http://www.itk.ntnu.no/ansatte/Andresen_Trond/finans/others/interest-free-money.txt

A Strategy for a Convertible Currency

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ABSTRACT

This paper proposes a solution for countries which are characterised by four criteria: they have no convertible currency now, and they experience three problems - potentially or actually - unemployment, inflation, and ecological degradation. The proposed strategy provides a new convertible currency - hereafter called New Currency - which constitute a powerful mechanism to tackle simultaneously these three problems. Its only precondition is that they produce at least some raw materials for which an organised international market exists.

Technically, this New Currency is a combination of two concepts, usually analysed separately: stamp scrip, and currency backed by a basket of commodities.

Stamp scrip is a medium of exchange characterised by a small monthly "user fee", or "negative interest" charge. This user fee gives an incentive to the bearer not to hoard this currency. Its practical and demonstrated economic effects include a strong positive impact on employment creation and on inflation control. It also provides structural support for ecologically sound economic growth. While the concept of "negative interest rates" may appear unusual at first sight, it has solid theoretical backing behind it. Even more importantly, it has been tested and used with remarkable success in a variety of cultures and historical settings, including as recently as the 1930's in Western

Europe.

The second concept – a currency backed by a predetermined basket of commodities – is more familiar. One original aspect here is that the Central Bank would guarantee delivery of the value of the basket, but would remain free to deliver it in the form of any mix of the commodities of the basket. This approach provides unusual stability for the international value of the currency, while guaranteeing substantial flexibility in the way the country fulfils its commitments .

The stamp scrip concept actively promotes internal economic stability and employment growth, while the basket of commodity concept ensures immediate convertibility to the national currency and the international stability of its purchasing value. These two concepts fit together by equating the negative interest rate of the Stamp Scrip with the costs of storing, insuring and delivering to their respective international markets the underlying commodities of the basket.

Significant advantages are provided by the proposed approach:

· the New Currency would become one of the more stable of today's convertible currencies, without requiring open-ended financial commitment or any new international agreements;

· the New Currency would constitute a powerful tool to meet three objectives: employment creation, inflation control, and ecological improvements;

· the New Currency would be a very flexible tool: it can coexist with the current currency, it can be introduced centrally or in a decentralised way. It is also highly amenable to pilot programs on any desired scale.

This paper is organised in seven sections as follows:

I. Background

II. Proposed Monetary System

III. Some Historical Precedents

IV. Pragmatic Implementation

V. Some Potential Misunderstandings

VI. Advantages

VII. Conclusions

Appendix: Selected Bibliography

I. Background

A number of countries are faced today with severe economic and financial challenges. The strategy proposed here is designed to help countries which are experiencing the following symptoms: scarcity of convertible currencies, inflation, unemployment and degradation of the environment. The only precondition necessary to apply it is that the country should have a production and export capacity of some commodities for which organised international markets exist.

Among the countries which meet these requirements one can mention all of Eastern Europe including the Soviet Union, and a majority of the Third World countries including all of Latin America and most of Africa and Asia. Even countries which currently have already a convertible currency may be interested in this approach because of it ecological implications.

The approach used here to tackle these problems concentrates on the creation of a new convertible currency. Convertibility of the currency is an option which is usually not considered by these countries, because it is believed to require new international agreements and substantial hard currency and/or gold reserves to make it possible. The proposed strategy doesn't require any of these preconditions, and provides some very important additional

benefits.

The question that this paper will address is therefore: Is there a monetary reform which can simultaneously achieve the following three objectives:

1. Make a national currency currently not convertible, into an internationally accepted convertible currency, without open ended financial commitments or new international agreements;

2. Provide a "shot in the arm" to the local economies, and specifically avoid the dangers of excessive unemployment and/or inflation;

3. Provide built-in support for ecologically sound development.

We claim that such a monetary reform is possible, that it is not only perfectly sound from a theoretical viewpoint, but that each time it has been practically implemented in the past, it has proved very successful as well.

The balance of this paper aims at providing the evidence for these claims, and some suggestions on how this strategy can be pragmatically implemented today.

II. Proposed Monetary System

It is proposed to introduce as legal tender within the country what has been variously described in the Anglo-Saxon literature as "stamp scrip", "stamp currency" or "negative interest money", and by "Wara" (merchandise currency), or "Frei Geld" (free money) in the German literature .

This theoretical concept was originally developed by Silvio Gesell during the later part of last century [see bibliography under Gesell, 1891, 1897,1978]. Silvio Gesell was an Argentinian

businessman and economist who has been neglected by many theoretical economists because of the - at first sight - unconventional nature of his "negative interest" concept.

The starting premise is that money as a medium of exchange is considered a public service good (just as public transportation for instance), and therefore a small user fee is levied on it. Instead of receiving interest for detaining such a currency, the bearer is in fact paying interest for its use.

Is such an unconventional concept as Gesell's "negative interest money" a theoretically sound one? The answer is a resounding yes, and is supported by personalities of no lesser stature than John Maynard Keynes. Chapter 17 of Keynes' "General Theory of Employment, Interest and Money" [1936] analyses the implication of such negative interest money, and provides a solid theoretical basis confirming the claims made by Gesell for such a currency. He even specifically states that:

" Those reformers, who look for a remedy by creating artificial carrying cost for money through the device of requiring legal-tender currency to be periodically stamped at a prescribed cost in order to retain its quality as money, have been on the right track, and the practical value of their proposal deserves consideration" [ibid. Page 234].

And he concludes with the amazing statement that "the future would learn more from Gesell than from Marx" [ibid. Chap. 22, Page 355].

The best and most recent contemporary analysis of Gesell's thesis is provided by Dieter Suhr in his "Capitalism at its Best" [1989]. His central thesis is that "normal" positive interest currency systematically suboptimizes the allocation of resources. He further proves that a small carrying charge on the medium of exchange corrects this problem. He also provides solid answers to some of the criticisms levied against Gesells original proposals. Other

economists such as Hajo Riese [1983] and indirectly Nobel price winning economist Samuelson [1969] have made the same point that the usual positive interest bearing money systematically creates suboptimization in an economy. So, if someone is going to create a new convertible currency, why go for second best?

Other economists who have studied the theoretical and practical implications of such alternative currencies include: Cohrssen [1932, 1933, 1983] , Dahlberg [1938], Fisher [l933], Henderson [1981], Herr [l986, 1987], and Yeager [1968, 1983].

What is the specific impact of such a currency on economic development?

A. Impact on Employment

The main practical effect of a negative interest currency is a strong incentive to avoid hoarding of such currency: people prefer to spend it very quickly on goods or services and thereby generate a chain reaction of economic transactions which otherwise would either occur in a much slower fashion, or simply not occur at all. This means in practice a strong and immediate creation of local employment without the need for government intervention.

During the I930's, several real-life implementations of such a currency were aimed at specifically reducing unemployment: in all cases this objective was met with complete success.

B. Impact on Inflation

Furthermore, if used correctly, such a currency helps to push inflation down. Inflation is simply the depreciation of a currency in terms of goods. The proposed currency has an impact on both sides of this equation.

First of all, while inflation reduces the value of a currency over time, a negative interest currency becomes automatically more valuable over time. Keynes explains why. Such a currency acts in this respect as any other commodity which has a significant storage cost: it increases in value over time. (Today's future markets in gold for instance show in practice always a higher future value than the spot price, reflecting precisely such a cost of storage over time).

Second, there is a substantial "interest cost" built into every good and service we purchase. Kennedy [1988], calculates that even in a relatively low interest country such as West Germany, the average interest component in the cost of garbage collection reaches 12%, for drinking water 38%, for sewage costs 47%, and for social housing a whopping 77%. By eliminating interest costs from the economy, the actual cash outlay required for any given capital intensive good or service would be dramatically reduced.

Such a buiIt-in tendency of a currency to automatically become more valuable over time, combined with the gradual elimination of the interest component from all capital intensive goods, combine into a powerful technique to combat inflationary tendencies.

C. Impact on the Ecology

The most recent reason for interest in stamp scrip and similar alternative monetary systems in the West or in Japan [Otani 1981; Henderson, 1981; Kennedy, 1988 ; Suhr,1989] results from environmental concerns.

" The higher the money-rate of interest, the higher is the pressure on entrepreneurs to avoid internal costs, that is, to externalize into the environment as much as the cost as is possible. Thus under neutral money, when interest goes to zero, this additional burden on resources

will cease" [Suhr, 1988, page 112].

When it pays more to cut a tree, sell the wood and let the proceeds earn interest than simply let the tree grow, it is predictable that "economic pressures" will be felt to cut more trees than is optimal from an ecological viewpoint. Stamp Scrip would reverse that process. It is interesting to notice that this point was also demonstrated in practice: indeed during the experiment with stamp scrip in Austria during the Depression of the 1930's, the incentive for not hoarding was such that people preferred to invest in replanting trees.

As ecological concerns are gradually creeping to the top of political agendas worldwide, this aspect alone justifies the experimentation suggested in this note.

These three objectives: spontaneous creation of employment, inflation control, and ecologically conscious growth are the three results that eonomists can predict from the introduction of stamp scrip.

However, even more persuasive than any theoretical discussion is compelling evidence from case histories: such systems have indeed been used in the past in a variety of cultures, sometimes for centuries, and have always had a significant positive impact.

III. Some Historical Precedents

Negative interest currency is part of the world's inheritance with a much longer history than generally perceived.

The oldest known historical precedent is Egypt, where this system was integral to a prosperity lasting more than one thousand years. Remember the biblical Joseph who saved Egypt from "the seven lean years" announced in Pharaoh's dream? Why did the Egyptians keep Joseph in such high regard simply for inventing stockpiling, which must

have existed in some form or another in most primitive hunter – gatherers tribes? Or was there something more to his system than that?

What the bible forgets to mention is that these stockpiles were also used as the basis for the currency system. Each farmer who contributed to the stockpile obtained a warehouse receipt – usually a piece of broken pottery with the inscription of the date and the quantity of bags of wheat he had contributed. They are the "ostraca" of which hundreds of thousands have been unearthed all over Egypt. The key to it, however, was a time charge on these receipts – to pay for the guardian of the depot, and for the pilferage by rodents – constituting the "negative interest charge" of the Gesell money.

This currency remained in function in Egypt until it was forcibly replaced by the Roman currency during the late Ptolemaic period [Preisigke, 1910; Godschalk, 1986]. Is it a coincidence that from that time on, and to this day, the economic "miracle of the Nile" has never recurred?

Another interesting precedent when negative interest currencies were successfully used for extended periods of time as the dominant legal tender, can be found in Europe's historical roots.

What did generate the extraordinary economic prosperity in Europe from 1150 to 1350? What enabled for instance the financing of the construction of the cathedrals, all built in that time interval, as well as the creation of some of the most lasting and interesting artworks of its history? At least part of the anwer lies in the currency of the time, called "brakteaten". They were silver plaques called back by the local authorities every three to six months and reissued with a lighter weight corresponding to an effective negative interest rate of about 6% per month on the average. No wonder people preferred to invest in tapestries, paintings or even cathedrals rather than hoard currencies...[Cohrssen, 1933].

More recently, and even more directly relevant to our proposal, are the variety of practical monetary experiments performed during the depression of the 1930's. Three of these examples will be discussed here.

The economy of the small town of Schwanenkirchen in Bavaria had been wiped out as well as the rest of Germany by the hyperinflation and economic recession of the 1920's. Mr. Hebecker, owner of the bankrupt local coal mine, decided in a desperate effort to propose payment to his workers not in Reichsmark, but directly in "Wara", payable in coal from the mine. Each "Wara" was issued at the par with the Reichsmark, and on the reverse side dated spaces were printed. Each month the bearer of the Wara bill had to purchase a stamp at a cost of 1% of the face value in order for this particular bill to remain valid. This was justified as a "storage cost for the coal backing the bill". The workers paid for their food and local services with this currency. The baker in turn explained to his wheat suppliers for instance that the only way he could pay them was in that same currency. The wheat suppliers and equipment manufacturers at the end of the cycle simply ended up redeeming the bill for coal from Mr. Hebecker's mine. Schwanenkirchen became quickly the most prosperous community in Bavaria...

By 1931, this "Freiwirtschaft" ("free economy") movement had successfully spread throughout Germany, involving no less than 2000 corporations and a variety of commodities in the "Wara" exchange system. Unfortunately, this experiment was blocked by the Central Bank in November 1931, and continuing economic stagnation generated the general dissatisfaction which brought to power Adolf Hitler with the consequences we all know.

In 1932, Austria as well as the rest of the Western world was in the middle of its deepest depression. Unemployment was reaching over 30% and the central government could not do

much to help. Mr. Unterguggenberger, mayor of the town of Woergl, decided to copy the Schwanenkirchen example. He convinced the town hall to issue 14,000 Austrian Shillings in "stamp scrip" covered by the same amount of ordinary Austrian Schillings deposited in a bank. This money again was valid only if each month one applied a stamp to its back, corresponding to the negative interest rate applicable to this currency. Two years later, Woergl became, just as Schwanenkirchen in Germany, the most prosperous town in Austria. Taxes were paid early, the water supply and the paved road system extended all over town, everybody had repaired and repainted his house, forests had been cleaned, trees were planted, a new bridge had been built. (This bridge still exists, and a plaque commemorating its construction with stamp scrip is still in place today).

No less than two hundred cities of Austria decided to imitate Woergl. At this point the Central Bank of Austria felt threatened in its monopoly of currency emission, and blocked the extension of the system against the opinion of the vast majority of the population. This decision was appealed all the way to the Austrian Supreme Court, but was upheld.

The third example of introduction of stamp scrip in the 1930's could have been the biggest experiment of all: the United States of America. Dean Acheson, then Assistant Secretary of the Treasury, was approached by Professor Irving Fisher with the same idea under the name of "stamp scrip". One feature of Professor Fisher's approach was that the "negative interest" stamp was fairly high (2% per week) and was calculated so that the face value would be amortised over one year, and the currency withdrawn at that point.

Acheson decided to have the whole concept verified by his economic advisor, the well respected Professor Russel Sprague at Harvard. The answer was that indeed stamp scrip would work perfectly economically, but that it had some implications for decentralised

decision making which Acheson should verify in Washington. By this time, the "stamp scrip movement" as it became known, had created interest by no less than 450 cities around the United States. For example the City of St. Louis, Missouri, had decided to issue $100,000 worth of stamp money. Similarly, Oregon was planning to launch a $75 million stamp scrip issue. A federal law had been introduced in Congress by Congressman Pettengil, Indiana, to issue $ l billion of stamped currency. Irving Fisher [1933] published a little handbook entitled "Stamp Scrip" for practical management of this currency by communities , and described the actual experience of 75 American communities with it.

Just at that time however, on March 4, 1933, Roosevelt announced the New Deal in his speech with the famous line "the only thing to fear is fear itself". It announced the temporary closing of all banks, prohibited the issue of "emergency currencies", and launched a series of centrally determined "public work projects".

Twenty files belonging to Hans Cohrssen who worked with Professor Fisher at that time are still available today for consultation at the New York Public Library. They contain the detailed plans from more than 100 communities and cities which were interested in the other approach: decentralised and based on stamp scrip.

The last example is the only case we know where this kind of currency is still legal tender today. It was originally introduced as an emergency currency during the Napoleonic Wars on Britain, and has evolved to permanent legal tender after 1914.

The economic impact of these wars was unusually harsh on the Channel Islands, including Guernsey. Invoking an ancient prerogative to produce its own notes, in 1813 Guernsey issued 4000 Guernsey Pounds which were interest free. While this experiment was not strictly using negative interest rates, it did clearly go a long way in that direction compared to a "normal" interest environment. And within months local community projects included repairing

buildings and roads, and later on rebuilding Elizabeth College. Issues were made with great care to avoid inflation.

Although this attempt, as all modern ones, was logically strenuously fought by the "normal" interest-charging banks, the islanders considered the success so effective that this interest-free currency is still used today. British respect for historic precedent made it possible for this experiment to continue.

The results are also still visible today: from a small poor island without resources, the island has become very prosperous, and can afford to levy very low taxes on its inhabitants. [Elkins, 1986].

One can conclude therefore that whenever "negative interest currencies" have been used in practice, whether as an "emergency currency" or as normal long term legal tender, economic prosperity has been the result. More specifically, its initial impact is a strong growth in the economy including an increase in employment, a gradual lowering of costs (as the interest component build in the prices of all goods and services is eliminated), and in the longer run a stable and sustainable growth. The modern experiments were blocked not because they were unsuccessful, but paradoxically because their very success was perceived as threatening to centralised decision making.

IV. Pragmatic Implementation

There are two different options for the way to introduce stamp scrip today, and the choice between the two depends mostly on the speed at which it is deemed desirable to meet the objectives of convertibility versus the internal economic benefits. The first option – issuing of a New Currency by the Central Bank – would provide immediate convertibility. The second one – decentralised issuing by several communities or regions as in the Woergl experiment – would maximize an immediate improvement in employment, but would not necessarily lead

to a fully convertible currency.

What is common to both approaches is that the currency issued would be backed by commodities. Some people claim that such a backing is a step backwards to a more primitive form of exchange. In fact, exactly the opposite may be true.

"From a practical point of view, commodity money is the only type of money that, at the present time, can be said to have passed the test of history in market economics. Except for short interludes of war, revolution, and financial crisis, Western economies have been on commodity money systems from the dawn of their history almost up to the present time. More precisely, it is only since 1973 that the absence of any link to the commodity world is claimed to be the normal feature of the monetary system. It will take several decades before we can tell whether the Western world has finally embarked, as so often is claimed, on a new era of noncommodity money or whether the present period will turn out to be just another interlude" [Niehaus, 1978 pp 140-41].

Indeed, since this date, we have experienced in the monetary system as a whole the biggest inflation run-up in modern history during the 1970's, and a traumatic strangulation of the Third World by external debt in the 1980's. In the United States itself, we can witness increased instability of the stock market including the biggest single day drop in history, and an incredible accumulation of public and private debt which will project its consequences beyond the end of the century. If there is a consensus on the economic evolution of the West in the 1990's, it is around the word "uncertainty".

"It will not be long before the world comes to recognise anew that it is no more possible to conduct affairs without a proper standard of value, than it would be to conduct affairs without an agreed unit of weight or length..." [Hogart and Pearce, 1983]

What is proposed is that in this environment, the New Currency

could become a beacon of
stability, simply by linking it with a commodity standard.

A. The New Currency issued by the Central Bank

Specifically, the Central Bank could issue a New Currency backed by a basket of between
three to a dozen different commodities. These commodities would be chosen among those of
which the country is a net exporter, and that have established international markets.

It should be emphasized that the specific composition of the following basket is just an
example: theoretically any mix of commodities which have an existing international
commodity market would do. In practice, we will see later how the basket for a specific
country would be best designed.

For example 100 New Currency could be worth:

.05 oz. of gold
plus 3 oz. of silver
plus 15 lb. of copper
plus 25 lb. of zinc
plus 1 barrel of oil
plus 5 lb. of wool
plus 25 lb. of lead
etc.

This value of the New Currency would be easily estimated everywhere: anyone with today's
Wall Street Journal, Financal Times or Neue Zuericher Zeitung would be able to determine
excatly that very day's value directly in his own currency. For instance, the New York value
on a particular day could read:

.05 oz. of gold	418.2 $/oz.	or	$ 20.91
plus 3 oz. of silver	5.28 $/oz.		$ 15.84
plus 15 lb. of copper	1.075 $/lb.		$ 16.12
plus 25 lb. of zinc	0.68 $/lb.		$ 17.00
plus 1 barrel of oil	17.6 $/bbl.		$ 17.60
plus 5 lb. of wool	3.238 $/lb.		$ 16.20
plus 25 lb. of lead	0.362 $/lb.		$ 9.05

= Total US$ / l00 New Currency $ 112.72

Therefore, if these seven commodities were the only ones included in the definition basket,
that day's exchange rate would be 1.1272 US$/New Currency.

This New Currency would be convertible because each of its component commodities is
immediately convertible. The Central Bank would commit to deliver commodities from this
basket, whose value in foreign currency equals the value of that particular basket.

However, the Central Bank would be free to substitute certain commodities of the basket by
others as long as they are also part of the basket. Indeed, what really matters here is not so
much the physical delivery of a specific commodity as in the case of commodity future
contracts, but the guarantee that the hard currency value of the basket will be delivered.

For instance, a redemption of 1 Million New Currency units on that day could be entirely
redeemed by delivering 2,391 oz. of gold. But it could also be settled by delivering for
instance 213,000 oz. of silver.

Or some other mix such as:

1,000 oz. of gold representing	$	418,200
100, 000 oz. of silver "	$	528, 000
and 500,000 lbs of lead "	$	181,000
For the required total of		$1, 127,200

An additional flexibility: the Central Bank could keep and trade its commodity inventories
wherever the international market is most convenient for its own purposes: Zurich for gold,
London for copper, New York for silver, etc. Because of arbitrage between all these places, it
doesn't really matter where the trades would be executed, as the final hard currency proceeds
would be practically equivalent. Finally, as these commodities have also future markets, it
would be perfectly possible for the Central Bank to settle any

forward amounts in New Currency, while offsetting the risks in the future market if it so desires.

Why is such a flexibility useful? The answer is clearest when a settlement of external payments is compared with today's situation.

First of all, the reserves that the country could rely on would indeed be much larger than its current stock of hard currencies and gold: it includes these reserves, plus its production capacity in up to 11 other commodities such as oil, gas, copper, etc.

The redemption mechanism described also makes clear why the New Currency would be automatically convertible without the need for complicated international agreements. The system can be started and managed completely unilaterally, without any negotiations. The necessary international commodity exchanges exist, operate effectively, and would welcome the additional business.

The final result would be more than a new convertible currency. It would be an unusually attractive convertible currency to the international market, because of its stable international purchasing power. By definition it would be much more stable than any one of its components (such as gold for instance). It would even be more stable than any other convertible currencies in today's market. In this sense it would be similar to the ECU, a basket of European currencies, which is attractive because it is more stable than any one of the national currencies of the basket. [See Lietaer, 1979, 1983, 1987, and Collins, 1985, for more detailed support about these and other advantages of commodity backed currencies].

The second key feature of the New Currency is that it would have a negative interest rate reflecting storage, insurance and transport costs to the key international markets for each of the underlying commodities . By transferring to the bearer these real costs (which in a

commodity standard have to be absorbed by someone anyway), one obtains automatically all the advantages ascribed to Stamp Scrip in the first half of this paper.

There are a number of practical ways by which this negative interest rate could be levied. To begin with, most of the "money" in circulation (and practically all of the New Currency that would be circulated internationally) takes the form of accounting entries in a computer somewhere, and it would be fairly simple to charge electronically the negative interest rate on these accounts.

For the bills, a number of options are available. One could use the approach of Woergl's stamp scrip: on the back of the bills little squares would be printed where the monthly stamps would be applied. These stamps could even be ordinary postage stamps of the right denomination and should be made easily available in the same places where currency bills are obtained [Fisher, 1933]. Another option: one could print a new set of paper money of different color perhaps every year (i.e. use the brakteaten system, something which is akin to the replacement of used bills in today's central banks). In this case 100 units in old bills would be retired and replaced with 90 units of the new issue, automatically charging 10% in user fees, and reflecting the higher value of the new issue. Another way is Gesell's original proposal: a periodic lottery would determine the serial numbers or color of the notes to be withdrawn from circulation at a price below parity. [Gesell, 1892, p 255]. One advantage of this approach is that such a lottery create uncertainty costs to all note holders (and therefore the desired anti-hoarding reflex), while requiring an administrative cost for only a small fraction. There is even a high-tech option in the form of the "chips on a card" electronic money tested in France: money is issued in the form of an "intelligent debit card" where a computer chip is imbedded in the card. Whenever a payment is made by inserting the card in a Point of Sale terminal, a phone, or any other device accepting the card, the credit on

the card could automatically be
adjusted for the time delay since the card was last debited.
For smaller amounts which require
a lower security level, cheaper magnetic strip cards are also
available, such as the ones issued
for the rapid transit systems of San Francisco, Caracas or
Washington D.C., or the British and
Japanese telephone authorities.

For the New Currency used as legal tender within the country,
the easiest way to start might
be a manual stamp system as in Woergl. But as the system
expands more sophisticated
methods should be considered as well. From a practical
viewpoint, it is imporant to choose
the most effective mix of these technologies for a particular
application. But from an
economic viewpoint, the way the negative interest is charged
doesn't really matter, as they all
would generate the same spontaneous behaviour patterns.

We have already discussed earlier what would happen with the
New Currency within the
country: people would spend it as fast as possible on services
and locally available goods. But
what would happen with the New Currency in the international
markets? As a first choice, the
same thing as with the locally used New Currency. The
international holders of New Currency
would very quickly try to buy local goods for export. They
would therefore automatically
have a vested interest in promoting the country's exports and
thereby contribute further to the
creation of local employment and initiative.

But would citizens as well as foreigners not always want to
sell the New Currency on which
they have to pay interest, in order to obtain dollars or some
other convertible currency which
gives them a positive interest? The answer is that within a
short period after the introduction
of the reform, the opposite may well happen. The margin of
profit from interest after
deducting actual inflation (which tends to be higher than the
official Consumer Price Index),
would be about the same as the increase in value of the New
Currency itself which is not
subject to inflation. In fact, the danger may be the other way

around, particularly whenever inflationary pressures are manifesting themselves in the western economies: what we are creating is in fact a "super Swiss Franc" , a stable currency in a strong economy. Investors have shown repeatedly that they are willing to forego interest and even pay interest to leave their money in Swiss Francs, independently of the enticing high interest rates offered by other countries.

Everything indicates that the 1990's may very well be a period where a stable, inflation proof currency, guaranteed by a diversified basket of commodities , would be highly appreciated. Therefore, as the international trust in the New Currency increases, particularly as the inflation-proof nature of this currency becomes more apparent, fewer holders would request redemption of the New Currency against physical delivery. As was the case for the gold backed dollar in the postwar era, people rarely requested physical delivery: it was sufficient to know that such a delivery was available in last resort.

Finally, the fact that the costs for storing, insuring and delivering the corresponding commodities are actually paid by the bearers of this currency is also an intrinsic advantage of the system from the country's perspective.

B. Decentralised Issuing of Stamp Scrip

Independently of the New Currency issued by the Central Bank, it would be possible to introduce the proposed system today in another way by encouraging decentralised experimentation at two or three different levels of government. It should be emphasized that both approaches can work perfectly well without reference to - or even the existence of - the other. It is also possible to make them work concurrently and make them reinforce each other.

How would this decentralised approach work in practice?

The first approach is to reproduce the Schwanenkirchen experiment: an agricultural community or a factory that produces an easily transported good with well established quality standards (wheat, coal, etc.) would be allowed to issue stamp scrip as a local currency, corresponding to a given percentage of last year's production volume (for instance at the beginning a maximum limit of 10% or 20% of this production). Such a limit is important, in order to avoid the temptation of overissuing by certain local authorities, which could provoke deterioration of the credibility of this local currency. It should be noted that a comparatively small amount of stamp scrip generates a large volume of economic activity, because of the higher velocity of circulation of that money. (In Woergl, the initial 5,000 Free Schillings circulated 463 times during the first year, generating no less than 2,300,000 Schillings of actual exchanges. This was a multiple of what happened to the "normal" Schilling at that time).

Similarly, at the larger end of the scale, a whole region or province which has a potential employment or economic restructuring problem could do what the State of Oregon or Pennsylvania planned to do in 1933: issue stamp money to finance a series of local initiatives.

Such local experiments can be gradually amplified to larger economic contexts as experience is gained.

It is also suggested that the monthly stamp tax be fixed around 2%, so that this money could be automatically withdrawn after approximately 4 years. For example, a 100 New Currency bill would require a 2 New Currency stamp each month to be valid. After 50 months or a little over 4 years, the total face value would have been repaid in stamps and the bill retired.

It is important that on a local level, taxes, all government services and as many as possible of the normally needed goods and services can be paid with this currency. That way the job

creation mechanism can spread effectively in a wide variety of employment areas. In the 1930's any bank, shop or other services simply put a sign in its window stating "Stamp Scrip Accepted Here". Such a voluntary system should similarly be encouraged.

Another technical detail: the stamp costs should be assessed monthly, and specifically not replaced by a transaction tax (i.e. assessed each time one uses the currency) as was done erroneously for instance in 1932 in Harden, Iowa, because this would inhibit instead of accelerate the desirable fast circulation of the currency [see Irving Fisher, 1933].

There are a number of other technical details relating to banking or tax procedures under stamp scrip which have been solved and are worth taking into account when practically introducing such currencies . We will not get into that level of detail here [see Kennedy, 1986; and Suhr, 1989].

C. Combining the Two Approaches

Finally, it should be noted that the two approaches - the New Currency issued by the Central Bank, and the decentralised stamp scrips - are not mutually exclusive. They can even be used so that they reinforce each other over time. Here is how this could work in practice.

Let us assume that a copper mine and a wool produding community have both decided to issue stamp scrip based respectively on copper and wool. Let us further assume that the Central Bank desires to increase its reserves in both these commodities . Nothing impedes the Bank from issuing New Currency and purchase with them the stamp scrip issued by these two communities. To the community, it doesn't make a difference if it is using New Currency or its own stamp scrip to create local jobs (as long as both have similar credibility by being backed by real assets, and have similar negative interest

rates). To the Central Bank, this would be the simplest way to back up its promises to deliver physical commodities whenever this would be necessary. Finally, such swaps would not change total liquidity in the country, given that by definition the amount of local stamp scrip taken out of circulation would be the same as the New Currency units issued by the Central Bank. In fact, such transactions would be playing internally within the country the same role that currency swaps are playing among European Central banks which are part of the European Monetary System whenever they need liquidity in another currency to intervene in their respective markets.

This example has also shown why central control of the commodity itself is not really required for the proposed system to work effectively. What would be necessary is to provide the Central Bank with the appropriate information about the availability of the dozen key commodities which would be part of the basket. The Central Bank would simply be one of the possible buyers of these commodities in the internal market, and its impact on this market would not be significantly different from any other substantial buyer.

D. Next Steps

There are clearly a wide variety of implementation plans which could be derived from the strategy proposed here. The number of options available and their flexibility have been underlined several times, and constitute in fact a significant advantage of the proposal. The following plan represents therefore only one of several possibilities, and aims at highlighting the key decision variables and their respective timing.

Assuming that a country decides to implement this proposal in both the centralised and decentralised options, the following eight steps would be recommended:

1. Decide on a list of potential commodities which could be incorporated in the basket defining the value of the New Currency. The key selection criteria are twofold: a commodity which the country is or could become a significant exporter of, and for which well developed international markets exist.

2. Prepare a series of specific "baskets" of these commodities by determining specific weights for each component (these would vary between 0% and 35% for any one of the commodities selected in the first step). The value of each of these baskets would then be computer simulated with actual prices from the last 20 years in order to include several "price shocks" such as the oil and gold boom of the 70s). The basket which has the more stable purchasing value in the international market would be chosen. Such stability could be technically measured by comparing this value with a broad world market price index, such as the OECD exports price deflator for instance. The final basket should ideally include no less than three and no more than a dozen different commodities.

3. Choose a limited number of pilot projects for the decentralised approach. Recommended criteria for selection of specific locations are in order or importance: good quality local leadership, need for local employment creation, and the production capacity of preferably one of the commodities of the basket. (This latter criterion is least important because it is not indispensable that the commodity which backs the local currency be one of the basket defining the new Currency. Any commodity which is transportable and has an established quality standard could do the job. The main advantage for choosing a commodity which would be part of the basket is that it enables the Central Bank to broaden its supply of commodities for export in case of international redemption requests as will be described in step 7.)
These local stamp scrips should be introduced with a strong involvement of the local

population, and the detailed modalities of the project worked out according to their input.
Different ways of charging the negative interest and different commodity backings could
be tested in this way.

4. Monitor these projects and inform the population at large about progress and problems, for
example through a television series. The spreading of the system is best achieved through
emulation and imitation at local initiative. It would be prudent, however, that the Central
Bank remains informed about these initiatives, so that someone keeps track of the total
quantity of money issued in the country. If needed, the issuing of normal currency could
be adjusted to take into account these new liquidities.

5. The Central Bank prepares buffer stocks of at least some of the commodities of the basket,
and makes the arrangements for potential delivery with the relevant international
commodity exchanges. It then issues the convertible New Currency first for payment of
international suppliers.

6. Prepare for issuing the New Currency as legal tender within the country. The experience
with the pilot projects, the best introduction methods, the most effective interest charging
mechanisms could now be generalised throughout the country. Again a full information
campaign through the local media to the population at large would be an important
ingredient.

7. Gradually integrate the decentralised with the centralised approach. This is best achieved
by having the Central Bank buy some of the local stamp scrip against payment in New
Currency.

8. Make available internationally information which could help other countries without
convertible currencies today to implement a similar approach in their own country if they
so desire.

Other plans are possible: for instance if the country desires to implement only the centralised approach, it would be sufficient to implement steps 1, 2, 5, 6, 7 and 8 of the above plan.

V. Some Potential Misunderstandings

The concepts presented here may prompt some questions about classical economic concerns. We could quote Keynes' comment in this context:

"The difficulty lies, not in the new ideas, but in escaping from the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds." [Keynes, 1936, p vi]

This is why the present chapter addresses some of those issues.

1. What happens to savings and investments under a negative interest currency regime?

With a reduction in the propensity to hoard currency, one could conclude that savings disappear. According to the classical equation, savings equal investments, the latter would similarly be reduced.

The fallacy in the above argument lies in assuming that cash, saving accounts, and similar cash equivalents are the only form that saving can take. People would indeed save less in these forms of monetary assets, but would save more in real physical assets, including productive assets.

Even large scale projects can be financed by issuing stocks and bonds, both of which become in fact more valuable (and therefore easier to sell) than in a "normal" market economy, because they both represent promises to future cash flows. One can have a taste of this phenomenon in today's stock markets: whenever interest rates drop, stock markets boom.

All other thing beng equal, one should even expect a net

increase in total investments after introducing negative interest currency, but the forms these investments would take would simply be different.

2. Why do we need negative interest rate currency, if inflation provides a similar "incentive not to hoard the currency"?

This misunderstanding results from a failure to distinguish between a depreciation of the purchasing power of the monetary unit (i.e. inflation), and the devaluation solely of the means of payment while the unit of measurement remains stable (i.e. negative interest money). This important distinction has been clarified by Langelutke [1929, Page 27] and Suhr [1988, Page 86].

In the case of inflation people cannot escape the carrying charges of money by obtaining claims to future money such as bonds, whose unit of measurement remains stable. Bond prices collapse, because interest rates have to climb higher still than the inflation rate. These high interest rates further strangle the economy in the process. In addition, trust in the entire economic structure is lost by the unpredictable value of the monetary unit itself.

None of these problems appear with negative interest rate currency. Bonds and any other forward claims to future money become in fact more valuable because they represent a way to avoid the penalty of holding cash. Real interest rates drop. The value of the monetary unit itself remains stable guaranteeing to all economic agents access to transaction money at low and predictable costs.

3. Does not a commodity standard condemn the country to export raw materials, a characteristic of developing countries?

The short answer is no: not more than the United States was "condemned to export only gold" before 1971, when the dollar was convertible on demand in

gold. Having one's currency backed by commodities does not limit any other export transactions whatsoever. The hard currency proceeds resulting from such other exports can be used to settle any redemption requests, even if the actual amount of the redemption is calculated through the commodity basket.

So it is only if someone requests redemption, and no other exports have been made, that commodities would have to be sold in last resort.

4. Does a currency backed by a commodity basket not unduly tie up resources?

The real cost for the Central Bank to purchase commodities is negligible: it is the cost of printing the New Currency (between US$20 and US$40 per thousand bills). In our proposal, even the storage and insurance costs are charged to the bearers of the notes.

5. If we are going to a commodity backed standard, why not simply take the most classical one: a currency backed by gold?

The gold standard was a standard only because someone (first Britain, then the United States) made an open ended financial commitment to buy and sell any quantity of gold at a preestablished price. Both Britain after World War I, and America in 1971 had to abandon that commitment. There is no reason to believe that other countries would be more successful at it in the long run.

Without such an open ended commitment gold will fluctuate just as any other commodity. Pegging the currency to a single commodity such as gold would make it convertible, but its international value would also become wildly unstable under circumstances totally outside anybody's control (from new gold extraction technologies in Canada or Australia and South African racial tensions, to Middle East wars).

A basket of well chosen commodities would have all the same features as gold, but in addition provides advantages which gold alone could not provide:

· Substantially larger reserve assets.

· More stable international purchasing value than gold. A basket of commodities is by definition more stable than any one component of that basket. This stability is further enhanced by chosing a mix of commodities and their respective weighting precisely to ensure such a stable purchasing power over time.

· Easier acceptance of the New Currency as their own currency reference by other countries without convertible currency today, if they themselves also produce some of the commodities in the basket.

6. How is the exact percentage of "negative interest rate" determined?

Two criteria are relevant here: actual costs, and strategic goals. And a pragmatic compromise between them is appropriate.

The first criterion is for each commodity of the basket, the actual costs to transport to, insure and store of commodities at specific international markets. One then computes the weighted average cost of delivering the commodities included in the basket defining 100 New Currency. However, one should not be too dogmatic about these actual costs, because nobody really can predict how many of the New Currency bills will actually be subject to a redemption request.

This is why this average can now be adjusted to take into account the strategic aims pursued with this medium of exchange. The higher the negative interest charge, the higher the velocity of circulation. A charge of less than -0.5% per month would probably not induce in the population at large a significant difference of behaviour than

the normal currency. At the other extreme, a penalty above -8% per month would probably provoke an overreaction, or even a rejection of the system. So the more reasonable range is probably between -1% and -4% per month.

Another factor in setting this rate is the desired speed at which one may want to retire the currency, if one wants to introduce it at first only as a pilot project or as emergency currency. Irving Fisher in 1930 had recommended the unusually high rate of -2% per week in his stamp scrip, because he wanted to retire each stamp scrip bill after only one year. In most cases a 2 to 5 year horizon would seem appropriate, which again produces a range of -1.6% to -4% per month.

In summary, one should start by computing actual cost, and then modify this result to match the strategic objectives of the specific application.

7. How is banking and capital rationing possible in a negative interest rate environment?

Let us assume that the negative interest rate charged to the public at large on bills and savings accounts is -2% . The banks themselves would be charged a slightly lower percentage on their own funds (e.g. -1%) in order to provide them similarly with incentives not to hoard their reserves. Finally, banks would be able to lend out in a free market for housing or other creditworthy project loans at a low, but positive rate, such as +1% or +2% for instance.

Therefore, banks can still have their normal spreads between the cost of funds and the market interest rates, and market rationing would still operate. The only but significant difference with the "normal" interest rate structures is that the starting point is -2% instead of for instance +8% in the United States today.

8. How would the system work in today's modern payment

systems where most transactions
are not settled in cash, but in cheques or credit cards?

These "modern" payment forms are in fact an advantage for the system. Indeed, checking
accounts would simply be charged the same negative interest rate as cash. The main advantage
of checking accounts is that it would be a lot easier to debit automatically the monthly 2% fee
without having to go through stamps or other charging devices necessary for bills. For credit
cards, nothing would have to be done: in last resort, credit card payments are settled via check
payments, so the negative interest rate would already be included in such payments. My
suspicion is that very quickly a debit card system would become fashionable instead of credit
cards: because now you would want to be debited as soon as possible for your purchases.

9. Is there no risk of inflation if someone overissues New Currency?

Yes, it is possible to overissue New Currency, and thereby lose the trust that the currency can
be redeemed.

This is the reason why in the decentralised approach the quantity of New Currency issued
should be restricted to a small percentage (10 or 20% for instance) of last year's production
results, particularly at the beginning. As experience accumulates, less conservative levels may
be carefully attempted. If the experience of Guernsey for instance continues to be successful
to this day, it has been in part because overissuing has always been avoided.

10. Cannot the value of a currency be simply assured as claims on the national economic
output?

This argument is mistaken because claims on national economic output provide neither the
guarantee of the value of a currency, nor a standard for

measuring it. Although it is true that the value of a currency ultimately is determined by the exchange of all the goods and services in the economy, it does not provide any useable yardstick to express such value. A small number of commodities in which the currency can be redeemed automatically provides such a guarantee and standard.

11. Cannot the convertibility and value of a currency be assured by monetary discipline and deliberate action by the Central Bank?

Theoretically yes. However, Ricardo pointed out already in 1817:

"Experience shows that neither a State nor a Bank ever had the unrestricted power of issuing paper money without abusing that power".

The recent performance of the United States, which has since 1971 such an "unrestricted power of issuing paper", illustrates that unfortunately the principle still holds today. The consequences of this abuse may still haunt us in the 1990's.

Trying to make the Currency convertible as "fiat money" would require new international agreements, agreements which would be difficult to obtain and even harder to maintain in the long run.

In contrast, as already pointed out earlier, the system proposed here can be implemented unilaterally, and would remain valid independently of whatever happens to the current monetary modus vivendi.

VI. Advantages

Time has come to summarise the key advantages which can be obtained from applying the proposed system now :

1. The New Currency would become immediately convertible, without the need for any new

international agreements. It would constitute an attractive new currency because of its inherent stability, and its built-in protection against inflation (particularly in comparison with " fiat" currencies backed by nothing) . It would provide automatically the country with very substantial reserves, including present inventories and future production capacities of up to a dozen commodities it produces. It would also provide greater flexibility in the disposal of these commodities in the international markets.

2. The decentralised approach in particular would strongly stimulate local initiatives to resolve any social and economic difficulties which may exist: Woergl demonstrated that this form of local self-help boosts morale, public order and social peace. In particular, the main immediate effect is the creation of additional employment without the need for government intervention, and without the creation of new local or public debt.
This characteristic provides the best guarantee for the socio-political viability of a convertible currency in the long run.

3. Similarly, the anti-inflationary impact of this currency could be particularly important.
This is a consequence of both the automatically increasing value of the New Currency over time, and to the elimination of the interest component in the costs of all goods and services.
This advantage is the best guarantee for the long term financial viability of the convertibility of the New Currency.

4. Ecologically sustainable growth has been creeping steadily up to the top of political agendas worldwide. This reason alone would be sufficient to implement the proposed monetary system. Several economists have concluded that it is one of the few true long term structural solutions to this problem.

5. The scale and speed of the introduction of the stamp scrip experiment is extremely flexible.
To begin with the New Currency is not necessarily an exclusive currency: it can be

introduced in parallel with the existing currency. Both in Woergl and in Schwanenkirchen,
the stamp crip was circulating in parallel with the normal national currency.
Furthermore the experiment can be controlled geographically and temporarily. It can be
introduced in some regions or cities and not in others, as was shown in Woergl. In addition,
at a -2% monthly interest, any particular bill automatically becomes extinct after four
years. New bills can be issued at that time or not, depending on the specific results or needs
of that region at that time. In other words, the reform can be easily introduced on a
temporary basis, and be made permanent only after its benefits are fully demonstrated.
Therefore, although it is possible to go ahead with a total monetary reform, one advantage
of the recommended system is its unusual flexibility so that it can be introduced only in the
specific regions where it is most needed and be gradually phased in or out as appropriate.

6. One could even go a step further. When a German company desires to make an investment
in India or Brazil today, in what currency can it make a five year projected cash flow of
that investment? Certainly not in rupees or cruzados, and not even in Deutsche mark or
dollars. In all such forecasts, the variability of the currency unit is typically larger than the
variability of the business itself. If a comparably more stable currency unit as the New
Currency would be available, it could make sense to prepare such "global forecasts" in that
currency unit. Although such a prognostication may seem far-fetched at this time, history
may still prove it right.

VII. Conclusions

Two ideas have been presented in this position paper: the validity of using Gesell's negative
interest currency as an effective internal economic management tool; and the concept of a
basket of commodities to make the existing national currency convertible.

These two ideas are logically linked by equating the negative interest rate of Gesell's money with the actual costs of storage, insurance and transport of the underlying commodities to their respective international markets.

While each of these two concepts are valid on their own right, their combination creates an unusually powerful tool to ensure not only that the national currency becomes convertible, but is supported by the political and financial stability required to keep it convertible in the long run.

Two different approaches are also presented to introduce this concept today: a New Currency issued by the Central Bank, and decentralised issues of stamp scrip by a variety of local communities. Again, both strategies are worth pursuing on their own. The first one would create an internationally convertible currency of remarkable stability. The second one would maximize creation of employment and economic activity in the different local communities where they would be introduced. Again also, both approaches can be combined into a very flexible and powerful strategy wherein they mutually reinforce each other.

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It is obvious that peace in our time is a precondition for humanity to face the substantial challenges of this last decade of the millennium. It is equally obvious that one can only realistically hope for global peace if the majority of the world experience a positive and sustainable economic evolution. It is hoped that the ideas presented here can contribute, to whatever limited extent, to this goal.

APPENDIX

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