

Money, Good and Bad

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Introduction

In our modern society, almost everyone deals with money in some way on a daily basis. Thinking about transactions or exchanges in terms of money is so “normal” and routine that few people ever think about the nature of money itself, or what things would be like if money didn’t exist, or what problems could possibly arise with money. Well, money has not always existed, and many problems, some of them quite disruptive, have occurred since money has come into use.

This essay will discuss why and how money originated; what money’s important functions and characteristics are; what makes “good” money and “bad” money; the impact of modern technology; problems and potential problems with money; and solutions to those problems.

Background

Millennia ago, there was very little of anything that could be called economic activity among people. That is, individuals and families were pretty much isolated economic entities and had to produce for themselves substantially everything they needed: food, shelter, clothing, etc. Just surviving was more than a full-time job; the less fit were unable to support themselves and perished.

Over time, people learned that they could be more successful (achieve a higher standard of living) through peaceful cooperation. It’s hard to be peaceful if everybody is stealing everybody else’s stuff, so maintaining peace required respect for *private property*. Eventually, it was realized that some people are much better hunters than others while other people were better at farming, building shelters, making clothes, etc. Therefore, much higher overall productivity could be obtained through *specialization*. Not only could each person spend most of their time doing what they were best at doing, but they could further hone their skill and knowledge as well as justify making specialized tools to further boost productivity.

Suppose you specialized in farming. Presumably, you would have lots of food available to you, more than you could consume yourself. But you would lack all the other things you need. You would have to trade some of your excess food with other specialists for the things you need that they have produced. Of course, the same applies to everyone else who would need to trade some of what they produced for food. When you need a new pair of shoes, you reach an agreement with a cobbler to trade, say, three bushels of corn for a pair of shoes. Each such transaction is called a *voluntary exchange*. Many such trades form a barter economy where various types of goods are swapped for all manner of other goods.

Each and every voluntary exchange is a powerful, almost magical thing that is grossly underappreciated. As long as the exchange is completely voluntary on both sides, then both parties to the exchange must come out ahead. Consider that the value of three bushels of corn is less to the farmer than to the cobbler. Since it is his specialty, the farmer can produce three bushels of corn a lot more easily than can the cobbler, plus the farmer has lots of corn while the

cobbler has little or none. On the other hand, the value of a pair of shoes to the cobbler is less than to the farmer for the same complementary reasons. As long as the value of the shoes to the farmer is higher than the value of his three bushels of corn *AND* the value of three bushels of corn to the cobbler is higher than the shoes, the exchange will take place; otherwise it will not. If a voluntary exchange does occur, then it is guaranteed that the wealth of both the farmer and the cobbler has been increased.

There is another aspect of the voluntary exchange that needs to be more widely understood and appreciated. The value that the person on each side of the transaction assigns to the things being exchanged depends upon many complex factors that almost always are unique to the circumstances surrounding each exchange. Each party to the exchange must make the value determinations themselves. Specifically, it is just not possible for someone else or an outside entity to assign these values accurately. This is one important reason (among others) why central planning systems never work well.

Note that *private property*, *specialization* and the *voluntary exchange* are the first three of the six things required for a free market economy. The remaining three are a *price system* of resource allocation, *competition* and *entrepreneurship*. We will indirectly touch on the price system in this discussion of money, but will leave competition and entrepreneurship for another essay.

The Functions of Money

A barter economy surely works, but it tends to be a bit clumsy and inconvenient. Money might help. There are three important functions that good money needs to perform well:

1. **Provide a convenient medium of exchange** – Your money needs to be available whenever and wherever you need it. In the past, that has meant easy to carry around in any reasonable amount, but technology is now in the process of obviating that need. Money needs to be divisible to a fine enough level so that amounts exactly matching the value of any transaction can be easily transferred. Money should be durable and difficult to duplicate or counterfeit. It would also be nice if money were difficult to steal.
2. **Act as a standard of value** – Just as a meter stick (or a yard stick) measures distance, money should establish a measure of value. It provides an easy way to compare the values of disparate things such as bushels of corn, pairs of shoes, houses, cows, etc. The scale on a meter stick is fixed and enables distances to be measured reproducibly and accurately at different places and at different times. Just as rubber would not make a good meter stick, something with a varying value calibration does not make good money. A standard that changes is not a good standard.
3. **Provide a mechanism to store value** – As a farmer, you harvest your corn in the fall, but you may not need a new pair of shoes at that time. Money enables you to sell your corn when you harvest it, store its value as money and buy shoes (as well as other things) later when you need them. Thus, the use of money decouples the two ends of a transaction, enables them to happen at different times and facilitates saving and lending. Obviously, money's ability to store value is seriously impaired to the degree that money does not act as a good standard of value.

Money that performs its functions well (especially 2 and 3) is known as “sound money” or “good money” or a “hard currency.” When more than one form of money is circulating, people will prefer to hang onto and accumulate the sound money and get rid of the bad money. If the bad money is bad enough, it loses value and simply falls into disuse.

Commodity and Representative Money

It appears that barley may have been the first thing to be widely used as money. The “shekel” was a specific weight of barley that became the currency unit. Other things were valued in terms of shekels of barley or fractions of a shekel. Later, but still several hundred years BC, gold and silver coins came into use and have demonstrated considerable staying power. Different weights of precious metals better performed the above three functions and are still used today. These types of money are called “commodity money” because a designated commodity that has intrinsic value is used as money.

For improved convenience, “representative money” eventually came into use. A commodity (e.g., gold or silver) was deposited with a dealer or a bank for safe keeping. Receipts were issued by which the commodity could later be reclaimed or withdrawn. The receipts, frequently called “bank notes,” were used as currency (primarily for larger amounts) in parallel with circulating coins to handle smaller amounts. Although the receipts or bank notes themselves had little or no intrinsic value, any holder (indeed, ALL holders) were guaranteed to be able to convert them to something that did have value at any time upon the request of the bearer.

The immutable laws of economics tell us that the value of any (and every) commodity is always set by the availability (supply) of the commodity relative to the demand for it. There have been many and continuing foolish attempts to force the value (price) of various commodities to some desired amount, but those who attempt to defeat the laws of economics inevitably lose. Of course, it is possible that the supply and/or demand for a commodity, especially one traded in small volume, could be “manipulated.” Someone could sell large amounts of a commodity at an artificially low price or buy large amounts at an artificially high price. Obviously, either would be to the disadvantage of the manipulator and could not long continue before the manipulators’ resources were depleted. Scurrilous promulgation of misinformation, either to increase or decrease demand, might be more cost-effective, but such lies will become evident fairly quickly. Thus, any manipulation, if successful at all, is bound to be short-lived, so any advantage to be reaped needs to be nailed down quickly. However, since the supply of and demand for anything can validly change over time, it is entirely possible (even probable) that the value of any given commodity *will* change.

Thus, commodity money has the disadvantage that the value of everything is measured relative to the value of the chosen commodity, which is not constant. To the degree that a commodity’s value relative to other commodities is not constant, that commodity’s ability to act as a standard of value and a store of value is necessarily impaired. Gold has performed the three functions of money fairly well over a remarkably long period of time. An important reason for this is that gold is durable and its supply is fairly inelastic. More gold cannot be created without significant cost and effort. Another reason is that, despite short-term fluctuations, the value of gold relative to everything else has remained surprisingly constant

over the long term. Of course, there is no guarantee that this will always continue to be true in the future.

On the other hand, commodity money does have one very big advantage: it has a fairly definite intrinsic value that is never zero. Representative money also has this advantage; although there is some added risk that the dealer or other depositary may not actually still have the commodity that was supposed to be in safe keeping when someone shows up to reclaim it.

Fiat Currency

Soon after the end of the first millennium (AD), the “innovation” of fiat money burst onto the scene. Like representative money, fiat money consists of bills or tokens that have substantially zero intrinsic value (or the intrinsic value is far below the face value). Unlike representative money, fiat money does not represent anything at all. There is no guarantee that it can be redeemed for any amount of anything of value. Its value is simply decreed by law or fiat.

Suppose you made up some paper bills in your basement with a “1” or “One” and a nice head shot of yourself printed on them. You then declare that each of your bills is worth one ounce of silver. Now you boogie on down to the store and exchange some of your fiat bills for groceries and clothing. That is all there is to a fiat currency. The only difference is that it normally is a government that prints the currency and decrees its value, not an individual. Unless the individual happens to be the dictator of record, he will not be able to use force to back up his decree or fiat.

The first fiat currency was attempted by the Song Dynasty in China. Paper bills were issued and decreed to be exchangeable for certain amounts of gold, silver or silk. However, there was no way to actually redeem the bills for these commodities or anything else of intrinsic value. This realization, combined with the printing of many bills, caused people to lose confidence in the currency. The government attempted to force the use of the currency by insisting that taxes be partially paid with the bills, but nevertheless, rampant inflation (loss of perceived and functional value) completely killed the currency.

In view of the abject failure of the first fiat currency, no one would try that again, right? Wrong. Many fiat currencies have been attempted and many have failed when the currency collapsed to its true value (zero). Considering its nature, it is not at all surprising that there have been, and continue to be, so many fiat currency failures. What is shocking is that there actually are examples of fiat currencies that have been made to work somewhat well for periods of several decades. How could something like that ever be pulled off?

In a totalitarian society, extreme oppressive force works pretty well. But even there, barter, black markets and use of precious metal coins still creep in “under the table” when people have no confidence in a fiat currency.

In freer societies, one fairly effective trick is to start out with a sound currency that is actually redeemable for something of real value. Then, in the face of some “emergency,” currency redeem-ability is “temporarily suspended.” It works best if redeem-ability is suspended and restored a few times before temporarily suspending it permanently. People have by then been “conditioned” to continue to think their money is “as good as gold” since its redeem-ability is to be restored – someday.

If nothing disruptive occurs for a period of time following the last suspension of redemption “privileges,” the “currency levitation” becomes self-perpetuating. It appears that a period of just a few decades without serious problems is all it takes to lull most people into a profound state of ignorance and complacency regarding their money.

In the final analysis, a person is willing to swap something of value for a worthless piece of paper today if and only if he has confidence that he can swap the paper for something of reasonably equal value tomorrow. When this has been happening for an extended period, people become more confident that it will continue to happen in the future. However, if and when this confidence is shaken, the collapse of a fiat currency is usually rapid and highly disruptive. The image comes to mind of the cartoon character that runs off a cliff, but doesn’t fall. After a suitable comedic interval, he looks down, realizes that absolutely nothing is holding him up and then quickly crashes down.

Comparison of Characteristics

The first thing to note is that fiat money is created by force. On the other hand, commodity money comes into use voluntarily among free and peaceful people. Thus, a fiat currency is monopolistic and entirely controlled by a government entity. Commodity money is the antithesis of this as it cannot be monopolistically controlled. Through the expenditure of work and effort, anyone can mine, grow or otherwise create more of the commodity.

Fiat money is political. If you move out of one political entity into another, you must change to using the fiat money that is demanded by the new political entity. Commodity money has intrinsic value and, therefore, can transcend political boundaries. Your gold coin will have substantially the same value (relative to other things) in any country, no matter whose likeness may have been stamped onto it.

Commodity money came into use and has been successfully used for thousands of years. Fiat money has been around for about the last 900 years. Fiat currencies tend not to last. There are a few examples where fiat currencies have been abandoned and phased out by the political entity that created it, but most have collapsed when people lost confidence and reverted to using commodity money and/or barter.

The characteristic most critical to a currency’s ability to perform the functions of money well is the “elasticity” of its supply. The supply of any commodity money tends to be quite inelastic. There is a definite cost to creating more of any commodity and that turns out to be a good thing when it is used as money. Fiat money, with substantially zero intrinsic value, is almost completely elastic. Governments can create additional fiat money at near-zero cost almost without limit.

Any sound money begins with something of value. You can exchange that thing for other things of value, or for representative tokens (physical or electronic) with the guarantee that tokens can always be redeemed for something of equal value. A fiat currency starts instead with worthless tokens and attempts to force people to value them.

Inflation

With representative/commodity money, the value of everything is measured in terms of, or relative to, the chosen commodity (usually, gold), and the value of the currency is anchored to the value of that commodity. In order to issue more representative tokens of zero intrinsic value, it is necessary to hold more of the backing commodity “on deposit” since it is guaranteed that each token can be redeemed on demand for a certain fixed amount of the commodity. The value of such tokens is fixed and cannot float around. However, as previously noted, the value scale can change (either expand or contract) to the extent that the supply and/or demand of the backing commodity shifts and affects its value relative to everything else. This is the fundamental disadvantage of commodity or representative money that is based on a single commodity.

Suppose you live in a country where the government has issued a representative currency based on gold. Said government holds the gold that backs the currency and “guarantees” that you can convert your dollars to gold on demand at the rate of \$35 per ounce of gold. One morning, you learn through the news that the government has changed the exchange rate to \$70 per ounce of gold, effective midnight of last night. Surprise! Any money you had under your mattress or in the bank can now be redeemed for only half as much gold and you will find that the prices of everything else in the stores will very quickly double as well. The currency has been devalued. That’s inflation. Although governments have done things this bad and worse, normally the change is carried out more gradually (in small steps spread out over time) to reduce economic disruption and avoid waking people up. Most people gripe about the prices going up instead of fingering the real culprit: the decreasing purchasing power of their dollars.

Of course, the government could decide to change the exchange rate in the other direction, say to \$20 per ounce of gold. This would be deflation. Don’t hold your breath; this is not going to happen as it would require the government to suddenly hold more gold to back the currency. By contrast, inflation enables the government to (elastically) print more worthless tokens to be backed by the same amount of gold.

Suppose now that you live in a country that has a fiat currency. What determines its value? Originally, the value was likely set when it was a hard currency convertible to something of real value. When this tie is removed (redeem-ability suspended), the value of the dollar (or other token) is no longer anchored to anything and begins to “float.” Since it is not tied to anything, it becomes its own pseudo-commodity whose value depends upon its supply relative to its demand. The supply is closely related to the total number of dollars in circulation, called the money supply. The demand is entirely determined by psychology! That is, people will value the dollar today based solely upon how much value they expect they will be able to trade it for tomorrow or next week or next year, and the demand will be set by this consensus. Anything based on human expectations is affected by a huge complexity of factors and can potentially be quite volatile.

Increasing the money supply tends to reduce the value of the dollar and vice versa, exactly as would be expected. When people have more dollars, they tend to bid up prices and prices rise generally. The value of the dollar is reduced. This is inflation. Politicians and governments love to increase the money supply so inflation is the rule and deflation is a rare exception.

A simple demonstration for the economics classroom starkly illuminates the inflation process. The teacher produces and demonstrates operation of a pocket flashlight that s/he no longer needs and is willing to auction off to the highest bidder. Not being allowed to take students' "real" money, the teacher distributes \$15 of monopoly money to each student to use in bidding. Students may combine resources if they are willing to jointly own the flashlight. The auction is conducted and the flashlight sells for (typically) \$25. Note that the worthless monopoly money has taken on a value only because the teacher is willing to exchange something of real value for it.

The teacher then produces and demonstrates a second identical flashlight, explaining that this is the only one remaining and that it, too, will be auctioned as before. An additional \$15 is distributed to each student and the second auction conducted. The second flashlight typically sells for somewhere near \$50. Obviously, the identical flashlight does not have a value greater than the first. The price has just gone up because the money supply has increased. More correctly, the value of each monopoly money dollar is much less. The total value of all the worthless tokens in circulation tends to be proportional to the total value of the goods and services for which they can be traded.

Inflation (or deflation) seriously interferes with money's ability to act as a standard of value and, therefore, its ability to act as a store of value. Some of the direct effects of inflation are:

- Acts as a stealth tax as it quietly siphons value right out of wallets and bank accounts
- Discourages savings and accumulation of capital
- Pushes up interest rates – if you want to charge 2% per year to rent out your money, you will need to collect 2% *plus* the expected rate of inflation (4% inflation means you must collect 6% interest)
- Favors borrowers and hurts lenders (unless the loan interest rates are variable)
- Interferes with the ability of businesses and individuals to plan into the future
- Diminishes confidence in the currency
- After inflation gets going, the expectation of continuing inflation (or worse, an increasing rate of inflation) tends to make inflation self-perpetuating and hard to bring under control

A few economists have proposed that "moderate" rates of inflation have indirect effects that can be good, such as reducing unemployment. But these claims rest on complex and unproven macroeconomic theories. Fiat currencies and the inflation that they enable are overall not good for anybody. In fact, it is rapid inflation that usually triggers the collapse of a fiat currency. Inflation exceeding 20% to 30% percent annually probably is about the tipping point that leads into a degenerative inflationary spiral from which the currency does not recover.

Modern Developments

The advent of pervasive high-speed electronic communication and computation has had significant impact. Transactions take place instantaneously at light speed. Immediate and widespread availability of information has reduced marketplace friction (a good thing). Accurate and detailed records are maintained by computers. In fact, numbers stored in computers have to a considerable extent replaced physical dollars in circulation. The money supply can be manipulated by changing numbers in computers. Another somewhat recent (in

the large-scale historical view) “innovation” was fractional reserve banking which allows the money supply to be manipulated by adjusting the reserve rate (the percentage of bank deposits that banks must hold “in reserve” to cover withdrawals).

A very recent and potentially important development is that of Bitcoin. Bitcoin is an entirely electronic currency. It is backed by absolutely nothing, not even a fiat! In addition to its electronic speed, convenience and internationality, the good thing about Bitcoin is that the money supply, the number of Bitcoins in electronic circulation, is rigidly regulated. Additional Bitcoins are added at a controlled slow rate. However, as with other unbacked currencies, the demand for Bitcoins is entirely determined by psychology! That is, people will value a Bitcoin today based entirely upon how much value they think they will be able to exchange it for tomorrow. Consequently, the value of one Bitcoin has gyrated wildly from next to nothing all the way up to the \$1,200 area and might be somewhat stabilizing in the \$400 range. If you really enjoy gambling, you might want to exchange some Federal Reserve Notes for some Bitcoins. People might not be risking nearly as much money on Bitcoin as they are if they had greater confidence in the fiat currencies issued by their governments.

The real significance of Bitcoin is not Bitcoin itself. It is the software that was developed to make Bitcoin work. Underlying Bitcoin is a system that maintains an accurate ledger of all Bitcoin transactions. So far, this is not different than your credit card company maintaining a ledger of your credit card transactions or your bank doing the same for your bank accounts. However, the Bitcoin system eliminates third parties such as credit card companies and banks. Direct, reasonably private, extremely-low-cost, international transactions are facilitated peer-to-peer among any participating pair of individuals or business entities. The software, running on many network nodes, maintains multiple up-to-date copies of its transaction log on multiple computers for safety and redundancy. Hashing and encryption provide privacy and guarantee the security of all transactions. Each transaction is verified by multiple network nodes before being confirmed and incorporated into the permanent record. A confirmed transaction cannot be reversed (except, of course, by means of a separate reversing transaction done at a later time).

A large part of the appeal of Bitcoin is its free-to-very-low, peer-to-peer transaction costs and its independence from any governmental authority. Bitcoin’s underlying technology, or more likely, an improved derivative of it, could become a key part of the implementation of sound money for either regional or (preferably) worldwide use. A completely electronic “token” could be used as representative money without the need to ever create, carry or exchange any physical tokens.

The United States

The framers of the United States Constitution very much appreciated the importance and benefits of sound money as well as the dangers of having a strong central bank. The Constitution was written in 1787, following some currency turmoil in the early days of our republic. As one of its few Article I, Section 8, enumerated powers, Congress was specifically assigned the power and responsibility, “To coin Money, regulate the Value thereof, and of foreign Coin, and fix the Standard of Weights and Measures.” A relevant part of Article I, Section 10, provides that, “No State shall ... coin Money; emit Bills of Credit; make any Thing but

gold and silver Coin a Tender in Payment of Debts...” The issue of a central bank was debated at the time, but the Constitution makes no provision for one.

For approximately 120 years following the ratification of the Constitution, the U.S. ran fairly smoothly using a hard (commodity) currency based on gold and silver. Central banks were chartered for stretches of time, but the U.S. had no central bank for most of this period. However, a few horrible events spanning a 60-year period in the 20th century caused the transformation of the U.S. dollar into a fiat currency and created a peculiar central bank that is not directly controlled by the government.

Because of the practice of fractional reserve banking, several overextended banks failed in 1907. This precipitated a panic and a run on the other banks, some of which then also failed. In what could be termed an overreaction, Congress passed the sweeping Federal Reserve Act in 1913. By it, Congress abdicated its responsibilities in the currency area as assigned by the Constitution and delegated them to an organization to be called The Federal Reserve. Part of the justification for the “Fed” was for it to act as a “lender of last resort” to enable banks to ride out runs and thereby forestall panics.

The “Fed” is indeed a central bank with great powers, but it is NOT part of the federal government. It is a cartel of twelve private banks. The Fed is managed by a seven-member board of governors whose members are appointed by the President and confirmed by the Senate to fourteen-year terms. Other than indirectly through these appointments (or changing the law), the government has no control over what the Fed does. The Fed is legally required to “report” regularly to Congress, but it is not obligated to take any direction from Congress or the President. All stock of the twelve Fed banks is owned by other private banks called member banks. The Fed is not taxed, but whatever it reports as a profit goes to the U.S. Treasury. However, it might be noted that the Fed’s operations have never been subjected to a complete and public audit.

Since the dollar was still tied to gold, the Fed was somewhat constrained from any huge increase in the money supply. Right after World War II, the dollar was still incredibly strong. It was accepted all over the world as being “as good as gold.” In fact, the dollar became the reserve currency of the free world. Other currencies were linked to the dollar and the dollar was, in turn, linked to gold at an exchange rate of \$35 per ounce, as agreed to by 44 nations at the Bretton Woods Conference of 1944. The final and most serious blow came in 1971 when President Nixon “suspended” redeem-ability of the dollar, completely severing any ties between the dollar and gold. (Dollar redeem-ability is still suspended.)

Today, the dollar is floating around as a purely fiat currency. It is far weaker than it used to be, but it is still hanging in as the world’s reserve currency, primarily because all the other fiat currencies are even weaker. Some think the Chinese are maneuvering toward having their Renminbi replace the dollar as the world’s reserve currency. For the first time ever, the entire world is using fiat currencies that float relative to each other. The relative “soundness” of each is more linked to the strength and stability of each country’s economy than any inherent characteristic of the currency itself.

Another one of the reasons used to justify creation of the Fed was that savvy bankers acting as central planners manipulating interest rates and the money supply would be able to better

smooth out business cycles, booms, busts and bubbles. The Fed's track record has not been good. The great depression of 1929 and the early thirties happened on the Fed's watch, as did the recent housing bubble and ensuing bad recession. There are quite a few somewhat less severe examples that could well be cited.

Yet another huge justification used for creation of the Fed was that its independence would remove monetary policy from the control of the politicians. (It should first be pointed out that you really only need to have a "monetary policy" if you have a fiat currency.) It surely is possible that politicians might have done a worse job, and it is not clear how much influence politicians may have actually had, but the performance of the Fed has been pretty dismal.

One of the most important duties of the Fed is to keep the value of the dollar constant, avoiding either inflation or deflation. There have been three decades under the Fed in which the dollar lost more than 40% of its value during the 10-year period and one decade when it actually gained 23% (deflation). Overall, under the Fed, the dollar has lost about 96% of its purchasing power! That is, the dollar in 2013 is worth only about four cents of the 1913 dollar.

President Woodrow Wilson signed the Federal Reserve Act in 1913. Shortly thereafter, he expressed fear that he may have ruined the country by doing so. Ultimately, it appears that Wilson's fears probably were very well founded.

In recent years, the Fed *and* the politicians have been digging the U.S. into a very deep hole. In an attempt to "buy votes" to improve their chances of being re-elected, politicians like to hand out benefits that cost money. Thus, they have become very strongly "addicted" to spending. Federal spending has grown to the \$3.8 trillion per year range. Government is no longer the small percentage of "overhead" that it used to be and has become quite significant compared to the entire gross domestic product (GDP), which is approximately \$17 trillion.

A balanced budget would require that politicians raise taxes to pay for their handouts. However, higher taxes would reduce their popularity. Governments at all levels are already confiscating a huge percentage – an average of nearly one third – of the private sector's earnings. When this much "blood" is extracted from the body and spent inefficiently, the anemic economy struggles to grow at even a slow rate.

Things really got totally out of control a few years back when the politicians figured out that they could avoid the immediate pain of imposing higher taxes by just borrowing money and postponing the pain to the future. So far, they have run up more than \$17.5 trillion in debt at the federal level, which is larger than a whole year's output of the economy (the GDP); that's a whole bunch of future pain. In addition, they have legislated large "entitlement" programs that have become actuarially unsound. The unfunded liabilities for these programs are not included in the \$17.5 trillion debt figure and are many times larger. Considerable additional debt resides at local government levels. An increasing number of cities have gone belly-up and some states (e.g., Illinois) are in danger of bankruptcy.

While the politicians have been spending and borrowing, the Fed has been expanding the money supply at an unprecedented rate. Inflationary pressures are building and must ultimately result in further declines in the value of the dollar. The Fed also has held interest rates (the rental price for money) at artificially low rates. Real interest rates (the interest rate minus the inflation rate) actually are negative in some cases, penalizing anyone who has savings

and causing gross misallocations of capital. Whether or not the Fed's actions are influenced by politicians (or even understood by most politicians), it is exactly what they would want as it helps them avoid immediate pain while they dig us into an even deeper hole.

Interest paid on the national debt in fiscal year 2013 was \$416 billion dollars, and this is at historically low interest rates. Interest rates *will* go up, probably to higher-than-normal rates. The \$416 billion in interest payments could easily hit \$800 billion or even \$1 trillion per year. If the budget is such a big problem now, what *ever* will the politicians do then? The day of reckoning approaches.

One or the other or both of two factors will trigger the rise of interest rates. First, those who loan our government money will insist on higher interest rates if they perceive increasing risk that we may no longer have the ability to pay them back fully and on time. Credit rating agencies have already reduced the U.S.'s credit rating once and threaten to do so again. Second, the declining value of the dollar as a result of the flood of dollars being created (inflation) will eventually force interest rates higher.

With careful, resolute and even-handed management, it *might* be possible to pull back from the brink and gradually climb or grow our way out of the hole. However, regardless of how it is done, there would unavoidably be noticeable pain involved. Therefore, this is something the politicians are simply not going to do. Instead, they will continue to "kick the can down the road," hoping that the collapse will not occur on their watch.

Barring a miracle (like a majority of intelligent, honest, responsible politicians), it appears that the end of our fiat currency is now coming into view in the not-too-distant future. Exactly when a collapse may come and what will trigger it is impossible to predict accurately. This is especially so now that ours is one of many unstable fiat currencies floating around relative to each other; one can draw at least temporary strength from the relative weakness of others. But don't look down.

The Path to Peace, Prosperity and Freedom

The very first requirement is a properly operating free market economic system. A free market economic system cannot be "properly operating" if there is any force involved. Everything in a pure free market economy must be the result of voluntary interactions and transactions among free people. A free market economy is the most powerful engine of wealth creation known. Since they cannot utilize force, the only way for someone to make money and "get ahead" in a free market economy is to do a really great job of satisfying other people's wants. A free market economy goes a very long way toward peace, prosperity and freedom.

The laws of economics have, of course, always existed, but human understanding of them began with the science of economics at about the time of the American Revolution. Much more widespread economic "literacy" surely would be helpful, especially in Congress. Markets are complex with billions of interacting feedback loops at many levels that maintain equilibrium; economic interactions, causes and effects are hard to fully understand and can often be counter-intuitive. The free market may not be completely without problems, but it surely is better than anything else that has been tried or conceived. Yet some still advocate

moving away from the free market and toward something involving central planning, which has colossally flopped so many times.

One of the greatest threats to a free market economy is politicians attempting to manipulate the economy through the use of government force. Sometimes, this may even be a well-intentioned attempt to “fix” some sort of real or perceived “problem.” Other times, it is just a payoff to a crony or special interest group. Common examples are:

- Targeted punitive taxation intended to reduce the demand for some good or service
- Subsidization aimed at lowering the (apparent) cost and increasing the supply of some good or service
- Guarantees, where taxpayers are put on the hook to guarantee loans or deals
- Forcing or prohibiting the use of some good or service (e.g., ethanol in gasoline)
- Attempting to force minimum or maximum prices for goods and services
- Bogus licensing requirements intended to protect established members of an industry (who usually hire good lobbyists) from new competition
- Confiscation of wealth earned by one individual and either giving it to another individual who did not earn it, or spending it in accordance with politicians’ priorities. (The only highly efficient spending is when you spend your own wealth for things that you want or need. The lowest efficiency is 536 politicians spending your money on themselves, their cronies or for things they think other people want or need.)

To the extent that the above distortions occur, we do not have a free market. All such actions have both some consequences that are seen and many that are unseen. Overall, the result is to misallocate resources and reduce wealth creation, thus penalizing everyone either directly or indirectly. All too often, unforeseen consequences even make the targeted problem itself worse instead of better. The U.S. economy is so distorted by so many such actions that it struggles to achieve 1% to 4% per year growth in “good” years when it could and should be humming along at 8% or 9% per year growth or more. That’s a whole bunch of wealth that’s not being created and not raising everyone’s standard of living.

Sound Money

Of course, to operate smoothly and well, any economy needs sound money. If we could “design” our money from the ground up, what choices should we make?

As we have seen, any truly sound money *must* either have an intrinsic value itself (commodity money) or be representative money that is *guaranteed* to be redeemable for something of value upon demand. The latter certainly is the preferred choice in our high-tech world where transactions are increasingly handled by adjusting numbers in computers rather than physically transferring pieces of paper or metal.

We reject fiat money simply because, for reasons discussed, it cannot be depended upon to perform the three functions of money well over long periods of time; its stability is poor and its collapse almost invariably is highly disruptive. It also happens to be philosophically inconsistent with a free market in that fiat money must be created by a government using force.

Commodity money and representative money arose spontaneously and independent of any government. We prefer to maintain independence from any political entity so that our new

money could be used within any region or the entire world, just as gold coins maintain substantially the same value (relative to other commodities) anywhere. Certainly, there would be no attempt to prohibit the use of any competing forms of money. Since sound money is always preferred to unsound money, our new money should be preferred if we've designed it correctly. (If not, oh well, somebody else did a better job and therefore should prevail. Competition is always a good thing.) Finally, sound money cannot be used as a tool to facilitate extreme financial irresponsibility by governments.

We come now to the question of what should back our currency. For what should holders of the currency be guaranteed to be able to exchange it upon demand? It would probably not be a horrible mistake to choose gold. Gold has been used successfully over long periods of time. It seems likely that this will continue to be the case into the future, but of course, there is no guarantee of that. Perhaps gold will be supplanted by something else in its industrial and cosmetic uses so that its demand decreases. Or maybe new uses for gold might be found that increase demand for it. Or perhaps some new way of mining, refining or creating gold will be invented that drastically increases its supply. Although gold would be way far better than the current situation of no backing, perhaps a way can be devised to improve upon gold as a backing for currency.

The choice of the best "thing" to back our currency turns out to be more complex than one might initially think. Unfortunately, there is no absolute scale of value. All things are valued relative to each other and, worse, the relative valuations change over time, sometimes dramatically. A great example of such dramatic change can be found in anything electronic. Advancing technology has made all things electronic cost less in terms of the dollar, even in the face of inflation that makes the dollar itself worth less; at the same time, the functionality, reliability, etc., of electronic products have improved greatly. So, what really does it mean to keep the value of the dollar "constant"? To what can one anchor the value of a representative currency in this vast sea of shifting values with no land ever in sight?

Economics is all about satisfying the wants of humans. Rather than tie our new currency to one commodity, it would seem better to tie it to something of great and lasting significance to humans. There are many ways this could be done, but it's hard to think of anything of more universal and fundamental human significance than "the cost of living." Indexes have been devised that are intended to measure the cost of living. We use them to measure inflation, so the concept of "the cost of living" is nothing new.

Suppose you are a descendant of Rip Van Winkle and you like to take long naps. You are planning a nice, 25-year nap. You realize that many things will change unpredictably over that amount of time. You know that you will not have a job when you awake and that you may have to live for a while without one. You may have a fair amount to learn in order to get up-to-speed, to nail down a job and to become self-supporting again. This is bound to take some time. To prepare responsibly, you stash enough cash under your mattress to support yourself in a reasonable (say, middle-class) manner for a year.

When you awake 25 years later, it seems entirely reasonable to expect that your stashed cash will indeed support you in an equivalent middle-class style for a year. You certainly should not be rudely surprised to find that your cash now will support you for only four months! Of

course, a lot of things may have changed. It might be that buggy whips were a part of your cost of living when you went to bed; when you wake up, buggy whips are no longer part of your cost of living, but gasoline is. What should not change, though, is the cost of living. If you can support yourself with a middle-class existence for \$50,000 per year today, you should be able to support yourself equivalently for a year for \$50,000 tomorrow or 25 years later or 100 years later. Money can do a pretty good job of acting as a store of value measured in terms of some well-chosen commodity. But it could do an even better job of storing value if that value is of direct, fundamental and more universal value to humans. How might this be accomplished?

A carefully designed and maintained cost of living index would have to be at the core. It should be composed of a large number of goods and services, each widely and frequently traded, with weighting factors so as to always accurately represent and total up to the median cost of living at any given time. All prices are, say, 52-week moving averages updated weekly, so there is a great deal of stability and no seasonality. No single component can have more than a miniscule impact upon the total. As the impact of things like buggy whips upon the median cost of living fades, their weighting factors are slowly reduced while the weighting factors for things with growing impacts (gasoline) are increased to reflect their growing significance.

It obviously is of the utmost importance that the index be impartially maintained by an independent entity immune to any political or economic influences. Note that the "Consumer Price Index" as maintained by the U.S. Government has been modified several times to show lower rates of inflation. For example, food and fuel have been removed as components of the CPI. Who believes food and fuel are not significant to the cost of living? One of the reasons for such manipulations is that COLA's (cost-of-living adjustments) based on the CPI are reduced, somewhat easing budgetary problems like the growth of Social Security payments. It should be possible to fairly rigidly define the procedure for determining the cost of living in such a way as to minimize the opportunity for nefarious manipulation.

Suppose that the cost of living when our new index is initiated is \$50,000.00. This then becomes the reference cost of living. Each time the cost of living is updated, it is divided into the reference cost of living to obtain an "adjustment factor." If the cost of living always stays \$50,000.00 (as is the goal), the adjustment factor is always 1.0000. However, suppose in some future week the cost of living computes to \$50,100.00. The adjustment factor then becomes 0.9980. Of course, if the cost of living starts to drift down below \$50,000.00, the adjustment factor will be greater than 1.0000. A cost of living computation of \$49,900.00 results in an adjustment factor of 1.0020. The trick now is to implement a negative feedback loop that will adjust the value of the dollar so that the adjustment factor stays very close to 1.0000 and therefore always keeps the cost of living very near \$50,000.00.

With a fiat currency, this has to be done by linking the money supply to the adjustment factor. If/when the adjustment factor drops below 1.0000 (inflation), the money supply needs to be decreased. This tends to increase the value of the dollar and cause prices to generally decline. In the opposite case, where the adjustment factor goes above 1.0000 (deflation), the money supply must be increased, thereby decreasing the value of the dollar and causing a general increase in prices back to a \$50,000.00 cost of living. The volatility of fiat currencies (previously discussed) combined with hard-to-predict time delays between changes in the money supply

and the resultant price changes make this feedback loop very tricky, but better than no control. Fiat currencies are *not* recommended.

A hard currency, guaranteed to always be redeemable for something of intrinsic value, is fundamentally much less volatile and more stable. The cost of living can be expected to remain quite constant naturally. It is not appreciably affected by the normal short-term fluctuations of the prices of its many components. It could be expected to change slowly over the long term as affected by, say, technology tending to reduce costs and/or the gradual phasing in and out of components (gasoline instead of buggy whips, etc.).

The negative feedback loop for a hard currency is established by directly linking the dollar redemption rate to the adjustment factor. That is, the dollar could be redeemed in gold at the current spot price for gold times the adjustment factor. Note that fluctuations in the price of gold are not at all disruptive as the dollar is now decoupled from any particular commodity. In fact, the dollar could be redeemed in *any* commodity that a depository institution and its customers might (voluntarily) agree to use; just multiply the current market price of the commodity by the adjustment factor to obtain the redemption rate. The feedback loop will be stable and maintain lock as long as the adjustment factor stays sufficiently close to 1.0000. This should be the case naturally, or can be engineered to be so by further smoothing of the index.

The dollar is now a representative currency that is guaranteed to be redeemable, but not necessarily for a fixed amount of any specific commodity. One cannot say that the dollar represents gold or silver or barley or any commodity, although it could indeed be redeemed for any of them. So, what exactly is it that the dollar represents? Using the numbers from the above examples, the dollar always represents slightly more than 10 minutes of middle-class living.

Conclusions

It should be possible to gain the manifold advantages of a hard currency without the potential disadvantage of tying it to some specific commodity. Instead, its flexibly redeemable value could be locked to follow any gradual long-term shifts in what is probably most important to humans, their cost of living. An overall approach to accomplishing this has been outlined. Cost-of-living adjustments would never be needed.

A hard currency is its own “monetary policy.” There is no need for central planning or manipulation. Therefore, a central bank is not necessary and the potential problems of a central bank can be avoided.

Interest rates (the rental price for money) should be set by normal market forces from competition among many borrowers and many lenders, just as all other prices should be determined by market supply and demand. Operating without the use of force, the myriad of corrective feedback loops of a voluntary free market automatically do the best job of maintaining balance and efficiently allocating resources. Central manipulation of anything is undesirable and almost inevitably destabilizing, especially when attempted in combination with the inherent instability of a fiat currency.

The free market is not perfect and completely problem free, but it is far better than anything else that has been conceived or tried. It also has the unique advantage of being the type of economy that naturally and spontaneously arises out of the voluntary interactions between free, honest and peaceful people.

<https://www.intellectualrevolution.tv/videos/adam-smith-lecture-paper-money-collapse-detlev-schlichter-complete>