

The Root of All Money

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“So you think that money is the root of all evil. Have you ever asked: what is the root of all money?” (Rand, 1957) Money often gets a bad rap. We tend to take for granted the vital role money plays in creating wealth. Every day we trade money for goods and services and earn money for our labor; this habituation has allowed us to forget why we use money. Government control of our money supply has muddled our view of what money is outside of state run mints. What would money look like under the free market? I propose that after answering these questions the existence of money in the free market will not only seem plausible, but desirable.

What is the role of money in the economy? Why does money exist? In 1892 Carl Menger pondered a similar question:

we have to explain why it is that the economic man is ready to accept a certain kind of commodity, even if he does not need it, or if his need of it is already supplied, in exchange for all the goods he has brought to market, while it is none the less what he needs that he consults in the first instance, with respect to the goods he intends to acquire in the course of his transactions.

Why do Americans accept dollars in exchange for a television? We gain nothing directly from the pieces of paper and coin. The answer may seem obvious, but it alludes to an immense affluence afforded by money.

The use of money bestows much prosperity which is largely disregarded. Even the most mundane but useful aspects of our economy exist only because of money; however we often fail to realize it. Consider a trip to the family doctor. On arrival we park our cars in the lot and greet the attendant behind the front desk. The nurse directs us into the doctor’s office. The doctor arrives. She times our pulse and measures our blood pressure. Behind the scenes, she uses her

years of training and experience to diagnose our ailments. We then head back to the front desk, pay the bill and leave. See it or not, nearly every aspect of our lives is replete with the effects of money. Imagine this story in a world without money. Let's say we are corn farmers. We might offer to compensate the doctor for her service in ears of corn, the amount of which must be less preferable to us than the doctor's services. This might work if the doctor happens to prefer this amount of corn to her time and effort. What about the nurse and attendant? They too would like to be compensated for their work. The doctor could either pay them with your corn or with her services. Prior to our office visit, the doctor had to pay for the equipment, the building, the land, and the medical schooling. She could promise, by contract, to compensate the builders and her teachers through future doctor visits and whatever other payment may come from customers like us but it seems unlikely that our doctor will succeed in her endeavor, not for lack of demand, but only for the inefficiencies of barter. This inefficiency is called the coincidence of wants problem (Jevons, 1876).

In our example there were two forms of trade, both direct and indirect. When the doctor exchanges her skills for our corn, this is direct trade. Alternatively, if the nurse had a demand for our corn, the doctor could trade with us first, and then trade his newly acquired corn for the nurse's work. This is indirect trade; so is money. Here, Steve Horwitz succinctly explains the benefits of money:

The use of money means that we no longer have to worry about finding someone who both wants what we have and has what we want. We only need to find someone who has what we want because we know people will accept money for their goods or services. Thus, money makes it much easier for people to engage in exchange, and this, in turn, improves economic well-being by getting goods into the hands of the people who value them most. (Horwitz, 2009)

Money is the oil of our economic engine. We take our corn to the marketplace and sell it for money. We take our money to the doctor's office and sell it for the doctor's advice. Money allows the doctor to specialize in medicine, while selling her money in exchange for her assistants help. Money allows the doctor to easily compare the costs of business – like paying for buildings, stethoscopes, and nurses – to her revenues – the money she receives from her customers. Money allows savings to be lent to current consumers and paid back by future producers. Our doctor can pay her teachers with borrowed money which she repays, with interest, to her lender from the money she earns providing medical care. In the words of Richard Ebeling: money is the general medium of exchange; money permits us to comparison shop; and money also enables an efficient transfer of resources between savers and investors (Ebeling, 1990).

As already stated, money is a medium of exchange. In our doctor example, corn was used as money. This is referred to as commodity money and has been used throughout history. A commodity becomes money by possessing the traits that make it useful and convenient for indirect trade. Menger sites “cattle, skins, cubes of tea, slabs of salt, and cowrie-shells” as historically used commodity money. Murray Rothbard sites others, such as: “tobacco in colonial Virginia, sugar in the West Indies, salt in Abyssinia, nails in Scotland, copper in ancient Egypt, and grain, beads, and fishhooks.” (Rothbard, 1963) It's important to recognize though, to the degree to which these goods function as money, they are not consumption or production goods. (Mises, 1953) This distinction between money and other goods will become important later, when comparing the effects of changes in supply of money to changes in the supply of goods.

According to Ebeling, “commodities such as gold and silver were found by individuals to possess the qualities and attributes most useful in providing a sound and stable medium of

exchange.” Mises defines those qualities and attributes as marketability (Mises, 1953). Goods vary in their marketability, through durability, divisibility, transportability, demand or use, etc... “If one good is more marketable than another—if everyone is confident that it will be more readily sold—then it will come into greater demand because it will be used as a medium of exchange” (Rothbard, 1963). Commodity money must be especially marketable good. This explains why gold and silver in earlier centuries rose to prominence as the standard commodity monies. Both are soft metals, easily moldable and divisible, which also make them transportable. As people begin accepting these commodities as money, their use rises, which increases their marketability, which increases their use and so on.

Commodity money is an efficiency improvement on direct barter exchange. Private coinage is a similar efficiency improvement on commodity money. Let’s assume the standard money is gold. The price of a good is measured by the amount and quality of gold needed to trade for it. For example, one television might trade for one ounce of pure gold. At each transaction the buyer of the gold -- the seller of the television -- would have to measure the purity of the gold, to assure its value. This is costly. Private coinage is a potential method of reducing these costs. How does this reduce costs? Consider our purchases of non-monetary goods. We buy cereal, spices, coffee, lumber, and metals all by weight or size. We rarely actually weigh or measure the products we purchase or test them for quality. Instead, we put our trust in the brands of the products. This is one reason why, all else equal, we pay more for food in a brand name restaurant than for food from an unknown vendor. The brand name is a signal of quality. Similarly, branded gold would command a higher price than unbranded gold of the same weight and purity. Under competition, the difference would be the marginal cost of coinage (Selgin & White, 1987). The stamp, or brand, is a signal of the quality and weight of gold allowing us to

avoid those costs of measurement and testing. Thus there is theoretical room for private coinage, if the costs of coining gold are less than the costs of measurement and testing. However, gold coins have historically been replaced by more efficient money substitutes.

Individuals will likely find that storing and transporting commodity money is inconvenient. Storing gold in your house is a hassle. Carrying gold from your house to the store is costly. Both might be unsafe. Rothbard suggests that to reduce the costs of storage, money warehouses will specialize in storing and securing money. As proof of our deposit, we would leave the warehouse with a receipt. Instead of gold changing hands in every transaction, often only the paper receipt for the gold will be exchanged, reducing the costs of transportation. As corn farmers, we could trade corn for a gold receipt. The receipt might claim gold at a different warehouse than our own. In this case, the gold would have to be transferred to our warehouse. We could move it ourselves or a company, possibly the warehouses, would specialize in transporting gold between warehouses. These receipts are money substitutes and they would look and feel a lot like cash. A warehouse might give you a receipt or bill that represents your claim to say 1, 5, 10, or 20 gold coins. We could trade these receipts just like we spend cash now. However, even though money substitutes are convenient, their use would be limited. The extent of their use, according to Rothbard, depends on three variables: the extent of the use of money warehouses (banks); the extent of the use of *each bank*; and the extent of the clientele's trust in banks. (1963)

At this point, once we deposit our gold in the bank it just sits there. Eventually we withdraw it, someone we have exchanged a receipt with withdraws it, or that someone's bank -- with our deposited receipt -- withdraws it. These idle resources leave room for an improvement in efficiency, by lending out the idle reserves. Banks could do this in two ways; one is to

physically loan out the gold to individuals. But as we already found, there are costs to physically trading in gold. Instead, the second method is to simply create receipts that are not covered by deposits. George Selgin sites two reasons why banks are able to loan out their reserves. First, depositors can be repaid in money that is not the actual money they deposited. Second, “the law of large numbers with random withdrawals and deposits makes a fractional reserve sufficient to meet actual withdrawal demands even though any single account may be removed without notice. “ (Selgin & White, 1987)

The idea of free market money is most often met with opposition concerns over bank runs. The implication is that, yes, fractional reserves are sufficient when withdrawals are random but the contagion of panic often causes everyone to want their money at the same time. The federal deposit insurance corporation (FDIC) was created to prevent bank customers from panicking. Yet, this is merely government’s solution to a problem it created. By restricting interstate branch banking, government has sabotaged banks’ ability to solve the problem of bank runs. By banking in a number of separate cities banks can distribute their reserves to the panicked areas. Multinational banks could distribute their reserves to panicked countries. A single bank can assign a certain probability to everyone withdrawing their money at once, allowing them to only keep a fraction of their reserves. Multinational banks can, in the same way, assign a probability to a worldwide panic, which will be smaller than the probability of runs on local banks. Therefore branching is desirable for at least two reasons. One, branched banks are less susceptible to bank runs and two, large branched banks required fewer idle reserves than the sum of smaller, individual banks (Horwitz & Selgin, 1987).

Why though would bankers not create an infinite number of uncovered receipts? I suspect they would if they were able to. However, they cannot; they are limited by those three variables

defined by Rothbard (1963). The first limit is the extent of bank use. If banks loan out a fraction of their deposits, more deposits means more uncovered receipts. The bank's loan fraction is a function of Rothbard's second constraint. It says that each bank's creation of uncovered receipts is limited by the extent of the competition in the banking industry. To see this, consider Selgin's second reason for uncovered receipts: random withdrawals. If bank A expects that a large fraction of their deposits will be withdrawn on a given day, they must keep more money in reserves to cover them. A larger number of competing banks means a larger number of A's receipts are deposited at the competing banks, which means a larger number of withdrawals and larger fraction of reserves required at bank A. The third and most important limit on receipts is the trust of a bank's customers and the trust of the people they exchange with. Owners of gold will only deposit with a bank that they trust to have money available when they demand it. Additionally, if a bank is notorious for printing too many uncovered receipts – and not being able to fulfill their withdrawals – few people will accept the bank's receipts as money. Competition will draw customers from untrustworthy banks towards trustworthy banks. Under competition, successful banking requires adherence to these limits. It's important to note that branding works the same way in banking as it does in private coinage. Not just anybody can start doling out bank receipts. Individuals will only store gold and accept receipts from the banks that have a reputation for being trustworthy. The point is there are limits on banks' ability to print receipts, even without government intervention.

Money would exist under the free market. Some commodity will develop as money, whichever commodity is the most marketable. Private coinage could reduce costs of measurement and testing, and private printing of money could reduce costs of storage, security, and transportation. As well, banks can act as financial intermediaries to reduce the amount of

idle resources. But most importantly, private money can exist without banks printing an unlimited amount of money. Nonetheless, we still have to question whether the free market will supply the correct amount of money at the right value. It seems possible that the free market could produce too much or too little money at a too high or too low of price.

The first question to answer is: what sets the value of money? Economists believe that supply and demand set prices. Let's again assume the money is gold. The 'price of money' may seem like an awkward term – as we are familiar with seeing the *prices of goods* in terms of money. Instead, the *price of money* is in terms of goods. In Rothbard's words:

The "price of money" will then be an array of alternative exchanges. One ounce of gold will be "worth" either 1/3 of a television set, 1/60 of an auto, 100 loaves of bread, or one hour of Jones's legal service. (1963)

Again, money is only a medium of exchange; therefore the demand for money only exists because individuals desire to engage in transactions. Consider the effect of an increase in the demand for money, that is to say, an increase in the demand for transactions. Individuals desiring to hold more money will bid up its price. In other words, they would have to be encouraged to let go of their money by offers of more goods in exchange, which is an increase in the price of money. A higher price of money allows individuals to purchase more with each unit of gold – their desired increase in transactions. The price of gold will rise until the demand for more transactions is satisfied. A similar process would take place with a fall in demand and a subsequent fall in the price of money. These changes in price, due to changes in demand, would create a net benefit to society, as individuals' preferences are being better satisfied. However, consider a change in the supply of money, for instance, a new supply of gold is found and mined. With a given demand for money, individuals will have more money than they desire and will bid

up the prices of goods, which is a fall in the price of money. However, there is no net benefit here. Since money has no value outside of being a medium of exchange, having a larger supply of money, as opposed to a larger supply of goods, does not make anyone better off, it only lowers the value of money. Rothbard draws an important conclusion from this, “it doesn’t matter what the supply of money is” (1963). Different amounts of money in the economy only change the purchasing power of each unit of money.

While the amount of money doesn’t matter, unforeseen *changes* in the money supply are costly. If the price of money falls, debtors pay back lenders with less valuable money, redistributing wealth from lenders to debtors, discouraging lending and encouraging borrowing. Contracts can thwart these costly effects by stipulating repayment in future money values. However, this is difficult. Recall that the price of money is an array of all your alternative exchanges. The technology to build computers might make computers relatively abundant while oil has become relatively scarce. Gold now trades for more computers but less oil; has the value of the coin gone up or down? As you can see, choosing the correct index of the price of money isn’t easy. Also, Rothbard points out two other costs of money supply changes. First, a change in the money supply is beneficial to those who get the money first. They have extra money while its value is still relatively high. After some time though, prices get bid up. Everyone else who didn’t get any of the new money sees their purchasing power decrease. This too is a redistribution of wealth, this time from late-comers to early-comers. Second, when sales lag in time after production, inputs are cheaper to buy than to replace. This makes revenues appear much higher than costs, encouraging entrance into a market with only artificial profits (1963). Finally, acquiring information on changing prices is costly as well, as is dispersing it. Prices printed on menus or signs will have to be reprinted: deemed “menu costs” by Greg Mankiw (Mankiw,

1985). All these costs suggest that, all else equal, the market will choose the commodity money that has the most stable supply, meaning: money will be durable and long lasting, and the costs of mining or creating new money will be nearly equal to its price.

To say that money is the root of all evil is to say that the root of all money, voluntary exchange, is evil. However, few to none of the luxuries we enjoy today – food, healthcare, leisure time with our families, etc. – would exist without both money and exchange. As money has afforded us more goods, so too must money be good and not evil.

Money exists for one reason: to facilitate trade. Direct barter exchange is severely constrained by the coincidence of wants problem and thus has little wealth producing potential. Many goods could potentially act as money, through indirect trade, and historically many have. In the search for wealth, individuals will choose the commodity that is the most appropriate money. Historically, gold and silver have tended to be the standard money, due to their marketability. To reduce information costs, brands of commodity money will assure quality and weight, and to reduce storage and security costs, warehouses will specialize in money storage. Filling the role of financial intermediaries, warehouses will loan out a fraction of their idle reserves to earn interest. Without government intervention, all else equal, successful banks will branch across states and nations, minimizing risk and reducing idle resources. Even though banks will print uncovered receipts, effectively increasing the money supply, they are limited in the extent to which they do so. Untrustworthy banks will be forced out of business by competition. Additionally, it's not the amount of money supplied that matters but the amount of changes in the supply. Ultimately, individuals, through their daily transactions, will have increased demand for marketable, saleable goods. They will prefer goods that are durable, transportable, and divisible. The increased use of a good as commodity money will cause a

snowball like effect as more people accept it in exchange. Eventually, fully functioning money, a commodity readily accepted in exchange, will exist without the state.

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