

**Prof. Dr. Margrit Kennedy**

# **Why Do We Need Monetary Innovation?**

**Three common Misconceptions**

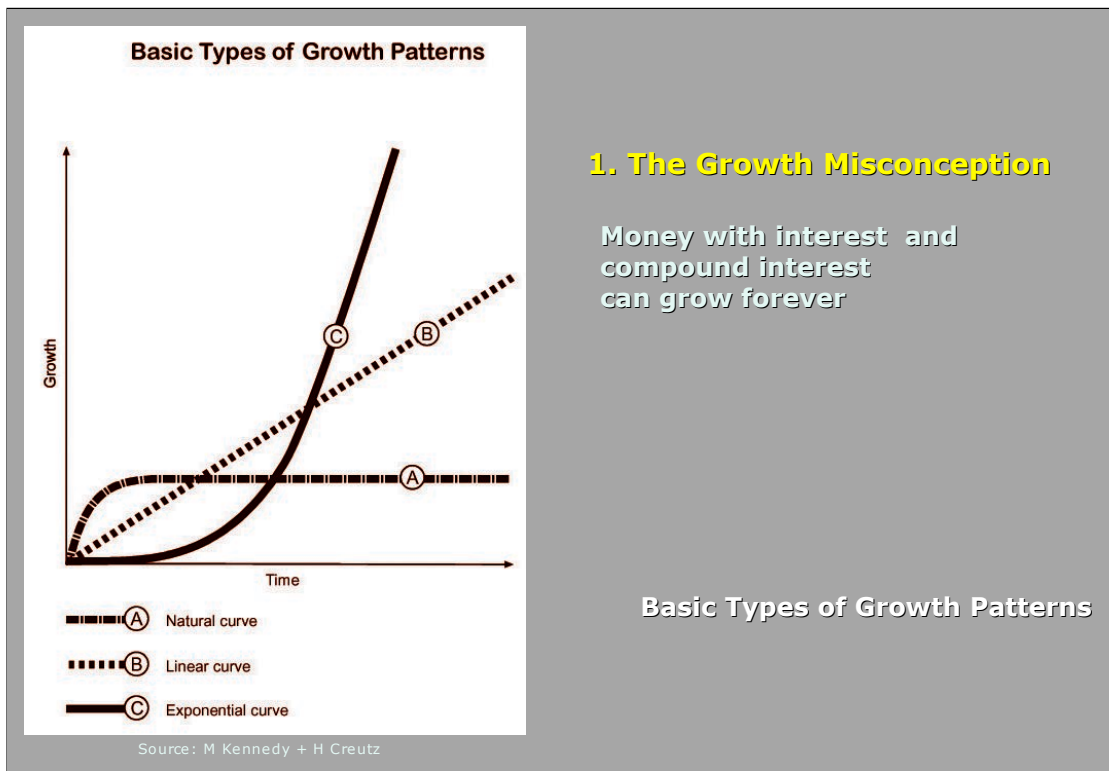
**Three threatening Results**

**Three possible Solutions**

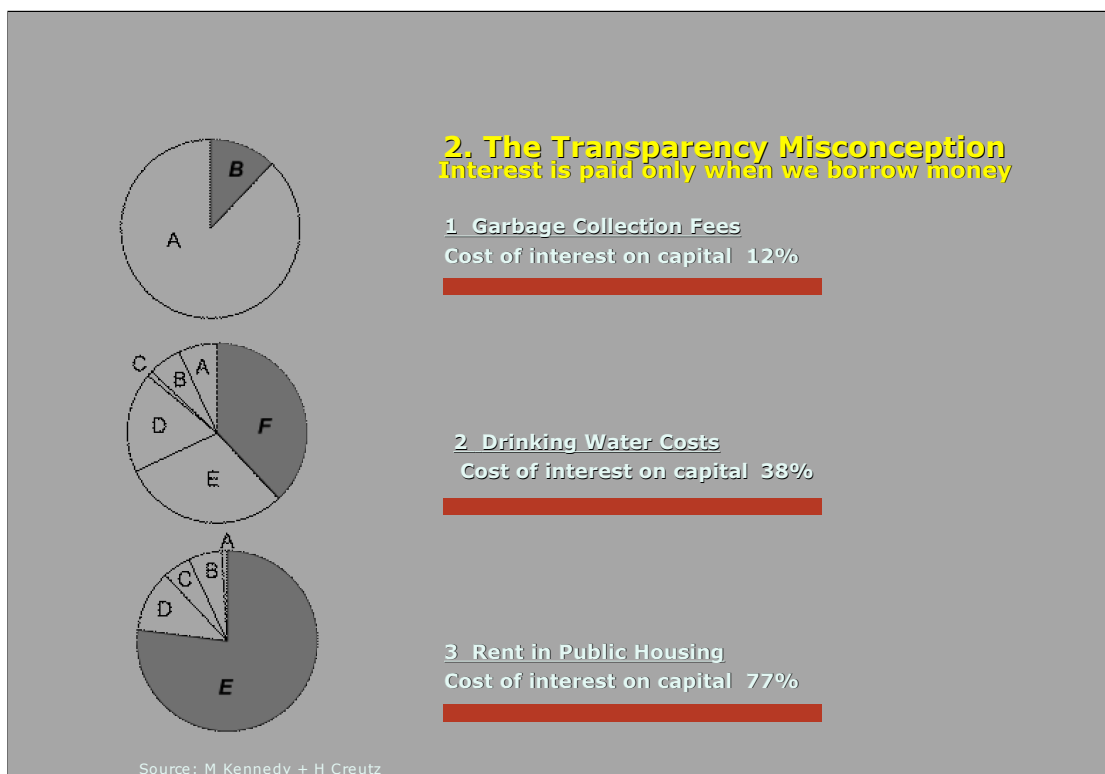
In this lecture I will pursue the question: Why do we need monetary innovation?" Firstly, I will describe three misconceptions most people hold about money; secondly I will explain three results of these misconceptions, and thirdly offer three possible solutions in terms of monetary innovations.

What is money? Let's take the good news first. Money is one of the most ingenious inventions of humankind. It helps the exchange of goods and services and overcomes the limitations of barter, thereby creating the possibility of specialization, which is the basis of civilization. Why then do we have a money problem?

Here is the bad news. Throughout most of history, the circulation of money has been based on the payment of interest. Interest leads to compound interest. Compound interest leads to exponential growth. And exponential growth in turn is unsustainable. Therefore, in order to understand how our monetary system works as an 'invisible wrecking machine' since its inception, it is useful to understand three basic misconceptions about money which almost everybody holds.



1. To comprehend the Growth Misconception, that "Money based on interest can grow forever" we need to understand three generically different growth patterns. Curve A represents the normal physical growth pattern in nature. Just like plants or animals, we grow fairly quickly during the early stages of our lives, then begin to slow down, and usually stop growing physically at an optimal size. Curve B represents a linear growth pattern, e.g. more machines produce more goods, more coal produces more energy, etc. This growth pattern is not so important for our analysis. It should be clear, however, that on a finite planet even this pattern will eventually create problems. Curve C represents exponential growth, the most important and generally least understood growth pattern. It may be described as the exact opposite to curve A, in that it grows very slowly in the beginning, then accelerates continually faster and finally grows in an almost vertical fashion. In the physical realm, this growth pattern usually occurs where things are out of order, where there is sickness, often leading to death. Cancer, for instance, follows an exponential growth pattern, and, using this analogy, interest may be seen as the cancer on our social and economic system. Because based on interest and compound interest, our money doubles at regular intervals, it follows an exponential growth pattern: at 3% compound interest it takes 24 years; at 6% it takes 12 years; at 12% 6 years. One penny invested at 5% interest in the year 0 would be worth 134 billion balls of gold of the weight of the earth in 1990, at the price of gold in this year - a practical impossibility.

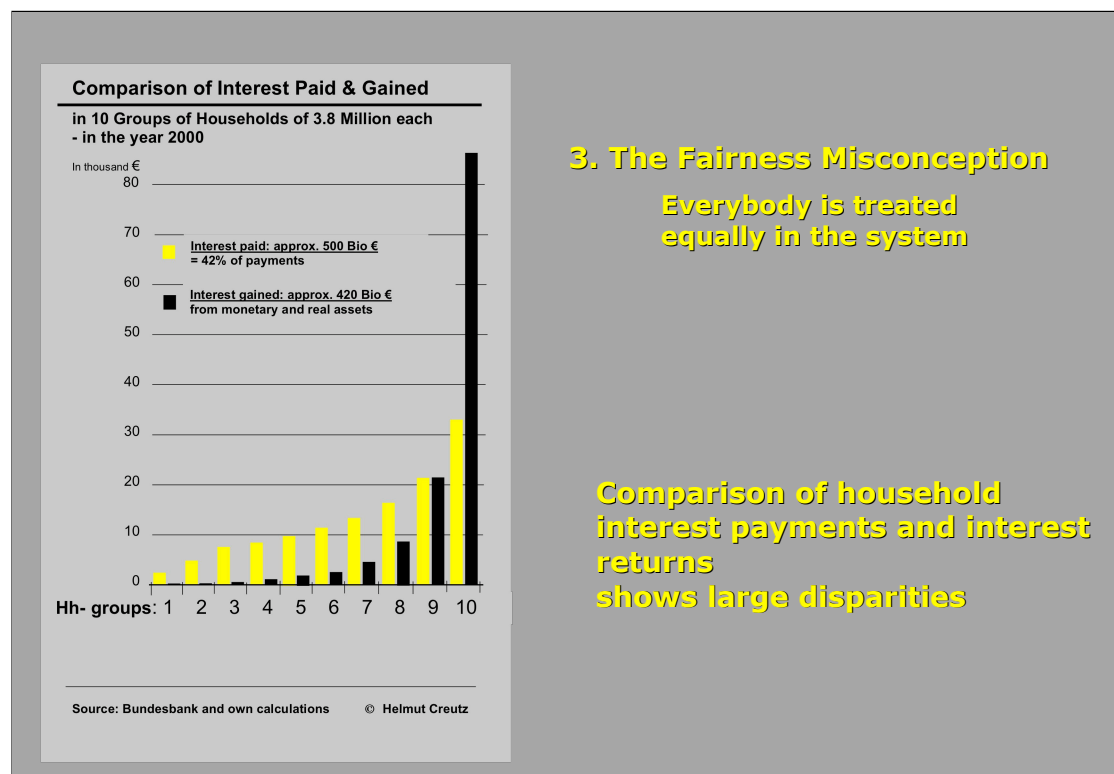


2. The Transparency Misconception can be summarized as:  
'Interest is paid only when we borrow money.'

The difficulty to fully understand the impact of the interest mechanism on our economic system is, that most people think, all they have to do is to avoid borrowing money, and they will not have to pay interest.

What they don't understand is that every price we pay includes a certain amount of interest. The exact proportion varies according to the capital versus the labor, maintenance, administrative and other costs of the goods and services we buy. This ranges from a 12 % interest component for garbage collection, (because here the share of capital costs is relatively low and the share of physical labor is particularly high) to 38% for drinking water and up to 77% in the rent for public housing (over 100 years, which is the time houses in Germany mostly last).

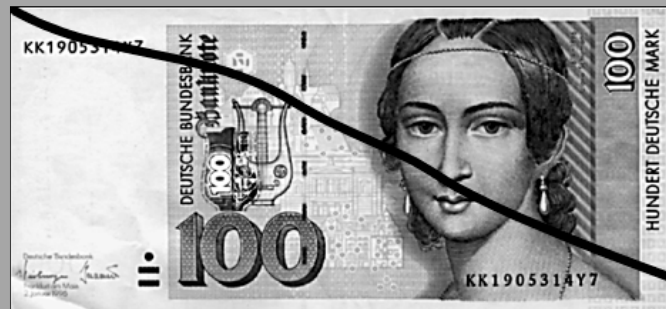
On the average we pay about 40% interest in all the prices of our goods and services. In medieval times people paid 'the tenth' of their income or produce to the feudal landlord. In this respect they were better off than we are nowadays, where almost one half of each dollar goes to the people who own capital as I will explain with the next misconception.



3. The Fairness Misconception holds that: 'Everybody is treated equally in this money system.' Since everyone has to pay interest when borrowing money and receives interest for savings, we are all equally well off within the present money system. On the contrary, there are indeed huge differences as to who profits and who pays in this system. Comparing the interest payments and income from interest in ten equal parts of 2.5 million households in Germany, this figure shows that 80% of the population pay almost twice as much as they receive, 10% receive slightly more than they pay, and the remaining 10% receive more than twice as much interest as they pay, that is the share the first 80% lose. This illustrates one of the least understood reasons why the rich get richer and the poor get poorer. In Germany, in the year 2004, this amounted to a transfer of about 1 billion € every day from those who work for their money to those can make their 'money work for them'. But have you ever seen money work? In other words, in our monetary system we allow the operation of a hidden redistribution mechanism which continually transfers money from the large majority to a small minority, creating a social polarization which over time will undermine any democracy.

## Result 1: Continual Inflation

Because of **inflation**,  
in the year 2001, every DM was worth only 20 Pfennig...



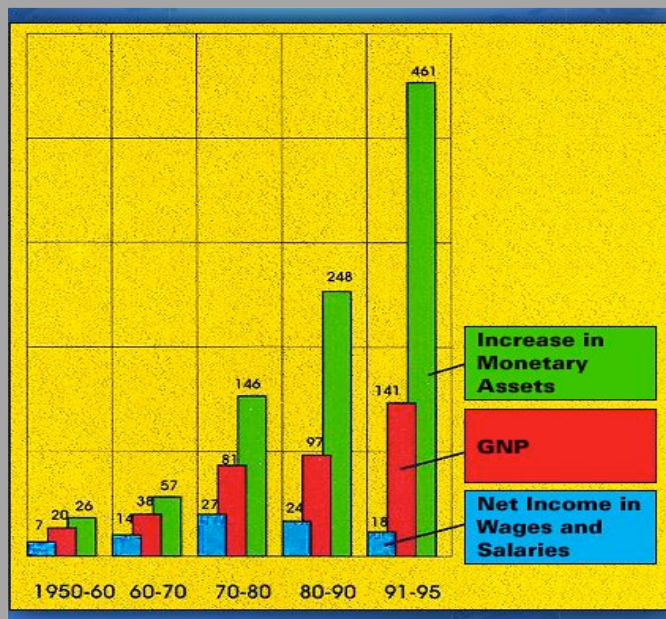
1950

2001

and this was the **most stable currency** in the world!

Source: H Creutz

As one result of this defect in our monetary system between 1950 and 2001 every Deutschmark lost 80% of its value i.e. is worth exactly 20 Pfennig, 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 inflation 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. About two years after every rise of interest follows a rise in inflation. Therefore, if we could abolish interest we could also abolish inflation. In the present money system we are faced with a dire choice: either economic or ecological collapse. Only as long as public and private debts increase, following the pathological growth of the money system, can the economy function. This means, we need economic growth at about any cost, thus preparing an ecological collapse of unprecedented proportions.



## Result 2:

### Widening Gap in Economic Indicators

Yearly average in billion DM  
from 1950 - 1995  
[All figures are inflation adjusted]

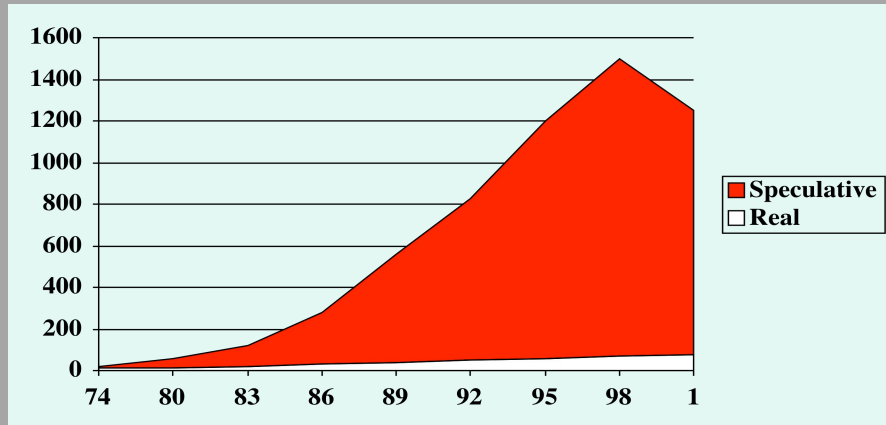
Source: M Kennedy + H Creutz

A second result of the interest system is that it leads to a most uneven growth of different sectors of the economy. Comparing three different indicators of growth between 1950 and 1995 in Germany we find that Monetary Assets (backed by an equivalent amount of debt) increased 461 times, the Gross National Product increased 141 times and the Net Income in Wages and Salaries (after tax) rose only 18 times, and it actually declined after 1980 to the level of the seventies.

If our body would grow 18 times between some months after conception and maturity and our head grew 461 times, while our feet only grew 18 times we would call this sickness, but few people understand that these figures drifting further and further apart indicate a severe sickness in our economic system. The lack of public discussion of this problem is evidence of our widespread monetary illiteracy.

## Result 3: Monetary Instability

US \$ bio

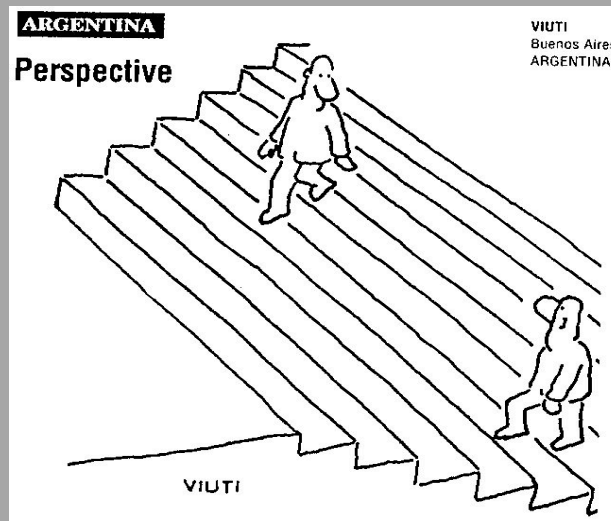


Quelle: Bernard Lietaer / BIS

As a third result the exponentially growing money system based on interest creates a high degree of monetary instability. In contrast to measures like the meter or the kilogram the value of our currency varies almost daily. Cashing in on this variability, the global volume of speculative monetary transactions between 1974 and 2000 increased to 97%, with a mere 3% of the transactions being in real goods and services including tourism. In 2001 the daily volume of trading exceeded \$2,000 billion whereas in the seventies it amounted to \$20-30 billion. What makes the situation so dangerous, is that all the currency and gold reserves of all the central banks in the world amount to only the volume of transactions handled in seven to eight hours of trading - a tsunami lingering on the horizon of our global financial system, as there is practically no institution which has sufficient reserves to intervene in a crisis situation. The small downward trend since the year 2000 is the result of the introduction of the Euro which has ended the currency speculation among European countries.



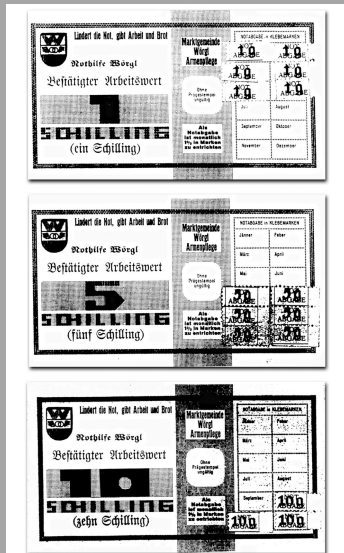
## We need a change of perspective



Today, economists all over the world treat money as a neutral measuring stick which has no decisive role to play in economic decisions. A recent study of the Club of Rome proves that this is wrong. Money is anything but neutral. In fact it acts like vacuum cleaner constantly sucking up resources from some regions with lower returns and redistributing them to those regions with high returns - at the moment this is China - with all the devastating effects this has on the culture, ecology and society in the affected areas. What we need today is another perspective on money, to be able to finally use the full potential of one of the most ingenious inventions of mankind, to help in realizing the dream to provide everyone on this earth with the basic necessities of life. One first solution would be to replace interest - a reward for the lender - with a "demurrage" or "appropriation fee" a cost for holding on to the money, a principle we apply to most other services like the use of a railway carriage. Nobody would be paid a reward to unload it, to be put back into circulation, but people pay a small daily fee if they use it. That is basically all we have to do with money to solve many of the problems created by the interest system.



## Solution 1. Interest Free Money-The Wörgl Example



- Circulation incentive of 1% per month or 12% per year
- Work-certificates worth 5.490 schillings circulated 416 times in 13.5 months
- Helped creating goods and services worth 2.283.840 schillings
- Town got  $12\% \times 5.490 = 658$  schillings in circulation incentives

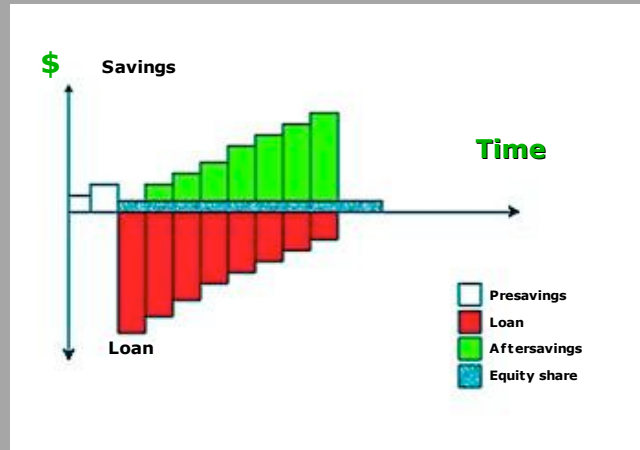
### Results:

1. Unemployment reduced by 25%
2. Town-Income increased by 35%
3. Public works investment rose by 220%

Source: M Kennedy + V Spielbichler

Between 1932 and 1933 the small Austrian town of Wörgl started one of the first model experiments - based on the book of Silvio Gesell "the Natural Economic order" (1916). Backed by an equivalent amount of ordinary schillings in the bank the town spent 5,490 'Work Certificates' into circulation. This money lost 1% per month. A stamp worth 1% had to be glued to it, so it would keep its value. This caused the Work Certificates to circulate 463 times in the next 13.5 months, thus creating goods and services worth  $5,490 \times 463$  or over 2,283,840 million schillings. At a time when most countries in Europe had a decreasing number of jobs, Wörgl reduced its unemployment rate by 25% within a year. Income from local taxes rose 35% and investment in public works 220%. The fee collected by the town government which caused the money to change hands so quickly amounted to 12% of 5,490 Schillings or a total of 658 Schillings. This small amount was used for public purposes and thus no single individual gained from it, but the community as whole. When, however, 130 communities in Austria began to be interested in adopting this model the Austrian National Bank saw its own monopoly in danger and prohibited the printing of any local currency.

## Solution 2. Interest Free Savings and Loan systems: The JAK-Members'Bank



Source: Margrit Kennedy + Mark Anielski, Canada

A second possible solution would be to adopt the Swedish JAK (Jord Arbede Kapital = land, labour, capital) - Member Bank system. It is probably the cheapest system for providing interest free loans - once it is established and has a sufficient amount of money to circulate. In Sweden about 26 000 people use this system and the yearly turnover in 2004 was about € 60 Million. The basic principle is simple indeed: People begin by saving for some months to get enough bonus points for getting a loan. Once they have got their loan, they immediately start saving again and in the end, when they have repaid the loan they have 90% of the loan as savings, which they are allowed to withdraw from the member bank after 6 months. The system as a whole and the individual savings and loans - over time - are thus always in a balance. The borrower becomes the lender and passes on the advantage of having an interest free loan to the next person, and the next one to the next and so on. The advantage of having a loan when money is usually worth more (because of inflation) is being balanced out by the fact that when the savings are being paid out this money is worth less. So we do not need to include an inflationary adjustment which is a part of normal loan costs, as we will see.

## Comparison of loan payments in normal bank and JAK

	Bank	JAK	
Credit	200 000 SKr	200 000 SKr	
Period	25 years	25 years	
Monthly repayment	1 568 SKr incl. Interest of 8%	667 SKr	
Fees		190 skr	
Monthly savings		654 skr	
Total amount monthly	1568 SKr	1511 SKr	
Total amount 25 years	470 400 SKr	453 300 SKr	
Total savings	0	196 200 SKr	

**Risk insurance:**  
Shares in the JAK Co-operative  
6% = 12 000 SKr as withdrawal in following year if there is no deficit

**Savings:**  
600 000 Bonus points =  
2 years X 2000 SKr per month

Source: M Kennedy + JAK Bank

The comparison of loan payments for a loan of 200,000 Swedish Crowns (SKr) over 25 years in a normal bank and in a JAK member bank shows how it works. While the normal bank charges 8% interest on average which amounts to monthly payments of 1,568 SKr, the JAK member bank charges (the repayment of 667 SKr, a 2% fee for its work of 190 SKr and a monthly savings of 654 SKr which altogether add up to) almost the same amount 1,511 SKr per month. Also the total amounts over 25 years of 453,300 SKr in the JAK system is comparable to 470,000 SKr in the traditional bank. The big difference, however, comes at the end of the 25 years, when there are no saving in the normal bank and 90% of the loan or 196,200 SKr in the JAK bank.

As a risk insurance borrowers need to buy shares worth 2% of the loan in the JAK cooperative. This can be withdrawn, in the same year, when the loan is completely repaid. One of the most attractive features compared to a normal bank loan, however, is the fact that in the JAK system interest or fees do not go up within the repayment period.

## Components in Interest for Loans and Credit in the Bank-System & in the JAK-System

### In the present banking system

Bank Fees	1.7%
Risk Premium	0.8%
Liquidity Premium	4.0%
Inflationary Adjustment	1.5%
<b>Total</b>	<b>8.0%</b>

### In the JAK Member Bank system

Bank Fees	2.0%
Risk Premium	0.0%
Liquidity Premium	0.0%
Inflationary Adjustment	0.0%
<b>Total</b>	<b>2.0%</b>

Source: M Kennedy + JAK Bank

Interest costs in a normal bank loan with an interest rate of 8%, for example, includes four different components: fees for the work of the bank (usually around 1.7%), a risk premium (or an insurance, in case the loan cannot be repaid of around 0.8%), a liquidity premium (as a reward for the person who gives up the claim to its own "liquidity", in this case 4%) and an inflationary adjustment (to balance out the lenders loss through inflation - depending on the rate of inflation - in this case 1.5%).

If we would adopt a circulation incentive or appropriation cost, i.e. a fee for money which is not passed on, we could eliminate the liquidity premium of 4% that would halve the costs for loans and the share of interest in all prices over time

If we could adopt a JAK system, however, this could be halved again, as in this system only 2%, i.e. the work of the bank needs to be paid.

### **Comparison of Credit Costs for average German household with € 30.000 /year**

- interest costs of 40%      € 12.000 / household /year
- demurrage half of that    € 6.000 / household /year
- JAK-System one quarter   € 3.000 / household /year

**An encompassing interest free savings and loan system, would  
reduce credit cost  
for the average German household to**

**€ 3.000 instead of € 12.000 / household/year**

Source: Margrit Kennedy, Why do we need Monetary Innovation?

A comparison of credit costs in the normal banking system, the demurrage or incentive system and the JAK system shows that an average German household with € 30.000 per year would pay 40% i.e. € 12.000 in interest today, € 6.000 in the demurrage system and only € 3,000 if the JAK system would be applied throughout the economy. The latter would mean that prices could go down considerably, the redistribution through the hidden cost of interest in all the prices would disappear; 80% of the people who now lose in the system would be almost twice as rich or could work half of the time; and we would finally be able have a sustainable money system, in which the value of the respective currency would remain stable over time. What a relief for the large majority of people. It would also mean that all projects social, cultural or ecological, which can just repay their investments would be "economically viable". A totally new culture could evolve and the gap between the rich and the poor would gradually decrease. Furthermore if poorer regions and countries would create their own currencies rather than borrow money from the highly industrialized centres and countries at high interest rates, they could prosper soon.

## **Solution 3.**

### **Complementary Currencies**

**Creating new financial liquidity for**

- **limited purpose - sectoral currencies**  
(examples: Saber, Fureai Kippu, WIR-system)
- **geographic area - regional currencies**  
(examples: Roland, Chiemgauer, Kirschblüte)

Source: Margrit Kennedy, Why do we need Monetary Innovation?

Solution 3 introduces the concept of “Complementary Currencies” (CCs) as the most feasible way of counteracting the negative consequences of the interest system and economic globalization. It defines complementary currencies, as “means of payment with a built-in target, which are not meant to replace the existing national or international currencies but to complement them”. Mainly in those areas in which the present system does not work very well: social, cultural and ecological projects, new liquidity can be created without burdening the taxpayer or governments with additional costs. CCs can be seen as a powerful tool for strengthening the economic viability of a specific social sector or a geographically limited region, each with its own specific interests and potentials. They have proven their potential to support and strengthen the economy - especially in difficult periods - in many instances. The names here give just a few examples of sectoral and regional currencies. The Saber and the Chiemgauer will be explained in more detail.

## Example for **Sectoral Currency: „Saber“**

Brasil: 40% of the population  
under 15 years of age  
1% surcharge on all mobile phone bills  
results in 1 bio US\$ for education  
vouchers for 7-year old students  
have **limited validity** one year  
**10-fold benefit for education**

**1 billion US\$ creates  
an educational benefit equivalent to  
10 billion US\$**

Source: Margrit Kennedy, Why do we need Monetary Innovation?

A recently designed sectoral currency is the „Saber“, the proposed Brazilian educational currency. As 40% the population of Brazil is under 15 years of age, this country has an enormous educational problem. When the mobile telephone industry was privatized the government put a 1% surcharge for education on the mobile phone bills. This resulted in a fund of 1 billion US\$ or 3 billion Reais for education in 2004. What could be done with this money? In 2004, Prof. Bernard Lietaer proposed to introduce a voucher system called “Saber” to multiply the number of students that can afford to obtain a college level education. The value of the Saber will be nominally the same as the Real, however it will only be redeemable for tuition payments for higher education and lose 20% per year to give an incentive not to hoard it. The vouchers will be given to schools for their youngest - e.g. the 7 year old - students, at the condition that they would chose a mentor from an older class to strengthen a weaker subject. The Saber is then transferred to the older student, and so on, until at last a Senior of 17 years who wants to go to university can use the Sabers to pay a part of the tuition. Including a reduced tuition rate for those subjects with free spaces in the universities the Saber will probably enable a factor of ten times what a direct allocation of the resources for education would allow.



## **Differences between complementary and traditional currencies:**

**use-** instead of profit-oriented  
**limited** instead of general acceptance  
**circulation incentive** instead of interest  
**transparent** instead of obscure creation  
**democratic** instead of central control  
**promoting community** instead of destroying it  
**win-win solution for everybody** instead of  
a "happy" few

Source: Margrit Kennedy, Why do we need Monetary Innovation?

The differences between complementary and traditional currencies are marked: Instead of being profit-oriented they are use-oriented; instead of having the goal to make more money out of money, they have the goal to connect underutilized resources with unmet demands. Their limited instead of general acceptance provides a "semi-permeable membrane" around the function or the region for which they are designed. They cannot be used to speculate on the international financial markets; they cannot be used to buy cars from abroad. They will help one purpose, and that is their advantage. Most of the complementary currencies do not charge interest but use a circulation incentive or a demurrage mechanism to keep the currency "on the move", thus avoiding all the dire consequences associated with interest. They can be established through a transparent process, and be democratically controlled by the users. Complementary currencies can stop the drain of financial resources to low-wage countries and tax havens, thereby calling a halt to the resulting loss of wealth and job opportunities, and promoting community instead of destroying it. They create a win-win situation for everybody: from an expansion of educational benefits to solving the problems of the increasing numbers of elderly, from the protection of cultural identity to marketing regionally grown foods, from an ecologically sensible use of the shortest transportation routes to exercising ethical concern when utilizing non-renewable resources.

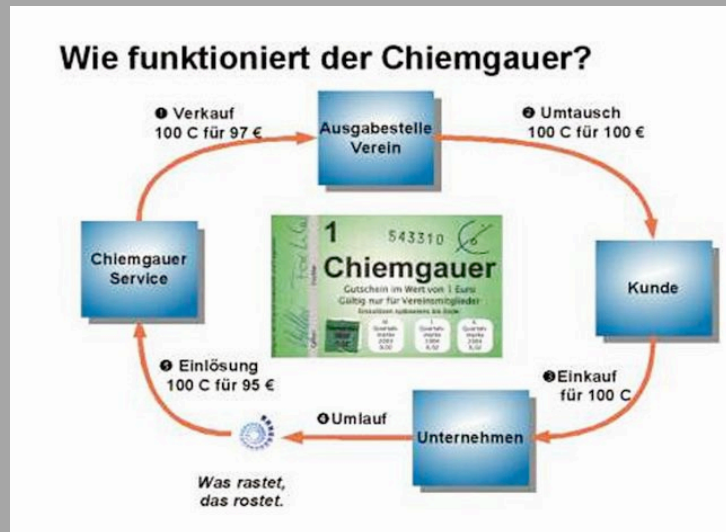
## Reasons for Regional Currencies:

- **partial decoupling** from globalized economy
- increased use of **regional products and services**
- **added value and surpluses** remain in the region
- strengthening **regional identity**
- **new links** between consumer and producer
- reducing need for **transport and energy**
- community owns **essential public utilities**

Source: Margrit Kennedy, Why do we need Monetary Innovation?

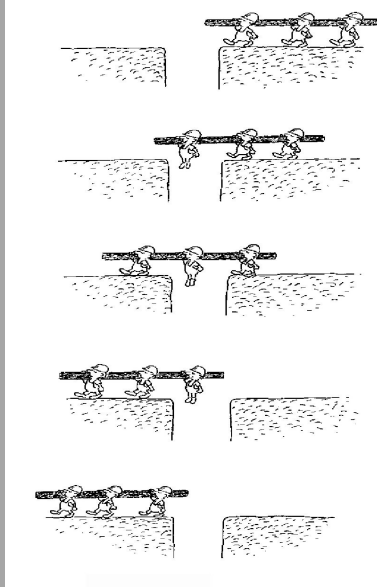
Regional currencies provide all the benefits listed for complementary currencies and are specifically designed to help the region. Whether the region is defined geographically as a bio-region situated in a mountain valley or around a lake; culturally through a common history, dialect or social customs; or economically through its special resources and production skills, unless it is protected through its own means of payment, it tends to lose in the fierce international competition over scarce monetary resources. Therefore, a partial decoupling from the globalized economy is one of the most effective measures to support the increased use of regional products and services, and to keep the added value and surpluses in the region. Just like the Euro has strengthened the European identity, so will a regional currency help strengthen the regional identity. In fact, in those areas in Europe where a regional currencies have been introduced, this was one of the major arguments why people begin to use it. The recent revival of local and regional farmers markets - in spite of the convenient supermarkets nearby - shows that people begin to value closer links between consumer and producer. Obviously producing and consuming regionally would reduce the need for transport and energy; and the sell-out of public utilities (water, electricity, sewage, waste removal, transport etc.) to private investors - which, almost everywhere in Europe, has resulted in more expensive and less efficient services - can be stopped with the use a regional currency to provide these services and to control their effectiveness.

## A German regional money system based on vouchers



Source: [www.chiemgauer-regional.de](http://www.chiemgauer-regional.de)

A practical example of a regional currency is the Chiemgauer which circulates around the Chiemsee in Southern Germany. Initiated as a complementary currency by the Waldorf School in Prien, it uses a voucher model. The design is such that all participants benefit. A bonus of 3 % is given to selected regional associations for purchasing Chiemgauer vouchers. The associations in turn sell 1 Chiemgauer for 1 Euro to their members, who profit by supporting their association without losing or paying money. They can then spend the Chiemgauer in over 200 participating shops. The first buyers of the new currency were Waldorf School parents, who bought vouchers to support the construction of an addition to the school. Since then, further non-profit projects have also become involved, and participants come from different parts of the region. Similar to the Woerl model buyers accept an annual fee of 8% to guarantee circulation. Four times a year a stamp worth 2% of the value of the voucher has to be attached, in order for it to retain its nominal value. The businesses that accept the vouchers can either exchange them for Euros at a five percent fee, or they can use them for paying other businesses, employees, the publisher of the local newspaper, etc. If they pass the vouchers on, they won't have to pay the fee. For the majority of businesses, accepting vouchers is a matter of cultivating customer loyalty. Thus accepting a small fee, which is tax deductible, to pay for a regional currency does not entail any additional expenses.

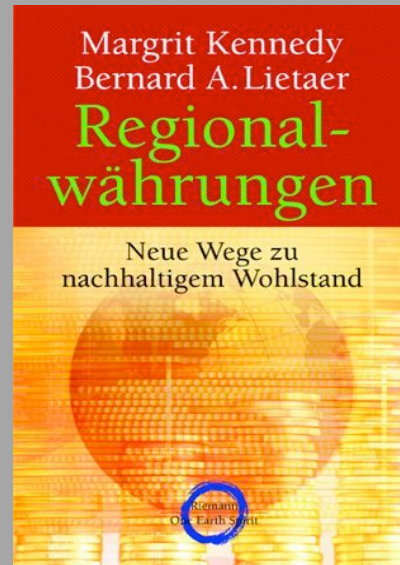
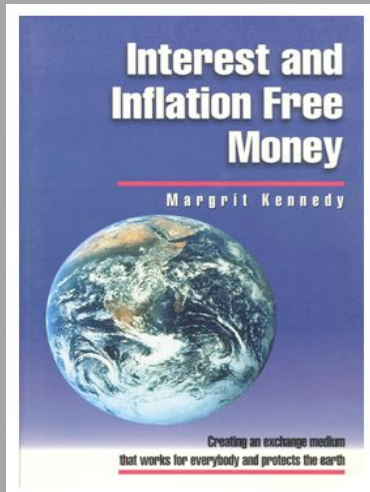


Toward the end of **2003**, **24 regional money initiatives** created a „Regio-Network“ in Germany.

In March 2005, this **number has tripled** - and increases by about 3 to 4 initiatives per month.

Surprisingly different regional currency models are presently tried out in Europe. Why this idea is being applied so widely may have essentially three reasons: 1. Many individuals and groups are searching for ways to contribute to the solution of the current economic crisis in which all the old recipes do not seem to work anymore. 2. There are several legal avenues for creating a regional means of exchange that are advantageous for all participants and therefore have the potential of being widely accepted. 3. Many other reasons for the revitalization of the regional economy exist beyond the economic benefits. As no initiative has all the answers yet and every single one is trying to develop its own specific solution for the individual problems of their region, the Regio-Network as a teaching and learning platform is used by almost all of them. It is being supplemented by meetings every three months in places where new currencies have already been started or are being planned. Since 2003 ever larger yearly conferences in the German speaking parts of Europe bring together all of the activists and those who want to be informed about the development. In 2004 a first European conference with about 200 participants took place in Bad Honnef, North Rhine Westfalia, Germany ( a CD with all of the relevant lectures and presentations can be ordered at: [info@ksi.de](mailto:info@ksi.de)). In August 2005 the first Complementary Currency Summit will be held in Denver Colorado, USA. ([www.access.foundation.org](http://www.access.foundation.org)).

Sources of information:  
[www.RegioNetzwerk.de](http://www.RegioNetzwerk.de)  
[www.margritkennedy.de](http://www.margritkennedy.de)



My book Interest and Inflation free Money - was written in 1987 and has been translated into 20 languages (the latest being Hindi). It still contains most of the relevant information given in this lecture, and is available through Seva International. E-mail: Ursala@hathway.com. The second book called "Regional Currencies - New Paths to Sustainable Abundance" which I co-authored with Bernard Lietaer seems to be the first book that has been written on this topic. (An English translation will be published in 2006). The book provides basic information on the core problems and solutions and examples from all over the world. The website [www.RegioNetzwerk.de](http://www.RegioNetzwerk.de) contains the latest information (mostly in German) on the development of the initiatives and the theoretical and practical groundwork that is being done. The introduction of regional currencies may prove to be one of the most powerful tools for the realization of a new democratic order. Numerous existing regional initiatives and programs are the logical "natural partners" in Europe. There are today approximately 300 initiatives within the regional movement in Germany, more than 2000 Agenda-21 groups, and more than a dozen EU/Leader+ projects (a program that promotes regional development in rural areas). In addition to these local groups, another partner could be the "Committee for Regions," formed to defend the principle that in the European Union decisions should be taken at lowest possible level. For commentaries or information contact: [margritkennedy@monneta.org](mailto:margritkennedy@monneta.org)