Chapter 3

Money

Economics cannot be understood without a sound understanding of money. In this chapter we look at how it came into being and the various forms it has assumed over time. But are all these forms of money equivalent? In what ways does fiat currency (government-printed paper notes) differ from gold and silver? What is the essence of money? Is there some secret to be found by examining money more closely?

> When I was young I thought that money was the most important thing in life; now that I am old I know that it is.
>
> *Oscar Wilde*

'Money, money, money — makes the world go round' and we can certainly see rather large gyrations in the money world at the moment. In fact the world of money is in deep trouble and it will get worse before it gets better.[1] The end result is quite predictable, and to quote Ludwig von Mises:

> There is no means of avoiding a final collapse of a boom brought about by credit expansion. The alternative is only whether the crisis should come sooner as a result of a voluntary abandonment of further credit expansion or later as a final and total catastrophe of the currency system involved.

Put in our modern context, continual printing of currency debases the value of that currency and affects the behaviour of people to the extent that we cannot help but print more and more as officials strive to boost the economy. This eventually leads to a hyperinflationary 'crack-up boom' to quote Mises again, and the currency involved dies as people struggle with trillion dollar notes to buy a loaf of bread.[2] This happened in Zimbabwe recently and

1 I write this in 2014.

2 "The boom can last only as long as the credit expansion progresses at an ever-accelerated pace. The boom comes to an end as soon as additional quantities of fiduciary media are no longer thrown upon the loan market. But it could not last forever even if inflation and credit expansion were to go on endlessly. It would then encounter the barriers which prevent the boundless expansion of circulation credit. It would lead to the crack-up boom and the breakdown of the whole monetary system." — Ludwig von Mises.

has happened to every paper money system that has been used so far.

To understand how all this happens we need to understand money — just what it is and what it is not.

Suppose that I did a job for a friend who had no money but could pay for my efforts with bananas. After work I go down to the barber with my box of bananas and trade him for a haircut with the box of bananas. We can see that bananas has taken the place of cash or credit or paper promises for this transaction and hopefully the barber will get to eat all the bananas before they become over-ripe and uneatable. The bananas are very much like a speeded-up paper money system. They are a good store of value for a while but that value decreases rapidly with time and so they really are not a good form of money.

Money has been around since humans first began to trade goods. It has varied over time and people will use whatever they can find that fulfils this need. People have used shells, cattle and beads for money but over many years they decided that gold and silver seemed to work best. For some 5000 years we have been using gold and silver all over the world as civilisation spread.

In the Old Kingdom of Egypt (2700 BC to 2100 BC) the Egyptians started using weights of copper and then silver (and sometimes gold) as measures of value, and as time passed the standard weight became the 'deben' which was about 7.6 grams of silver. By the Middle Kingdom (2000 BC to 1100 BC) we have records showing a sack of wheat might be 1 to 2 deben, a sack of barley was 2 deben and a jug of olive oil was 1 deben. To quote the source:[3]

> During most of ancient Egypt's pharaonic history, there was no money as such, at least in the form of coinage (and paper bills were far in the future). Not until the middle of the first millennium BC were any coins used in Egypt, and at first, they were usually of foreign mint. In fact, most of the information related to wages, pricing and payments are more related to weights and measures.

3 touregypt.net/featurestories/prices.htm

> The ancient Egyptian economy, based on redistribution and reciprocity, set prices in units of value that referred directly to commodities. At first, for the purposes of exchange and trade, the Egyptians calculated the value of goods and services in units that were directly related to the necessities of life. Later, the calculation was made in terms of the weights of metals, such as copper or silver, though rarely did these metals ever change hands. Rather, their weight was used as a reference for value. For the most part, the ancient Egyptians never conceptualised the use of money.

It shows the lack of understanding by the author that he should talk about the Egyptian's lack of money concept. The Egyptians were actually using silver as money. They equated a set weight of silver as a particular value and other goods were valued in relation to this set weight. This exactly is money. Only when kings and emperors decided to 'own' all the money and then proceeded to defraud their citizens by adding base metals to the silver melt did they need to ensure that they marked the coin face with a certain number as its value! It is us, in our modern age of computerised bank credit, who have lost the knowledge of what constitutes real money.

The attributes of good money were well understood in the times of the Greeks, and Aristotle (384–322 BC) wrote the first description of what makes good money. The first thing is that it must be universally accepted as a useful measure of the worth of everything else. As we have discussed before, 'value is in the eye of the beholder' so it is subjective, but when a money is used by everyone it develops a generally accepted value by all.[4] This then becomes the measuring stick by which all else is measured, so that the value of anything is then measured in terms of the money. This just happened as part of the human psyche and growth in trading.

---

4 Value is always in the eye of the beholder and cannot be an absolute. Ludwig von Mises: "Only stilted pedants can conceive the idea that there are absolute norms to tell what is beautiful and what is not. They try to derive from the works of the past a code of rules with which, as they fancy, the writers and artists of the future should comply. But the genius does not cooperate with the pundit."

Aristotle then explained the five defining features of money:

1. It must be durable. This is why bananas are no good as money. Soldiers in German prisoner of war camps during World War II used cigarettes as money even though they were not durable, because they had no other commonly used item of value, and they didn't expect to be using them as money for too long. Gold and silver have been used by societies since the dawn of time and the earliest money still retains its value after thousands of years. That certainly shows durability.
2. It must be portable. Gold and silver are very valuable and so we need to carry only a few ounces to have plenty of purchasing power. One ounce of gold is worth around $2000 and one gram is worth $60. Silver has generally had a value around one sixteenth of this, since this was about its relative scarcity over time. The US Geological Survey estimates that there are currently *in situ* reserves of approximately 16.4 billion ounces of silver versus 1.6 billion ounces for gold, about a 10:1 ratio.[5] But the relative value of gold and silver will vary over time. In any case a few grams of gold or silver would easily pay for day-to-day needs and buying a car might take only 10 ounces of gold.
3. It must be divisible. We must be able to divide any piece of money into smaller parts which will have value accordingly. Then we can give change.
4. It must be fungible. Any piece of gold is identical with any other piece of gold of the same weight. This is why fine arts are no good as money, even though they have value, since we can hardly cut the *Mona Lisa* in half and expect each half to be worth half the original.
5. It must have intrinsic and stable value. This means that everyone recognises that the money has value just because it is what it is, and that value continues to reside in the money over time so that this value can be stored until needed.

---

5 'Mineral Commodity Summaries 2011', US Geological Survey (2011), pp 66–67, 146–147.

So by 500 BC the use and value of gold and silver as money had been well decided. Not only was the value of gold and silver stable from day to day and over the times of people's lives, it was also stable over thousands of years.

When King Solomon ruled in 1000 BC he was able to buy horses from Egypt for 150 silver shekels, which weighed about 55 troy ounces. In Australia, thoroughbred horses can still be bought for 55 ounces of silver today. In the Middle East around AD 600 at the time of Mohammad a chicken could be purchased for one silver dirham. Today the price of a chicken in the Middle East is still one dirham.[6]

So although some economists like to regard gold as a barbarous relic, we are not so far away from the ancients and their money as we might like to think. Gold and silver are still stores of value and can be trusted to hold that value over a long time. Perhaps for as long as humans need money!

It was around 600 BC that the ancient Lydians started using a naturally occurring mixture of gold and silver called electrum as money.[7] This was found in the Patroclus river near Sardis and it was eventually used in small standard weights as a commonly agreed money of consistent value. The original mixture from the region contained about 70–90% gold with the rest in silver with a few traces of platinum and copper and other metals. These metal lumps became standardised as Lydian coinage and were stamped with a lion's head. Over time the ratio of gold to silver declined until it reached about 40% gold in 325 BC. However, by using the lion's head stamp on each coin the king could pass laws insisting that his coins retained their original value even if he mixed a little more copper and silver into his electrum.[8]

> For the love of money is the root of all evil.
>
> *1 Timothy 6:10 The Bible*
> *King James Version*

6 A good discussion of this can be found at danel.ch/gold.html

7 Lydia was an Iron Age kingdom of western Asia Minor located generally east of ancient Ionia in the modern Turkish provinces of Uşak, Manisa and inland İzmir.

Even at this early time the people in charge couldn't help but produce counterfeit coins. Eventually as gold and silver smelting developed it became more useful to use silver as common coins and keep the gold for larger transactions. Some scholars believe that the Lydians may well have developed the world's first free market, using their standard money as the basis for trade, and this led to the accumulation of great wealth by Lydian kings such as Alyattes and his son Croesus. Thus giving rise to the expression 'as rich as Croesus'.

Around this time Alexander the Great succeeded his father as king of Greece at the age of 21 and proceeded to establish a unified silver money system that provided peace and prosperity for Greece. After his death the quality of money again deteriorated around the Mediterranean until the Romans instituted a bronze money standard. This was the basis of the rise of Rome and the development of their Empire following their conquest of neighbouring states. Once again things went awry and it was Julius Caesar who established a new silver and gold money system for Rome. After his assassination in 44 BC the currency was debased until his adopted son Octavian re-established hard currency in 31 BC. Octavian ruled over a prosperous empire as Augustus on the principles of sound money, moderate taxes, free trade, free enterprise and private property![9] But the rulers of Rome could not stop themselves from debasing their currency.

When times got tough they made the same mistake as we are still making today. When governments are in charge of the money system they always find ways to cheat on their citizens:

'In Diocletian's time, in the year 301, he fixed the price at 50,000 denarii for one pound of gold. Ten years later it had risen

8 "The earliest coins were not the natural electrum found in the beds of the Patroclus River near Sardis, but artificial electrum made by a metallurgical technique that had been pioneered by the Egyptians over a thousand years earlier." — Robert Mundell, robertmundell.net/history/history-of-the-international-monetary-system/

9 Nathan Lewis, *Gold: The Once and Future Money*, John Wiley and Sons, 2007.

to 120,000. In 324, 23 years after it was 50,000, it was 300,000. In 337, the year of Constantine's death, a pound of gold bought 20,000,000 denarii.' [10]

Roman rule was crumbling and their empire fell into the Dark Ages with the feudal system based on self-sufficient estates basically without using money at all. This would last for around 1000 years.

Meanwhile the Chinese started using bronze coins around 4000 years ago and from around 200 BC produced circular coins with a square hole in the middle as money. China had very little natural silver and didn't start using it for money until 2000 years ago when it formed silver ingots to be used for larger payments. Silver began to be used as everyday payments from around AD 700 and continued to grow and develop as money until around AD 900 when they started using paper notes for money. This use of paper and silver together continued until 1455 when the Ming government banned the use of paper as money — no doubt because of problems of over-issuance or just plain counterfeiting. The use of silver only as money in China continued into the 19th century. The Chinese conducted their international trade using silver, importing it from across the Pacific Ocean, as their mines were not sufficient for their needs, and trading goods with Europe for silver.

> Lack of money is the root of all evil.
> *George Bernard Shaw*

Silver was a very successful money when traded at its commodity value but it was getting scarce as the New World mines ran out in the seventeenth century.

At this time Holland had adopted a standardised gold and silver coinage that traded at 100% commodity value. This high-value coinage was in great demand and the Dutch enjoyed tremendous international trade advantages as a result. Sound money also encouraged low interest rates and this boosted economic growth. The English saw the success of this approach and John Locke, the philosopher, argued the case for a dual standard in Britain.

10 A very good summary of this continuous devaluation is to be found here: wiki.mises.org/wiki/Money_and_banking_in_Ancient_Rome

Queen Elizabeth I commanded Sir Isaac Newton to become the first Master of the Mint and determine the weight of metal to represent the English pound. This was a revolutionary idea in England as prior to this event kings used 'their' money as they wished and their word was law. This change saw the development of sound money where the pound was redeemable for a given and unchanging weight of gold for the next 233 years and ushered in the amazing industrial age with Britain as the world leader.

The reason Britain stopped redeeming pound notes for gold was the cost of the first world war. Britain could only pay for it by printing up excess paper money and when it came time to try and get back onto the gold standard in 1920 they found the resulting devaluation difficult to cope with. Eventually they went off the gold standard altogether in 1931. Germany did not try to return to a gold standard after World War I as they had reparations to pay for and as a result they fell into the trap of printing too much paper money and suffered from hyperinflation in 1923. They eventually printed up trillion mark notes which rapidly became completely worthless. Other countries of Europe which were forced to adopt the gold standard were Austria in 1923, Poland in 1924 and Hungary in 1925.

In 1776 the thirteen independent colonies of Britain in America combined to declare themselves independent from England. This led to the American War of Independence which the colonies won and signed the Peace Treaty of Paris with England in 1783, thus founding the United States of America as an independent nation. Back in 1776 there was no official money for the 13 states and the Spanish silver dollar coin was widely used. However, to fund the war against England the colonialists issued a paper currency called the Continental dollar. This currency was not backed by gold and by the end of the war they had printed so much that it was practically worthless. Hence the expression, 'Not worth a Continental'.

When the leaders of the rebellion came to draw up the constitution of the United States in 1787 they had two clauses dealing with money. Article 1 section 8 gives Congress the right to 'coin money' and section 10 requires the states to pay debts only in 'gold and silver'. Whether this means that the constitution was designed to strictly use only gold and silver as money, in the light of their experience with the continental paper money, or not seems to be somewhat of a moot point because after adoption of the Constitution in 1789, Congress chartered the First Bank of the United States and authorised it to issue paper banknotes. This First Bank was mainly for the benefit of the new government and was chartered for 20 years, at which time it was sold to private interests.

The US Second Bank was chartered in 1816 for 20 years and by 1836 some 1600 local state-chartered private banks were issuing paper money. These state banks issued over 30,000 notes of different colour and design which were easily counterfeited. Along with bank failures, this created confusion and circulation problems. To finance the Civil War in 1861 the US Treasury issued paper money for the first time and these notes, backed by gold, became the ubiquitous 'greenbacks'. Anyone wanting gold could take their greenback to the Treasury and buy back their gold. This is what backing a paper currency with gold means.

As with most other countries there were various attempts by bankers and politicians to use paper money as currency, but these were liable to failure as banks succumbed to the temptation to print more paper dollars than they could support with gold. After the establishment of the Federal Reserve in 1913 as a central bank, politicians felt that they would now have the ability to support banks in trouble.[11] The bankers knew that they now had the power to control the economy and greatly increase their wealth.

Broadly speaking, the US used gold and silver, along with paper backed by gold, as legal tender until Roosevelt confiscated all gold coins in 1933 on pain of imprisonment. After that the US used only paper as legal tender internally but continued to use gold for international payments. This continued until Nixon repudiated

---

11 *The Creature from Jekyll Island: A Second Look at the Federal Reserve*, G. Edward Griffin, 1994.

US international debts in 1971 by refusing to pay in gold — but he would pay with US dollars now not backed by gold. After 1971 the US dollar was backed by the full faith and credit of the US government — not gold.

So over the course of history when countries use gold and silver as money we find that they become more prosperous, and as long as the government does not interfere with this basic tenet all commerce settles down to produce a sound economy. Where we see governments take control of the money we see inflation of the money as they counterfeit or print extra to meet emergency needs such as war or to win the votes of citizens in elections. This extra money causes a rise in the prices of goods and services as people start spending the extra paper currency and this inflation of the money supply causes a general rise in the price of most things. This becomes a boom time and is followed a few years later by a recession. The boom and bust cycle is formed. The details of this phenomenon will be discussed later on in chapter six.

If we examine the economies of the western nations for the last four or five decades we see that they have all experienced this cycle, which became known as the business cycle. The prime cause of this situation is government and bankers taking control over the money supply and continually adjusting its value by changing bank interest rates as they attempt to create a stable environment in which business can prosper. But always they are too high or too low and the continual 'thrashing' of the economy eventually causes a bust that is too big to correct easily and the country lapses into a seemingly unresponsive depression. Most of the major western powers are reaching this point now and this is why 2014 is becoming such a worrying year for all who are interested in preserving the value of their money.

But the story of money is not yet complete. John Maynard Keynes was a mathematician and economist who grew up in the upper crust of British society, and his theories led him to believe that when the bust was occurring in society the way to fix the problem was to increase the amount of money (credit or paper money) by a large amount. This would encourage people to start spending again and the bust would be fixed. As he explained to Franklin D Roosevelt in 1936, 'Even if it requires that we place new money in jars and bury them in mines around the country so that we employ the unemployed in digging this money up we would solve both our problems with one stroke.' President Roosevelt commented that, 'I don't understand your theories, Mr Keynes but I like them,' and ushered in the New Deal bringing socialist ideals and the welfare state into existence. Ever since that time the governments of the western world used Keynes' thinking to advance ways of solving their recessions by 'increasing liquidity' — central bank words for increasing the amount of money in the country.

> Lack of *real* money is the root of all evil.
>
> *Phil Scott*

Until recently this has seemed to work and has been accepted as the way to solve the boom/bust problem. The problem is that since the bust of 2008 in the United States the chairman of the Federal Reserve has been printing up trillions of dollars and supporting banks in the US, the UK and the EU, which has only made the problems worse.

As the Federal Reserve of America prints more money, even after the latest large bust in 2008, we know that this will continue to lower the value of each dollar note and cause ever greater inflation of prices. This is causing some of them to convert their paper money into gold and silver in an effort to retain the purchasing value of their wealth. The governments of other countries are also increasing their money supply in an effort to lower the value of their currency so they can compete more easily on the international market. This interaction is establishing a worldwide currency war which will have devastating consequences for all.

> A nickel ain't worth a dime any more.
>
> *Yogi Berra*

Real economists have thought about this money problem the world is having and see that as long as governments have control of the money they will always succumb to temptation and expand the money supply. The answer must therefore be to provide a currency that cannot be continually expanded by governments or anyone else. One mysterious person (or persons) known only by the pseudonym Satoshi Nakamoto has developed a new digital money called Bitcoin which can only be expanded up to 21 million coins and no more. Each bitcoin can be created by a computer performing a difficult number-crunching task and when a new coin is created it is available for purchase by anyone else who joins up on the distributed peer-to-peer network at whatever value can be agreed between the creator and the purchaser and this has led to considerable fluctuations in its price. The bitcoins were for sale for a few cents each when they first appeared and are now worth around some hundreds of dollars — and this can change up or down unexpectedly. The coin 'mining' process is designed to produce new coins with ever increasing difficulty over an extended period of time up to around 2040. They are also designed so that each coin can be split down to thousandths of a bitcoin so if the value gets too high for common purchases we can buy things for cheaper fractions as we choose.

So far this looks attractive, as money we 'invest' or 'save' as electronic bits on a distributed network is getting more valuable with time compared to paper money, which gets less valuable. What's not to like? The other point is that anyone can use them to buy goods from anyone else in the world who will agree to the exchange. No fuss. No charge for service. No Visa fee. No exchange rate hassle. No government taxes. All transactions are anonymous and highly encrypted so that there is no government surveillance. No bank fees. No one else will know that anything has been transacted. Just the buyer and the seller.

At the moment the US government is prosecuting one organisation for exchanging dollars for bitcoins on the basis that they were conducting a financial transaction without the appropriate government licence to operate as a finance organisation. Big Brother is fighting back! The other problem is the time it takes before there are enough people around the world ready and willing to accept bitcoins as payment for goods. The comparison between an electronic paper dollar that steadily loses value and is subject to bank fees and taxes or confiscation by governments with a digital coin which mostly increases in value and cannot be confiscated or even detected will become a fascinating topic of conversation for some time.

We should also note that the American government is leading the charge towards an entirely digital money system and is continually making the use of actual paper money or coins illegal. For instance:

> Last year, Madison, WI banned drivers from mailing in cash for any and all payments. If you're dropping off trash at the dump in Bridgewater, MA, don't bother bringing cash. As the sign says: 'Absolutely NO cash will be accepted!!!!!'
>
> As of 1 February 2012, the Maryland State Comptroller's Office outlawed all cash payments at branch offices — statewide. Whether you're paying taxes, traffic tickets, or zoning fines … your cash is no longer accepted. As the Comptroller announced: 'Effective February 1, 2012, the Comptroller's Office will no longer accept cash payments at branch offices.'
>
> Thanks to state bill R.S. 37:1866 you can now be arrested in Louisiana for paying for second-hand items … with cash. As the final version of the bill reads: 'A secondhand dealer shall not enter into any cash transactions in payment for the purchase of junk or used or secondhand property.[12]

> The trick is to stop thinking of it as 'your' money.
>
> *IRS auditor*

As this process develops we will discover that our cash will disappear and all our transactions will occur through our bank account, which is entirely electronic noughts and ones just the same as bitcoins. The difference is, however, that every bank process is recorded and retained by the banking system and is available for government scrutiny or theft by third parties. Also there is always a charge for every transaction, and as we have

12 Jeff Yastine, Senior Research Director, The Oxford Club pro.oxfordclub.com/MONEY4979BRKIUP/MOXFP510/?o=999223&s=1004707&u=28093217&l=570989&r=Milo

learned from the Cyprus debacle, governments believe that any money in 'their' banking system is available to them to tax or confiscate at will.[13]

And of course there is always the possibility that any digital record can be scrambled or deleted so that any money that it used to represent is rendered incomprehensible or non-existent.

Money isn't what it used to be![14]

> Money is gold, and nothing else.
>
> *J P Morgan*

13 Travis Holt, 'So, What's It Like To Have a Business in Cyprus Right Now?', lewrockwell.com/blog/lewrw/archives/134665.html

14 For more detailed information about money see: 'Mises's Revolutionary Theory of Money', mises.org/daily/6379/Misess-Revolutionary-Theory-of-Money