Part One

THE BASICS OF MONEY
Chapter 1

The Fundamentals of Money and Money Demand

Modern industrial society requires extensive division of labor. Extensive division of labor is feasible only in a market economy, that is, in an economy based on the voluntary contractual exchange of goods and services on markets. Such a system, by necessity, requires the institution of private property (clearly delineated ownership of goods and services) and a medium of exchange, money. Modern civilization, and the degree of material provision (wealth) that we all associate with advanced civilization and that we have come to expect from it, requires trade, markets, private property, and money. Such an economic arrangement can be called, broadly, capitalistic.

Primitive societies may be able to do without these things. A strictly self-sufficient small community, maybe a single household,
a clan, or a small village, may produce the bare necessities of life and distribute them according to the diktat of a leader or group of leaders, according to some central plan or agreement, or even according to established traditional rules. But such a society does not take advantage of the benefits of an extensive division of labor that wider trade relationships allow, and its members will struggle to become more prosperous. Autarky is a recipe for poverty. Very few people today want to live in such a society, and it is no surprise that the vast majority of mankind has left this way of life behind.

For the past 200 years communism has promised to erect a modern industrial society with a high standard of living for everyone but do so without private property, without free trade, and thus without money. In a proper communist commonwealth, where every resource is owned and allocated by the state, there is no place for market exchange and no place for money. Economics has demonstrated convincingly that no advanced industrial economy can ever operate along communist lines, and the historic failure of self-proclaimed (albeit not fully consistent) communist societies in the twentieth century illustrates this poignantly. Capitalism is a term that still has negative connotations in many circles, but it is a fact that the only advanced, highly productive, and wealth-generating societies we know, whether from experience or theoretical investigation, are in a broad sense capitalist societies. They require private property, exchange (trade), and money.

**The Origin and Purpose of Money**

Money is the medium of exchange. Money facilitates the exchange of goods and services on markets. Of course, private property owners can exchange property without the help of money. They can trade goods (or services) directly for other goods (or services). Such exchanges are called direct exchange, or barter. Exchanges that involve a medium of exchange are called indirect exchange. The problem is that in a barter economy people cannot realize the full benefits of trade because transactions are possible only whenever each party wants precisely what the other party has to offer. Person A will sell his good “p” to person B only if whatever B has to offer in exchange, let us say good
“q,” is precisely what A wants. If one of the two parties has nothing to offer that the other party has use for, then the trade will not take place. Economists call this condition double coincidence of wants, and it severely restricts the number of transactions that will occur in a barter economy. An additional impediment to trade is that many goods are indivisible. Please note that double coincidence of wants and limited divisibility hamper not only the exchange of physical goods for other physical goods but also the exchange of services. Despite these inevitable drawbacks of a barter economy, the exchange of goods and services started most certainly on such a limited scale with people exchanging what both parties to the trade found immediately useful.

It is obvious that in a barter economy people would pretty soon start to accept certain goods in trade, not because they want them but because these goods can be traded very easily for other things. There is a bigger market for some goods than for others; certain goods are more marketable; they are more fungible. For example, somebody may sell a goat for a sack of salt, not because he desires the salt but because he knows that salt is more easily traded for other things and that he stands a good chance of later exchanging the sack of salt for whatever he really desires. This is such logical behavior that it would be utterly surprising if it did not happen fairly quickly in any trading society. As more people start accepting the more fungible goods in trade, these goods become yet more fungible, and it is clear that they ultimately gain the status of generally accepted facilitators of trade. These goods could be cloth, beads, wheat, or precious metals. Whatever they are, they acquire a special place in the universe of traded goods. They are media of exchange. The most fungible good and the most generally used medium of exchange is ultimately called money. Now person B can buy product “p” from person A, although A has no use for B’s product “q.” B can instead sell “q” to C, D, or E; accept the medium of exchange from them as payment; and use that to buy “p” from A. Person A will accept the medium of exchange in the knowledge that others will also accept it in exchange for goods and services.4

Thus, no more than rational self-interest on the part of trading individuals is required to explain the emergence of media of exchange.5 It is in the interest of everybody who wants to participate in the free, voluntary, and mutually beneficial exchange of goods and
services to use media of exchange. Indeed, it is in the interest of everybody to ultimately use only one good as the medium of exchange, the most fungible good, and that is called *money*.

Money is not the creation of the state. It is not the result of acts of legislation, and its emergence did not require a society-wide agreement of any sort. Money came into existence because the individuals who wanted to trade found a medium of exchange immediately useful. And the more people began to use the same medium of exchange, the more useful it became to them.6

Money is a social institution that came about spontaneously. Other such institutions are the concepts of private ownership and of clearly delineated property and the rules and standards according to which property titles can be transferred. All these institutions came into being because people saw the immediate benefit from extended human cooperation, of cooperation that goes beyond the immediate family or clan. Such cooperation allows an extended division of labor that enhances the supply of goods and services for everyone who participates in it.

Not only does the existence of money not require a state organization to issue it, but it is also inconceivable that money could have come into existence by any authority (or any private person or institution) declaring its unilaterally issued paper tickets money.7 That money does exist in this form today is obvious. Yet, as the Austrian economist Carl Menger showed more than 100 years ago, money could have come into existence only as a commodity.8 For something to be used for the very first time as a medium of exchange, a point of reference is needed as to what its value in exchange for other goods and services is at that moment. It must have already acquired some value before it is used as money for the first time. That value can only be its use value as a commodity, as a useful good in its own right. But once a commodity has become an established medium of exchange, its value will no longer be determined by its use value as a commodity alone but also, and ultimately predominantly, by the demand for its services as money. But only something that has already established a market value as a commodity can make the transition to being a medium of exchange.

Which commodity was used was up to the trading public. Not any good was equally useful as money, of course. Certain goods
have a superior marketability than other goods. It is no surprise that throughout the ages and through all cultures, people almost always came to use precious metals, in particular gold and silver, as these two possessed the qualities that were ideal for a medium of exchange: durability, portability, recognizability, divisibility, homogeneity, and, last but not least, scarcity. Indeed, the very rigidity of their supply made them attractive. The fact that nobody could produce them at will made them eligible. They could be mined, of course, but that took time and involved considerable cost. And their essentially fixed supply contrasted with the inherently flexible supply of the goods and services for which money was being exchanged, thus ensuring that exchange relationships were not further complicated by a volatile money supply.

An Anthropologist’s Challenge

The anthropologist and political activist David Graeber has recently challenged this account of the origin of money. In his book *Debt: The First 5,000 Years*, he makes the following three claims:

1. The barter economy is a myth told by economists, and it is not supported by anthropological evidence.
2. What was common instead was the “gift” economy, in which people hand over goods or perform services without immediate payment but under the mutual understanding that, at a later point in time, a reciprocal service or handing over of a good will be performed.
3. Money originated as an accounting device employed by Sumerian temple workers (i.e., state bureaucrats) in Mesopotamia as early as 3500 B.C.

Graeber believes he has undermined the traditional explanation for the rise of the monetary economy but in fact he has done no such thing. As we will see, he has simply failed to apply concepts of economics accurately to the societies he analyzed, either because he misunderstood these concepts or refuses to employ them correctly. Be that as it may, this has led him into confusion.
As to point 1: Graeber gives this chapter the title “The Myth of Barter” and quotes fellow anthropologist Caroline Humphrey as stating that “No example of a barter economy, pure and simple, has ever been described, let alone the emergence from it of money; [. . .].” But these somewhat grandiose claims are not supported by evidence. Graeber qualifies them by stating that “all this hardly means that barter does not exist,” only that it is almost never employed between fellow villagers but is usually confined to trading with strangers. Graeber himself provides three examples of primitive societies for which barter is an important part of their lives: the Nambikwara of Brazil, the Gunwinggu people of western Australia, and the Pukhtun of northern Iraq.

“What all such cases of trade through barter have in common is that they are meetings with strangers who will, likely as not, never meet again, and with whom one certainly will not enter into any ongoing relations.”

I am not aware that economists have made this distinction between trading with fellow villagers and strangers, and I am not clear why this distinction should be of any significance for understanding the benefits of barter and the emergence of indirect exchange through money. Graeber does not make this clear. The fact that barter is (mainly) employed for trading with strangers seems to somehow discredit it in his view, although why is never explained.

Graeber has certainly not shown that barter is a myth. To the contrary, his examples illustrate vividly the power of trade. Trade is, by definition, to the benefit of both parties to the transaction. Otherwise, why would they trade? In Graeber’s examples, people overcome tribal hostilities and inborn animosity to strangers because they evidently realize that they benefit from trading with people outside their intimate circle of friends and family. Trade is a form of extended human cooperation—extended because it allows cooperation across political or established familial borders. It is this process that creates “society.” Trade, first through barter, then through indirect exchange via money, enhances wealth and furthers peace, and it allows humans to build societies that are extensive and open, rather than closed and tribal. Such a pro-market interpretation seems to elude Graeber.

Regarding point 2: Instead Graeber considers much more important the exchanges between people among whom fairly close social ties
already exist. Here, he discovers a form of exchange that he believes has escaped the economists or has been shamefully neglected by them. People hand over goods or perform services without receiving immediate payment, but in the knowledge that at some future point in time the other party will reciprocate. Graeber explains that both parties even call their part of the deal gift, and he provides some stylized examples to illustrate the process.\(^\text{14}\) Apparently, Graeber fails to realize that these are also instances of barter, and that only the delivery of one side of the trade has been postponed into the future.

Only two forms of exchange are logically conceivable: direct exchange (goods/services for other goods/services) or indirect exchange (involving money as a medium of exchange). Graeber’s example of a “gift” economy involves the handing over of shoes today in exchange for handing over something else, which is as yet unspecified but could be, as per his example, potatoes or a pig, at an equally unspecified time in the future. This is, of course, again a barter transaction, but both sides of the transaction occur at different times. There is an element of credit here, but it is still barter. One party does not get anything in return right away, but that party now has a claim against the other party, and that claim will ultimately be settled again in the form of goods or services.\(^\text{15}\)

Even more surprisingly, Graeber believes that double coincidence of wants has now been avoided.

“In any of these scenarios, the problem of ‘double coincidence of wants,’ so endlessly invoked in the economics textbooks, simply disappears.”\(^\text{16}\)

This is not the case. We may say that the constraint from double coincidence of wants is now lessened. What the party that has delivered first may get later is not specified right away, so it will depend on any future needs as they arise. This means that a range of possible goods or services may later qualify as repayment and may then indeed satisfy the party that delivered first. However, the two parties are now bound together via the original transaction. If A has given something to B, A now has a claim specifically against B, and only against B. If A thought it unlikely that B would ever produce anything or have anything in his possession that could really interest A, A would be reluctant to enter the original trade with B in the first place. Additionally, B must fear that, given the unspecified nature of the claim that A now has against him,
he will later be asked to hand over something that he does not want to part with. Graeber sees no problem with any of this because all his trading partners are neighbors and already part of a friendly community. But it is clear that, outside the small, closely knit neighborhoods for which Graeber has constituted his examples, this will quickly be a hindrance to the emergence of a more extensive network of trade relationships. In a modern economy, we certainly prefer the flexibility that generally accepted media of exchange give us to the mutual dependencies that a network of claims against specific individuals entails.

We can illustrate this further by considering the example of two self-employed hairdressers, one working in Graeber’s modified barter economy, the other in an economy using money. By cutting the hair of his clients, the first hairdresser establishes a portfolio of claims against his customers. He has acquired not a present good but a string of future goods. Also, the initial transaction (providing the service of hair cutting) has tied him to those customers. He cannot buy anything from those whose hair he has not cut.

By contrast, the second hairdresser is paid with units of the most fungible good, the generally accepted medium of exchange, money. He is in possession of a present good, not a future good. He can cash it in instantly or may hold the money for some time and wait for a more appealing spending opportunity. Importantly, money allows him to transact with anybody participating in this monetary economy (using this form of money), not just the clientele of his salon. He may even buy things from bald people. In the process, he does not incur any credit risk to his individual clients. After all, we benefit from trading with strangers, with people we will never meet again.

Be that as it may, it is evident that notwithstanding Graeber’s nostalgic attachment to the intimate relationships of the “gift” economy, human societies have evolved very differently. Almost all of them have adopted media of exchange, and Graeber cannot even blame this on the economists he so much likes to ridicule. Economists have explained these phenomena only for the past 300 years, but money has been used for more than 2,500 years. Economics helps us analyze the benefits of money conceptually, and those standard explanations still appear valid and convincing, and they should be obvious to Graeber if only he allowed himself to use the analytical tools of the economist.
As to point 3: The Sumerian economy of 3500 B.C., according to Graeber, used the silver shekel as a monetary unit. One shekel’s weight in silver was fixed as the equivalent of one bushel of barley. All the silver was stored in temples and was thus not used in trade by the public. There was no need for this, according to Graeber, as payments could be made in anything else. The silver hoard was used for government accounting purposes only.

No prizes for guessing what type of economy this was. Of course, it was again a barter economy. The monetary unit did not circulate in the economy, so people exchanged goods and services directly for goods and services, maybe with the mismatches in settlement periods and thus with the element of credit that Graeber considers so important, but certainly without the network-expanding powers of a medium of exchange. The Sumerian economy therefore tells us little about the benefits of money and how money came to be used because it is not a monetary economy in the first place but a barter economy. Graeber, despite his insistence on the “myth of barter,” has given us yet another example of the barter economy and its inherent constraints. Graeber fails to realize that a pile of silver owned exclusively by the state is not “money” in any traditional meaning of the word, and whatever the temple workers recorded in their accounts were not money prices but barter-exchange relationships translated via barley into silver.

Graeber keeps insisting that credit came before money, and we may happily concede this point, but why this is relevant is not clear. A barter economy can certainly entail credit in order to lessen the constraints from double coincidence of wants, but that still does not make it a reasonable alternative to the monetary economy. A developed market economy requires indirect exchange. The use of money becomes indispensable in economically advanced societies because only a medium of exchange allows a wide network of impersonal trade relationships to emerge (trading with strangers). The economist’s conceptual analysis of the importance and genesis of money remains valid. Graeber has not undermined it in the slightest. He has not exposed the fallacies of the economists but has revealed his own prejudices against the open society and its foundation in extensive contractual, voluntary, and money-aided exchange, which still is the basis of our prosperity today.
What Gives Money Value?

To the extent that a good begins to function as money, its value is no longer determined alone by any specific use value that the money commodity may otherwise have but also, and soon dominantly, by its monetary exchange value, by its function as a facilitator of trade. When gold and silver became media of exchange, their market value was no longer determined solely by their original use value as metals in industrial production or as jewelry. Now people had demand for gold and silver as monetary assets. This additional demand, and any changes in this demand, naturally affected the prices of these metals. When the demand for money went up, that is, when people wanted to hold a larger share of their wealth in the form of money, the prices of gold and silver went up, assuming that all else remained unchanged; and when the demand for money fell, the prices of gold and silver fell, again assuming that all else remained the same. Gold and silver acquired an additional element of value independent of their use value, and that was their pure exchange value as media of exchange.

Something is money only because others in society accept it as money in trade. This is true of any form of money, whether it is gold, paper tickets, or the immaterial electronic book entries that we use predominantly today. And the exchange relationship between what is used as money and all the goods and services that are being exchanged for money (money’s purchasing power) is also determined by the trading public. This is an important point that often seems to get overlooked. Those who advocate gold and silver as proper money often refer to an “intrinsic value” that these metals allegedly possess. They seem to believe that the fact that these are physical assets and that they have nonmonetary uses as jewelry or industrial commodities also gives them value as money. This view is mistaken. Their nonmonetary uses mattered only at the point in time, now long past, when they were first used as money. Once the precious metals had established themselves as monetary assets, their nonmonetary uses became secondary for their valuation.

The term *intrinsic value* is meaningless in economics. All value is subjective, meaning it is the result of acts of valuing by people. Gold
and silver have certain physical properties that are intrinsic to them, but how those are valued is always the result of a subjective assessment by the users of gold and silver. Certain properties of gold made it better suited for monetary purposes than any other (or most other) naturally occurring elements, foremost its durability and divisibility. But electronic money today is also perfectly divisible and, for all we know, durable. Electronic money is not only immaterial; it also has no other, nonmonetary function whatsoever. It is evident that this does not preclude electronic money from being used as money. Both gold and electronic money are being used as forms of money today (albeit to different degrees), and this is the result of social conventions. That is always the case with money, which is always and everywhere a social institution. People have found it useful for thousands of years to use gold as a monetary asset, and to some degree they still do so today. And more recently, people have found it useful to use electronic money.

If the public were to no longer consider gold a monetary asset, its price would certainly collapse, although it would not go to zero, as would happen to paper money or electronic money if it were no longer considered money. Conversely, if gold lost all its nonmoney functionalities, if it magically became useless as an industrial commodity or jewelry, it could still retain its value as a monetary asset if the public continued to consider gold as a useful monetary asset. There are, of course, big differences between gold and state-issued fiat money, and they relate to the process of their production and the elasticity of their supply, and those are determined somewhat (but not entirely) by their physical properties. But the sooner we free ourselves from the material aspects of the various forms of money and focus on those other features, the better.

A similar mistake is often made by the defenders of state fiat money. They assume that it is the state that bestows value on fiat money today. Again, this view is mistaken. All currencies today are irredeemable paper monies. The state does not back them with anything, and they are not claims on anything. If you take a paper note to the central bank, you do get change—that is all. Again, its value comes from the public’s use of it as money in trade. It is the public that bestows value on money.
(Almost) Any Quantity of Money Will Do

Once a commodity or any other asset is accepted as a medium of exchange, its usefulness as such cannot be enhanced by an additional supply. This is a unique feature of money. Other goods deliver a greater service to the public if their supply is increased. More cars can transport more people; more TV sets can entertain more people; more bread can feed more people. These things are goods because they have use value, they can directly satisfy the needs of their owners. The same holds for the means of production, such as tools, plants, and machinery. Although they do not satisfy the needs of consumers directly, their usefulness lies in their ability to help in the production of goods and services that will ultimately satisfy the needs of consumers. This is why they have use value, too. More consumer goods can satisfy more consumer needs now; more investment goods can satisfy more consumer needs later. A society that has more consumer goods and investment goods is richer. A society that has more money has higher prices.

In this respect, money is different from any other good. To the extent that a good is used as money, its usefulness lies exclusively in its marketability, in its general acceptance as a medium of exchange, as a facilitator of trade. Its value to its owner lies in its exchange value, not its use value. Money is valued because of what you can buy with it. If society overall has more money, meaning that society has a bigger quantity of the money substance, it has more of the medium with which to exchange things, but it does not have more things to exchange. The exchange value, the purchasing power of every unit of the money commodity or money substance, will be different (prices will be different), but this is unrelated to society’s overall wealth, the available quantity of goods and services. It follows from this that—outside of the extreme cases of acute scarcity or abundance of the monetary asset—any amount of the good money is optimal. Any quantity of the money commodity or money substance will be sufficient to allow the money commodity to fulfill all functions of a medium of exchange.18

To illustrate this, let me take you back to the community of A, B, C, D, and E that we met earlier in this chapter when demonstrating the benefits of money. Let us assume this community uses gold as a
medium of exchange and the available supply of gold and the various preferences of the trading individuals result in an exchange relationship of one-tenth of an ounce of gold for one unit of A’s product “p” and one unit of B’s product “q.” Person A is willing to sell his product “p” to person B and accept one-tenth of an ounce of gold in return for it. Person B has acquired the gold by selling his product “q” to another member of the community. Person A can equally use the gold to buy goods and services from C, D, or E. The benefit that this community derives from indirect exchange, from using the available amount of gold as money, is the same as if the community had a smaller or larger supply of the precious metal at its disposal. Let us assume that the supply of gold was smaller and that the exchange ratio would turn out to be one-twentieth of an ounce of gold for one unit of “p” or “q.” Or we could imagine a third scenario in which the community had a much larger quantity of gold and the exchange ratio would be, let us say, one-fifth of an ounce of gold for one unit of “p” or “q.”

The benefit that society derives from using gold as a medium of exchange is identical in every one of these cases. As gold functions as a medium of exchange, the size of its available supply is entirely immaterial. Once a good is used as money, practically any amount of that good (within reasonable limits) is optimal for fulfilling all the functions that a medium of exchange can fulfill. As long as the good in question has all the attributes listed here and is therefore the most fungible good and widely accepted, nothing stands in the way of its delivering all the services that a medium of exchange ever can deliver. All the benefits that society can derive from using a medium of exchange can be derived from any amount of the medium of exchange. The benefit that society derives from using gold as a medium of exchange is identical in every one of these cases. As gold functions as a medium of exchange, the size of its available supply is entirely immaterial. Once a good is used as money, practically any amount of that good (within reasonable limits) is optimal for fulfilling all the functions that a medium of exchange can fulfill. As long as the good in question has all the attributes listed here and is therefore the most fungible good and widely accepted, nothing stands in the way of its delivering all the services that a medium of exchange ever can deliver. All the benefits that society can derive from using a medium of exchange can be derived from any amount of the medium of exchange.19,20

Naturally, this applies to all forms of money, including today’s paper money or electronic money. Whether a pile of banknotes adding up to $10,000 is a lot of money or not depends entirely on what you can buy with it. When there was a much smaller quantity of dollar banknotes, or book entry claims to dollar banknotes, circulating in the U.S. economy, $10,000 could buy you more goods and services than today. The exchange value of money was different—its purchasing power was different—when the supply of money was different. But this is all. The U.S. economy does not work any better or any worse if the overall supply of what is used as money, whether it is gold, silver, paper
tickets, or electronic book entries at banks, is larger or smaller. This is the logical consequence of money’s having pure exchange value and no direct use value. From this follows that, as long as we allow prices to be reasonably flexible, there can never be a shortage of money, and there is thus no need for ongoing money production. This point will become clearer in the course of our investigation.

The Demand for Money

An important concept that leads to much confusion and misunderstanding is the concept of the demand for money. How much of the monetary asset is desired?

Demand for money is not demand for wealth. In everyday speech it is often assumed that everybody wants more money, that the demand for money is therefore limitless. But what people mean by this is the demand for wealth, for control over goods and services, but not demand for the medium of exchange specifically. It is probably not unfair to assume that most people prefer more goods and services to fewer goods and services. They prefer more wealth to less wealth, and this is the reason that people, over time, developed all those social institutions that help them work together more efficiently, such as private property, trade, and money, and that help them become wealthier; and it is the reason people, through their continuous spontaneous cooperation on markets, maintain these institutions today. But demand for wealth does not concern us here. Demand for money, rather, means the following: Given a certain level of wealth, how much money do people want to hold? How much of their overall wealth do people want to hold in the form of the medium of exchange at any point in time? What are the factors that determine this money demand and cause it to change, and how is money demand being satisfied in a market economy?

The first question is: Why hold money at all? The monetary asset has important disadvantages to other goods and services and claims to goods and services. Money has no direct use value. It neither satisfies needs directly as consumption goods do, nor does it help produce consumption goods in the future as investment goods do. It usually offers no return in the form of interest or dividends (exceptions to this will be discussed
Holding the monetary asset thus involves opportunity costs. But the one essential advantage that the monetary asset has over all other goods and services is its general acceptance in return for goods and services. Like no other asset, it can be exchanged for any other good or service instantly and with no or minimal transaction costs. This marketability gives its owner a flexibility that (usually) no other good can provide. Extreme fungibility is the hallmark of money. The demand for money is demand for readily usable purchasing power. People have demand for money because they want to be ready to trade. The demand for money can also be called the demand for cash holdings, although the term demand for money will be used here. It is that part of a person’s overall possessions that is most readily exchangeable for goods and services on the market.

Thus, it is the uncertainty and unpredictability of life that causes people to hold the monetary asset. People hold some of their wealth in money because they want to have the flexibility to engage in exchanges quickly and spontaneously. The relationship between the demand for money and the number and volume of overall transactions, however, is tenuous. We can illustrate this with the following thought experiment:

If we imagine for a moment an economy in a state of equilibrium, or, as Ludwig von Mises put it, an “evenly rotating economy,” an economy in which the same procedures and activities unfold with unvarying regularity again and again, in which nothing ever changes, and in which therefore every transaction is completely predictable, there would be no need for anybody to hold money. Everybody could precisely match the time and the size of their outlays with the time and the size of their incoming revenues. Excess income could always be fully invested and thus earn an income in the form of interest, dividends, or rents. In a world of no uncertainty, there would still be transactions but no need to hold a monetary asset. Everybody simply needed an accounting unit but nobody had any actual demand for money holdings. Of course, such an economy is pure fantasy. It is entirely a theoretical construct that helps the economist isolate, analyze, and describe certain procedures in theory. It could never exist in the real world. The mental construct of the evenly rotating economy is, within limits, useful for economic science. But these models struggle to account for the demand for money, which is a phenomenon of the real world of uncertainty and unpredictability.
How much of the monetary asset any person wants to hold is ultimately subjective but it is clear that it is intimately linked to the purchasing power of the monetary unit. In our earlier example of a community of A, B, C, D, and E, how many ounces of gold a person will want to hold as his cash balance will be different in each scenario. If the community has relatively large quantities of gold available for use as money, then the purchasing power of each unit of gold will be—all else being equal—relatively low. Let us assume that exchange relationships determined by market exchange come out at one-fifth of an ounce of gold for one unit of “p” or “q.” In this scenario, a person with a certain demand for readily available purchasing power (demand for money) will want to hold more gold than if the community overall had relatively small quantities of gold and the purchasing power of each unit was relatively high (for example, one-twentieth of an ounce of gold buys one unit of “p” or “q”). The purchasing power of each ounce of gold is different in the two scenarios. Therefore, the flexibility that each ounce of gold provides as a medium of exchange to its owner is different. As demand for money is demand for readily exercisable spending power, a person with a certain (subjective) demand for money will hold different quantities of the monetary unit if money’s purchasing power is different.

This is, of course, true for any form of money. It applies equally to fiat money. Nobody has demand for a specific quantity of banknotes or a specific number of coins, just as under a gold standard nobody has demand for a specific amount of gold. Demand for money is always demand for readily exercisable purchasing power. It is purchasing power that one demands, not the money substance as such, whatever it happens to be. If money’s purchasing power is low, we need to hold more of it to satisfy the same money demand than if money’s purchasing power was high.

Naturally, every person has it in his or her power to adjust holdings of the monetary asset precisely according to personal preferences. Of course, a person’s overall wealth sets a limit to how much of the monetary asset the person can own. Conversely, every person must have a bare minimum of nonmonetary goods to stay alive (food, shelter). But within these limits every person can hold exactly the amount of money he wants to hold. If a person wants to hold more money, he
can sell assets or reduce money spending. If a person wants to hold less money, he can spend the money on goods and services. It would be absurd to make the claim that a person really wants to hold less money but cannot reduce his money holdings. If nobody in the economy accepted the surplus money in exchange for goods and services, then this form of money would have ceased to function as money. After all, general acceptance is what makes it money. By the same token, no person could claim to want to hold more of his wealth in the form of money but be unable to exchange his other possessions for money. In that case, one would have to question if the person’s other possessions were not worthless and if the person already held his entire wealth in the form of money. Because of the high marketability of the monetary asset, which is the precondition for its function as money, every person holds exactly the quantity of money that the person desires to hold.

But what if everybody in society wanted to increase money holdings? Would that not require somebody to come up with a plan to produce money? The answer is no.

The demand for money can always be satisfied by a change in money’s price, meaning its purchasing power. If people have a higher demand for money, they will sell goods and services or reduce money outlays on goods and services. If many people do this, it will put downward pressure on the prices of goods and services, and this will cause the purchasing power of the monetary unit to rise. But the rise in money’s purchasing power is precisely what will satisfy the additional demand for money. This process will last until people are again happy with the quantity of money they hold. The quantity of money in the economy has not changed, but its purchasing power has. The same quantity of money that bought a certain quantity of goods and services before now buys a larger quantity of goods and services. The public now holds a large portion of its overall wealth, consisting of money and nonmoney goods, in the form of money. This means the public’s higher demand for money is satisfied. An increased demand for money is always increased demand for purchasing power in the form of money, and this demand will be fully met by a fall in money prices, meaning the rise in the purchasing power of every unit of money.

The key difference between money and all other goods and services is again that money has only exchange value and not use value.
If demand increases for any other good, somebody has to produce more of that good for this demand to be satisfied. Additional demand for TV sets and cars can be met only by producing additional TV sets and cars because only additional units of these goods can satisfy additional demand for their services. Demand for cars and TV sets is demand for the use value that these goods provide. Money, however, does not need a producer. Every amount of money is optimal. If the public wants to hold more money, nobody has to produce more money. As money has exchange value, the extra demand for money is synonymous with extra demand for money exchange value and can be met by a drop in prices, that is, a rise in the purchasing power of the monetary unit. By selling goods and services in order to raise money balances, as all people do who want to raise their individual money balances, the community collectively exerts downward pressure on prices, and the resulting drop in prices is in itself sufficient to satisfy the increased demand for money. No new money needs to be produced to meet additional demand for money. Conversely, if the demand for money declines, people will “sell” money holdings for goods and services. The result will be a rise in the money prices of goods and services, meaning a drop in the purchasing power of money. This is the unique feature of a medium of exchange. Demand for and supply of money are coordinated by changes in purchasing power, not by adjustments to the physical supply of monetary units. Just like all individuals can hold, at every point in time, exactly the money purchasing power they desire simply by buying or selling goods and services, so the economic agents in aggregate can hold, at every point in time, exactly the money purchasing power they desire simply by selling or buying goods and services and thereby adjusting the purchasing power of the existing stock of money.

**Are “Sticky” Prices a Problem?**

One potential criticism at this point could be that in the real world not all prices are that flexible. Many prices are “sticky” and will not adjust as quickly as this somewhat stylized account implies. Does this process really work as smoothly as described here, or does it not lead to economic disruptions? And would this lead to an economy with constant massive price swings?
These are important points, and we will meet them again on a few occasions and in different shapes throughout our further investigation. My response to them is twofold:

1. Yes, this account is to some extent idealized but not by much. In the real world, certain frictions will indeed be inevitable and the process will not be as smooth. However, these frictions should not be overestimated. In essence, this process does take place as described.

2. The expectation, often implicit in this criticism, that systems of elastic forms of money, in which the quantity of money can be adjusted easily, can provide a smoother adjustment to changes in money demand is entirely illusionary.

A full explanation of these two points will have to wait until the later chapters when we will have covered more theory, but a few things may be added to point 1 here already: It is inevitable that some prices will adjust more quickly than others, but a widespread stickiness of prices is unlikely in an entirely free market and does not even exist today when markets are not “perfectly” free. More things are being repriced quite quickly in response to demand changes than is often believed, not only financial assets but also real estate, airline tickets, hotel rooms, used cars, most items in the supermarket, and almost anything bought and sold on the Internet. Almost 100 years of ongoing paper money inflation has made many believe that prices go up more easily than down, but whenever monetary conditions are stable we see that this is not the case. Even items that appear to have “fixed” prices, such as new cars, are often quickly discounted if demand drops. Even many wage deals now include variable components that make them much more flexible than previously. I think many economists overstate the problem of price stickiness. And if prices are that sticky, why do many mainstream economists constantly follow inflation statistics and perennially worry about even minor deflation? Furthermore, and very importantly, we do not have to assume that everything will be constantly and flexibly repriced for the process described here to work.

Moreover, big price swings and drastic changes in money’s purchasing power are not to be expected. First, there are powerful balancing
factors at work. Consider the following: When a section of the public experiences a higher money demand, reduces money spending, and thus pushes prices lower, the rest of the public, who, we must assume, have an unchanged money demand, will now be confronted with falling prices, which means a higher purchasing power of their (unchanged) money holdings. This part of the population will now have an incentive to spend some money. These people do not have a higher money demand, yet the downtrend in prices increases the purchasing power of their money balances, and thus the opportunity costs of holding money rather than spending it. To some degree the process will thus be aided by money flowing from those with unchanged money demand to those with increased money demand. The latter “bid” money balances away from the former. This process will take some of the adjustment pressure off prices.

Second, a sudden, drastic, economy-wide change in money demand is unlikely. It may occur in a crisis, but what is to be expected in normal times is that, as the economy gets slowly more productive and the supply of goods and services slowly increases, money demand will also rise, and this will lead to moderate ongoing deflation, a modest tendency for prices to drop on trend. As we will see in the course of our analysis, there is no problem with this process. In fact, it has many advantages.

I admit that changes in money demand can be disruptive and that this will be particularly the case if they are drastic and sudden. But as I will show in the course of our analysis, no elastic monetary system is conceivable, not even in the frictionless world of theory, that can avoid these disruptions through quick adjustment of the stock of money. This is the reason why any economy using money (and therefore any developed economy) is subject to certain instabilities. But we will see that these instabilities are much larger in a system of elastic money than a system of inelastic money. What I have tried to show here is simply that, because of money’s unique feature, there is no need for ongoing money production, that demand for money can be met, naturally and automatically, through market forces adjusting its price.

The conclusions so far may seem a bit surprising, as they go against much of what is being written and said about money in the media and
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even many textbooks. I think that most people today readily assume that a higher demand for money must mean, ultimately, a bigger supply of the available money units. This, however, involves an undue transfer of relationships that hold for goods and service that have use value to the sphere of money, which has pure exchange value. I will make two more points to illustrate the conclusions from this chapter.

It is a fact of history that fundamentally different substances have functioned as money. Nobody will deny that gold and silver functioned as money, and nobody can deny that, today, pieces of otherwise pretty worthless paper and even immaterial, electronic book-entry claims to such pieces of paper function as money. What made these substances “money” was evidently not specific physical properties. Gold, silver, and paper are very different substances, and immaterial money is no substance at all. What made these “things” money was only their acceptance in voluntary exchange for goods and services rather than any ability of these substances (or nonsubstances) to satisfy needs directly. But if money is money only because it is generally accepted as money in exchange for goods and services that have use value, then its value must be pure exchange value. Once we agree on this point, all the conclusions of this chapter follow logically: Once a good is established as money, no additional quantities of this good are needed. The performance of an economy is independent of the supply of money. Within reasonable limits, any quantity of money is optimal. Money production is redundant. Supply of and demand for money can always be brought in line by changes in money’s purchasing power. Society overall and every individual in society can satisfy their demand for the monetary asset without the help of ongoing money production.

I hold these statements to be correct, but the reader can check them for himself. As a user of money, the reader will know why he holds money and what determines the amount of money he wants to hold at any point in time. After all, to grasp what money is for and how we use it, and what therefore makes good money, does not require us to speculate about its origin 3,000 years ago and to analyze the tribal traditions of the Gunwinggu people in Australia, however educational that may be in other respects. Money is a social tool, and we all use it every day. All I am doing as an economist is to analyze in a more conceptual way what
we are all doing daily as money users, and the reader/money user can test my analyses and does not have to take my word on faith. I can thus argue as follows:

We money users hold cash balances because we want to be ready to trade. If we did not value the flexibility, the readiness of instantly engaging in economic transactions with others, we could as well put all our wealth in consumption goods that satisfy our needs or in investment goods that generate returns and that deliver more consumption goods to us in the future. Holding cash involves opportunity costs. We hold money balances only to the extent that we value the flexibility that they give us higher than the additional things we could enjoy if we spent the money. How high we value that flexibility is subjective. It varies from person to person and for the same person will change from time to time, depending on personal circumstances. What drives the desire for flexibility does not have to concern us here. But whatever our desire for “spending flexibility” is, how this translates into demand for a specific quantity of money naturally depends on the purchasing power of the monetary unit. Demand for money is therefore demand for purchasing power in the form of money. It follows that changes in money demand can always be met by changes in money’s purchasing power.

The preceding explains why societies can function and grow with inelastic commodity money. Inelasticity of supply is no hindrance for a commodity to be used as money. Or to put it differently, there is no basis for the widespread belief that somebody has to meet the growing demand for money in a growing economy—or in an economy that may for other reasons have a growing demand for money—by creating more money units.

**Other Functions of Money**

The skeptical reader may at this point still raise the following objections: First, the case is built on money’s function as the medium of exchange, but standard economic textbooks also ascribe other functions to money, such as a store of value or a unit for accounting and monetary calculation. Second, the changes in money’s purchasing power that result from changes in money demand could be disruptive,
as they may impair money’s role as a basis for economic calculation. Maybe it is better to adjust the money supply in response to changes in money demand than to allow money’s price to change. This would make sure that money is a reliable tool for economic calculation. Third, if money production is not needed, how can we account for the growth in banking, which for a long time has included the issuance of money substitutes and fiduciary media, the latter meaning uncovered claims to money proper that are used by the public just like money, for example, demand deposits. How can we account for the fact that the world has moved away from commodity money of fixed supply to paper money of perfectly flexible supply?

These are all good and valid questions. We will address each one of them in detail in the course of our investigation. At this juncture it may just be sufficient to make the following points.

All additional functions that can be assigned to money are the result of money being the accepted medium of exchange. These functions, important as they are, are derivatives of the medium-of-exchange function. Because money is the medium of exchange and every good or service is traded against money, money prices are ideal for economic calculation. As to money being a vehicle for storing wealth, it is apparent that many other assets can be used for that purpose, too. Many of these have the additional attraction of potentially generating returns over time. Money does not offer any returns. It can therefore compete with other potential storages of wealth only by offering something special, and that is its universal acceptance in exchange for goods and services, its unique marketability, the ability to be exchanged for goods and services faster and more conveniently than any other asset. That, after all, is why it is money. So we are again back to the medium-of-exchange function of the monetary asset.

Certain financial assets, in particular high-quality debt claims that are traded in very liquid markets, can sometimes become “near-monies,” and their owners may thus feel a reduced need to hold money proper. But these assets are fundamentally different in that they constitute simultaneously somebody else’s liability and therefore always carry an additional risk. Proper commodity money, such as gold, but also fiat money in the form of irredeemable paper tickets, is a financial asset that is not somebody else’s liability at the same time. The purchasing
power of this money varies only with changes in the demand for money and, in the case of paper money, also with changes in its inherently flexible supply. We see here that the inflexibility of supply in the case of commodity money makes it a superior store of value.

There is obviously a scenario in which money does generate a return, and that is when there is deflation. In an economy with an unchanged money supply but rising productivity, meaning a growing supply of goods and services, prices will on trend decline. This is called secular deflation. The purchasing power of the monetary unit appreciates over time. An unchanged quantity of money buys more things next year than this year. It is clear that this is very different in today’s world of universal paper money in which central banks usually aim for a steady depreciation in money’s purchasing power. In short, the store-of-value function of money is fulfilled much better in a system of inflexible commodity money than in a paper money system. A detailed discussion of these points will have to wait until we discuss advantages and disadvantages of deflation. In any case, the store-of-value function of money is certainly no argument for ongoing money production but an argument against it.

We will also discuss the second point regarding the potential for purchasing power stability of paper money in detail in a later chapter. I already mentioned earlier that the expectation that elastic money systems can adjust the quantity of money in a way that avoids price changes is unfounded, even in theory. This will become apparent in the course of our further analysis. But it is already clear at this stage that such an argument for the introduction of elastic money is very different from the widespread notion that a growing money demand means somebody somehow has to produce money and that, therefore, some form of elasticity in the money supply is required. Ongoing money production is simply not needed. It is not true that society needs a money producer who can satisfy changes in money demand and that it is probably best to entrust this role to the state, as is universally the case today. Money is certainly not a “natural monopoly” of the state. Money has evolved organically and spontaneously from the voluntary actions of trading individuals. Once the market has identified the suitable monetary commodity, no further production of this commodity, nor any other adjustment to its supply, is needed. Those who advocate
elastic forms of money cannot claim that it is necessary or inevitable. They have to show that it is superior to inelastic money. Their argument will have to be that by replacing the money of the market—a commodity of relatively inelastic supply—with elastic fiat money under the control of the state, better results can be achieved for society overall. This is obviously a much weaker argument. It relies crucially on the appropriateness of the specific theories according to which money production is beneficial. We will look at these arguments in detail later.

However, our conceptual analysis of demand for money and how it differs from demand for any other good or service has already revealed a fundamental problem for any central bank trying to avoid fluctuations in money’s purchasing power that may result from changes in the demand for money. The problem is the following: If the demand for any good or service rises and all else remains the same, the price of that good or service will rise in relation to all other goods and services. At the higher price, some of the demand for this good or service will now go unfulfilled. However, the higher relative price will provide an incentive to producers or potential producers of this good or service to produce more of it and, if indeed more of that good or service is then being produced, the extra demand may finally be met and the price recede again in response to the additional supply. This is the standard process for any good that has use value. The situation is different with money, which is demanded only for its exchange value. In the case of the monetary asset, a rising demand for money—all else being equal—will lift money’s price relative to all other goods and services. The purchasing power of the monetary unit will rise. However, at the higher “price,” no demand for money goes unfulfilled. As demand for money is only demand for money purchasing power, the higher purchasing power in itself has fully satisfied the additional demand for money.

Naturally, this cannot be said of any other good, which, in order to be a good at all, has to provide use value, which can never be satisfied simply by a change in the good’s price. It follows that even a money producer who claims to print money only to satisfy any additional demand for money and to stabilize money’s purchasing power faces a fundamental problem. In order to avoid a rise in money’s purchasing power, the money producer has to anticipate the rise in money demand before it articulates itself on the market. This appears to be
impossible given what we said previously about everybody’s ability to satisfy changes in money demand instantly. The money producer would practically have to know that money demand was about to go up before the economic agents themselves knew. Whenever the demand for money rises, economic agents can be expected to act on this change immediately. They will instantly raise their cash holdings and exercise downward pressure on the prices of goods and services. The purchasing power of money changes more or less simultaneously with the demand for money. After such a rise in money’s purchasing power has occurred, the money producer knows that demand for money has gone up, but his role is nevertheless redundant: The purchasing power, which he set out to stabilize, has now risen anyway, and the extra demand for money is fully satisfied through this rise in money’s purchasing power. In the case of goods and services that have use value, changes in market prices communicate changes in the preferences of the consumer. In the case of money, price changes (changes in money’s purchasing power) also communicate shifts in preferences but, at the same time, the price changes constitute the full satisfaction of the changed preferences. Those who advocate an elastic form of money in order to absorb sudden changes in money demand and to keep money’s purchasing power stable will have to explain how the money producer is supposed to anticipate changes in money demand before they affect purchasing power. We will revisit this point when we discuss the concept of price-level stabilization in full in a later chapter.22

The third point about the rise of banking, and fractional-reserve banking in particular, is a different one. What fractional-reserve banking is and how it came about will be explained in more detail shortly. Here, a couple of short comments may suffice.

Fractional-reserve banking introduced a degree of elasticity into the money supply, even at a time when money proper was still a commodity of essentially inelastic supply. Banks created so-called fiduciary media, that is, uncovered claims to commodity money.23 These claims could come in the form of redeemable banknotes or redeemable deposits, redeemable into the core monetary asset that is, in this case, gold. As these were not backed by the banks’ physical holdings of the monetary commodity and yet were still used by the population just as if they were money proper, their effect was to—de facto—expand the
supply of what was used as media of exchange in the economy. Because fractional-reserve banking developed spontaneously in the market, the advocates of elastic money will point toward its existence and long-standing history of practice as proof that the market has demand for an elastic form of money. How else could the market have supported fractional-reserve banking for so long? How can fractional-reserve banking as a market phenomenon be reconciled with our earlier statement that ongoing money production is not needed and that a changing money demand is satisfied fully and naturally by changes in money’s purchasing power alone?

In order to answer these questions, we will first draw a number of additional conclusions directly from money’s unique position as a good that is solely demanded for its exchange value. We will see that whoever manages to issue a form of elastic money and have it accepted by the public as a general medium of exchange is in a very special position. In contrast to any other producer of goods and services in the economy, the money producer enjoys the unique privilege of being able to happily ignore the level of independent demand for his product and yet produce very profitably. Because of money’s unique features, money production can proceed regardless of money demand.

**The Unique Position of the Paper Money Producer**

For the reasons that the monetary asset is different from any other good, the position of the money producer is different from the position of the producer of any other good. First of all, money can be “sold” and distributed more easily than any other good, as the characteristic feature of money is its unique marketability. The money producer can instantly exchange it for any other good or service. This is not the case with any other good or service produced in the economy, as these necessarily have use value and thus meet specific needs. The salability of every other good is therefore limited by the as-yet-unfulfilled demand for the specific satisfaction it provides. Money’s use is universal.

Moreover, essentially any quantity of money can be produced and placed with the public. If, as we have seen, any demand for money can
be satisfied by a rise in the purchasing power of the monetary unit, then it must be the case that any additional supply of money can be absorbed via a drop in the purchasing power of the monetary unit. One follows logically from the other. If unwanted amounts of money are being produced and distributed (they simply have to be spent by the money producer), they will tend to raise money prices in the economy, meaning they will lower the purchasing power of each existing monetary unit. With money demand being unchanged but with the purchasing power of every monetary unit now being lower, the public will willingly hold larger quantities of the monetary asset. As he produces more money, the money producer will face a declining purchasing power of every additional unit of money he creates, but he will never face a situation in which unsalable amounts of the monetary asset pile up in his warehouse, a situation that is indeed a risk for every other producer in the economy.

The producers of goods that have use value, for example, cars or TV sets, may also try to place extra units by lowering their price, but such a strategy faces some tight restrictions. First, the cost of production will impose a limit on how much prices can be lowered to sell extra units. Such a strategy is likely to lead to losses soon. Second, there is the fact that even at lower prices the public will not absorb unlimited amounts of additional cars and TV sets. Given that these goods offer use value, demand for them is satiable.

The first point traditionally also applied to money producers. In a strict commodity money system, the money producer is he who extracts the monetary commodity from where it occurs naturally, gives it an economically usable form, and brings it into circulation. Under a gold standard, those are the gold miners. As long as gold is considered a form of money, gold miners, too, will not have to sit on their inventory for long. At falling prices, the gold can always be placed. But mining gold is expensive, and if a growing supply depresses prices too much (has caused a too steep decline in money’s purchasing power, that is, the price of gold), further exploration will be unprofitable. This, however, changes fundamentally for the paper money producer. Producing modern state fiat money (paper money or electronic claims to paper money) is essentially costless. Thus, the paper money producer can produce unlimited quantities of money and place them. Neither the cost
of production nor any given level of money demand on the part of the public is a constraining factor. If the money producer is willing to live with a falling price of the monetary unit (inflation), he can produce and place with the public as much money as he wants.

Even today’s mainstream consensus does not contest that an injection of new money could always be absorbed by a rise in prices. The public can essentially be made to hold any amount of money. Whatever the public’s present desire for holding money balances might be, the paper money producer can always produce more and place it.

The former chairman of the Fed, Ben Bernanke, once expressed the privilege and power of the paper money producer thus:

_The U.S. government has a technology, called a printing press (or, today, its electronic equivalent), that allows it to produce as many U.S. dollars as it wishes at essentially no cost. . . . We conclude that under a paper-money system, a determined government can always generate higher spending and hence positive inflation._

To “generate higher spending” (a higher gross domestic product [GDP]) and “positive inflation,” or to at least willingly incur higher inflation as a by-product of generating a higher GDP, is frequently the goal of a modern central bank, and printing money is the means to achieve it. We will analyze the rationale behind such statements later. But what is already noteworthy is that Mr. Bernanke evidently does not consider present money demand an obstacle to a “determined” government’s monetary policy. The extent of the public’s autonomous desire for cash balances determines how quickly money printing translates into inflation, but it does not constitute a constraining factor for paper money production as such.

It is certainly the case that when aggressive money printing causes a very fast drop in money’s purchasing power, this can lead to the present form of money losing its status as a medium of exchange completely. This is what happens in the final stages of hyperinflations when they morph into complete currency collapse. But as long as an economy’s established money maintains its status as the medium of exchange, a growing supply of it will simply be absorbed via a drop in its purchasing power.

Because of what makes money money, the producer of money is in a unique situation: He can produce money very profitably, and although
the public has no need for any additional units of his product, as any
demand for money is demand for readily exercisable purchasing power
and can be met by automatic changes in the purchasing power of the
monetary unit, the money producer can place essentially any amount of
his product.

The Monetary Asset versus Other Goods

Before we analyze fractional-reserve banking in more detail in the next
chapter, a couple of additional conclusions can be drawn first from the
fundamental difference between the monetary asset and all other goods
in an economy.

As no ongoing production of money is needed, society derives
no advantage from having competing producers of the good “money.”
In the case of all other goods and services, which necessarily have use
value, competition among the existing or even potential competition
from new producers of goods is essential for ensuring that the optimal
number of goods is produced at the lowest possible cost. In the case of
the medium of exchange the optimal amount already exists, and there
is no advantage to be had from lowering the cost of money production.
Lowering the cost means that more money can be produced with the
same or even lower factor input, but more money is of no benefit to
society. More of any other good or service with use value is a benefit
to society. Thus, factors that can be allocated either to money produc-
tion or the production of any other good and service should always be
allocated to producing nonmoney goods and services.

The verdict is the same when it comes to choice. The advantage
that competition by private producers offers in terms of delivering
goods and services with different specifications that cater to individual
consumer preferences and tastes does not exist when it comes to the
good “money.”

The competition among producers today guarantees that the
consumer gets not only one type of car and one type of TV set, but
a whole range of cars and TV sets. It is advantageous to society that
the specific preferences of its individual members can be met. But this
is the case only because these goods and services have use value. The
enjoyment somebody derives from his own car or TV set would not be diminished—and potentially would be enhanced—if these items were completely customized to meet individual requirements, and if everybody else in society used types of cars and TV sets with different specifications. This is not the case with money. The good “money” is only useful for anybody because others in society use the same good as “money.” A customized form of money that only one person uses is no longer money. It would no longer be a medium of exchange. It would be useless. A medium of exchange logically requires that others use the same form of money, too. Widespread use is the precondition for a good to be money. Universal use would be ideal. Customized money is a logical impossibility. Indeed, the more universally accepted a good is as money, the more valuable it will be as a medium of exchange.

The standard reasons for why a competitive market of private entrepreneurs is best in providing goods and services—reducing the cost of production and thus allowing an expansion of production with an unchanged or even lower factor input; producing a greater variety of products to meet specific consumer needs; technical progress—do not apply to the good “money.” The very fact that money is unchanged in terms of its supply and its specifications and widely accepted in its uniformity makes it ideal as a medium of exchange, and it explains why the precious metals gold and silver have been chosen as the ultimate form of money throughout human history.

For similar reasons, proposals for “currency competition” by private money producers do not seem convincing. One of the most famous advocates of this idea was Friedrich August von Hayek, who suggested in his book *Denationalization of Money* that the state’s territorial monopoly of money printing should be revoked and the supply of paper money opened up to the competition of private money producers.26

Hayek was, next to Ludwig von Mises, the other outstanding representative of the second generation of Austrian School economists. His first two publications, the German-language *Geldtheorie und Konjunkturtheorie* (1929) and his first English book, *Prices and Production* (1931), were contributions to the Austrian business cycle theory, which had been founded by Hayek’s mentor, Ludwig von Mises, with the publication of Mises’s seminal book on money in 1912.
For his work, Hayek received the Nobel Prize in Economics in 1974 (Mises having died in 1973). The work of Mises and Hayek will have a great role to play in the further analysis, although I cannot agree with Hayek on this point.

Hayek proposed competition in paper money production not because he thought that this would supply society with more and cheaper paper money but, quite to the contrary, because he thought a competitive market would produce “better” paper money, meaning less inflation-prone paper money. According to Hayek, paper money competition would help avoid the overproduction of money that is a constant problem if money production is under the exclusive control of the state. With competing paper monies to choose from, the public would be less exposed to the inflationary policies of a single territorial monopolist. In a system of multiple paper monies, if the inflationary consequences became too painful, the public could at least switch to another provider. Based on our analysis so far, we can already identify some flaws in this proposal (and others will become apparent later).

First, the proposal introduces multiple parallel monies, which is suboptimal and costly, and the public may thus reject it. A society with multiple media of exchange does not realize the full advantages of using money. The coexistence of multiple monies partially defeats the very purpose of having a medium of exchange in the first place. Money is more useful to its owner the more transactions it can facilitate instantly, without, for example, having to be exchanged for something else first. The more widely accepted a medium of exchange is, the more valuable and useful it is to its owners and society overall. This is precisely the reason why, historically, trading communities have exhibited a strong tendency toward adopting the same commodity as money. Because of money’s considerable network effects, market forces will tend toward the establishment of one money, rather than a multitude of different currencies. A universally accepted medium of exchange that facilitates any transaction between anybody in the world would, of course, be the optimal currency. In that respect, gold was the first, and has so far been the only, practically global medium of exchange.

A look at today’s world-spanning patchwork of local state paper monies can illustrate this point. From a global perspective, markets are today partially segregated by the use of multiple state fiat monies, each
of which enjoys regional dominance due to the state monopoly of issuance, legal tender laws, and long-standing history of local use. This monetary arrangement reintroduces an element of barter into international market exchange, an undoubtedly suboptimal arrangement.

If, for example, someone earns an income in the United Kingdom in pounds but wants to spend part of it in the United States, that person has to find somebody who wants to do exactly the opposite. Only then can he exchange some of his pounds for dollars. We meet here again a form of “double coincidence of wants” that characterized the barter economy. This would not be necessary if both countries used the same form of money, or if they were at least on an identical commodity standard, such as a true gold standard, in which pounds and dollars were simply defined as specific units of gold. Then, money could flow from one country to another, similar to the way in which it flows today from one region to another region within the same country or currency area. This is how money facilitated international trade under a gold standard.

The closest the world has ever come to a global form of money, which is the most valuable form of money for cooperation on markets and a global division of labor, was the classical gold standard, from 1880 to 1914. Although these arrangements were far from ideal and certainly no blueprint for the best conceivable gold standard, the classical gold standard still marked a remarkable period of strong growth, expanding global trade, and harmonious monetary relations between nations, a period abruptly brought to an end by World War I.29

I do not think that many people today realize that the abandonment of the international gold standard and its replacement with a multitude of local paper money franchises under state control during the twentieth century constituted economic regression and not progress. In order to deal with the inefficiency of partial barter, an active market in the various state monies has developed, the 24-hour, several-trillion-dollars-a-day foreign exchange market. Today’s public seems to consider this market the epitome of international free markets and uninhibited capital flows. This is a misconception. In fact, the global foreign exchange market essentially constitutes a second-best solution by money users to cope, as best as possible, with politically motivated monetary segregation. The desire by every government to issue
its own paper money for its own political reasons is a powerful hin-
drance to global market integration, effective division of labor, and
human cooperation across political borders. Today’s foreign exchange
market is makeshift to minimize the cost from monetary nationalism.
“The high technology and the elaborate financial instruments in the
foreign exchange and money markets are no more the expression of a
high degree of market development than the increased sophistication
of burglar alarms is evidence of a greater degree of public security”
(John Laughland).30

Hayek’s proposal to go back to multiple monies even in societies that
already benefit from the use of one unified medium of exchange would
deprive money users of some essential advantages of using the established
form of money and for this reason the public may simply reject it.

Second, there are other reasons why the public may not take to
Hayek’s well-intended proposal. We have already seen that money could
not have come into existence by anybody issuing otherwise worth-
less paper tickets and declaring them money. Today, essentially worthless
paper tickets (and electronic claims to such tickets) are accepted as money
because of their particular history, meaning the established tradition of
using them in exchange, which dates back to the time when they still
used to be claims on scarce commodities. The public feels confident that
paper money will be accepted today mainly because it was accepted yes-
terday, and yesterday the public accepted it because it was accepted the
day before, and so forth, all the way back to when the monetary com-
modity was gold or silver, and the monetary use of gold and silver goes
back further to when these commodities were not yet money but sim-
ply forms of jewelry or prestigious objects. As we have already discussed,
the institution of money originated from frequently traded commodi-
ties. Paper money did not appear from nowhere, readily formed and
uniformly accepted. And this will pose a big challenge to new money
producers. Against the established state paper monies we use today, new
d paper monies issued by private producers will find it difficult to gain
acceptance.

Again, we see a fundamental difference between money and any
good or service that has specific use value. When governments give
up monopolies in postal services, airlines, or TV programming, pri-
vate competitors can quickly gain a foothold, not only by finding more
efficient ways of delivering a similar service but often by catering to individual needs and providing more tailored versions of the product or service. “One size fits all” is usually an inferior approach when it comes to the provision of goods and services that deliver use value, but in the case of money, which is demanded only for its exchange value, “one size fits all” is indeed quite appropriate. Hayek might be mistaken when he believes that the public may want to swap a widely accepted uniform medium of exchange that suffers from a steady loss of purchasing power for a multitude of less widely accepted monies that have a more stable purchasing power, in particular as inflation, as long as it is not too high, is often deemed manageable by the individual money user.

Herein lies an important advantage for the paper money producer once his money is widely accepted as a medium of exchange: The advantages of staying with the established and widely used medium of exchange are usually considerable, and the costs of switching to a new medium of exchange sufficiently prohibitive that a considerable degree of ongoing decline in the monetary unit’s purchasing power can be expected to be tolerated by the public. History shows that established media of exchange remain in use even at relatively elevated inflation rates for a long time. Of course, the public will try to protect itself as best as possible against the negative effects of the creeping loss of purchasing power. People will try to keep their cash balances fairly low or to anticipate further price rises when setting prices in the present. This will inevitably accelerate the decline in the purchasing power of the monetary unit, and it may ultimately lead to complete currency collapse. But it is usually only in the later stages of the inflationary process that the public shuns the established money completely and switches to other media of exchange, like foreign currencies or commodities. But for as long as monetary expansion is ongoing but not excessive, the public will usually manage to adjust its economic activities to money’s declining purchasing power.

As the present economic mainstream treats inflation not only as one of many problems associated with elastic money but the only problem, it is maybe not surprising that paper money systems enjoy such wide acceptance again. By itself, continuous moderate inflation is not an insurmountable problem. Modern macroeconomists have even elevated moderate inflation to the status of a policy objective and a slowly
rising consumer price index to standard-bearer of monetary stability. However, as I am going to demonstrate, changes in purchasing power are not the only effects of elastic money, and not the most sinister ones. An expanding money supply will always change relative prices, the allocation of resources, and the direction of economic activity, too. Over long periods of ongoing money injections and a constant, if even fairly slow, decline in money’s purchasing power, there must occur a continuous mispricing of assets and misallocation of resources that will lead to a progressively more unbalanced economy. A paper money system with moderate inflation is not as stable as it may appear for a long time—even to the individual paper money users. And even if the individuals were aware of those drawbacks, long-run economic stability would still hardly be a decisive factor for the individual money user when choosing his preferred form of money. A new, privately issued paper money that is less elastic, less inflationary, and less destabilizing to the economy in the long run, may still find it difficult to compete with an established, widely accepted form of fiat money, even if the latter is, in the long run, highly destabilizing.

A proper denationalization of money would indeed be a great step toward a more stable monetary system but such a denationalization would require the state to exit the money production business completely. Inviting private “competitors” to join the state in the area of money printing is not enough. Under Hayek’s proposal of denationalization lite, the success of private money producers is questionable, and if they were to succeed, the outcome would be suboptimal: various parallel monies, all of which might still be elastic enough to cause economic instability. What would be needed, instead, is a complete separation of money and state. If the state were to exit the sphere of money completely and hand the task of supplying a medium of exchange back to the private sector, it is extremely likely that we would again get a hard form of money, one that cannot be produced by a privileged money producer at will, and one that is truly international. Indeed, our further investigation will demonstrate that a highly elastic form of money is unlikely to emerge from the free market but is usually the result of state intervention.

The gold standard was, after all, already a denationalized form of money, and the twentieth century’s trend away from gold and toward
national state paper monies reflects the peculiar intellectual and political trends of that century. Money has thus only recently become nationalized, and we still suffer the consequences to this day. A return to a gold standard would mean a proper (re)denationalization of money. Hayek was wrong, in my view, when he suggested that competitive paper monies could be as good or even better than a gold standard, but Hayek was also skeptical as to whether it would be politically feasible to reestablish a gold standard, and his proposal can be seen as an alternative, albeit a flawed one, in my view.

With the unique position of the money producer explained, we now turn to the question of fractional-reserve banking, which is an essential component of the present paper money system. It therefore demands closer inspection.

Notes

2. Ibid.
6. The first economist, to my knowledge, who elaborates this point clearly was Carl Menger, an Austrian economist and founder of the Austrian School of Economics, in his 1871 book, *Grundsätze der Volkswirtschaftslehre*. See in particular pp. 253–255.


11. Ibid., 29 (page numbers refer to the 2012 paperback edition).

12. Ibid.

13. Ibid., 32.


17. Ibid., 39.


19. Ibid.

20. Those who are critical of the concept of commodity money sometimes try to undermine it by constructing extreme examples. What if there were only one gram of gold in the world? Would that also constitute the optimal quantity? The answer is, of course, no, it would not. A commodity that is that rare is not suitable as money. If gold had been this scarce, no society would have used it as a monetary asset. But this is hypothetical. Gold is not that rare. What if gold could suddenly be produced in laboratories and its supply therefore easily expanded? In that case, gold would lose its unique qualification as money. The public would then probably choose a different commodity. But if a commodity is neither extremely scarce nor extremely abundant, and if its physical qualities make it suitable as a medium of exchange, such as durability, homogeneity, and divisibility, once this commodity has been chosen as a medium of exchange, any quantity of it can deliver all the services that money can ever deliver. A society derives no advantage or disadvantage from whether its supply of gold is such that the price of good “p” comes to one-fifth of an ounce of gold, one-tenth of an ounce of gold, or one-twentieth of an ounce of gold. The benefit of using gold as a medium of exchange is the same in each scenario. This is what is meant by the statement that any amount of the monetary asset is optimal.

22. See Chapter 6.


25. What is the role of technical progress in the field of money? We revisit this question when we speak about Bitcoin.


