Chapter 1 – The History of Money

The few who understand the (money) system will either be so interested from its profits, or so dependent on its favors, that there will be no opposition from that class.

– Rothschild Brothers of London, (1773-1855)

When you or I write a check there must be sufficient funds in out account to cover the check, but when the Federal Reserve writes a check there is no bank deposit on which that check is drawn. When the Federal Reserve writes a check, it is creating money.

– From *Putting It Simply* by the Boston Federal Reserve Bank (1984)

There's no limit to central bank expanding its balance sheet in theory.

– Dennis Lockhart, Chairman of the board of the Federal Reserve Bank of Atlanta (2012)

Inflation is a more fundamental danger than speculative investment. Some countries seem to be in the unusual situation where they are trying to create inflation. They will come to regret that.

– Paul Volcker (2013)

The old saying is that 'figures will not lie,' but a new saying is 'liars will figure.' It is our duty, as practical statisticians, to prevent the liar from figuring; in other words, to prevent him from perverting the truth, in the interest of some theory he wishes to establish.

– Carroll D. Wright, statistician addressing the Convention of Commissioners of Bureaus of Statistics of Labor (1889)

INTRO

Although we talk about money on a daily basis and most of us work hard for it, few stop to reflect on what money actually is and what it means. Even people working in the world of finance often do not comprehend what money is all about. The fact that money is created out of thin air and in the form of credit is quite difficult to understand. This important little secret is not taught at most schools and is actually only understood by a confined group of financial insiders. This is not necessarily a bad thing. According to Henry Ford, the famous car manufacturer, a revolution would break out before dawn if people got wind of how our money system really works.

1. What is the origin of money?

Ten thousand years ago, money in the form that we know it, did not exist. A simple community consuming merely a few varieties of food and materials, did not need a trading system. However, as soon as society began to develop, the demand arose for a more complex trading system. What developed out of this demand was a system of barter and exchange and even credit. Desired products that were relatively stable in value, like cattle and dried meat, were used more and more frequently as a method of payment.

Bartering is still the most elementary system of trade. In times of crisis, this form of commerce is frequently re-introduced. Towards the end of World War II, cigarettes were a much-used means of barter on the devastated European continent. In effect, cigarettes were transformed from consumption goods into 'preferred goods with the function of money', in economist speak.[1] In Argentina in 2001, when foreign powers refused to lend money to the country anymore and the national financial system collapsed, bartering emerged within 24 hours. And as recently as 2013, Iran delivered oil to China and India in exchange for gold.[2] Iran was forced to barter due to an economic boycott by the US and the EU which had shut Iran out of the international SWIFT payment system from 2012 to 2013, preventing the country from carrying out international payments.

Bartering has many disadvantages. There is not always a constant need for certain products, and perishable goods are unstable in value.

Large, round Rai-stones were used as a means of exchange (money) approximately 600 years ago on the Micronesian island of Yap. The biggest Rai that was ever found was three metres in diameter and weighed 4,000 kilograms. The stones were rare

1 Extensively described by R. A. Radford in 'The Economic Organization of a Prisoner of War Camp', Economica, Year 12, nr. 48, 1945, p. 189-201.

2 http://www.bbc.co.uk/news/business-17203132

because they had to be brought from the islands of Palau, which lie 400 kilometres away. Transporting the stones brought great risks with it. Up to this very day, the stones are valid as a form of barter. Other much-used means of exchange were shells (China) and grain (Mesopotamia, Babylon and Egypt).

2. How did gold become money?

Obviously, it is possible for some goods to act as money. These goods do need to have certain characteristics: they have to be easily divisible, portable, imperishable and scarce. But if you wish to exchange, calculate and save it – three functions that are essential in an efficient society – then money has a good deal of important advantages over valuable goods.

Since 700 B.C., the peoples of almost all cultures – Mayans, Incas, Egyptians, Greeks, Romans, Byzantines, Ottomans and Arabs – have considered gold and silver to be a valuable means of exchange. And because of their unique characteristics, scarcity and attraction, these precious metals have formed the basis of monetary systems around the world for thousands of years.

Apart from being divisible, portable, enduring and scarce, precious metals are enormously desirable. Whether that is due to their shine or weight (gold weighs almost twice as much as lead), people all over the world feel attracted to gold and silver. In addition, gold and silver are impossible to copy. Out of the entire periodic table of elements, gold and silver are the most suitable as a means of payment.

Precious metals also turn out to be perfect stores of value. Proof of the fact that gold has around the same value as 2,000 years ago can be found in the Museum of London. On display is a Roman *aureus* coin, which contains eight grams of 22-carat (90%) gold. According to the details printed next to it, one *aureus* could buy some 400 liters of cheap wine. At 2011 prices, eight grams of 22-carat gold is worth roughly 400 euros. When bought in small cartons at French wine houses, one can still buy wine for around one euro per liter. The demand for gold and silver is infinite and eternal.

3. When did coins come into existence?

The first form of coined money can be dated back to China. Around the same time, coins appeared in the West and in India. The Chinese coins were minted from various metals, including copper and bronze. The coins were made under strict supervision by the government in order to guarantee uniformity. Since the Chinese made their coins from base metals, their money had a low intrinsic value.[3] It is for this reason that a hole was bored into the middle of the coin so that a large number of coins could be transported on a string. Chinese money had low production costs but had the disadvantage that it was easy to replicate.

The first Western coins originated in Lydia, in today's western Turkey, around 650 B.C. They were made from electrum, a natural alloy of gold and silver. Thanks to the invention of a standard by which the purity of gold and silver could be established, the coins were quickly split into gold and silver variants. Because gold is about fifteen times more rare, silver was used for coins with a low nominal value.[4]

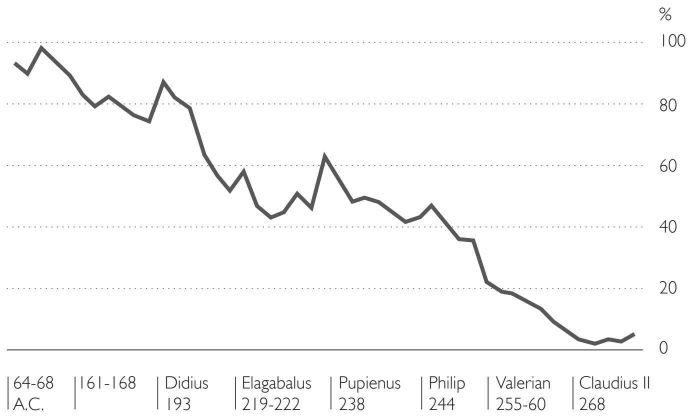
Alexander the Great, Julius Caesar and Emperor Augustus all built their empires around a monetary system based on gold. Maintaining the value of one's currency was key to keeping power. Soldiers were kept happy by regular payments of wages in gold and silver coins. Whenever the value of the currency was undermined, the empire came under pressure. There are strong indications that the Roman Empire fell because the Roman currency was debased. Following the demise of significant sources of income, the most important Roman coin fell considerably in value between 238 A.D. and 274 A.D. due to the silver content

3 The intrinsic value of a coin is determined by the value of the metal with which the coin is made. http://www.investorwords.com/2587/intrinsic_value.html

4 The nominal value refers to the value that is shown on the coin.

being continually reduced.[5] It is no coincidence that an economic crisis then ensued.[6]

Silver content Denarius



Source: Zerohedge/ Tulane university (2010)

5 http://www.tulane.edu/~august/handouts/601cprin.htm

6 'The Crisis of the Third Century (234–284 A.D.)', http://en.wikipedia.org/wiki/Decline_of_the_Roman_Empire. http://en.wikipedia.org/wiki/Crisis_of_the_Third_Century.

4. A short history of monetary gold

After the fall of the Roman Empire, Western Europe returned to a locally organized economy where barter once again became the norm.[7]

During the Middle Ages, the Byzantine gold solidus coin, commonly known as the bezant, was used widely throughout Europe and the Mediterranean. The bezant was possibly the most successful means of payment in world history. These gold coins existed from 491 A.D. to 1453 A.D. and were accepted as money from England to China.[8] In 1252, gold coins called florins were minted in Genoa and Florence for the first time in almost five hundred years. The florin was the precursor to the Dutch guilder, which was used all the way up until 1999.[9] Shortly afterwards, Venice introduced the ducat which had the same size and weight as the florin. Towards the end of the 13th century, all Italian city states, whose influence was rapidly increasing, made use of gold coins in order to facilitate their growing trade, thereby toppling the monarchs' monopoly on the issuance of money. In a short time frame, these gold coins spread throughout Western Europe, spawning a monetary system based on gold. In 1275, eight silver coins were needed to buy one gold coin of the same weight.

After the decline of the Byzantine Empire, and the spread of the bubonic plague and a series of financial crashes hammered Europe, the role of the bezant as money was replaced by silver coins in many European countries. From 1550 until the early 17th century, a long period of general price increases ensued. After the discovery of large deposits of silver in Latin America in the 16th century, an international silver standard developed, which existed for almost 400 years. Since silver has less value than

7 B. Bartlett, 'How Excessive Government Killed Ancient Rome', in: *The Cato Journal*, year 14, no 2, 1994.

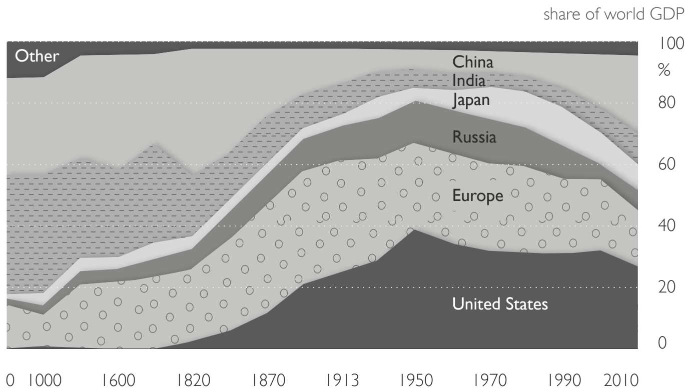
8 Antony Sutton, *The War on Gold.*

9 R. Kool, 'A Thirteenth Century Hoard of Gold Florins From the Medieval Harbour of Acre', in: The Numismatic Chronicle 166, 2006.

gold, silver coins were more easy to use for every day purchases. A silver standard was also adopted by the United States in 1785.

In the period between 1750 and 1870, many wars were fought on the European continent. Because of this and also due to ongoing trade deficits with China, a significant amount of silver moved eastwards, causing many silver standards to disappear over time.

Economic history of China and other major powers



Source: University of Groningen

5. What are the advantages of a gold standard?

Within a gold standard, each unit of money (one hundred euro, for example) corresponds to a certain amount of gold (say, 2 grams). A currency's value is backed by gold bars in the vault of the government or the central bank.

Having a gold standard brings with it many advantages. The most important advantage is that it forces governments to be disciplined in their fiscal policy because they cannot turn on the printing press to finance budget deficits.

Gold offers monetary security and is the most important weapon against the depreciation of money. A gold standard gives citizens economic freedom because their money is always exchangeable for gold. Gold is recognized worldwide as being valuable and for this reason, citizens are not dependent on financial decisions made by financial authorities, as is the case today. An undisciplined buildup of credit and debt – the real origin of the current credit crisis – cannot occur within a gold standard.[10]

Due to the mounting silver shortages, the United Kingdom and many countries in the British Empire adopted a gold standard in 1816. They were soon followed by Canada (1853), the US (1873) and Germany, where the new gold mark was introduced in 1872. In the course of the 19th century, the gold standard became more and more popular.

The stability of prices over a long period of time can be attributed to the disciplinary monetary effect of a gold and/or silver standard. England, for example, experienced almost no inflation for almost two hundred years up until the dissolution of the gold standard in 1914.

When money printing is not an option, even fighting wars is made more difficult.[11] The period between 1850 and 1914 – when

10 Gold standard: http://economics.about.com/cs/money/a/gold_standard.htm.

11 Wars are frequently financed with fiat money and, partly for that reason, they put the monetary systems of warring countries under pressure. This was certainly

most European countries were on a gold standard – was a time of economic prosperity in Europe during which no major wars took place.

The value of the dollar remained stable as long as the US had a gold standard.

the case with the First World War, the war in Vietnam and the Iraq-Afghanistan War.

6. Why was the gold standard abandoned?

With a gold standard, politicians and bankers have little influence over the economy because they are unable to influence the exchange rates of the currency. It is also not possible to print money to supply 'easy credit' to businesses in an effort to kick-start the economy, as is the standard monetary procedure nowadays.

A gold standard does not collapse or disintegrate on its own. When a large trade deficit occurs, gold reserves can be drained pretty quickly. When these large outflows occur, countries cannot guarantee that their currency will remain exchangeable for gold and are often forced to withdraw from a gold standard. This is precisely what happened to the US in 1971.

Many European countries went off the gold standard in 1914 in order to be able to print more money to finance the First World War. Wartime governments understand that they cannot raise money to finance the war by raising taxes or by borrowing from banks. Accelerating the printing presses is an easier method – and often the only way – to pay for a war.

After the end of World War I, the excessive money creation continued apace, leading to the creation of a massive credit bubble in the 1920s. This led eventually to the market crash of 1929, after which the world economy collapsed and fell into a deep economic crisis.

7. What is fiat money?

In a financial system where money is not backed by something substantial like gold or silver, banks can create virtually limitless amounts of money by creating new loans. All money is created in the form of credit (new debt). If all loans were to be paid off, all money would disappear. Because interest has to be paid on every loan, however, more and more new money (i.e. debt) has to be created. We call money that is created during this process of unbacked money creation, *fiat* or *fiduciary* money. Its value rests on the confidence that goods or services can be paid for. The term fiat refers to the first words that God spoke according to the story of Genesis in the Bible: 'Fiat lux' in Latin, or 'Let there be light' in English.

All known fiat money systems have failed in the past (see Appendix I). Central bankers, however, continue to claim that this time, all will be well. Such claims are reminiscent of the joke about the guy who jumps from the roof of an 80-story building. As he flies past the 20th floor, somebody shouts from the window to inquire whether all is fine. 'No problems so far!' is the answer. If turning on the printing presses would lead to prosperity, then Africa would not be a poor continent, Zimbabwe would be rich and the Weimar Republic would still exist.

8. What is meant by fractional banking?

In a fractional reserve banking system, the bank retains only a portion of all outstanding liabilities as available reserves. In 1900 this was around 30%, and has now declined to just 3%.

Fractional banking started at the end of the Middle Ages, when Italian bankers[12] – often goldsmiths – started to give 'bills of exchange' to clients who stored their gold coins with them. These bills were used more and more as money, since they were backed by gold. When bankers noticed that the gold coins were hardly ever retrieved from their bank safes, they began giving out more of these receipts than could be backed by the gold in their vaults. These receipts are considered to be the first bank notes.

Nowadays, bank reserves are held as currency or as a deposit with the central bank. Commercial banks can take out loans from the central bank based on assets on their books. The money for this new loan is created out of thin air and credited to the commercial bank's account at the central bank. Now the bank can use this new money to fund new loans or investments.

So money creation starts at the central bank. By typing a few numbers on the computer, unlimited amounts of new money can be created. If, for instance, 10 billion is created this way, then this amount will be transferred from the central bank to a commercial bank.[13] The receiving bank can then sell loans to the value of 90% of this 10 billion. The amount of 9 billion is transferred onto another bank's account and this party will lend out another 90% of the 9 billion (= 8,1 billion). This process can continue until the original 10 billion from the central bank has generated extra credit in the amount of more than 90 billion. This is the theory known as fractional banking.

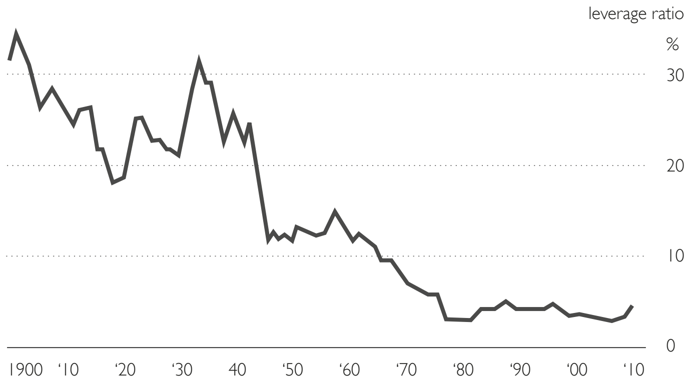
A commercial bank can thus create new money by selling a new loan and putting it on its balance sheet. In practice, banks

12 The oldest bank in the world, the Monte dei Paschi di Siena (1472), has come into serious trouble a few years after the start of the current credit crisis.

13 In exchange for collateral, like a package of old loans.

try to lend out as much money as possible and will search for the cheapest possible funding. It is important to understand that central banks can never replenish the reserves of a bank. They can increase a commercial bank's liquidity but never its solvency.

Solvency of Dutch banks 1900-2010



source: DNB

9. Where was fiat money invented?

As with many other inventions, fiat money was first invented in China.[14] Marco Polo, who travelled extensively throughout the Far East from 1275 to 1292, published a book describing his travels after returning to Italy. For Europeans, his texts were the only source of information about Asia for many centuries. Polo described how the leader at that time, the Emperor Khan, had found a way of creating paper money that was just as valuable as gold and silver.[15] His Mongol Empire reached from Siberia to the Black Sea, covering around one-fifth of the world's inhabited land area:[16]

> You might say the Emperor has the secret of alchemy in perfection, and you would be right. The Emperor makes his money of the bark of a certain tree, in fact of the mulberry tree, the leaves of which are the food of the silkworms, these trees being so numerous that the whole districts are full of them. What they take is a certain fine white bark or skin which lies between the wood of the tree and the thick outer bark, and this they make into something resembling sheets of paper, but black. When these sheets have been prepared they are cut up into pieces of different sizes. All these pieces of paper are issued with as much solemnity and authority as if they were of pure gold or silver; and on every piece a variety of officials, whose duty it is, have to write their names, and to put their seals. And when all is prepared duly, the chief officer deputed by the Khan smears the seal entrusted to him with vermilion, and impresses it on the paper, so that the form of the seal remains imprinted upon it in red; the money is then authentic. Anyone forging it would be punished with death. And the Khan causes every year to be made such a

14 G. Davies, *A History of Money*, p. 49-54.

15 Marco Polo, *Il Milione*. (2001)

16 http://www.allempires.com/article/index.php?q=The_Mongol_Empire

> vast quantity of this money, which costs him nothing, that it must equal in amount all the treasure of the world. With these pieces of paper, made as I have described, he causes all payments on his own account to be made; and he makes them to pass current universally over all his kingdoms and provinces and territories, and whithersoever his power and sovereignty extends. And nobody, however important he may think himself, dares to refuse them on pain of death. And indeed everybody takes them readily, for whosesoever a person may go throughout the great Khan's dominions he shall find these pieces of paper current, and shall be able to transact all sales and purchases of goods by means of them just as well as if they were coins of pure gold. Furthermore all merchants arriving from India or other countries, and bringing with them gold or silver or gems and pearls, are prohibited from selling to anyone but the emperor. He has twelve experts chosen for this business, men of shrewdness and experience in such affairs; these appraise the articles, and the emperor then pays a liberal price for them in those pieces of paper. And with this paper money they can buy what they like anywhere over the empire. So he buys such a quantity of those precious things every year that his treasure is endless, while all the time the money he pays away costs him nothing at all.

The Mongol Il-Khans in Persia, impressed by the use of paper money in China since 1024, decided to adopt this system. Technical advisers were sent to Peking, and an organization to introduce fiat money was set up. The Persian people, however, had not been able to grow gradually accustomed to the use of paper currency over several hundred years of incremental developments. They simply refused to believe that these nicely printed pieces of paper were worth anything, and the experiment ended in failure.[17] Paper money in Asia disappeared from the 14th century onwards. A great thirst for silver followed. Almost 25%

17 Gordon Tullock, Political Economist (1957).

of the world population was living in China at that time. Paper money would not reappear until 1609, when the Wisselbank in Amsterdam started issuing 'bills of exchange'.

10. Other examples of fiat money throughout history

Over 400 years later, in 1716, the Scottish economist John Law managed to convince the French King to conduct an unparalleled monetary experiment. Law was the son of a banker and travelled throughout Europe as a financial expert hoping to win rulers over to his economic ideas. He understood that a country could stimulate the economy through means of fiat money.

France was on the edge of an abyss due to the many wars of the Sun King, Louis XIV. The French regent[18] allowed John Law to set up a bank with restricted powers to issue bank notes. Through its success, the bank quickly grew to become the Banque Générale, and the money that it issued was even elevated to legal tender.[19] Large volumes of money were pumped into the economy this way, which did indeed stimulate the French economy.

Law eventually got himself into trouble pursuing another business opportunity. In 1717, he founded the Mississippi Company. His company received monopoly rights on trade between France and the French colony Louisiana in the south of the US. Thanks to a promotional campaign about the unlimited possibilities of the new promised land, more and more French people bought shares in the new company. But the speculation turned into a hype and got out of control. The boom turned into a bust and both experiments failed: the share price of his new company and the value of the fiat money plunged. Law's life in France was no longer safe and so he fled to the Netherlands. In 1726, with the permission of the Dutch government, he succeeded in setting up the first national lottery.

18 http://www.historyworld.net/wrldhis/plaintexthistories.asp?paragraphid=kbb

19 Similar to American bankers, who christened their central bank 'The Federal Reserve', Law knew that a confidence-inspiring name partly determines the success of a bank.

11. Other misfortunes with fiat money

Hardly a century later, it all went wrong again. In the years after the French Revolution, the Assemblée Nationale issued national bonds, so-called 'assignats'. The suggestion was planted that these bonds, which were also used later as money, were backed by the church's possessions that had been confiscated during the Revolution in 1779. According to a government report from 1790, an attempt was made to stimulate the economy by turning on the printing press:

> We have to save the country and the even greater amounts of money shall help France to recover.[20]

We might well call this Quantitative Easing[21] (QE) avant la lettre.

Because of all this newly printed money, people began to distrust paper money. The French government quickly implemented some strict new rules. Maximum prices were set to curb inflation, and it was forbidden on pain of death to ask to be paid in gold instead of paper money when selling goods. In a last attempt to protect the paper money system, all trade in precious metals was forbidden as of 13 November 1793. These measures, however, only delayed the inevitable. As history has shown time and again, rulers have yet to succeed in printing extra money with impunity or to implement the 'conjure-something-out-of-nothing' trick with lasting success.

In mid-August 1796, after a few years of financial disarray, the lack of public confidence in the French currency reached an apex, and hyperinflation ensued. Soon, paper money lost all value. The people's anger was so intense that mobs gathered in the Place Vendôme to publicly burn paper money, printing plates

20 Antony Sutton, *The War on Gold.*

21 Quantitative easing will be explained extensively in the following section.

and money presses.[22] Due to the subsequent hyperinflation, many years of chaos ensued. After this monetary disruption, Napoleon introduced a bimetallic monetary system which restored financial stability from 1803 onwards. Most of Europe joined this monetary system. The new French franc remained in existence for almost two hundred years, until the introduction of the euro.[23] In 1865, several European countries created the first European monetary union (known as the Latin Monetary Union). It was disbanded in 1927 and the bimetallic system was repealed in 1928.

22 Richard M. Ebeling, 'The Great French Inflation', in: *The Freeman*, year 57, nr. 6, 2007.

23 But because the French government was forced to keep printing money to be able to cover the costs of World War I, in 1914 it stopped pegging the franc to gold.

12. What is Quantative Easing?

Quantitative easing (QE) is the euphemistic term used by the US Federal Reserve to build a smokescreen around the unconventional monetary policies it has embarked upon. If QE were a patriotic military operation, it would probably have been named ‘Operation Firing up the Printing Press’. But since this would endanger public trust in the value of the currency, the spin doctors at the Fed decided on the term Quantative Easing. Only one in a million would understand that QE has to do with printing more money.

Before he became Fed Chairman, Ben Bernanke mentioned the possibility of turning on the printing presses in order to fight deflation:[24]

> The US government had a technology called the printing press (or, today, its electronic equivalent), so that if rates reached zero and deflation threatened, the government could always act to ensure deflation was prevented.

Central banks only embark on these unorthodox monetary policies to stimulate the economy when standard monetary policies have become ineffective.

Wikipedia defines QE in the following way:

> A central bank implements quantitative easing by buying specified amounts of financial assets from commercial banks and other private institutions, thus increasing the monetary base. This is distinguished from the more usual policy of buying or selling government bonds in order to keep market interest rates at a specified target value.[25]

24 http://www.gpo.gov/fdsys/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf
25 http://en.wikipedia.org/wiki/Quantitative_easing#cite_note-39

With quantitative easing, central banks provide commercial banks with excess liquidity to promote private lending. Japan's central bank, the Bank of Japan (BOJ), is seen as the inventor of these recent unconventional strategies. During the middle of the 1990s, Japan experienced a severe recession after years of economic partying in the 1980s. The BOJ wanted to lower interest rates to zero. This was accomplished by buying more and more government bonds. Subsequently, the BOJ also bought asset-backed securities and equities.

Since the start of the global financial crisis in 2007, similar policies have been used by the United States, the United Kingdom and the Eurozone. As in Japan, the initial purpose was to lower interest rates. But from 2008 onwards, the Fed and other central banks started aggressively expanding their balance sheets by buying up assets such as Treasuries (US government bonds) and mortgage-backed bonds in order to support the housing market and to finance the large fiscal deficits that arose as a result of the economic fallout from the credit crisis.

The United Kingdom also used quantitative easing to support the British economy. Stephen Hester, CEO of the RBS Group, explains:[26]

> What the Bank of England does in quantitative easing is it prints money to buy government debt, and so what has happened is the government has run a huge deficit over the past three years, but instead of having to find other people to lend it that money, the Bank of England has printed money to pay for the government deficit. If that QE hadn't happened then the government would have needed to find real people to buy its debt. So the Quantitative Easing has enabled governments, this government, to run a big budget deficit without killing the economy because the Bank of England has financed it. Now you can't do that for long because people get wise to it

26 http://www.itv.com/news/2012-05-11/hester-quantitative-easing-funds-bigger-budget-deficit/

> and it causes inflation and so on, but that's what it has done: money has been printed to fund the deficit.

Officially, central banks in most developed nations are prohibited from buying government debt directly. So they use a backdoor trick to buy their national bonds in the secondary market. In this two-step process, the government first sells bonds to private banks and insurers. These entities then sell these assets to the central bank.

13. Do all central bankers agree on QE?

At least one central banker seems to be hedging against the risks of 'the biggest bond bubble' in history. Records show that Dallas Federal Reserve President Richard W. Fisher owns at least $ 1 million in gold in a portfolio[27] worth at least $ 21 million. This is apparently a hedge against the Fed's controversial QE policies, which he is surprisingly candid about:[28]

> It will come as no surprise to those who know me that I did not argue in favor of additional monetary accommodation during our meetings last week. I have repeatedly made it clear, in internal FOMC deliberations and in public speeches, that I believe that with each program we undertake to venture further in that direction, we are sailing deeper into uncharted waters. The truth, however, is that nobody on the committee, nor on our staffs at the Board of Governors and the twelve Banks, really knows what is holding back the economy. Nobody really knows what will work to get the economy back on course. And nobody – in fact, no central bank anywhere on the planet – has the experience of successfully navigating a return home from the place in which we now find ourselves. No central bank – not, at least, the Federal Reserve – has ever been on this cruise before.

He warned as early as 2010 that the Fed was 'positioning itself as the buyer of pretty much all government debt'. At that time, he described the risk of these unorthodox monetary policies as 'the risk of being perceived as embarking on the slippery slope of debt monetization'.

27 http://economix.blogs.nytimes.com/2012/01/31/how-the-fed-presidents-assets-stack-up/?_r=0
28 http://www.moneynews.com/StreetTalk/fed-fisher-inflation-qe3/2012/09/23/id/457266

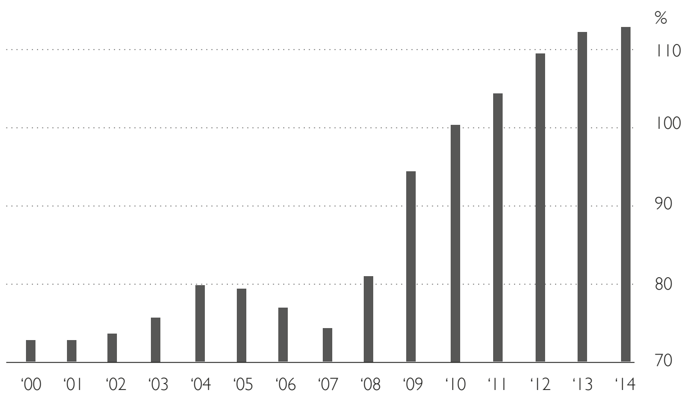
He is not the only central banker who has been so candid about the risks of the worldwide strategy of quantitative easing. In a testimony before the Treasury select committee in 2013, the Bank of England's Executive Director of Financial Stability, Andy Haldane, said that the bursting of the bond bubble 'created by central banks forcing down bond yields by pumping electronic money into the economy' was the main risk to financial stability:

> If I were to single out what for me would be the biggest risk to global financial stability right now, it would be a disorderly reversion in the yields of government bonds globally. Let's be clear. We've intentionally blown the biggest government bond bubble in history. We need to be vigilant to the consequences of that bubble deflating more quickly than we might otherwise have wanted.

But the risk of inflating the international monetary system by printing too much money should also be considered. In the past, these kinds of monetary policies have led to periods of hyperinflation.

Goverment debt advanced economies

As a percentage of GDP



source: IMF and Fulcrum Asset Management

14. When did hyperinflation occur?

One of the worst things that can happen to an economy is hyperinflation. The definition of hyperinflation is a rise in prices of over 50% within a year. Hyperinflation is so harmful because money loses its value and power. We could well call it the death of money. Without money, the economic system disintegrates and people revert almost immediately to bartering.

A good example of the dangers of fiat money is the hyperinflation that scourged Germany's Weimar Republic in the beginning of the 1920s. The German Republic stood under enormous financial pressure due to the huge amount of reparations imposed on it by the victorious Allies after the First World War. There was simply no way the German economy could bring in enough money to fulfill these payments year after year. The only way to do so was to allow vast amounts of fiat money to be printed. When high inflation resulted in the German people losing trust in the stability and value of their money, Germany found itself in a disastrous spiral of hyperinflation. Where one originally paid 42 marks for one US dollar, in 1923 the exchange rate had skyrocketed to more than 5 billion marks per dollar. In barely three years, the German currency had become worthless and the monetary system had crashed.[29] A financial nightmare became reality.[30] Many Germans lost all their savings and hope, with some committing suicide as a result.

29 Thomas Noble, *Western Civilization Beyond Boundaries*, p. 826-829.

30 Ferguson, *When Money Dies* (2010).

Periods of hyperinflation, ending with monthly inflation rates of well over 5,000%

Country	Year
Hungary	1946
Zimbabwe	2008
Yugoslavia	1994
Germany (Weimar)	1923
China	1949

15. Can we trust official inflation figures?

Governments are very creative in adjusting economic data. In the US, the manipulation of key figures and economic indicators has been elevated to a work of art. Many analysts and commentators now question the official statistics. Bill Gross, who founded PIMCO, the largest bond asset management company in the world, called the officially published inflation figures (CPI) 'a con job'[31] and the way they were presented a 'deception'.

The calculation of inflation can be influenced by the method and the model used. A model can be customized in many ways. When economists talk about financial engineering, it is clear that more than one outcome can be generated from a certain model.

Inflation is calculated as the average change in the price of a composite basket of goods and services over a given period. This is supposed to indicate whether the cost of living is higher (inflation) or lower (deflation) than earlier measured. This method is not very reliable because the choice of what goes into the basket of goods is necessarily arbitrary. Not everyone will buy the same products included in the basket of goods, of course. Many products and services are not included at all in the Consumer Price Index (CPI). Local taxes, for example, are not included in the CPI but they have risen sharply in recent years. As a result, disposable income has been growing less than inflation and many people feel 'squeezed'.

Cheuvreux, an equity broker owned by one of the largest French banks, Crédit Agricole, published a report[32] as early as 2006 claiming that real inflation rates in the US were around 6.7% – a number close to the growth of the money supply – instead of the officially published figures of around 2%.

31 http://www.investorsinsight.com/blogs/john_mauldins_outside_the_box/archive/2008/06/09/fooling-with-inflation.aspx

32 http://www.gata.org/files/CheuvreuxGoldReport.pdf

In the last decade, the monetary authorities in the US have fought a 'hidden war' against inflation, to ensure that the financial markets would not be alarmed by growing inflation. The main measures used were:

- To maintain low gold prices;
- Change of the method used for the calculation of inflation;
- Stop publishing the US M3 money growth figure.

The same report explains why a rise in the official inflation rate is disadvantageous for the government:

- It increases the costs for the government, as pensions and other social benefits have to be adjusted annually for inflation.
- Rising inflation leads to higher interest rates and therefore higher borrowing costs for the government and higher mortgage rates for consumers. Higher interest rates have a negative impact on stocks and bonds.

16. How is inflation calculated?

Statisticians have found a number of methods they can use to lower the official inflation figures. This covert war is conducted mainly by changing the calculation methodology of inflation. The statistical model was changed little by little over the past thirty years.

According to John Williams,[33] an economist who has specialized in this field, the quality of government statistics has deteriorated significantly since the 1990s. According to him, the statistics on inflation were fairly accurate until the early 1990s. In the following years, the model used to calculate inflation numbers started to change as politicians began to pressure the statisticians.

In his report 'The Consumer Price Index' from 2004, he lists the four most notable 'tricks' used:

1 – Replacement by cheaper alternatives
When a piece of meat is too expensive, it is replaced in the inflation model by a cheaper burger. This is justified by the argument that people will start looking for cheaper alternatives when prices rise.

2 – Geometric considerations
Over the years, the arithmetic weighting of items in the inflation basket was replaced by a geometric weighting. As a result, products rising in price weigh less heavily in the model while products that are cheaper are weighted more heavily.

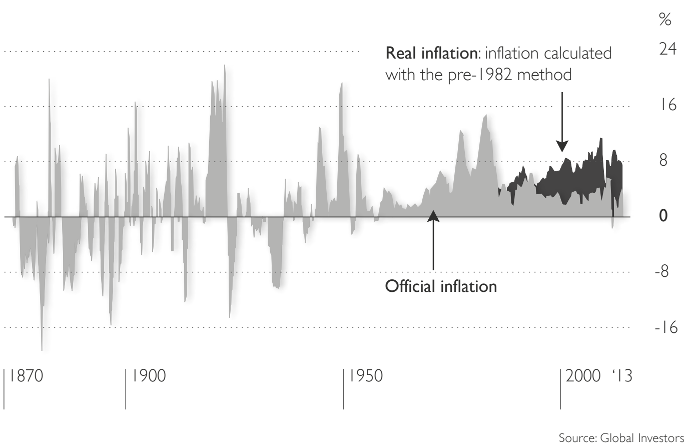
3 – Hedonic adjustments
This is the strangest adjustment of all. It is used to lower prices in order to correct for quality improvements that are embedded

33 Founder of www.shadowstats.com
http://rationalwiki.org/wiki/Shadow_Government_Statistics

in product prices (derived from the Greek word *hedone*, which means 'pleasure').

Not all of these methods have been misused, but the combination has had the result that inflation figures are structurally understated. With many entitlements tied to the Consumer Price Index (CPI), the real value of social security payouts has shrunk dramatically.

Is today's inflation manipulated?



Monthly inflation data going back for more than a century. The grey shaded areas represent the official Bureau of Labor Statistics' historical Consumer Price Index (CPI). If we were to use the pre-1982 method of calculating CPI, we would end up with inflation as shown by the black line in the picture above. The black area shows that real inflation is currently around 8%. This compares to official statistics declaring CPI to be around 2%.

17. Examples of the distortion of inflation figures

The best example of a hedonic adjustment to price movements was highlighted in a Wall Street Journal article a few years ago. A TV model for sale for $ 30 in 2005 was being sold for the same price in 2006. But the model had slightly changed. The six-watt speaker had been changed to a ten-watt speaker, and the screen now had more rounded corners. Statisticians claimed that the television had become so much better that the price therefore should be adjusted downwards by 30% even if it was still being sold for the same price. These kinds of adjustments are being made continuously. The main consequence of all this is that people are not sufficiently compensated for the increased costs in their wages, pensions or benefits. Especially lower and middle class families are hurt by these changes.

From the government's perspective, another advantage to underestimating inflation is the way in which economic growth is adjusted for inflation. If an economy grows by 3% and inflation is 2%, then economic growth adjusted for inflation (known as real growth or real GDP) is 1%. But if inflation is in fact 4%, then in real terms the economy will have contracted by 1%. Adjusting for inflation can mean the difference between a recession and positive economic growth. Announcing that the economy is in a recession tends to lead to a decline in consumer confidence and also possibly lower consumer sales.

18. Do central banks combat or cause inflation?

Central banks' websites often mention that all is about 'financial stability'[34] and that combating inflation is their main task. But they never tell you that they are the ones causing inflation by creating more and more money every year. Any student of monetary history knows that central bankers have never succeeded in building a lasting fiat money system without leading to a large loss in spending power. By printing more and more money, all currencies in a fiat money system are debased. According to former US Senator Ron Paul, the Fed's claim that it is fighting inflation is as incredible as cigarette manufacturers' statement that they want to help consumers stop smoking.[35]

Apart from fighting inflation, another vital task for most central banks is to stimulate the economy. This is why the amount of money in circulation has to grow each year. The goal of the ECB from its inception in the late 1990s was money growth of 4% to 5% annually. But within a few years after the introduction of the euro, yearly money growth had risen to above 10%. Through the excessive growth of debt, most Western currencies have lost over 95% of their spending power in the last century alone.

Central banks now also act as the lender of last resort. As a consequence, central banks such as the Fed and the ECB create over one trillion dollars in new money every year in order to support their governments. And still they claim they are fighting inflation.

34 During the Amsterdam Gay Pride of 2012, employees of the Dutch central bank danced around a see-saw upon which stood the word 'stability' in large letters.

35 Ron Paul, *End the Fed* (2009).

19. Does anybody really understand this financial system?

In most countries, governments and banks have worked together to monopolize the creation of money. The fact that our money is backed by nothing but hope and trust must be kept hidden from ordinary people. Even most economists do not fully understand money. Only those who have studied monetary economics know the inner workings of our financial system. And most of them end up working for their government or central bank, so they are bound to keep their mouths shut.

It suits bankers when consumers see a bank as a large piggy bank with lots of money in the safe. Few people know that printed and minted money represents only a small percentage of all the money that is in circulation. Research shows that, to this day, one-third of all people believe that vast piles of money lie waiting in the vaults of their bank for savers to go and collect. If savers realized the risks of their money being lent out over thirty times, they would probably prefer to buy gold. For this reason, it is of the utmost importance for banks to play down the safe-haven aspects of gold whilst simultaneously trying to maintain people's trust in money.

Savings in a bank account, however, are legally speaking a debt claim. That is why, in the case of a bank bankruptcy, deposits are not immediately returned to the deposit holder, as is the case with an equity or bond portfolio. In order to make sure that people do not withdraw their money en masse, the government guarantees the savings of every citizen up to the amount of 100,000 euros per bank in Europe and $ 250,000 in the US. Whether the government itself owns enough money to be able to cover these claims is, of course, questionable.

Most European bankers have allowed themselves to be completely hoodwinked by American propaganda that gold no longer plays an important role in the current financial system. In the Netherlands, almost all gold counters within banks have been closed. But in Switzerland you can still buy gold and silver at almost every bank.