helps to step back from mundane matters and engage in some self-reflection. Ask yourself, why you actually act the way you do? And is it in your best interest today and a year from now?

People and communities with a longer decision-making horizon often achieve a much higher level of prosperity than those with a short-term view. Education, health care, and financial literacy: these all require frugality today in the interest of prosperity tomorrow. And we are extremely lucky here and now to watch and participate in the development of an ecosystem that defies the general trend of living in lifelong debt and discounting the future. Bitcoin is the money of the future, with which we can save today.

Time preference is one of the most important economic insights, one that is also very practical in life. How you approach your health, finances, family, and friends is often a direct result of your time preference. The level of time preference and civility

are two sides of the same coin. Seen through these optics, inflationary state money can only be viewed as an instrument of civilizational degeneration. Bitcoin, on the other hand, has the potential to usher in a new golden age with a high degree of societal orientation toward the future.

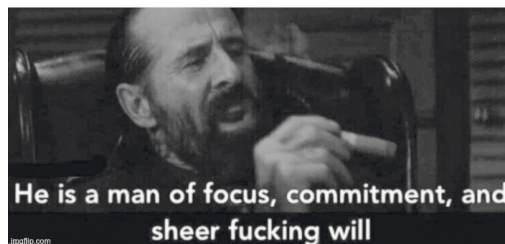
III. BITCOIN AND MONETARY HISTORY

The history of money teaches us a clear lesson: do not entrust money to a central authority. Power over the definition and creation of money is too tempting, and sooner or later it will be abused. Bitcoin offers an escape from the historical merry-go-round of the constant redefinition and debasement of money.

Why Concern Yourself With Monetary History?

“Monetary history” sounds like something they tormented you with in school. Just reading that term makes your eyelids start to feel heavy, and you wonder if you should brew another coffee or close the book right away, telling yourself that you’ll finish reading it another time (you won’t). But try to stick it out, and I promise you will be well rewarded. The monetary history is a surreal ride comparable to John Wick’s latest killing spree. It is a story full of hope and betrayal, fabulous riches and crushing poverty, truth and lies. If you understand the internal logic of the historical development of money, you will also understand the underlying logic of current events. Although many people don’t like to hear it, money is a crucial aspect of all human action. Understanding money will give you a giant head start in a time where the era of one kind of money is ending and another is beginning.

A STUDENT OF MONETARY HISTORY:



So let's get to it!

From Communism to Cooperation

Throughout history, mankind has used everything possible as money: seashells, worked stone wheels (Rai stones), livestock, salt, and tobacco. Nevertheless, precious metals, especially gold and silver, have always held a special place in the history of money. The reason for the special status of these metals is that they best constitute the essence of money.

What is Money?

Money is an institution that emerges when a society grows sufficiently complex. As soon as a division of labor begins to occur in the human community (with some procuring food, others making tools, still others building dwellings, etc.), a need arises to somehow share the fruits of labor among the members of society. One way to do that is via communism, i.e., to share the fruits of labor based on solidarity and a subjective estimation of needs. But this type of solidarity works to satisfaction only to a very limited extent – typically within the family, among relatives, and among long-term trusted friends. Even in a community like this, however, communism has an upper limit by the so-called Dunbar number: the human brain is unable to maintain more than about 150 strong relationships. Larger communities with a deeper division of labor need money because money is a neutral tool. In a monetary economy, the allocation of the fruits of labor does not depend on the subjective emotions and mutual affection of community members but on the productivity, usefulness, and scarcity of exchanged goods and services.

Money performs the following functions that are critically important to the further development of human society:

Money is a **store of value**. Let's say Bob is a skilled blacksmith and makes the best horseshoes and swords in the county. He has a full pantry of food and plenty of fine clothing, and he is doing well overall. If he had to work just to maintain his standard of living, he would have to work an hour a day; this would allow him to barter

his horseshoes and swords for enough food and an occasional refreshing of his wardrobe. He doesn't need more food and clothes, as these would just be eaten by mice. However, the surrounding community needs Bob's horseshoes and swords (they need to arm themselves against raids by the barbaric Fiatmen tribe) and basically has two ways to get Bob to keep forging more: enslave him or motivate him. The problems of enslavement (that is, forced communism) are discussed in detail in Ludwig von Mises' book *Socialism*; for now, let's just say that motivation is a better long-term strategy for Bob's community. So, in return for his forging, Bob gets a magical item that allows him to obtain food, clothing, and whatever else he wants at any time in the future – he gets money that stores the value that he has created going forward. Money is a great store of value because, unlike food or clothing, mice won't eat it. Money has a property we call *durability*.

Money is an **accounting unit** that allows for both divisibility and concentration. For Bob's money to really hold value into the future, other people must know and accept it; they must be able to value their goods and services in this money. This does not necessarily mean that Bob's money is the only unit of account or that it has an unchanging purchasing power over time. In a free market environment (where no one manipulates the value of the currency through government regulations, etc.), purchasing power and proper pricing are handled by the laws of economics. However, fundamental to the needs of Bob and his community is that the money be easily divisible and that it concentrates enough value in a small amount; in short, it needs to be able to mediate the trade of a single nail but also of a whole wagonload of swords. Throughout history, silver coins and gold bars have served this purpose very well.

Money is **uniform and easily verifiable**. It works best when no guesswork is required regarding the actual purchasing power of the money in question for individual transactions. This is problematic for instruments that are not identical to each other; e.g., individual cows are quite different in terms of age and health, so they may

have “hidden defects”. **Historically, gold and silver coins solved this problem rather satisfactorily, but with one major catch: to be uniform and easily verifiable, individual coins needed to be minted and certified by a trusted third party.** This was usually the ruler, and it gave the ruler virtually unlimited power (we will explain its nature later).

It is no accident that Greece and the Roman Empire became the most advanced civilizations in the world. At their respective peaks, they used money that fulfilled the criteria above well, allowing prosperity not only to be created but also to be preserved.

Drachma, Denarius, and Solidus: A Thousand-Year Cycle of Prosperity and Decline

Greece: Drachma

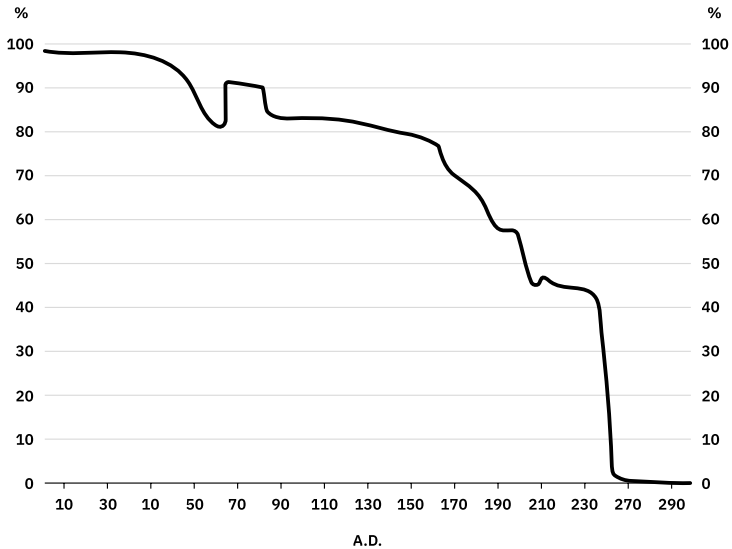
One of the earliest coins in human history is the Greek drachma. Originally (6th century BC), it was a silver coin containing 4.3 grams of silver. Although the drachma was the primary coin of most city-states, there were also smaller coins (the smallest was the hemitartemorion, containing 0.09 grams of silver) and large medals (the decadrachm, with 43 grams of silver). Greek silver coins were in circulation for hundreds of years, not only in the Mediterranean but also in distant India, for example. According to historical research, a craftsman in fifth-century BC Athens earned 1 drachma a day, which provided food for one person for 16 days.

Not much was written about the debasement of coins in ancient Greece; the drachma was a relatively stable monetary unit for hundreds of years. The reason for this stability was quite possibly the competitive nature of city-states; no Greek state had a long-term monopoly on the creation (and subsequent depreciation) of money.

Rome: The Denarius and the Aureus

The denarius was the base unit of the Roman Empire, similar to the Greek drachma. It was in circulation for over 400 years, from 211 BC to 238 AD. The denarius initially contained 4.5 grams of silver, and this standard was maintained for two hundred years. However, around the turn of the millennium, Emperor Augustus succumbed to the allure of **coin debasement** – the melting down of coins and re-minting them with a lower silver content. The emperor thus obtained a greater number of coins from the same amount of precious metal. And since the emperor decreed the nominal value of the coin, the debasement of the coins meant an increase in the emperor’s “wealth”. This wealth, however, did not just materialize out of nothing; it was literally a **theft of everyone else’s purchasing power**. As soon as merchants noticed the lower silver content in the coins, they raised the prices of their goods in order to receive the same amount of real money, i.e., silver. And these higher prices had to be paid mainly by workers receiving wages that did not increase.

The aureus was a gold coin minted from the first century BC to the 4th century AD. It was originally defined as 25 denarii, and here you’ve probably already guessed the problem. With the gradual debasement of the denarius, gradual “adjustments” also needed to be made in the definition of the aureus. Julius Caesar minted an aureus containing 8 grams of gold; Nero reduced it to 7.3 grams. After the reign of Marcus Aurelius (an otherwise great Stoic philosopher), the gold content of the coin fell to 6.5 grams. Subsequently, the aureus was renamed solidus and the gold content was reduced to 5.5 grams. In 337, the content was reduced to 4.5 grams; however, the solidus was still a relatively “solid” coin, worth 275,000 denarii! At this time, denarii had almost no silver content and therefore almost no monetary value.



Debasement of coinage in ancient Rome, percentage of silver in coins minted between the year 1 and 290 A.D. Source: Butcher (2015) Debasement and the decline of Rome

Looking at the precious metal content of Roman coins gives us a good indication of the overall health of the Roman Empire. In times of prosperity, it would never cross the ruler's mind to destroy the basic building block of the economy by debasing it. In the times of all-pervasive bureaucracy and decline, though, the coin became the first victim, and this further accelerated the disintegration of the empire. As we can see from the graph above, the trajectory of coin debasement was never reversed; financing spending by covertly robbing one's own population was too much of a lure for rulers once they discovered it.

Byzantine Empire: The Solidus

As the Roman Empire gradually disintegrated, the center of European power and civilization shifted to the east, where the Byzantine Empire arose. The rulers of the Byzantine Empire continued to mint the solidus gold coin, initially with a weight of 4.45 grams of gold.

The Byzantine solidus became one of the most stable currencies in human history; it was minted for 700 years, until the 10th century, with almost no signs of diminution. The solidus was a coin made of almost pure gold; the coin had a purity of 23 carats, that is, a 96% gold content. Shrinking such a coin must have been a huge temptation. Why shouldn't it have a few percent less gold? No one would notice! The reality that the solidus remained stable for such a long time suggests that the period after the fall of the Roman Empire was not as dark as it is sometimes made out to be. On the contrary, in contrast to the Later Roman Empire, it was an age of lower time preference, at least as far as the decision-making of rulers is concerned. Preserving the gold content of the solidus required a strong orientation towards the future and resistance to the short-sighted lure of cheap money.



Solidus of Justinian II. from 705, gold content 4,44 grams. Source: Moneymuseum.com

Alas, not even the solidus escaped debasement in the end. In 1034, Emperor Michael IV ascended the throne and slightly reduced the gold content of the solidus. Just like in the days of Roman decline, there was no turning back from this path. In 1042, the solidus was devalued from its original 23 carats to 21 carats, 18 carats in 1059, 16 carats in 1068, 14 carats in 1071, 8 carats in 1078, and finally to less than 8 carats after 1081. The coin, which had been the anchor of the world economy for 700 years, was destroyed

within 50 years. The solidus was replaced by the hyperpyron coin (20.5 carats), which remained stable until the crisis of 1204, after which it too was debased, ending up with zero gold content in the final period of the Byzantine Empire.

The Dollar Before 1913

So, now that we've clarified why we need money and briefly summarized how the historically best possible form of money—gold and silver coins—always deteriorated, let's now skip ahead in time a bit. Today's world is de facto a world of the dollar standard, so in the second part of this chapter, we'll take a look at the troubled history of the dollar.

The Colonies' Experience With Paper Money

The first historically known paper money was used in China in the 11th century. The next manifestation of paper money in history won't occur until it appears in the American colonies.

In 1690, the English colony of Massachusetts embarked on a raid against the French colony of Québec. The soldiers were promised a share of the booty, but the expedition ended in a fiasco, and the soldiers barely escaped with their lives. Since the administrators of the colony had no way to pay the soldiers and did not want to risk a rebellion, they decided to solve the situation by printing vouchers, which represented the promise of future exchange for real money (gold or silver). This promise was not kept; on the contrary, the colony increased the circulation of paper vouchers six-fold during the following years.

The amazing invention of paper money quickly gained popularity across the colonies and was even vehemently promoted by Benjamin Franklin. Let's see what the consequences were with a quote from the book *The Creature from Jekyll Island*:

“By the late 1750s, Connecticut had prices inflated by 800%. The Carolinas had inflated 900%. Massachusetts 1000%. Rhode Island 2300%. Naturally, these inflations all had to come to an end and when they did, they turned into equally massive deflations and depressions.”

Paradoxically, it was England that definitively put an end to colonial inflation and thereby saved the colonies from total disaster. The Bank of England issued an order to the colonies that the only paper money allowed was the one printed in England. This didn't fly with the colonies, however, where antipathy towards British rule was rising steadily, and in subsequent decades they mainly used gold, silver, and tobacco as money.

The Spanish Dollar and the Constitutional Safeguard Against Paper Money

During the war of independence, the colonists once again shot up with the paper opiate, and the consequences were devastating: in 1775, the total money supply was \$12 million; four years later, it grew to \$600 million. Paper “continentals” were initially defined as 1 continental = 1 dollar in gold. After four years, they were worth 0.01 gold dollars.

But what was that dollar? Strangely enough, it was not an American invention; it was the Spanish dollar, widely used at the time, and it was defined as 24.443 grams of silver. These dollars were already in broad circulation in the colonies, and in 1785, Thomas Jefferson convinced members of the Continental Congress to allow the new United States to adopt Spanish dollars as its official currency. Jefferson's proposal was ratified. The next step was to ensure that silver dollars would not be debased and that the hydra of paper money would never return (everyone still remembered the paper hyperinflation of the prewar and wartime periods).

To guarantee these two points, Congress defined the dollar as 371.25 grains of silver (roughly 24.05 grams), and the United States Constitution prohibited states from making anything but

gold and silver legal tender. And for the avoidance of doubt, the Tenth Amendment to the Constitution specified that the federal government has only the powers delegated to it by the Constitution, so it could not issue any federal paper money.

And that is the end of monetary history. Since then, mankind has prospered under a new sound money standard, and everyone lived happily ever after. Oh wait, that's not at all what happened. So how come today's dollar is pure fiat currency again, even though the Founding Fathers went to such lengths to prevent precisely that scenario from ever arising again?



I know that monetary history can get frustrating. That's why we've got these memes thrown in.

Bimetallism

In 1792, a bimetallic monetary standard—or bimetallism—was introduced: Gold and silver circulated concurrently. Gold had an indisputable monetary function, and, as with the silver dollar, there was concern that without a clear definition of gold coins, they would be debased and coins of variable quality would be minted. Congress therefore took a step that seemed justified, and in addition to the silver dollar, it also defined the gold dollar. The value of the gold eagle coin was set by Congress at ten dollars. This meant that one ten-dollar gold coin was worth the same as ten

silver dollars. However, the members of Congress failed to realize one fundamental thing: gold and silver do not have a stable value relative to each other. While defining the gold and silver dollars, Congress simply took the existing ratio at the time—gold was 15 times more expensive than silver—and prescribed the gold and silver content of the coins with that ratio.

This error set the stage for future problems when silver and gold coins alternately disappeared from circulation, depending on how advantageous it was to hold one metal and spend the other. This is because most of the time, the price-to-market ratio differed from the ratio set by Congress. The California Gold Rush eventually resulted in a significant influx of gold into the market, and the ratio between gold and silver shifted definitively in favor of silver, as it was relatively undervalued by the fixed ratio. It became more profitable for people to withdraw silver coins from circulation and use gold coins for payments. This is a practical demonstration of Gresham's law: people tend to “hodl” strong money and spend weaker money. The adjustment of the ratio in 1834 to 16:1 made the situation even worse; silver was undervalued compared to gold and was disappearing from circulation. In 1853, silver coins were debased; twenty years later, bimetallism was abandoned and the United States adopted the gold standard.

So, in the end, the original silver dollar didn't even last 100 years.

In 1900, the dollar was defined as 23.22 grains (1.5 grams) of gold. This dollar lasted an even shorter time than the silver dollar, a mere 33 years.

Economic Cycles Before the Creation of the Fed: The Panic of 1819

Before explaining why and how the US central bank—the Federal Reserve System (Fed), as it is called—was created, we should answer one obvious question: what caused economic cycles before the Fed was created? As we saw in the first chapter on the Austrian school of economics, it is primarily the central bank that is the epicenter of repeated cycles of credit expansion and subsequent contraction.

But how then is it possible that we can observe economic cycles in history even before the creation of central banks?

The answer can be found in Murray Rothbard's book, *The Panic of 1819: Reactions and Policies*. In the economics community, this book is considered to be the best analytical work on the causes and effects of the first banking panic in the United States. In it, Rothbard points to the fact that America 200 years ago was hardly a laissez-faire country. First, the federal government dragged the young country into the War of 1812 (between the United States and Great Britain). This war was one of the triggers of the crisis. Rothbard writes:

"[The war] brought heavy pressure for federal government borrowing. New England, where the banks were more conservative, was opposed to the war and loaned only negligible amounts to the government, and the federal government came to rely on the mushrooming banks in the other states. These banks were primarily note-issuing institutions, generally run on loose principles."

But why were the banks "run on loose principles"? The banking business required state licenses, and states generally granted licenses to the institutions willing to accept government bonds as collateral. Moreover, the federal government agreed to suspend the convertibility of notes for money (gold) – because the relaxed credit policy allowed the government to continue borrowing for war spending. So even though there was no central bank as such, it was the federal and state governments that created the great credit expansion that later resulted in the Panic of 1819. Rothbard explains:

"Banks continued to expand in number and note issue, without the obligation of redeeming in specie, and their notes continued to depreciate and fluctuate from bank to bank, and from place to place. The number of banks increased from 208 to 246 during 1815 alone, while the estimated total of bank notes in circulation increased from \$46 million to \$68 million."

(...)

“Investment in real estate, turnpikes, and farm improvement projects spurred, and prices in these fields rose. Furthermore, the federal government facilitated large-scale speculation in public lands by opening up for sale large tracts in the Southwest and Northwest, and granting liberal credit terms to purchasers. Public land sales, which had averaged \$2 million to \$4 million per annum in 1815 and 1816, rose to a peak of \$13.6 million in 1818.”

(...)

“It does not seem accidental that the boom period saw the establishment of the first formal indoor stock exchange in the country: the New York Stock Exchange opened in March 1817. Traders had been buying and selling stocks on the curbs in Wall Street since the eighteenth century, but now they found it necessary to form a definite association and rent indoor quarters.”

In an effort to tame the speculation mania, the federal government created the Second Bank of the United States (a sort of precursor to the Fed). However, this federal bank also engaged in credit expansion (as part of aiding private banks) and faced rapidly diminishing gold reserves. And then panic set in:

“Faced with these threatening circumstances, the Bank of the United States was forced to call a halt to its expansion and launch a painful process of contraction. Beginning in the summer of 1818, the Bank precipitated the Panic of 1819 by a series of deflationary moves.”

(...)

“The contractionist policy forced the state banks, in debt to the Bank, to contract their loans and notes outstanding at a rapid pace. Total bank notes in circulation were estimated at \$45 million in January, 1820, as compared to \$68 million in 1816. The severe monetary contraction, lasting through 1820, led to a wave of bankruptcies particularly outside New England. (...) The financial panic led, as did later panics, to a great scramble for a cash position, and an eagerness to sell stocks of goods at even sacrifice rates”

As always, the culprit was the ruler, government, or state. The misguided credit expansion stemming from the fractional reserve policy was sanctified and deepened by the actions of the state and federal governments. The ensuing panic and crash were an inevitable and necessary correction of misallocated capital. The Panic of 1819 was actually relatively short and painless because no one had the brilliant idea to implement quantitative easing, bailouts, or other modern monetarist voodoo. But more on that later.

The Logic of Monetary History: Money Perpetuum Mobile

Now it's time for a digression. Let's explain the internal logic of the history of money. Why does control over money always lead to its initially gradual, then sudden disintegration and the abandonment of all original definitions and guarantees?

Money is a curious phenomenon. As we saw in the example of Bob the blacksmith, money is a **tool for value preservation**. This definition is important, and as we routinely see all around us, people who get their hands on money without earning it through productive efforts usually have a very unhealthy attitude towards money. For example, lottery winners are known for their inability to hold on to their money; undeserved wealth often ruins their lives.

Nevertheless, money is neutral; even those who have accidentally won, looted, or obtained money through political games find themselves with an extremely powerful tool at their disposal. Money makes it possible to wield control over scarce resources and literally fulfill the dreams of its holders. Many, if not most, people strive to obtain as many resources as possible and fulfill as many dreams as possible. And these don't necessarily have to be dreams in the style of "an endless Caribbean vacation"; historically, the most pernicious dream is to do good.

“Power tends to corrupt, and absolute power corrupts absolutely.”

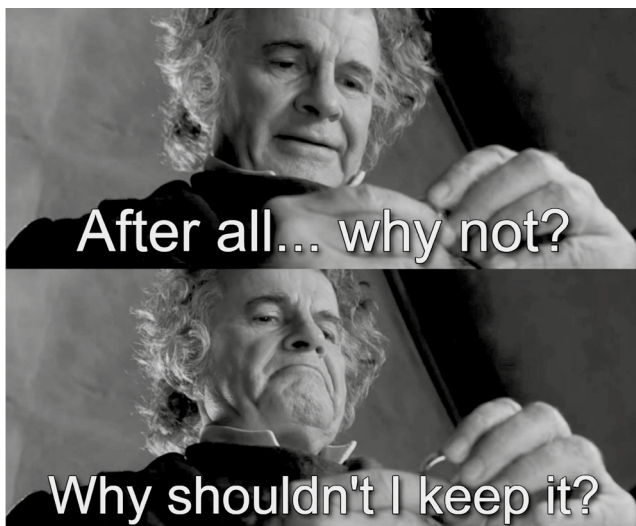
– Lord Acton

Power over the definition of money is a major temptation. This does not need to be limited to the matter of defining the metal content of coins; throughout history, bankers have been unable to resist the temptation to issue more depository receipts (“banknotes”) than they could realistically redeem. And manipulating the definition of money in all kinds of ways provided an elegant solution for bankers and statesmen alike, seemingly bringing additional prosperity that would otherwise not have arisen.

After all, money is a magical store of value. He who gets more money will have greater wealth. All of this is true, with the caveat that money is only a relative carrier of wealth; for the sake of argument, let’s say that 10% of all outstanding money controls 10% of all wealth. If the government or bankers create additional money and now control 20% of the money, they gain 20% of the wealth while everyone else loses 10%. **Money does not create wealth; it can, however, move wealth from the hands of some to the hands of others – from producers of goods to the masters of money.**

The history of money, the manipulation of its definition, and the setting of “monetary policy” are, in short, a special instance of the age-old effort to create a perpetual motion machine – a miraculous machine that produces more energy than it consumes. The *perpetuum mobile* of money is treacherous and seductive in that it sucks in its energy (in the form of purchasing power) initially invisibly and with great dispersion over time and space. If the masters of money rob the citizens of 1% of their purchasing power, will anyone notice? If the masters of money create an economic boom and the consequences in the form of depression won’t be felt by the economy for another 10 years—and perhaps not even then if an even bigger boom is created instead—isn’t that simply the best deal with the devil?

Power over money is too tempting, and there is no man or man-made institution capable of bearing it responsibly. Like the Ring of Power, this power must be destroyed, or it will destroy humanity.



Bilbo Baggins upon the discovery of a weapon of mass destruction – the money printing press

The Creature From Jekyll Island

Let us now return to our excursion through monetary history.

In 1913, the Federal Reserve System (Fed) was created. It was the culmination of an effort by bankers and other advocates of easy money that had been ongoing for 120 years. The Fed was preceded by two unsuccessful attempts to create an American central bank.

The First Bank of the United States operated from 1791 to 1811. The bank was the brainchild of Alexander Hamilton, a big proponent of the centralization of power.

The Second Bank of the United States existed from 1816 to 1836.

What was the motivation behind establishing a central bank? Well, creating additional money and thus redistributing wealth to the masters of money at the expense of everyone else. To fulfill that vision, the bankers and their allies in Congress devised an ingenious way around the constitutional safeguards. One loophole that the Founding Fathers forgot to address was that Congress was never prohibited from borrowing. The way to bring back paper money was, therefore, to base the financial system on debt. And with the help of creative accounting, that's exactly what happened, and debt became the foundation of the monetary system we still have today. In a nutshell, the debt-to-money accounting trick works like this:

1. The government issues government bonds.
2. The bank accepts government bonds onto its balance sheet in the assets column.
3. The bank creates new money corresponding to the value of the bonds by accounting entries; this “loan” is on the receivables side of the bank's balance sheet.
4. The government can now spend the new money for its expenses.

Under such a system, the government doesn't issue any paper money; it only seeks to borrow funds. It is the banks (both the central bank and the commercial banks) that actually create money out of thin air and provide it to the government. This process is a fine example of a monetary *perpetuum mobile*; it is so good that both statesmen and commercial bankers sought for years to make it fully legal and sanctified, until they succeeded in 1913. Nowadays, the money that banks “lend” is not actually lent; it is newly created money that appears on the banks' balance sheets as a balance item to the received assets (government bonds, household mortgages, etc.). It is actually strange that the newly created money is called a loan, as no one is actually lending anything to anyone. The bank simply creates new money; and vice versa, when the “loan” is repaid, the money disappears from circulation.

Reality or Conspiracy Theory?

i Some people have a hard time accepting the fact that today's money is built purely on debt and is primarily created by commercial banks (based on a privilege granted by the central bank). I've even been accused of making up conspiracy theories when stating this fact. It is comical that the reality of today's money seems so absurd to the uninitiated that they are reluctant to believe it. Non-believers may be convinced by this quote from the website of the Bank of England:

In the modern economy, most money takes the form of bank deposits. But how those bank deposits are created is often misunderstood; the principal way is through commercial banks making loans. Whenever a bank makes a loan, it simultaneously creates a matching deposit in the borrower's bank account, thereby creating new money.

(Bank of England, Money Creation in the Modern Economy, Quarterly Bulletin 2014 Q1)

The creation of the Fed was preceded by a secret meeting of influential bankers in 1910 on Jekyll Island. The participants included representatives of the largest banking houses, whose names are still well-recognized today: Morgan, Rockefeller, Rothschild, Kuhn, and Loeb. The aim of the meeting was to create a system that would protect banking houses from "panics" – the sudden demands of depositors to withdraw real money (gold), which the banks never had enough of since they were already making full use of their accounting trick of creating money (or, rather, new money receipts in the form of banknotes). The ideal development for the bankers would be one that would completely take real money in the form of gold out of the game and establish a monetary system based purely on debt and paper; however, until this was achieved, the aim was to at least create a "lender of last resort" to bail out commercial banks in case of problems. And the government, in exchange for its legal protection of this fraudulent scheme, acquired a bottomless source of money without the need to raise taxes significantly.

The legislation that was introduced to Congress in 1913 spoke, of course, of the urgent need to stabilize banking and prevent recessions, but as the world soon learned, the Fed could not fulfill this promise. On the contrary, the existence of the bailout mechanism led to an even greater credit expansion, which triggered the apparent economic boom of the 1920s and subsequently led to the contraction known as the Great Depression. Nevertheless, the protection of the big banks succeeded; they did not go bankrupt during the Great Depression, and in 1933, the bankers' dream came true when President Roosevelt nationalized the gold of American citizens and allowed the advent of pure fiat (we will describe this a little further below).

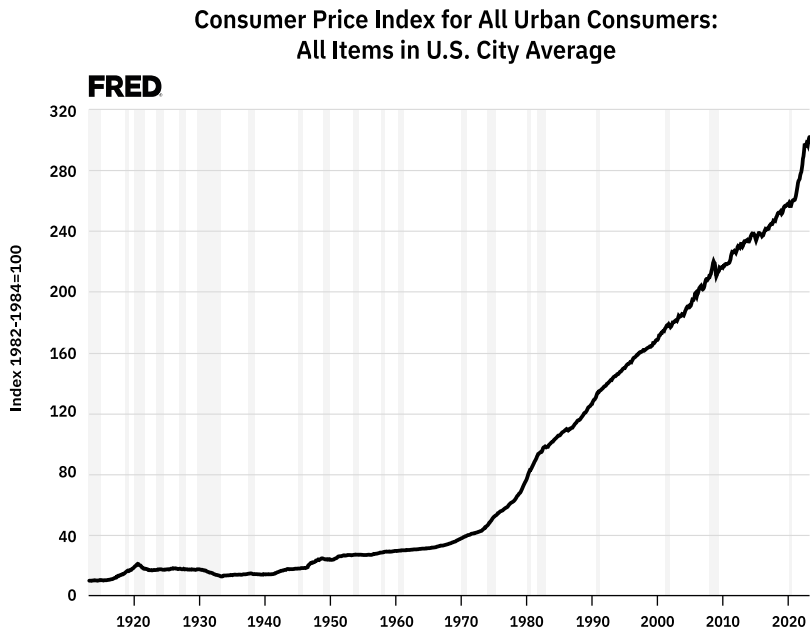


Chart showing the consumer price index in US cities, 1913–2023. The gray areas are US recessions. Source: Fred.

In the 108 years since the creation of the Fed, there have been a total of 20 recessions in the United States. Central banking is often presented as an invention that ensures economic stability.

However, the opposite is true: it is the originator of periodic credit expansions and subsequent contractions. In this cycle, there is a transfer of wealth to those who get the new money first: the government and the financial sector (described by the so-called Cantillon effect). This wealth is not newly created; it is a redistribution of purchasing power away from those holding cash and savings and those who are dependent on wages. **Inflation is a reverse tax: the poor pay the rich.**

The Cantillon Effect

Let's imagine a pyramid of champagne glasses. First, we fill the glass at the very top, and as it overflows, those on the level below it get filled, and so on. With each successive level, the champagne loses its freshness, and the glasses on the very last level are filled with a flat trickle at room temperature.

This is essentially the way that new money spreads through the economy today. Those who get the money

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first enjoy its full purchasing power; they have more money and prices have not yet gone up. As soon as new money starts to be spent (typically on financial market instruments), word of a higher money supply spreads through the economy, and prices rise. Those at the bottom of the money distribution pyramid face higher prices before new money reaches them (e.g., in the form of wage increases).

The dynamic of how new money spreads through the economy is called the Cantillon Effect. The Cantillon effect predominantly results in the enrichment of the upper strata of society at the expense of the lower strata.

1933: Executive Order 6102

On April 5, 1933, President Franklin D. Roosevelt issued Executive Order 6102, "prohibiting the hoarding of gold coins, gold bars, and gold certificates within the territory of the United States." The president ordered all citizens to hand over almost all their gold

by May 1; it was purchased from them at a price of \$20.67 per ounce. Disobeying the order meant a fine of \$10,000 (roughly \$200,000 today) and/or 10 years in prison. Citizens were allowed to keep coins with a total weight of 5 ounces (approximately \$100 at the time). After the citizens surrendered the gold, the government changed the official gold valuation to \$35 per ounce. The government knew about this planned revaluation (or rather devaluation) in advance; the official definition of the dollar no longer corresponded to reality after the considerable credit expansion of the previous twenty years. The government thus legally robbed its citizens. American citizens were subsequently prohibited from owning gold until 1974.



Executive order by which FDR nationalized the gold of American citizens Source: Wikipedia.

The nationalization of American gold was fundamentally facilitated by one fact: people had already become accustomed to comfortable monetary instruments in the form of notes, checks, and bank transfers. The majority of gold coins and bars were thus no longer in circulation but stored “safely” in bank vaults. Such gold could hardly be concealed, as banks, of course, kept records of their clients and could be asked to share data.

The main reason for issuing Executive Order 6102 was the fact that the Fed was still required to back dollar bills with gold. Since the very creation of the American central bank was highly controversial, it was not possible to just jump straight to full fiat. Federal reserve notes therefore had a mandatory minimum reserve ratio of 40% gold. Twenty years after the creation of the Fed, this requirement was already “too binding”, and the nationalization of gold followed by a 58% devaluation of the dollar once again loosened monetary policy. In addition, citizens could no longer make a feared run on the bank because they simply could not demand real money from their bank anymore.



Notice the sentence at the bottom of this bill: “Will pay to the bearer on demand one dollar.” Dollar bills prior to 1933 were simply vouchers that could be exchanged for real money in the form of gold (previously also silver). Source: Wikipedia.

1971: The End of Pretense

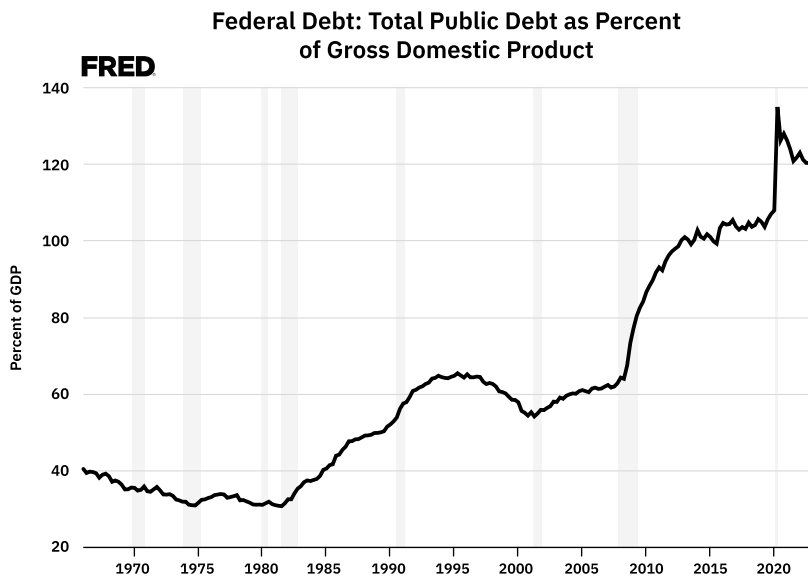
Towards the end of World War II, a conference was held in the American town of Bretton Woods. The aim of the conference was to create a new world financial order, the basis of which would be the dollar.

The conference fulfilled this purpose perfectly: after thousands of years of gold and silver, dollars became the new world currency. Dollars at that time were still exchangeable for the underlying gold, but only for the central banks, not private citizens. However, the issuance of new dollars was continuous (the accounting trick of money created from debt was too tempting), and thus the dollar was steadily losing its value. As the dollar was artificially overvalued against gold, there

was a gradual outflow of gold from the United States. The American government sought to prevent the outflow of gold by all possible means: friendly “agreements”, manipulation of the market price (through the so-called London Gold Pool in the years 1961–1968), and unilateral changes to the original Bretton Woods agreement, but it was all in vain, and the United States continued to lose gold due to the widening difference between the official valuation and the market price of gold. Does this remind you of something? Yes, this is the same problem experienced by the rulers of ancient Rome: the problem of debased money whose nominal value no longer corresponded to the actual content of the precious metal.

In 1971, US President Nixon ended the pretense and “temporarily” suspended the convertibility of the dollar into gold. Dollars were no longer convertible, even for central banks.

It's only been some fifty years since we began living in a world of pure fiat, a world of money “backed” by debt.



And—what a surprise—the debt has been growing rapidly since the 1970s. Development of United States federal government debt as a share of GDP, 1966–2023. Source: Fred.

Bitcoin: The End of Monetary History?

In terms of monetary history, this 50-year experiment with pure fiat is just a curious digression. Like the decline of the denarius, the solidus, or the Spanish dollar, the “debt dollar” will not be around forever. The loosening of the original guarantees and definitions is already irreversible, and without much hyperbole, it is becoming difficult to differentiate the monetary policies of the United States and Zimbabwe. Perhaps the only difference is the fact that US dollars, unlike Zimbabwean ones, are still in high demand around the world and form the currency reserves of most of the world’s central banks. It is impossible to say in advance what the disintegration of the current world financial order will look like; however, I dare say that this current order will not survive for another fifty years.

Bitcoin is very much a restorative technology. After the crazy experiment of fiat money, this is a tool that has the potential to bring back a much-needed monetary anchor to our economies.

For the first time in the history of humanity, we have available money for which:

1. We do not need a central authority for minting and certification of monetary units.
2. There exists no monetary policy in the real sense of the word.

The first point addresses the inherent vulnerability of gold and silver. Every central authority has always abused its position sooner or later. Point number two is the Achilles heel of the modern financial system. Central planning in the field of money works no better than central planning in any other industry.

Bitcoin brings hope that our troubled monetary history has finally met its end. It will no longer be possible to wake up the inflation monster that eats up the savings and wages of those who are

defenseless against it. **With bitcoin, it is possible to start saving again. Not investing or speculating, but actually saving, i.e., keeping some of the earned money and with it preserving purchasing power into the future.**

However, for bitcoin to become real money without the risks described in the previous chapters, two rules must be followed:

1. Overseeing that bitcoin's issuance schedule does not change. We need to operate and use as many bitcoin nodes as possible to create a hard core of monetary sovereignty.
2. Have our bitcoin in a complete, exclusive, uncompromising self-custody.

While the first rule is critically important in the long run, the second rule is acute here and now. Because the "6102 risk" can materialize at any time. And the current state is in its favor.

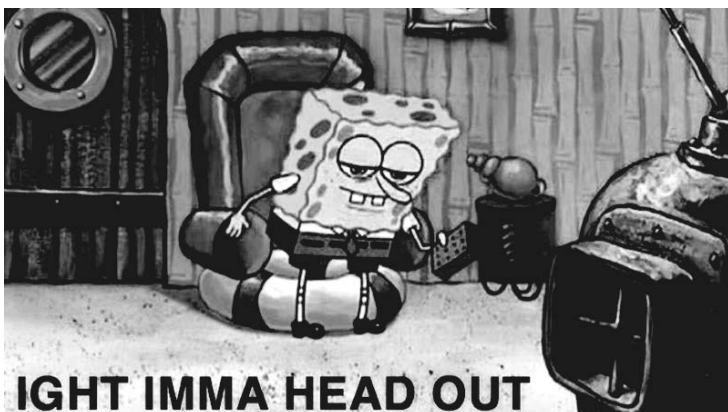
Bitcoin and the 6102 Risk

The biggest risk in terms of large-scale confiscation of bitcoin are entities that custody bitcoin on behalf of their customers, whether those are custodians or exchanges, the largest of which are concentrated in the USA. Per available data and estimates:

- Coinbase holds around 1 million bitcoin.
- Grayscale, one of the first bitcoin trusts, holds more than 600,000 bitcoin.
- Kraken, another of the largest bitcoin exchanges in the world.
- BitGo: one of the world's largest professional custodians, serving institutions that do not want to handle bitcoin private keys directly. Over time, other US institutions, including banks, are

gaining authorization to hold bitcoin in custody. And all of these institutions have full client identification information, so even if the clients manage to withdraw their bitcoin in time, Uncle Sam will knock on their door later. The events of 1913 and 1933 show that something like this can happen perfectly legally.

These lines really do sound like a conspiracy theory. Really, a hundred years later, even a secret meeting on an island with the comic book name of Jekyll Island to create a federal banking cartel sounds like a conspiracy theory! But the reality is that the fiat dollar is running out of steam, and it doesn't really matter anymore whether it will last another five years or twenty years. If there are savvy individuals in the Fed, the government, the bureaucracies, and among the powerful bankers, they are probably already planning their next move. And in the context of monetary history, the blanket confiscation of millions of bitcoin to build another financial system on this basis doesn't actually sound all that crazy. This would likely keep the United States in the lead while the rest of the world would be left with worthless paper and database entries. It might spark some kind of war, but that's nothing they don't have experience with in Washington. And after all, everything could be solved peacefully: by an agreement to redeem the bonds in bitcoin (at the exchange ratio set by the United States government :-)



You, my dear reader, the moment the conspiracy theories begin to fly

But let's put the conspiracy theories aside. The bottom line is simple and valid, whether it's the government, a hacker, or an exit-scamming CEO that wants to rob you:

If you don't control the keys, you don't control your bitcoin. And if you have a publicly known door, someone might come knocking on it.

No More Patches

Studying monetary history makes a person aware of one repeating motif over the past thousands of years: interventions in money always cause problems that are addressed by further interventions. The history of money is the history of patching previous holes.

Coin debasement led to inflation, which led to further debasement, the redefinition of the monetary unit, and compulsory legal tender laws. Bimetallism and the gold standard in an economically illiterate setting led to Gresham's law, with one of the metals being taken out of circulation. Government-sanctified fractional reserve banking led to the emergence of a legal banking cartel. Debt money unleashes wild economic cycles, and the depression phases of cycles push central bankers to increasingly loosen rules for pumping new money into economies.

The monetary history of the entire world is culminating in the irresponsible experiment of pure fiat. Money is no longer the anchor of the economy; it is a token in the casino of the financial markets. You can try your luck and play this game, or you can start saving sound money.

We don't know what other patches bankers, politicians, and officials will pull out of their sleeves. Helicopter money? CBDCs? A populist attempt to return to the gold standard?

No matter what the next patch for the broken financial system will be, we are not relegated to sitting around and waiting for our ruin or salvation. We have the opportunity to keep savings in sound money that cannot be debased. We have the opportunity to get off the historical merry-go-round of perpetual monetary fraud and take money into our own hands. We have the option to choose bitcoin.

IV. BITCOIN: SEPARATION OF MONEY AND STATE

State money is the last great tool of the state for controlling society. History is merciless towards state power over institutions: over the centuries, the state has lost control over the Church, the media, education, and the economy.

The Origins and Nature of the State

In the chapters above, we looked at human action, time preference, and money from a “longer and higher” perspective. Using the analytical apparatus of the Austrian school of economics (“higher” perspective) and history (“longer” perspective), we begin to understand what bitcoin really represents: it has the potential to take money out of the hands of the state and return it to society. And in order to understand the importance of a **separation of money and state**, we must take a look at the state itself from a higher and longer perspective.

Franz Oppenheimer, a German sociologist who in 1908 wrote a small book entitled *The State: Its History and Development Viewed Sociologically*, will help us in this task. According to Oppenheimer, romantic theories about the origin of the state as an institution for better political coordination are in stark contrast to historical reality. The origin of the state lies in the simple dynamics between three basic groups, which were established with the expansion of humans after the Neolithic Revolution (approximately 10,000 years before Christ): Hunters, herdsmen, and farmers. Hunters and herdsmen were nomadic by nature, while farmers led a settled life. Hunters were mostly neutral towards other groups (they didn't have much to gain from others and weren't an interesting target themselves), but herdsmen represented a natural predator towards farmers. While herdsmen were mobile and used to frequent combat (both against other herdsmen and against natural predators attacking

their herds), farmers were easy targets, always in the same place and devoting maximum energy to their land and crops.

“...the cause of the genesis of all states is the contrast between peasants and herdsmen, between laborers and robbers, between bottom lands and prairies”

– Franz Oppenheimer

From this initial dynamic, Oppenheimer derives six stages of the creation of a state:

1. **Looting:** Herdsmen raid settled farmers and rob them of food, furs, women. The raids are characterized by burning villages and similar pastimes.
2. **Exploitation:** Over time, herdsmen realize that farmers are the metaphorical goose that lays the golden eggs. Instead of a one-time looting, it is more profitable for herders to take only the surplus production from the farmers and keep them alive. However, in order for the farmers to be here for the next harvest, it is necessary to protect them from other groups of raiders. Herders thus begin to protect farmers – not out of love, but in their own interest.
3. **Tithes:** taking the entire surplus production is costly for herdsmen since it requires full monitoring and control of individual farmers. They therefore establish a uniform tax or tithes for farmers, in short, a flat-rate payment for protection. For farmers, such an arrangement is also more advantageous, as it allows them to keep a larger part of their production, motivating them to further increase productivity.
4. **Occupation:** It begins to be advantageous for herdsmen to leave the nomadic lifestyle and instead settle permanently with the farmers.

5. **Monopoly:** Lords (into which the herdsmen have transformed) appropriate the monopoly right to administer justice on “their” territory. The lords do not like mutual disputes and fights between individual villages (these reduce the yield), so they adjudicate these disputes themselves and establish relative peace in the territory.

6. **State:** The lords create a mythology of their family (typically: they have been given the right to rule by gods), establish a hereditary title to territory and subjects, create hierarchical structures for better tax collection.

Cattle and Capital

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Livestock is the earliest capital that was available to mankind. Compared to game (targeted by hunters) and crops (farmers), livestock could be kept over the long term, was self-regenerating and scalable (one family could have a herd of thousands of heads). The Latin term *capitale* is derived from “head”, a piece of cattle. The English term *cattle* originally denoted any property and income, and has a common etymological origin with *capitale*. Cattle were also one of the first forms of money.

We can summarize Oppenheimer's thesis on the origin of the state as follows: In the distant past, stronger nomadic herdsmen conquered weaker, settled farmers. Since the desire for profit without labor was universal among nomads, this arrangement eventually paid off mutually (farmers needed protection from other raiders), and thus the state was born. According to Oppenheimer, no matter where a historian looks, the origin of the state is violent subjugation.



A herdsman informs a farmer of the new state of things. Approximately 10,000 years B.C., not colorized

In addition to his explanation of the origins of the state, Oppenheimer provides us with another very useful insight when he divides the means of subsistence into **economic means** and **political means**. Economic means are cultivation, production, and trade – productive effort presupposing people’s voluntary, mutually beneficial cooperation. Political means are, in turn, robbery, subjugation, collection of ransom, or taxes. “The state is an organization of the political means,” summarizes Oppenheimer.

And it has been so throughout human history: over time, the political means of obtaining sustenance have transformed from the simple collection of tithes to the creation of production and trade monopolies, the collection of more and more taxes and duties, and finally the control of money and the use of the “monetary perpetual motion machine” – central banks and fiat money.

Let's not confuse the state with some abstract monster (or, conversely, a savior), however. “State” is simply the designation of a privileged class that lives by political means and seeks to maintain its position

with the aid of mythology (from divine mandate to theories of the social contract and pseudo-economic considerations of public goods) and, last but not least, violence (as another sociologist, Max Weber, says, the state can be well defined as a monopoly on violence). The state is a specific group of people who have their own motivations.

State vs. Society

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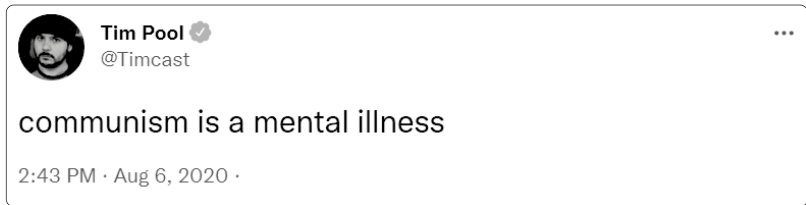
The reader may be slightly taken aback that we're using the terms "state" and "society" as antipodes. State education and, to a large extent, the media have indeed cultivated a long-term impression in us that the state and society are synonymous. It is not so. **Society is all the people living in a certain territory and/or sharing certain traditions;** society has its own culture and institutions, which often transcend states geographically and temporally (e.g. during the 20th century, Czech society survived six different state arrangements). **The state is a power agglomeration whereby certain members of society are placed in a privileged position in which they can legally use the political means of sustenance** (violence, taxation, commands and prohibitions). With the development of the state in the form of a democracy, the apt quote of the French economist Frédéric Bastiat begins to apply: "The state is a great fiction, with the help of which everyone tries to live at the expense of everyone else."

Motivation and Responsibility in State Structures

Let's pause for a moment and consider the above-mentioned motivations within state structures. If the state has control over a certain sector of the economy, it immediately presents a double problem.

First, the problem of economic calculation. As we mentioned in the chapter on the Austrian school of economics, state control means the absence of market prices, which are valuable information signals. Sectors under state control face the problem of "groping in the dark" – a politician and a bureaucrat simply have no way of determining which allocation of factors of scarcity is optimal.

That is why communist countries and state-controlled industries are notoriously backward.



That is also true.

Then, second, is the problem of politicians' and bureaucrats' motivations. As Ludwig von Mises points out in *Bureaucracy*, politicians and officials are, unsurprisingly, people with their own personal motivations. And the nature of state structures and the services they provide is such that politicians and officials rarely bear the long-term costs of their decisions. However, they are capable of appropriating short-term returns, be they votes, well-paid jobs, or backroom deals in the form of future positions in regulated industries (the infamous “revolving door,” typically between financial regulators and big banks).

The idea that the motivations of state officials and employees are not always exactly in line with the public interest is neither too controversial nor exclusive to the “fringe” Austrian school of economics. There is a whole specific branch of mainstream economics devoted to examining motivations in the public sector. This is the so-called Public choice theory, and its proponents have rightfully been awarded several Nobel prizes in economics.

Why We Should Separate Institutions From the State

Let's move on to the question of why we should strive to separate various social institutions (including money) from the state. In addition to the already mentioned reasons—the problem of economic

calculation and the skewed motivations of those in power—it is also important to remember that various institutions have been used throughout history to bolster the state's mythology and make it easier to control the population.

What is an Institution, Actually?

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Referring to money as an institution may seem strange to the reader. Ordinarily, we talk about institutions as specific organizations: companies, authorities, think tanks. In the social sciences (history, economics, sociology), however, the word institution refers to a long-established pattern of behavior that serves to fulfill social needs. Institutions are created by evolutionary pressures as so-called spontaneous orders (FA Hayek deals with this topic in detail). The institution of money arose out of the need to exchange and store value over the long term. The institution of the school arose from the need to organize the transfer of knowledge and skills. Institutions may or may not be administrated by the state. Institutions are a natural outcome of societal pressures and will exist even without state intervention.

Institutions such as the Church, school, and media are potentially very powerful instruments of state propaganda, and it comes as no surprise that totalitarian states will not allow any competition or private initiative in these institutions. In democratic countries, the potential for abuse of these institutions for state propaganda may not be so obvious; the problem, however, lies in their inherent potential for abuse. State influence over institutions is like a loaded gun, waiting only for a hand that will not hesitate to pull the trigger.

State power over the institution of money is expressed in very specific ways. It is not used for propaganda but for the redistribution of wealth; the power to redefine and create money makes it possible to easily transfer wealth from the productive sector to those who control the money (the state and the financial sector), providing a typical example of Oppenheimer's political means.

Simply and succinctly, state influence or direct control of various social institutions weakens society and strengthens the state. Fortunately, through the course of history, we have seen a clear trend toward the gradual separation of institutions from the state.

Historical Separations of Various Institutions From the State

Even though new technologies have improved the ability of states to surveil and control society, there is reason to be optimistic: the state has steadily been losing its power over the course of history. Money is the last great institution that facilitates the control of populations and economies, and as we shall see below, the era of state money is coming to an end through its own inertia.

But first, let's review the most visible examples of the separation of institutions and the state. We will see that humanity (especially Western society) has come a long way in the matter of the emancipation of man from the state.

Religion

During the Enlightenment (17th–18th centuries), all civilized nations underwent the separation of church from state. The importance of this separation cannot be overstated. As we noted at the beginning of this chapter, the herdsmen-turned-lords developed a mythology over time that helped them maintain their privileged position throughout the ages, and this mythology usually centered around a divine mandate.

The divine mandate can be observed in every major empire of history: from Egyptian pharaohs to Chinese dynasties and Japanese emperors, from Inca rulers to European kings, they all proclaimed their right to rule was granted by god, or even that they themselves were an embodiment of god on Earth.



Is she still behind me? I knew it! They won't leave me alone, not even to take a ride on my beloved Chubby. Source: Wiki.

The ever-present reliance on the divine mandate across history and geography hints at the powerful legitimacy it provided to rulers. Every human culture in history has had its natural belief in the supernatural and the divine element; linking political power with the supernatural was an obvious solution to long-term legitimacy; you do not question god. And if god chooses a pharaoh, king, or emperor, who is the simple peasant to ask questions?

Like any power over an institution, this divine right was also abused. The most famous example is the Spanish Inquisition, which was active in the years 1478–1808 and functioned as a kind of religious Gestapo, removing inconvenient and critical elements of society.

The separation of church and state resulted from the functioning of economic laws. As economic specialization gradually increased, so did the importance of cities, and these cities needed ever more people. Economic migration released large numbers of people from

the clutches of mental and material slavery; in cities, they were able to earn an independent income and find new communities and ideas. The advent of the Enlightenment, enhanced by the technological revolution, then turned the state mythology on its head: the true sovereign was the city dweller, and the mandate to rule came from the people, not from heaven. The rulers were forced to acquiesce to the ideas of the Enlightenment as they became economically dependent on the cities; the creation of wealth shifted from rural peasants to urban artisans, entrepreneurs, and their employees.

“The industrial city is directly opposed to the state. As the state is the developed political means, so the industrial city is the developed economic means. The great contest filling universal history, nay its very meaning, henceforth takes place between city and state.”

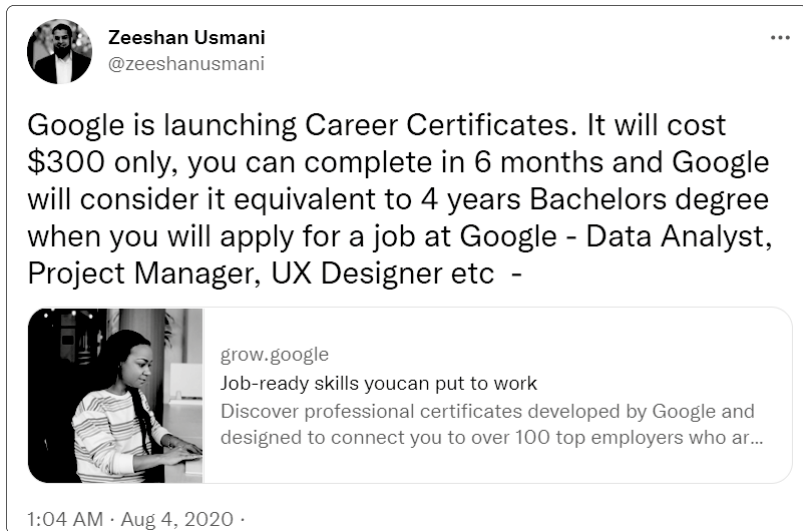
– Franz Oppenheimer

The gradual disappearance of the divine right greatly undermined the legitimacy of the state itself. In the course of the last two centuries, we have seen new forms of advocacy for state legitimacy emerge: national identity, social justice, and the provision of public goods. Before long, all were uprooted by a shocking reality: experiments in finding new meanings of the state gave rise to world wars, concentration camps, gulags, miserable quality of public services, and systematic inequality before the law. After its separation from the Church, the state as a concept has been going through a fierce identity crisis.

Education

Although it may seem that education is still a sovereign domain of the state, recently this assumption has been diverging from reality. Yes, in most countries, schooling is compulsory, and a large number of secondary schools and universities are still part of the government-run system. However, people who want to maintain their expertise and competitiveness after leaving school must educate themselves on their own, with the help of YouTube, Udemy,

Khan Academy, etc. The trend is even getting to the point where some companies no longer insist on formal schooling, requiring real education and skills instead.



Zeeshan Usmani
@zeeshanusmani

Google is launching Career Certificates. It will cost \$300 only, you can complete in 6 months and Google will consider it equivalent to 4 years Bachelors degree when you will apply for a job at Google - Data Analyst, Project Manager, UX Designer etc -

grow.google
Job-ready skills you can put to work
Discover professional certificates developed by Google and designed to connect you to over 100 top employers who ar...

1:04 AM · Aug 4, 2020 ·

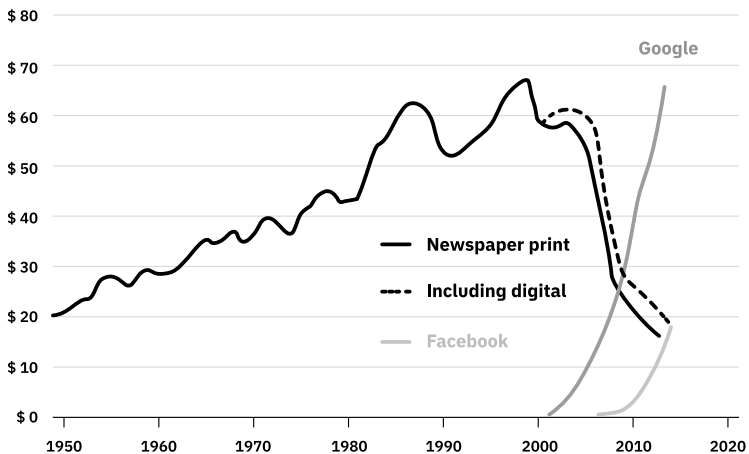
Three hundred dollars and six months for the equivalent of a Bachelor's degree. Sounds like a better deal than \$30k for some useless state-prescribed propaganda! Source: Twitter.

Media

The media is a good example of the technological separation of an institution from the state. The development of the internet resulted in a very rapid disruption of existing media houses (both private and state-owned), which were directly or indirectly connected to the state. Even in countries where the media were not under direct state control, there was a problem with the manipulation of the media in the pre-internet era. Having a critical view of the establishment can, for example, make access to information sources impossible. In the United States, granting access to journalists to White House press conferences has long been a controversial issue, as asking questions that are too independent can cost journalists their accreditation. The more power the state has over society and the greater the barrier to “market entry” in the media, the easier

it is for the state to engage in propaganda. The internet and the blogs, social networks, and independent servers emerging on it, such as Zerohedge, Wikileaks, and The Intercept, as well as the podcasts and private conference recordings, are to a large extent taking the media out of the sphere of influence of the state.

Newspaper Advertisement Revenue: Adjusted for Inflation, 1950–2014



The decline of media houses is evident from advertising revenue statistics. Facebook and Google disrupted paper media; who will disrupt these giants in return? Source: Newspaper Association of America.

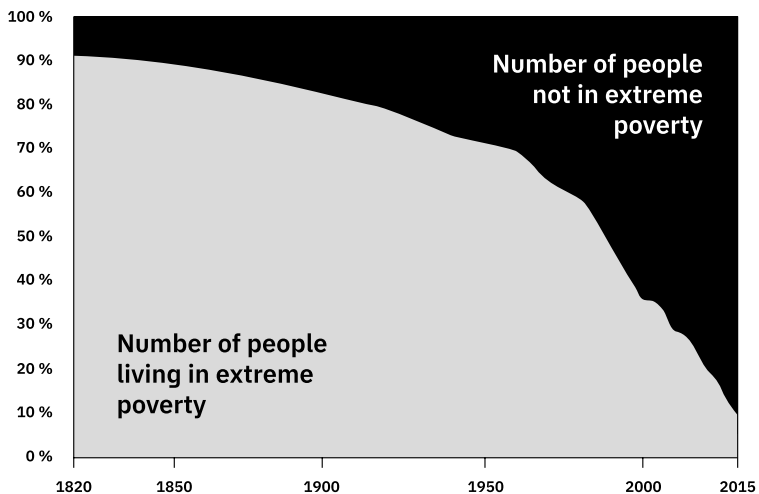
Of course, new players like Facebook and Twitter also engage in political manipulation. However, the fundamental difference compared to the old media houses with a monopoly on information is that social networks lack the secure, monolithic standing these houses had. The history of internet services to date rather points to the fact that market share is fleeting, and despite their current giant market share, they do not wield a monopoly on information. Moreover, a very positive trend is evident in that the abuse of their position itself is being seriously discussed; in earlier times, critics of the media were simply labeled as conspiracy theorists or otherwise silenced.

As ominous as the news and leaks revealing tech giants' ties to the state may seem, let's realize one thing: these companies and their form of

revenue from online advertising have only been around for 20 years, and it's already a publicly known issue that will again be addressed by disruption in the future. One possible future for non-state media may be news and social servers funded by streaming micropayments enabled by the LNP/BP (Lightning Network Protocol/Bitcoin Protocol) technology stack, such as has been happening recently with Nostr, Stacker News, Podcasting 2.0, and such.

Trade and Business

The last 200 years have been amazing and completely unprecedented in human history in terms of real wealth growth. For thousands of years, most people lived in abject poverty. Then, around 1820, something changed, and humanity embarked on a path that had seemed impossible until then: significant population growth combined with a significant drop in poverty. Around 1800, there were 1 billion people in the world, and over 90% lived in poverty. There are almost 8 billion people in the world today, and less than 10% live in poverty. That means that today, paradoxically, a smaller absolute number of people live in poverty than 200 years ago, although there are eight times as many people in the world!





Descent into Prosperity: Over the past two hundred years, most of mankind has finally emerged from extreme poverty. Source: ourworldindata.org.

What happened after 1820? Let's quote from the book *Progress* by Johan Norberg: *"By then, the Industrial Revolution was taking off in Europe, starting in England, a country where government control of the economy had been scaled back and the élites did not try to resist new technologies like they did in other places. (...) By 1900, extreme poverty in England had already been reduced by three-quarters, to around ten percent. Never before had the human race experienced anything like it."*

So, what actually happened after 1820? Freedom happened: a separation of production and trade from the state. People have one amazing tool at their disposal, which economist Julian Simon calls the *ultimate resource*: the human mind. A free mind can do wonders: create technologies that are *"indistinguishable from magic"*, as A. C. Clarke put it. The market, with the help of the price mechanism, is then able to coordinate millions of minds, thanks to which people are able to work magic and solve previously unsolvable problems in a short time. The result is enormous prosperity and, from a historical perspective, almost paradisiacal conditions of living.

And the most beautiful thing is that everyone benefits from the growing wealth – the poor most of all. Once again to quote Norberg: *"Since 1950, India's GDP per capita has grown five-fold, Japan's eleven-fold and China's almost twenty-fold (...) Almost nine in ten Chinese lived in extreme poverty in 1981. Only one in ten do today"*

 **HumanProgress.org** 
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In 1978, when China started to reform its failing communist economy, its GDP per person stood at \$1,583 (French levels in the early 1830s). By 2016, it rose to \$12,320 (the French level in 1964). China grew as much in 38 years, as France did in 130 years. buff.ly/2UJyIUl

6:29 PM · Apr 29, 2019

Technology and globalization have allowed poor countries to benefit from the catch-up effect: they have been able to rise out of poverty in a much shorter time than it took Western countries. Source: Twitter.

India is a strong example of the effect of the separation of production and trade from the state. In 1991, India was in a severe crisis caused by decades of state planning. Norberg: *“The crisis caused Finance Minister Manmohan Singh to stand up in Parliament and quote the nineteenth-century romantic Victor Hugo: ‘Nothing is more powerful than an idea whose time has come.’ The idea was to dismantle the protectionism and planned economy that had held India in poverty since independence in 1947. License requirements were removed, tariff barriers were reduced and the Indians got more freedom to start businesses and compete with the old monopolies. What used to be known as the ‘Hindu rate of growth’—a growth rate slower than population growth—is history. Since the reforms, average incomes have increased by 7.5% a year, which means that they double in a decade.”*

From time to time, some countries experience a return to the historical standard in the form of power control over production and trade, and the result is also the historical standard in the form of poverty, hunger, and filth. Socialism is a barbaric idea. It never worked in any industry, wherever or whenever it was applied.

And socialism doesn't work in the field of money either. It distorts price signals, redistributes hard-earned wealth, and discourages production. Central banking and fiat are just as pernicious as the Soviet Gosplan.

Impacts of Monetary Socialism

“Today’s banking system is much closer to a socialist arrangement than a market one,” is how Jesús Huerta de Soto, author of the book *Money, Bank Credit, and Economic Cycles*, describes our current reality, pulling no punches. The reasons for his stated characterization are as follows, and they apply in all the countries of the world:

1. At the pinnacle of the banking system is a state monopoly based on state-defined money.

2. The state grants banks the privilege to create new money based on debt.
3. The entire banking system is controlled by one planning agency, the central bank.
4. Losses are socialized to the maximum extent possible, with the help of bailouts, quantitative and qualitative easing programs, and finally, almost unlimited provision of liquidity by the central bank.
5. Crisis interventions are arbitrary, short-sighted and usually violate long-term principles of prudence in the name of short-term stabilization.

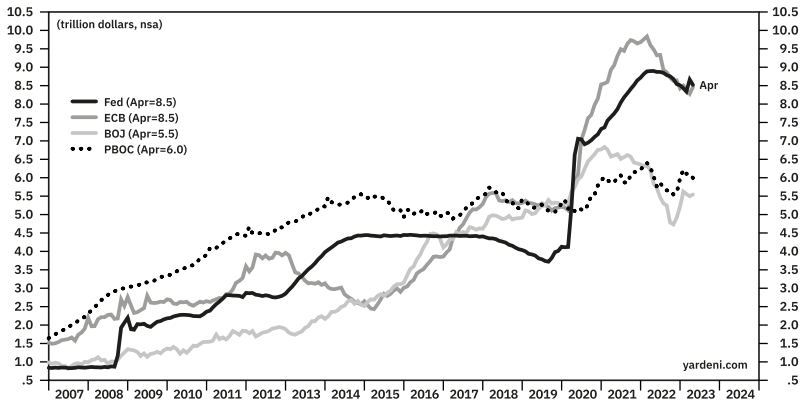
In other words, monetary and banking socialism has the same hallmarks as socialism in any other industry: a non-market environment and the pursuit of central planning produce unsatisfactory results that are subsequently patched up by more and more interventions. However, while in the case of state production of cars or food, the poor quality is evident at first glance, in the case of money, the destructive impact of the socialist arrangement is less visible.

The main consequence of monetary socialism is the systematic transfer of resources from society to the state and the financial sector. The state thus receives more funds than it should, were it to rely on taxation, and the financial sector gets richer and more influential at the expense of other sectors of the economy.

This systematic transfer of resources mainly happens in two ways. **First, fiat money created on the basis of debt ensures a permanent and unlimited demand for government bonds.** Since for decades now there has been no scarce collateral such as gold constraining the creation of money, the government can be sure that there will always be unlimited demand for its debt

in the “market”. Especially after 2008, when quantitative easing became a regular part of monetary policy.

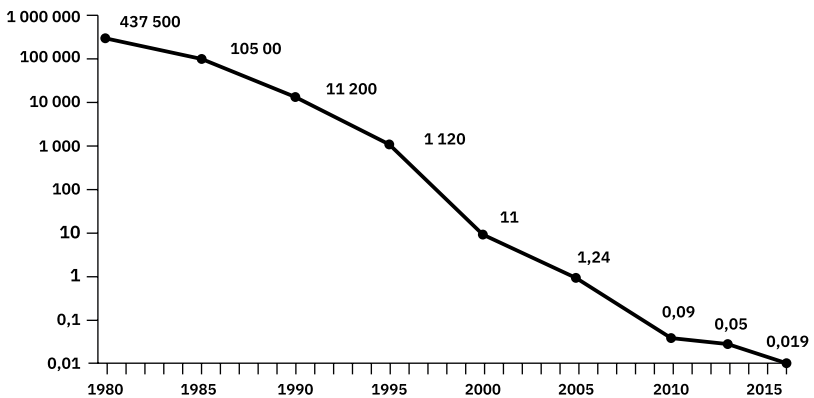
Total Assets of Major Central Banks



The balance sheets of the four major central banks ballooned after 2008. The main asset they are buying for newly printed money? Government bonds. Source: Yardeni Research/Haver Analytics.

Quantitative easing is a good example of the gradual erosion of definitions and guarantees regarding the value of state-mandated money. Like the rulers of ancient Rome, today's central bankers are not able to keep money from being debased in the long term. A \$600 billion quantitative easing program was implemented in 2008 as a one-time measure. This promise was broken (the volume of buybacks during the previous crisis was double that amount), and further rounds of outright purchases of securities by many central banks followed. The wave of quantitative easing that began in 2020 was unprecedented in its massiveness. The main type of security purchased was, of course, government bonds, purchased not only by the Fed but by all the major central banks of the world. In principle, this is the provision of unlimited money to the government – money that is newly created and whose purchasing power depends on a corresponding decrease in the purchasing power of other holders.

Second, an inflation-targeting policy is a smart way to redistribute the purchasing power created by productivity growth. With the gradual growth of productivity, it is possible to produce a larger quantity of better-quality products at lower costs. In a competitive environment, the inevitable consequence of productivity growth is a fall in prices. A good example of this process can be found in the electronics industry, where electronic devices are becoming more powerful, of better quality, and more accessible. Best of all, the ever-falling prices do not cause problems for manufacturers, as costs are falling even faster than sales prices due to more efficient production processes.



*The cost of storing 1GB of data is more than a million times lower than it was in 1980.
Source: Alimpacks.*

This effect is not something specific to electronics; a gradual decline in prices due to higher productivity occurs in every sector in which investment is made and in which there is a competitive environment. The technical term for such a drop in prices is “growth deflation”.

The Double Meaning of Deflation

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Deflation is an often trotted out bogeyman that central bankers and economists who support them like to hide behind. **The term deflation can have two meanings – a natural, long-term decline in prices due to increasing productivity, but can also mean the “deflating” of prices, mainly those of financial instruments that were previously inflated.** While the first case of deflation is beneficial for society and brings prosperity (individuals have more purchasing power as their savings increase in value without the need for risky speculation), the second case of deflation is actually harmful to the economy and is accompanied by financial crises and the risk of cascading collapses. **Harmful deflation is nonetheless a direct consequence of the actions of the central bank and the financial sector.** The danger inherent in the “fight against deflation” is that within the framework of this fight the natural trend of falling prices is prevented. The artificially inflated prices of financial instruments continue to be inflated, until one of three final scenarios plays out – a deflationary collapse (in the style of the Great Depression), a creeping nationalization of the economy (such as what has been taking place the last two decades in Japan), or hyperinflation (Austria in the 1920s, Russia 1990s, Venezuela since 2016).

Most of the world's major central banks work with an inflation target of 2%. The requirement is that the typical consumer's basket of goods increase in price by an average of 2% per year. However, if, due to growing productivity, a natural price drop of 3% were to occur in the same period, then consumers would be deprived of a total of 5% of their purchasing power. Instead of paying 97 dollars for a certain amount of goods, they pay 102 dollars. Instead of being able to save 3 dollars, people are forced to pay 2 dollars more. This is a very important aspect of the harmfulness of artificial inflation. **Society loses far more than nominal inflation, as it is also deprived of the natural increase in purchasing power due to falling prices as productivity increases.**

Monetary Socialism and the Ever-Hungry State

Now that we've shown how purchasing power is redistributed under monetary socialism, let's have a look at the consequences of such redistribution.

Power over the money allows the state to earn much greater revenue than it could by means of simple taxes and the sale of bonds in the free market, i.e., without buyers who wield the privilege to create money and without institutions that are obliged to buy government bonds. We can easily illustrate this using, as an example, the American federal budget of 2023

BUDGET PROJECTIONS FOR FY 2023 (As of May 12, 2023)

OUTLAYS	\$6.4 Trillion
REVENUES	\$4.8 Trillion
DEFICIT	\$1.5 Trillion
DEBT HELD BY THE PUBLIC (End of Fiscal Year)	\$25.8 Trillion

Source: Congressional Budget Office

Public expenditure (outlays) is \$6.4 trillion, whereas revenues are only \$4.8 trillion. To fully cover the outlays, the government must borrow \$1.5 trillion, or 23.4% of the total expenses. This is very alarming in and of itself, but what's even worse is that the government of the world's strongest economy borrows heavily every year (over the last 50 years, only 5 have seen a budget surplus).

The government and the media try hard to hide the extent of the problem by comparing the deficits and total debt to the nation's domestic product, or GDP. However, such a comparison is completely irrelevant. Relevant are always the revenue and expenditure of the entity in question; you too do not compare your household's expenditures to the total income of the apartment building you live in but to the income of your own household. Government deficits should always be compared with government income.

Monetary socialism allows the government to cover a significant percentage of expenditures without having to accede to the unpopular step of raising taxes. Most of the world's countries today operate on the principle of deficit budgets, where a shortfall in funds is covered by issuing government bonds, which are purchased by the financial sector with the backing of the central bank.



They're everywhere, but not everyone can see them.

But monetary socialism aids the state in terms of taxation as well. As a result of inflationary monetary policy, taxpayers gradually move into higher tax brackets as their nominal income rises, even though their real income stays the same or drops.

What does the state do with all this money? It, of course, runs and finances many things that, at first glance, appear beneficial (health care, education, infrastructure, social security). However,

leaving aside the aspect of the often sub-par service quality of these government services (as public servants are not incentivised to satisfy their customers), these are increasingly replaced by private initiatives over time; it is quite common in countries with public healthcare and schooling to shop around for private alternatives, as these are of a much higher quality and are readily available without long waiting lists. A far worse consequence of inflated government spending are “services” that are actually not demanded by anyone and would have no place in a free society:

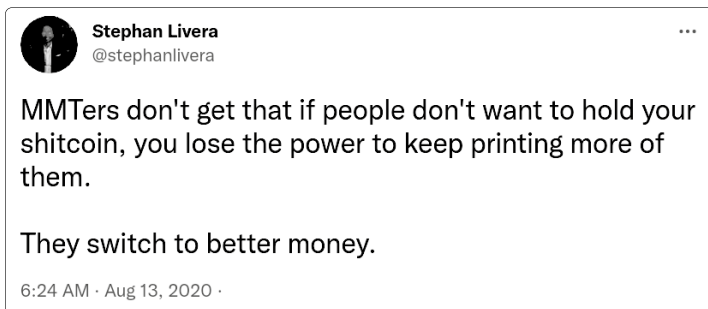
- Wars “for democracy”. The wars in Vietnam, Afghanistan and Iraq are just three of the most famous cases out of a large number of nonsensical military campaigns in which the US has engaged over the past 50 years, escalating the conflict to the virtually complete destruction of the given country. A defensive war may be justifiable, but the US campaigns of the past decades have been anything but that. US Military expeditions are possible by the almost unlimited resources available to the US government thanks to the exceptional status of the US dollar as the world's reserve currency.
- The War on Drugs. Launched in the USA in 1971, the war on drugs is increasingly being commented on as a complete fiasco in terms of fulfilling its original intentions. The United States has the world's highest incarceration rate, with a substantial share of inmates imprisoned for the possession and sale of soft drugs, such as marijuana. Similar to alcohol prohibition, drug prohibition led to an increase in potency of the drug and introduction of destructive substances such as fentanyl. The consequences of both alcohol and drug prohibitions have been the very opposite of original intentions, with crime becoming more organized and violent, and addiction more widespread.
- The War on Poverty. The welfare state is often presented as an achievement of modern civilization, but it is also worth considering what consequences it has for the labor market and private charity. In this context, I recommend exploring the

ideas of Thomas Sowell, an American economist, according to whom the war against poverty is the main cause of the gradual creation of ghettos in American cities. The welfare state is (much like the war on drugs) a program created in the 1970s after the advent of the pure fiat money system, which allowed for an explosion in government spending.

- War on the Virus. Following the example of previous initiatives, in 2020-2021, an uncompromising war was waged around the world against the ideal enemy of the state: the invisible virus. Only thanks to the illusion of wealth derived from massive money printing could governments afford to pay blanket compensation for the months-long disruption of economic activity. This war will probably have the most devastating long-term consequences of all those named above, as it resulted in a difficult-to-repair disruption of global logistics, production processes and mutual trust in society.

Monetary socialism diminishes state officials' accountability to taxpayers, significantly increases the state budget, and allows the financing of dubious programs that serve rather to satisfy egos and score short-term political points while having devastating long-term effects on society.

And now: **Do you think something will change fundamentally in the future? If yes, then only in the sense of further entrenching the trend that has already begun.** Modern monetary theory (MMT) is gaining popularity, essentially saying that a state with a central bank should stop taking any account of the amount of deficit and indebtedness as it can cover all expenses with the help of a printing press. In principle, this is the monetary policy of Zimbabwe, with the only difference being that the dollar is the world's reserve currency and has had no competition until recently.



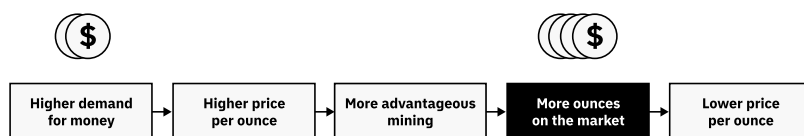
The problem with MMT: the shitcoin called USD has competition in the form of better money. Source: Twitter.

Gold or Bitcoin?

Libertarians and Austrian economists have been foretelling the end of monetary socialism for decades. Most have been calling for a return to sound money in the form of gold. Gold has been money for most of human history, and it has almost optimal monetary properties.

However, in 2009, Satoshi discovered something that no one expected: a potential money with even better qualities than gold. In contrast to gold, bitcoin has two unique properties: it is absolutely scarce and, at the same time, intangible. These features make it a very attractive candidate for the future money of mankind, especially if non-state money is indeed to remain non-state.

In practice, absolute scarcity means that higher demand does not increase the issuance of monetary units. For precious metals (which are not absolutely scarce), the following mechanism of balancing supply and demand can be observed throughout history:



Balancing supply and demand for precious metals

In the case of bitcoin, however, the mechanism is as follows:



Balancing supply and demand for bitcoin

Higher demand for precious metals leads to more new metal entering the market; the supply here acts as a regulator of price growth, and gold and silver thus maintain a more or less stable purchasing power. Bitcoin has a maximum number of circulating units built into the protocol: 2.1 quadrillion satoshis, or 21 million whole coins. An increased demand for money therefore does not trigger the supply of new satoshis to the market for bitcoin; rather, it results in the adaptation of network security.

Is There Enough Bitcoin?

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2.1 quadrillion satoshi is an enormous number of units – if 1 satoshi were equal to 1 cent today, then the total market capitalization of bitcoin is 21 trillion dollars, which is roughly twice the market capitalization of gold. If bitcoin were to encompass all the money in the world, then 1 satoshi would be equal to about 5 cents - the “broad money” of the entire world is about 100 trillion dollars (according to Visual Capitalist). Bitcoin is therefore sufficient to fulfill the role of global money, and at the same time we would not have a problem with the lowest monetary unit being too valuable. Moreover, so-called subsatoshi payments can already be made in the Lightning Network. Bitcoin is in principle infinitely divisible (but that doesn’t diminish its scarcity, for the same reason slicing the pizza into 8 pieces doesn’t satisfy hunger any more than slicing it into 6 pieces).

With the gradual separation of money from the state, we can expect the price per satoshi to continue rising, as this is the only

mechanism that, in the case of bitcoin, balances the demand for money and its supply in the market (existing holders must be enticed by the prospect of sufficiently high purchasing power since miners cannot increase market supply).

But doesn't this mean bitcoin is money that is just as bad as fiat, only with an opposite indicator? No, because the significantly increasing purchasing power of satoshi is only a temporary phenomenon. This is the effect of what is called Gresham's law. This law, originally describing the behavior of gold and silver in the context of state-imposed bimetallism, can be adapted to the case of the co-circulation of bitcoin and fiat as follows:

Nakamoto-Gresham's Law

Bitcoin drives out fiat as a store of value. Fiat, on the other hand, drives out bitcoin as a medium of exchange.

Rationale:

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Fiat is money with a long-term decline in purchasing power. It is rational to use fiat for short-term spending – as a medium of exchange.

Bitcoin is money with long-term growth in purchasing power. It makes sense to use bitcoin for long-term savings – as a store of value.

The above applies under the assumption that the individual still has income in fiat. In the case of income in bitcoin, bitcoin inevitably also becomes a medium of exchange.

Nakamoto-Gresham's Law simply states that bitcoin will appreciate against fiat until such time as income in bitcoin becomes a natural occurrence. It is likely that by some point fiat money will no longer exist, so comparing purchasing power to fiat will no longer be relevant; the important thing will be the comparison of bitcoin's purchasing power against goods and services. The effect of Nakamoto-Gresham's law will thus disappear, and the dominant

effect will be the slow and gradual growth of purchasing power due to productivity gains.

The Credit Market and the Two Stages of Separation

Some economists occasionally argue that bitcoin cannot fully function as money since it is not possible to build a credit market on top of it. The alleged problem is that nobody will want to borrow appreciating money, as the cost of such a loan would be very high. Borrowing 10 million satoshi when bitcoin is appreciating by 20% per year is sheer madness. The economy under a bitcoin standard, so the criticism goes, will therefore be an economy of permanent recession – no credit, no investment, high unemployment, and a privileged class of hodlers growing ever richer and laughing at everybody from the comfort of their citadels. Such naive criticism comes from a misunderstanding of the different stages of the separation of money and state. **There will be two stages of bitcoin fostered separation of money from the state.** The first stage, in which Nakamoto-Gresham’s law applies, is a stage of high volatility and “god candles”, with the price of bitcoin jumping around wildly, though with an undeniable upward trend. Just as it is irrational to spend bitcoin on consumer goods at this stage, it is irrational to borrow bitcoin as well. **The first phase of the separation of money and state can be characterized as a phase of price discovery and rebalancing:** humanity gradually becomes aware that there is a new form of money with better properties than fiat money or precious metals and subsequently rebalances its savings into the new money. This phase, understandably, takes a long time; bitcoin was initially a new, experimental technology with uncertain risks. Only as the years pass does our understanding of how best to use this technology grow, and the immutability of its monetary policy becomes something to be taken seriously.

Only in the second phase—after the price discovery and rebalancing phases—can bitcoin begin being used for other monetary functions, like facilitating the credit market. And at this stage, bitcoin will not behave much differently from precious metals; the only difference is that with precious metals, purchasing

power growth due to productivity growth is partially reduced by flexible supply, which can, however, also cause significant shocks. Examples are the high silver inflation in Spain in the 16th century or the California gold rush in the 19th century.

In contrast to today, the credit market in a world living under a bitcoin standard would likely be markedly more restrained. The smaller the role played by loans, the greater the financing of investment plans with the help of savings, which are worth building under a bitcoin standard because, in the long term, they appreciate at the rate of productivity growth. It is also likely that instead of just lending to entrepreneurs, investors would rather insist on a share in the enterprise; the precedent for this kind of arrangement is actually the relatively widespread “Islamic banking”, where one does not lend but rather invests (to learn more, I recommend a brilliant talk by Allen Farrington titled “Bitcoin and Islamic Finance”, given at Baltic Honeybadger 2022). When it comes to the credit market, the burning question is: Will bitcoin banks emerge? Hal Finney, one of the first bitcoin developers, predicted the emergence of bitcoin banks as early as 2010, and events have proven him right to a certain extent: current centralized exchanges are de facto bitcoin banks, as transactions within them take place outside the bitcoin blockchain, and we cannot be sure that they are not implementing a fractional reserve policy (i.e., that they are not selling or lending more bitcoin than they actually hold).

Hal Finney anticipated that bitcoin might have a scalability problem since, in the base layer, bitcoin is only able to settle a few thousand transactions in one bitcoin block, which is built on average every ten minutes. Bitcoin banks were supposed to solve this problem by being trusted institutions that would hold bitcoin on behalf of their users, and transactions between users would then take the form of changes in the banks' internal accounting. In this, fortunately, Finney was wrong, as in 2016, two brilliant minds—Joseph Poon and Thaddeus Dryja—came up with the Lightning Network solution, which has evolved significantly in the years since and is now practically usable for everyday payments. Therefore, bitcoin

banks are not needed to scale payments, and due to the intangible nature of bitcoin, they are not even needed to securely store large amounts of bitcoin.

The Advantages of Bitcoin Compared to Gold Are:

- The absolute scarcity and the strong associated effect of Nakamoto-Gresham's law in the first stage of the separation. The appreciation of bitcoin against fiat currencies makes it very attractive, and according to some, the long-term rising price of bitcoin is its own organic marketing. This effect is sometimes referred to (somewhat humorously) as NGU (Number Go Up).
- Bitcoin's intangible nature is a very good safeguard against state takeover efforts. Compared to gold, we can use bitcoin for digital payments worldwide, without the need to rely on any service providers.

One major disadvantage of bitcoin compared to gold is the Lindy Effect, which has not yet been sufficiently verified by history. Gold has been around for thousands of years; bitcoin has only been around for a decade. Nevertheless, the world is quite fast-paced nowadays, and it is possible that one more decade will be enough to confirm bitcoin as the best possible successor in monetary history.

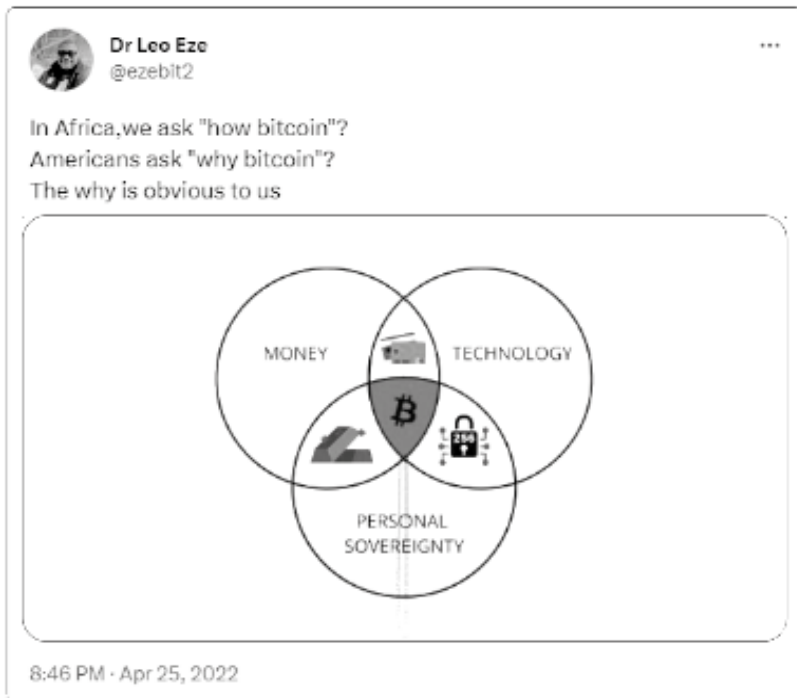
Bitcoinization: The Future of Monetary History

The ascent of bitcoin as a new form of money is sometimes described using the term "hyperbitcoinization". The term derives from hyperinflation, the final stage of monetary socialism. However, there need not be anything "hyper" about bitcoinization, just as the decline of fiat does not have to be accompanied by a devastating rise in consumer prices (as we mentioned, alternatives to hyperinflation are deflationary collapse or nationalization of the economy).

When we look at the history of monetary arrangements in the twentieth century, bitcoinization can be compared to "dollarization,

when a country adopts the US dollar as its currency. Dollarization can be official (e.g., Panama) or unofficial (Belarus, Venezuela, Argentina, and other countries suffering from high inflation, where ordinary people start saving and thinking in dollar terms). However, the dollar has its fair share of problems, as it is subject to ever-fiercer capital controls and is as inflationary as other fiat currencies, even if the rate of its decline is somewhat slower. It is likely that as awareness of bitcoin spreads around the world and the quality of the dollar declines further, bitcoinization will become a more frequent phenomenon than dollarization. Aside from protecting an individual's purchasing power, bitcoin offers another significant benefit, especially for people in developing nations: it facilitates digital transactions. Currently, many countries unofficially operating on the dollar often rely exclusively on cash transactions, making online purchases or digital exchanges out of reach for the average person. Bitcoin, however, opens the door to these financial interactions.

Over the course of the next decade, bitcoinization will take place through bitcoin's organic permeation into economic activities (savings, wages, and payment systems). There is no need for any kind of officially sanctified bitcoinization at all; on the contrary, the effective separation of the institution from the state always happens in a bottom-up fashion. Once regular people understand bitcoin's advantages, it will be the people themselves and their companies that decide on bitcoinization, learning to work with it securely and accepting short-term volatility as the price for the long-term positive effect of Nakamoto-Gresham's law and its other qualities (censorship resistance, resistance to confiscations, ease of cross-border transactions, etc.).



Recently, bitcoin has become popular in many African communities, as fiat currencies across Africa are even more broken than in the West. Source: Twitter.

For businesses that decide to move their treasuries to bitcoin, the next logical step over time will be to use bitcoin in their supply chain and for paying their employees. However, this step may take a long time to come since, in the first phase of bitcoinization, the effect of the Nakamoto-Gresham law, which discourages the use of bitcoin for payments, is still strong.

Bitcoin and the Savings Renaissance

As regards personal bitcoinization, the first logical step is to start saving in bitcoin. Today, saving is a half-forgotten function of money: to save means to simply put a portion of one's earnings away and "tuck it under the mattress". To save means to hold on to monetary units without any counterparty risk or a risk of an

investment failure, such as we face when we put our money in the bank or invest in stocks, bonds, or other financial instruments. Bank deposits today do not even cover the official inflation rate, so it is literally impossible to save in fiat. Instead of conservative planning for the future, they evoke the sad image of an old granny who, after decades of frugal living, discovers that her money has barely retained a tenth of its original value. Within the framework of the DCA strategy, bitcoin gives savings back their meaning.

DCA or Regular Savings in Bitcoin

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Dollar cost averaging, or DCA, is a simple and very effective strategy to bitcoinize our long-term savings. The essence of DCA is that you make small, albeit regular, deposits into bitcoin, regardless of the current price – for example, exchanging 100 bucks every month upon receiving our paycheck. The big advantage of DCA is that we don't need to worry about immediate price fluctuations at all, and we can break free of the short-term speculative mindset. This is an ideal strategy for reducing personal time preference – with DCA, we're planning years ahead. Since no one knows what the status of bitcoin holders will be in the future, it is recommended to avoid exchanges with KYC processes as much as possible and to save using via P2P tools such as Vexl, Bisq, or Hodl Hodl.

When it comes to the bitcoinization of savings, one has to get rid of the feeling that we've "missed the boat". It is useless to be depressed about the fact that we did not buy bitcoin years ago for a few dollars. As far-fetched as it may sound today, in hindsight, it may very well be irrelevant that some speculators made millions of dollars by "getting in early" and "selling the top", as dollars will eventually prove worthless. It is possible that a patient "stacker" with a low time preference will thus end up protecting and gaining much more purchasing power than some boastful "whale" with hundreds of cheaply acquired bitcoin (which they will nevertheless sell at a high fiat price tag). Finally, if bitcoin indeed becomes global money, then it won't be "too late" for anyone to switch to it. Although

the effect of increasing purchasing power will be diminished after Nakamoto-Gresham's law is exhausted, it will still happen because of bitcoin's ability to reflect productivity gains.

Hal
VIP
Sr. Member


Activity: 314
Merit: 3235



Re: Historical perspective (for a newbie)
June 05, 2011, 07:05:36 PM
Merited by OqNasty (50), M-BTC (1)

Research dollar cost averaging.

 Hal Finney

Hal Finney was already recommending DCA with respect to bitcoin in 2011. Source: BitcoinTalk.

An Unexpected Separation

Every historical instance of institutional separation from the state must have been unimaginable at first, seeming like utter heresy to most people. On the eve of every separation, there must have been many who argued that the given institution had been linked to the state throughout its entire history and that only the state's benevolence and expert leadership allowed the institution to exist at all and protected society from falling into anarchistic chaos. Such is also the case with money today. No one can currently imagine the separation of money from the state, although in hindsight, it will appear obvious and inevitable.

It may happen that the fall of the dollar will be blamed on bitcoin, and bitcoiners will be demonized, much like what happened to gold holders in the 1930s. However, bitcoin cannot cause the dollar to collapse; if the dollar actually collapses, it will be the nature of fiat money itself that is to blame. We must not forget that pure fiat without a link to gold is something that has only been around for the last fifty-some years. In that time, monetary policy has become more and more extreme and out of line with any existing economic

recommendations (on the contrary, new economic theories like MMT have had to be invented in a hurry). In the event of a fall in the dollar, bitcoin would only fill the resulting vacuum.



Mike drop. Source: Twitter.

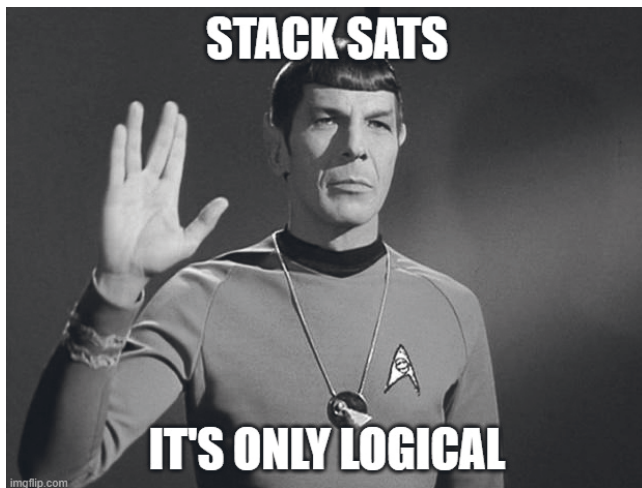
History will look back on the separation of money and state as a civilization shift comparable to the previous separations of state and the church, education, and business. Bitcoinization is the most Velvet of revolutions. It does not require street protests, political campaigns, or armed conflicts. For most people, it doesn't even require a deep understanding of economics, history, or technology; the increasingly tangible effect of Nakamoto-Gresham's law will cement the attractiveness of bitcoinization. A bitcoin-powered society may not necessarily be a utopia, but it will be another major step away from a primitive power arrangement to a prosperous civilization.

V. WHY BITCOIN ONLY?

In the previous chapters, we analyzed why we need non-state money, the effects of monetary socialism, the history of state power over money, and how and why bitcoinization—the adoption of bitcoin as new money—will gradually occur. However, one question remains unanswered. **Why bitcoin only?**

Don't we have a diverse, thriving, dynamic, and exciting cryptocurrency industry? Shouldn't we also explore ETH, XMR, LTC, ADA, or other exciting tokens? Shouldn't we farm yield or invest in NFTs? Shouldn't we diversify into altcoins?

Short answer: No. Adopt a strategy of regular, ongoing purchases of bitcoin (the DCA strategy), live long, and prosper.



The end. Thank you for reading.

Longer answer: Keep on reading.

What's the Point of Blockchain?

To a certain extent, “blockchain” is an empty buzzword; the blockchain database on its own without a tradable token (e.g., bitcoin) makes no sense. In bitcoin, the blockchain is created as a by-product of transaction settlement, and its main purpose is to provide the possibility of independent verification of the current UTXO set (the database of unspent transaction outputs – that is, who owns what). The bitcoin full node allows everyone in the world to create their own copy of the blockchain through the process of validating all bitcoin transactions from the initial genesis block to the current UTXO set; the blockchain thus gives everyone the certainty that the received bitcoin are genuine (and that they are not, for example, bitcoin cash). At the same time, the operation of one's own node gives the recipient assurance that the received transactions comply with the rules of the bitcoin protocol.

In a nutshell, the purpose of blockchain is to **enable the existence of non-state money without dependence on a trustworthy third party.**

This is not some kind of unnecessary paranoia. Bitcoin was preceded by a number of centralized attempts that did not end well for the founders and holders of the currencies in question:

- **Liberty Reserve:** the project ran from 2006–2013 and provided digital transfers of units, which today we would call stablecoins (equivalents of dollars, euros, ounces of gold). At its peak, Liberty Reserve had around 1 million users. Allegedly, the system was widely used to launder money from stolen credit cards and similar activities. In 2013, the founder was arrested, later sentenced to twenty years in prison, and all funds were confiscated. Some users (who used Liberty Reserve similarly to PayPal for legal activities) are still dealing with the authorities to see if they will get their money back.
- **e-gold:** the project ran from 1996 to 2008 and enabled the transfer of digital grams of gold. The company actually held

the underlying gold and does not appear to have ever pursued a fractional reserve policy. At its peak, the company held 4 tons of gold, and users performed transactions valued at \$2 billion annually. US authorities shut down the project in 2008, and they confiscated the gold, which they only returned to the users in 2013. The founders were given light sentences.

- **e-bullion:** a project similar to e-gold, also dealing with digital gold transactions. It operated between 2001–2008. At its peak, it had a million users and held around 1.5 tons of gold. E-bullion was run by the Fayed couple who had a falling out, and the husband had his wife murdered. The authorities confiscated all of the gold.
- **Liberty dollar:** operated from 1998–2007, mainly dealt in gold and silver coins with a dollar denomination (according to the original definition of the dollar as a coin of precious metal). Liberty dollars were at one time very popular in the American libertarian community. In 2007, Liberty Dollar's offices were raided and the founder was indicted for counterfeiting the US dollar (yes, “counterfeiting” in the form of much more valuable coins). Although the founder faced decades in prison, he was eventually freed (the confiscated metals were only released in 2017).

Satoshi finally solved the conundrum of non-state money using a proof-of-work mechanism with dynamic difficulty adjustment. From the beginning, bitcoin was conceived as a system without a central point of failure, where there’s no risk of servers shutting down, founders being arrested, or funds being seized.

Satoshi's invention has given us non-state money, which we can legitimately expect to be with us for a very long time to come. And this for one simple reason: **The decentralized nature of bitcoin is assured by the financial motivation of miners.** We cannot expect miners to spend energy on proof-of-work for the love of

bitcoin; we must assume that their only concern is financial gain and that miners are economically rational.

Two requirements for non-state money

This brings us closer to answering the question, “Why bitcoin only?”. Non-state money must meet two requirements:

1. Decentralization
2. Predictable and unchanging monetary policy

Both points are absolutely essential. Non-state money must fundamentally differ from existing money; its monetary policy must be neutral, i.e., unchangeable and predictable hundreds of years in advance. And at the same time, the new monetary system must be unassailable by the state or any other interest group.

If non-state money does not meet one of these criteria, sooner or later it will fail. Insufficient decentralization can result, for example, from high demands for the operation of full nodes or the granting of privileges to certain actors. Systems with a complex base layer (e.g., ethereum) are notoriously demanding on node operators, while systems based on the so-called proof-of-stake—for example, ethereum 2.0—on the other hand, motivate smaller holders to put their coins in the hands of large validators, typically exchanges.

If a non-state monetary network has centralizing tendencies and creates central points of failure for itself, it doesn't make much sense to devote yourself to it for the long term. If the network sees greater success in circumventing transaction censorship and other manifestations of the state monetary monopoly, the network in question will be shut down or regulated just like bitcoin's predecessors were. Most of bitcoin's competitors make this very basic mistake: they sacrifice decentralization in favor of more extensive functionality on the base layer and faster development. Bitcoin, on the other hand, develops in layers: the base layer

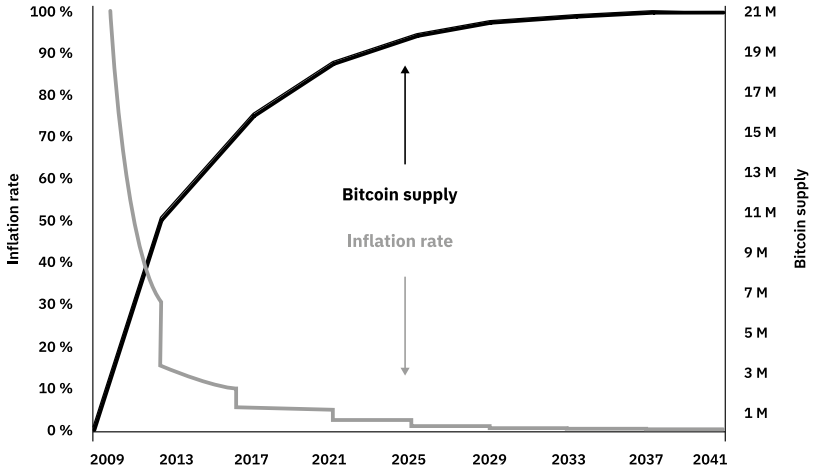
(blockchain) is simplistic, while other layers (the Lightning Network and application layers above it) are more expressive, but still without the need to trust anyone and without the requirement to centrally coordinate further development.

Now let's look at the second point more closely: predictable and unchangeable monetary policy.

With bitcoin, we can be quite certain that there will never be more than 21 million in the world. How do we know that? Firstly, from the code itself, which defines the rate of release of new units into circulation: In the first 210,000 blocks (corresponding to about 4 years), 50 bitcoin were released per block; in the next blocks, 25 bitcoin were released, and so on. But code can be changed. It is not the code on its own that guarantees the immutability of the monetary policy; it is rather guaranteed by all bitcoin node operators, who decide what code will run on their computers.

If you find this too abstract, then know that bitcoin's resistance to attempts to change the protocol was already thoroughly tested years ago. In 2017, the so-called block size war took place (*The Blocksize War*, an eponymous book was also published on this topic), involving the face-off of two distinct camps: one sought to increase the bitcoin block size parameter, the other to maintain it at the original level, and the third to activate SegWit (a technological upgrade that later enabled the construction of the Lightning Network). The more conservative side won, which did not allow an increase in the block size and instead introduced the SegWit solution. An attempt to change bitcoin monetary policy would play out the same way: it is assured that the bitcoin community would be completely united in its opposition to any attempt to change a parameter as critical as the total future number of bitcoin. Any such effort to change the monetary policy would only result in the creation of another of the many altcoins, just as the consequence of the war over the size of the block was the splitting off of bitcoin cash, which subsequently fell into oblivion.

Bitcoin Issuance Schedule



Monetary policy, at the end of which there will be 21 million bitcoin. Source: Bitcoin wiki.
https://en.bitcoin.it/wiki/Controlled_supply.

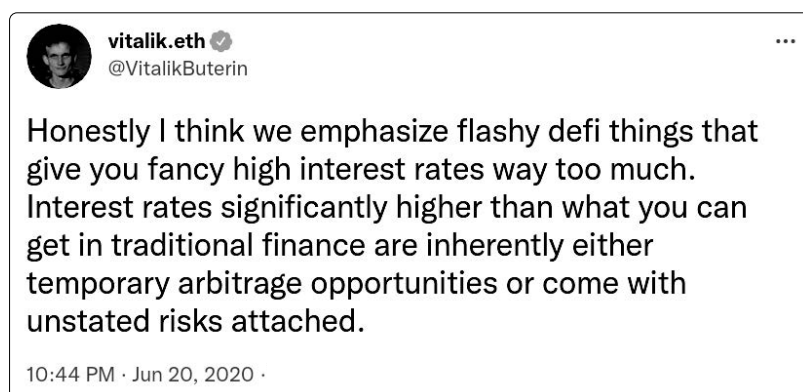
Decentralization and an immutable monetary policy are simply two sides of the same coin.

Ethereum: Ultra Sound Money?

It cannot be denied that, in some ways, the ethereum network seems to be nipping at bitcoin's heels. In the long term, it is the second largest network and sometimes even surpasses bitcoin in terms of total transaction fee volume, which ensures sufficient motivation for validators to devote resources to the network to secure it.

Alongside bitcoin, ethereum can be considered the only other real contender for the role of non-state money, and lately ethereum promoters themselves like to talk about how ethereum is money and sometimes even brag that it is so-called “ultra sound money” because of its deflationary monetary policy (units of money are set to decrease in the long term due to the burning of transaction fees).

While bitcoin users can transact through the Lightning Network to avoid high transaction fees, nothing like that is possible with ethereum. And it is due to high transaction fees that all activities other than speculation with high short-term returns and risk are gradually being pushed out of the network (at the time of this writing, these are DeFi “yield farming” and gambling on NFT art). This markedly disrupts the original story of a world computer that can run a decentralized internet. Lately, ethereum has been more like a decentralized casino, which Vitalik Buterin, ethereum’s founder and leader, himself has criticized:



Vitalik: DeFi is riskier than it currently seems. Source: Twitter.

Fundamental changes in ethereum are usually implemented using so-called hard forks," which are backwards incompatible rule changes (the ease of their implementation, by the way, speaks volumes about the centralization of nodes and the tremendous influence of leadership in the form of Vitalik Buterin and the ethereum foundation, which even employs a person in the position of “hard fork coordinator”). However, at some point, even the hard forks were insufficient for the major overhaul that the ethereum planners had set out to do. The transition from the proof-of-work-based ethereum 1.0 to the proof-of-stake-based ethereum 2.0 required launching a completely new network and gradually ending the former ethereum. Ethereum 2.0 is based

on new principles completely different from those of the existing network. Instead of proof-of-work, it runs on proof-of-stake; instead of a globally shared blockchain, it is based on so-called sharding (64 separate chains that are only partially compatible). During the transition, existing holders of “old” ETH were entitled to a corresponding amount of “new” ETH, but that's about all the networks had in common. All of the Lindy effect that ethereum has accumulated over the years has thus been lost, and the new network now has to prove its security and viability all over again.

While ethereum needed to shut down and start over again on brand new principles, bitcoin has been working for almost 15 years under the same basic protocol rules, building a network effect and sparking a gradual (and perhaps, later, sudden?) global bitcoinization. And the question remains whether ethereum 2.0 will already be the final version or whether there will be a need to migrate further to ethereum 3.0.


Recap: Why Bitcoin > Shitcoin

For non-state money, we need **decentralization and an unchangeable monetary policy**. Bitcoin has set the bar in both, and it is impossible for shitecoins (a technical term, just like “penny stocks” or “junk bonds”) to compete with bitcoin. It is completely irrelevant that ethereum fans are drawing up charts of a monetary policy that will be even more deflationary than bitcoin's when ethereum's monetary policy can be changed on the fly. We don't need a new central bank; we need full separation of money from the state and from central planners, no matter whether they work for a central bank or a cryptocurrency foundation.

A classic objection to these propositions is that not all altcoins aspire to become non-state money. Well, there are two answers to this: First, another use—one that would last at least a few years—has not yet appeared. Where are all the decentralized computers, prediction markets, DAOs, decentralized banks, and tokens revolutionizing dentistry? The only lasting use case seems to be the sophisticated casino, where the dupes are constantly jumping on the bandwagon

of buzzword marketing. Second, even if such a use existed, on what network would it run? Is there a network other than bitcoin that is decentralized, has a functional mechanism for long-term motivation of miners, and at the same time has no need to end operations and switch to experimental technology?

Others might also object that we cannot, after all, predict the future. What if something better than bitcoin comes along in the future? This is indeed possible. However, the later such a bitcoin killer appears, the more difficulty it will have (due to the strengthening Lindy effect and bitcoin's permeation of economic activities through ongoing bitcoinization). Another factor working against all manner of "innovative cryptocurrencies" is that bitcoin is in large part simple to understand; shitcoins tend to differentiate themselves by their complexity, trying to appear sophisticated. Taken together, all these facts make bitcoin a natural Schelling point for non-state money.



WizardofAus 雷丰 ⚡
@BTCSchellingPt

WTF is a Schelling point?

The solution people choose by default; The economist Thomas Schelling defined this back in the 60's.

The Schelling point for money for a millennia was \$Gold, then recently the USD\$, and now #BTC ₿ emerges as the new global Schelling point for money

9:40 am · 21 Aug 2020

Schelling point: A solution in which parties that do not communicate with each other agree independently: Twitter.

At the same time, it's quite possible that the "blockchain" on its own (without the token) could be applicable for obscure uses, such as the settlement of trades on an exchange; some large exchanges

even have trial programs in this regard. But let's face it: is this something you would be interested in if that one news piece or a study didn't use the term "blockchain"? For the exchange, it is simply an alternative database and backend solution for the settlement of trades. It's not for nothing that blockchain consultants are said to be hired only to push for a database system upgrade with the magic wallet-opening word "blockchain" stuck on it. I assuredly don't want to give the impression here that bitcoin has everything settled. On the contrary! Even bitcoin, which represents the best hope for non-state money, is not without problems. Among the most pressing are:

- **Sustainability of miners' motivation:** we have 4 halvings behind us, and the share of transaction fees in the total remuneration is growing. But is it sustainable going forward? There are good arguments why yes – additional layers over bitcoin (such as the LNP/BP protocol suite) increase the so-called transaction density – one onchain transaction in the future can settle a larger amount of economic activity on higher layers. However, we will have relative certainty only after the next 2-3 halvings (i.e. in 8-12 years).
- **Hostile efforts to change the protocol or monetary policy:** it is likely that the 2017 corporate attempts at a major block size increase were not the last. This attempt, known as SegWit2x or the New York Agreement, was problematic for two reasons: firstly, a significantly higher block size limit goes against decentralization: with larger blocks, the set of possible node operators decreases (because the requirements for their operation increase, both in terms of hardware and in terms of connection); secondly, it was an attempt by well-capitalized companies to adapt bitcoin to their business needs, which would be a very dangerous precedent. Node signaling within the UASF/No2X movement prevented the change from being adopted, but will the community be similarly vigilant in the future?

- **Compliance layer:** according to the growing number of bitcoiners, the biggest problem is the gradual spread of KYC practices – ubiquitous identification of bitcoin holders. Considering the transparent nature of the bitcoin blockchain, KYC is very dangerous – this kind of “taint” is subsequently hard to get rid of. The essence of bitcoin is financial sovereignty – identification of holders and their subsequent monitoring flies directly in the face of this essence. Identified holders face the risk of confiscation in the future, along the lines of the 1933 United States gold confiscation (Executive order 6102).

And now, let’s return to the questions we posed at the beginning of the chapter.

Don't we have a diverse, thriving, dynamic, and exciting cryptocurrency industry? Well, as it was once said on the floor of the US Congress, “We have bitcoin, and we have shitcoins.” Shitcoins can be exciting in the short term as they go through hype cycles and offer an enticing get-rich-quick story wrapped in the guise of revolutionary technology. However, this is a zero-sum game, where the gains of one are offset by the corresponding losses of the other (often the VC investors and the development team benefit, while retail, i.e., you, are the exit liquidity).

Should I diversify? Into other asset classes for sure. Not into shitcoins – that’s not about diversification so much as it is gambling with valuable satoshis.

Am I not supposed to farm yield? Only if you are able to explain to yourself where that yield comes from and what risk it carries. Otherwise, ignore this gamble, and in the future, you will likely experience JOMO (*joy of missing out*).

Bonus: But I'm in the green on shitcoins! Congratulations, especially if you are in the green not only against fiat currency but also against bitcoin. But if you don't sell your shitcoins for

bitcoin quickly, it's very likely that in a couple of years you'll have a lot fewer satoshi than you do today.

Ultimately, it's about your expectations from bitcoin. If it's the possibility of long-term savings with the hope of value preservation, then bitcoin is for you. If you're looking to get rich quick, then bitcoin will probably disappoint you. Bitcoin represents the best possible hope for non-state money. I'm not saying that you can't make money from shitcoins; I'm just saying that they don't make any sense in the long term due to the trade-offs against decentralization and sustainability.

SOME RECOMMENDATIONS IN CONCLUSION

If the ideas in this book have captured your interest and you plan to hold savings in bitcoin for the long term, it is important to follow a few basic rules. Bitcoin is specific compared to other instruments in that it offers the possibility of true sovereignty: if you hold bitcoin, its security is solely your responsibility.

The basic rule is to keep bitcoin in your own custody, not in an online wallet or on an exchange. Anyone who has been around bitcoin for a while will sooner or later come across a sob story of lost or stolen bitcoin from a service where the user is not the only one with access to the bitcoin keys. No matter what, avoid online wallet services. For larger amounts, get a hardware wallet (ideally with the possibility of security in the form of Shamir backup; I recommend the Trezor Model T). For smaller amounts, use Muun, Phoenix, or Zeus mobile wallets. When setting up wallets, pay careful attention to the recommendations; it is critical to write down the recovery seed on an offline medium, such as simple paper (which you should then keep somewhere safe).

After you set up your wallet (whether mobile or hardware), it is good practice to try to delete and restore the wallet from the recovery seed, i.e., simulating the loss of the device. Believe me, you don't want your first attempt at restoring your bitcoin from seed to be the "real deal." You'll sleep much better if you go through a dry-run recovery with an empty wallet first.

Always carefully verify the addresses you send your satoshis to. The internet is rife with all sorts of malware trying to steal your sats through substitution of the address during copying and pasting (ctrl+c and ctrl+v).

Never trust services and ads promising to multiply your bitcoin. It is always a scam. Never exchange your valuable satoshi for altcoins. This is not "bitcoin 2.0", it doesn't have scaling figured

out, and banks and corporations are not adopting it. It is a scam or misguided fantasy of creators who do not understand the essence and added value of bitcoin.

Become familiar with the options for acquiring bitcoin without having to go through the KYC process. These are in-person purchases, purchases at bitcoin ATMs, or purchases via decentralized networks such as Vexl, Bisq, or Hodl Hodl.

In short, if you observe the following commandments, you'll sleep soundly at night.

THE TEN COMMANDMENTS OF BITCOIN

1. Thou shalt not show thy seed or Shamir to thy neighbor.
2. Thou shalt keep thy satoshi in a hardware wallet.
3. Thou shalt keep only change in thy mobile wallet.
4. Thou shalt withdraw thy satoshi from the exchange immediately after purchasing.
5. Thou shalt give thy preference to DCA over soothsaying of market trends.
6. It is forbidden to stack so strongly that you grow fearful of a price drop (Thou shalt buy on the dip – not selleth).
7. Thou shalt resist the temptation of altcoins as they are a trap of the devil, eager to take thy sats.
8. Thou shalt check well the address when sending, since the malware demons lurk behind every corner.
9. Thou shalt refrain from boasting of the size of thy stack.
10. Thou shalt give preference to hodling over trading.

SELECTED RESOURCES FOR FURTHER STUDY

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BITCOIN

SEPARATION OF MONEY AND STATE

"When it comes to bitcoin, Josef offers some interesting ideas on the way adoption will occur. Bitcoin will permeate across economic activities from wage payment, to online shopping, to in-person payment systems. But perhaps most relevant for our time, bitcoin brings back a renaissance in savings."

STEPHAN LIVERA

"Josef Tětek's book is a clear and concise introduction to the ideas that comprise the bitcoin rabbit hole: Austrian economics, time preference, the history of money, and the misuse of the state's power over money. A worthy read."

MAREK SLUSH PALATINUS

"By taking the reader on a journey through the history of money and the role of the state in its control, Josef lays the groundwork for readers to understand bitcoin's revolutionary potential. If you want to be financially prepared for the future, you have to read this book."

BTC GANDALF

