

If money rules the world – who rules money?

A case for complementary currencies

In the late seventies, environmentalists – among whom I count myself – were among the first to question the present money system, which – in order to function – requires exponential growth returns that the planet could never sustain. We discovered that there was a severe lack of understanding on the most basic facts about money amongst laymen as well as professional economists. Up to this day, it remains almost taboo among economists, bankers and politicians to discuss it publicly, as if the global monetary system was a fundamental given. However, nothing could be further from the truth.

I first discovered that there is a basic antinomy between ecology and economy due to a well-hidden problem in our money system. I started to find practical solutions, which are demonstrating how we can finally free ourselves from being ruled by our money system – to ruling it.

The hidden problem: compound interest

Money – as one of the most ingenious inventions of humankind – facilitates the exchange of goods and services and, thereby, overcomes the limitations of barter. It creates the possibility of specialisation as the basis of civilisation. Taking a more detailed view leads us to a problem that has been ignored for a long time: the availability of money – based on the payment of interest – has two sides. The useful side most people understand immediately sees interest as the price for money, which functions as an indicator for the scarcity of products or money in our economies – and

as such, it is difficult to replace. The problematic side, which is rarely discussed, is that interest also creates an impetus for exponential growth. What we call 'interest' not only contains the cost of the work of the bank, a risk premium and an inflationary adjustment, for example costs, which cannot be eliminated, but also contains the so-called 'liquidity premium'. This is the reward for the lender who lends his money to others. Money owners have the ability to hold money back until the 'price is right' as it produces almost no storage costs like all other goods. Money – in its present form – therefore not only provides a key, but also a lock to the market.

This possibility for the retention of money tends to distort all market mechanisms, and over time, money – and not the provision of goods and services – becomes the prime focus of all economic activities. Foreseeing this in 1936, Keynes wrote: "Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation. When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done."

We now live in a time in which the capital development of the world seems to have become a by-product of the activities of a casino.

Therefore, the question arises: How can we create a money system, which avoids the compounding

of interest and all its associated problems? Therefore, it is useful to understand three – out of at least thirty – misconceptions about money, which almost everybody holds.

Three misconceptions

1. The 'Growth Misconception' is based on the belief that money based on interest can grow forever – and this in turn is based on people not understanding two generically different types of growth.

Curve a) represents the normal physical growth pattern in nature in which everything stops growing at an optimal size. This is the only sustainable growth pattern that exists.

Curve b) represents exponential growth doubling its units at regular intervals. It may be described as the exact opposite to curve a), in that it grows slowly in the beginning, then accelerates continually faster and, finally, grows in an almost vertical fashion. Based on interest and compound interest, our money follows an exponential growth pattern: at 3 percent com-



pound interest it doubles in 24 years; at 6 percent it takes 12 years; at 12 percent 6 years.

To show the impact on money in the long run, we may use the famous example of Josephus' cent invested at 5 percent interest in the year 0. In the year 2000 this cent would be worth over 500 billion balls of gold of the weight of the earth, at the price of gold in that year. Without the compounding of interest, the sum accumulated would have been 1,01 Euro.

This shows that it is not interest that is the problem, but the compounding of interest. Through the use of the 'discounted cash flow', however, interest and compound interest provide the basis for all evaluations of economic efficiency for investments in conventional currencies.

2. The 'Transparency Misconception' deals with the second major difficulty in fully understanding the impact of the interest mechanism on our economic system. Most people think that they pay interest only if they borrow money. They do not understand the fact that every price contains a certain amount of interest, depending on the share of capital deployed per unit of output. This relationship – together with the rate of interest – determines the interest component in prices. For the three following examples from Germany, it ranges from a 12 percent interest component in the price for garbage collection (because here the share of capital costs is relatively low and the share of physical labour is particularly high) to 38 percent for drinking water – and up to 77 percent in the rent for public housing (when calculated over 100 years, which is the estimated time houses in Germany are supposed to last). On average, people in Germany pay about 45% interest in the prices of goods and services they need for their life.

3. The 'Fairness Misconception' is based on the notion that everyone is treated equally in our monetary system. We all have to pay interest when borrowing money and receive interest for savings. However, when we take

a closer look, there are indeed huge differences as to who profits from and who pays in this system. Comparing the average interest payments and income from interest in ten equal parts of 2.5 million households in Germany, we can show that 80 percent of the population pays almost twice as much as they receive, 10 percent receive slightly more than they pay, and the remaining 10 percent receive more than twice as much interest as they pay. This last amount is the share that the first 80 percent loses.

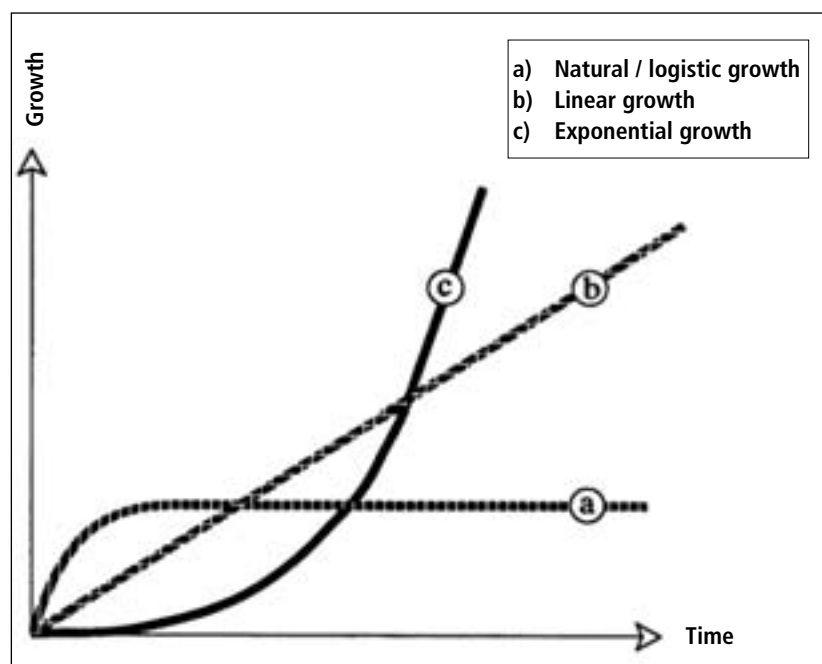
This illustrates one of the least understood reasons why the rich get richer and the poor get poorer – and that the economists' notion that money is just a neutral veil for the economy is incorrect.

In Germany, in the year 2004, about 1 billion Euro were transferred every day from those who work for their money to those who can make their 'money work for them'. But money never 'works'. Only people and machines produce real value. Money can only be re-distributed from those who create that value to those who own money. In other words, we allow the operation of a hidden redistribution mechanism in our monetary system, which continually transfers money from the large majority to a small minority, creating a social polarisation

that undermines any democracy over time. An Argentinian banker, who had worked in the National Central Bank for 36 years, once asked me – in regard to this figure: "...and what use is equality before the law for us without equality before the money?"

Even more to the point, President Obasonjo of Nigeria stated after the G8 summit in Okinawa in 2000: "All that we borrowed up to 1985 or 1986 was about \$5 billion. So far we have paid back about \$16 billion. Yet we're being told that we still owe about \$28 billion ... because of foreign creditors' interest rates. If you ask me what is the worst thing in the world, I will say it is compound interest." At that time, the developing world was spending thirteen dollars on debt repayment for every one dollar it received in foreign aid and grants.

Many believe that those 10 percent who profit from the system are the culprits who will not allow fundamental change to take place. However, even the rich are just as helpless to change it as the poor. The late billionaire Sir James Goldsmith once said: "What use is more money to me when I will be surrounded by more and more poor and suffering people who hate me? I feel as if I have won a game of poker on the Titanic!"



Two Results

Out of the many devastating results, due to this well-hidden mistake in our money system, two are particularly noteworthy: inflation and monetary instability.

1. Inflation: Between 1950 and 2001 every Deutsche Mark lost 80 percent of its value – and this was the most stable currency in the world. For most people, inflation seems like an integral part of any money system – almost ‘natural’ – since there is no country in the world without inflation. Because it is perceived as a given, economists and most people believe interest is needed to counteract inflation, while in fact interest is the major cause of inflation. The creation of money is carried out via bank loans. Whoever receives these loans has to repay them with interest and compound interest. If we consider the world economy, it follows that the amount of money in circulation is systematically insufficient to repay all debt. Leaving aside temporary contractions, it is only by a continuous expansion of the money supply that economic actors as a whole can sustain their ability to pay.

So where is exponential growth actually taking place? The asset markets hold the answer. It is in the number of assets and in the asset evaluations – and this is especially true for the securities market that has grown exponentially over the past decades. However, unless this rise corresponds with a comparable rise in the producing economy their surge is excessive. These overvalued assets serve as backing for creating loans. But – if the backing is getting weaker – how is the money not supposed to lose solidity? In a monetary system with compound interest, inflation cannot be prevented. At best, it can be kept at low levels for a number of decades. Ultimately, a correction – that means a massive and painful adjustment – is inevitable. We see the beginnings of this process right now.

2. Monetary instability is a second result of the exponential growth pat-

tern in our money system. In contrast to measures like the meter or the kilogram, we are used to the fact that the exchange rate of our currencies varies almost daily. Cashing in on this variability, the global volume of speculative foreign currency transactions between 1974 and 2004 increased to 97 percent, with a mere 3 percent of the transactions serving the exchange of goods and services including tourism. Recent figures in 2007 show that the daily volume of trading already exceeded \$3.200 billion – whereas in the 1970s it amounted to just \$20 to 30 billion. Thus, economic instability is created on a global scale. After speculative money flowed massively into Thailand, Malaysia and Korea in the early 1990s – only to be withdrawn a few weeks later – it left the most devastating effects – not unlike war – on the culture, ecology and society.

Three historical solutions

The religious leaders of Judaism, Islam and Christianity understood the problems of compounding interest and left us solutions how to deal with it:

- In Islam people who follow the Sharia observe a complex set of rules to prevent interest from compounding. It forbids not only investments in morally or socially prohibitive activities, but also speculation and excessive costs of loans and, consequently, makes the moneylenders – whether private or professional – a part of the project, which they are financing. Therefore, they have a strong sense of responsibility for its continuity and success.
- Judaism used to resolve the problem of compounding interest by waiving all debt regularly every seven years in the so-called “jubilee year”. After seven times seven or 49 years, not only debts were ‘for-given’ and debt-slaves were freed, but also private land was given back to the community.
- The Christian churches in Europe, mainly during the Middle Ages between 900 and 1400 AD, imposed strict interest prohibition laws. They punished those who levied interest on loans severely, excluding them

from the Christian community and Christian funerals. Money was kept in circulation by regularly re-calling and re-minting the thin metal coins – in some areas called Brakteaten – every three to four years and by levying a fee of 30 to 40 percent in the renewal process. This was – at the same time – a way of collecting taxes. The use of the old coins was forbidden by law and sanctioned by prison sentences. This time related charge on money – called ‘demurrage’ – acted as a ‘circulation incentive’ and meant that nobody was able to hoard money without risking a loss. Instead of charging interest, people usually accepted loans that guaranteed the equivalent value after some months or years – and thus they eliminated the ‘liquidity premium’, or reward for the lender, which causes the compounding of interest. In terms of modern banking practices, leaving out this share in the cost of interest would halve the costs for loans and subsequently – over time – the 45 percent share of interest in prices.

All three historic solutions have remained alive up to this day: The Islamic model is finding more and more acceptance among the Muslim population in view of the failure of the capitalist money system to provide for systemic stability and fairness. The Jewish model of waiving the debts has been advocated to counteract the capitalist money systems’ inability to deal with social justice – in terms of the waiving the outstanding loans of the least developed countries. And many of the complementary currencies now running in Germany are using demurrage as a circulation incentive.

Where these solutions have not been applied, three historic consequences have arisen: hyperinflation (or crash), social revolution and war. However, neither the 87 monetary crashes over the last 25 years, nor World Wars I or II, nor social revolutions like the French, Russian or Chinese, have changed anything fundamentally in terms of the money system.

Complementary currencies and the use of demurrage

A new way to tackle the interest problem has emerged in Europe – mainly Germany – during the last decades. In addition to the many local exchange and trading systems, twenty-eight regional complementary currency systems have emerged, most of them based on demurrage. Complementary currencies may be defined as means of payment with a built-in target. They are not meant to replace the existing national or international currencies, but to complement them. Mainly in social, cultural and ecological areas in which the present system does not work very well, new liquidity can be created without burdening the taxpayer or governments with additional costs. They can be seen as a powerful tool for strengthening the economic viability of a specific social sector or geographically limited area. Models of complementary currencies exist on all levels of economic activity: the international (www.terrarc.org), the national (www.wir.ch), the regional (www.regiogeld.de), and the local level (www.tauschringe.de). Most interesting for the international business community – at the moment – seems to me the Terra TRC.

The Terra TRC – a global “Trade Reference Currency”

Some years ago Bernard Lietaer, an internationally renowned monetary expert, began to envisage a global monetary system that goes beyond the simple dollar domination of the past sixty years. He saw that three unresolved issues are haunting the global monetary scene. Firstly, there is no international standard of value – a critical function of any money system. Since the floating exchanges of the 1970s, the US Dollar has stopped playing that role, and no other currency has been able to fill in that gap. Secondly, currency instability persists. According to the World Bank, 87 countries have experienced monetary crises in the past 25 years. And thirdly, institutional deadlock: The banking system is not pushing for monetary reforms because “hedging”

products (insurance against monetary instabilities) constitute significant profit centres.

The solution he advocates is what the International Air Transport Association (IATA) successfully did 25 years ago through an internal currency arrangement among its members, for example to create an independent global Trade Reference Currency (TRC) useable across industries, designed to provide an inflation-resistant international standard of value, to stabilise the business cycle, and realign stockholder's interests with long-term sustainability.

The so-called ‘Terra’ would be backed by a standard basket of the most important commodities and services traded in the global market (for example oil, wheat, copper, gold and other assets, and some standardizable services like carbon emission rights, international freight or telecommunication units). A ‘Terra Alliance’ would issue electronic inventory receipts for commodities sold to it by producers. It could include both governmental and private sector actors who represent the main producers or users of the components in the basket.

The bearer of the Terra would pay the cost of storage of the physical commodities (estimated at 3.5 to 4 percent per annum), which makes the Terra a ‘demurrage’ currency and encourages its use as a contractual, planning and trading device, not as a store of value. The benefits of the Terra compared to conventional money include not only the resolution of the three issues identified above, but also the creation of an ideal standard of international value, given that its basket would capture main elements of global trade. By the very definition of a basket, it would be more stable than any component of the basket (such as gold), and it would also be a robust standard, given that it is a fully backed currency.

As any Terra trade is basically standardised counter-trade (international barter), it doesn't require new legal agreements. Counter-trade is routinely practiced today in over 100 countries, with a volume of more than \$1 trillion per year. The Terra would operate as a complement to conventional national

currencies, in parallel with them, and would be an inflation-resistant currency, ideal to track results over long-time periods or across countries. Like most complementary currencies the Terra would be counter-cyclical to the conventional money creation process, thereby stimulating the world economy in downturns and cooling it off in boom periods. Last but not least, the demurrage feature would realign financial interest with long-term thinking, thereby resolving the conflict between shareholders' optimisation and long-term sustainability.

Conclusions

The solutions for financial stability, presented here, will be a surprise for conventional economic thinking, which invariably assumes monopolies for national currencies as an unquestionable given. The examples mentioned show that monetary sustainability will be enhanced by a diversity of currency systems, so that multiple and more diverse channels of monetary links and exchanges can emerge. We have all the technologies to make the use of multiple currencies feasible. While – at the moment – they are proving their capacity to play a stabilising role on a small scale, it is urgent to recognise that they can contribute to sustaining the global economic system tomorrow, if we are able to implement them on the scale necessary to make a difference.

Prof. Dr. Margrit Kennedy



margritkennedy@monneta.org
www.monneta.org
www.margritkennedy.de
www.terrarc.org
www.complementarycurrency.org
www.reinventingmoney.com