

Re-Engineering the Financial Processes

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ABSTRACT

Irrespective of whether the UK joins the Euro, *global* economic stability requires *global* co-operation on the management of currency conversion rates (i.e. 'exchange rates'), including the US Dollar, the Japanese Yen and other currencies, as well as the European currencies. In the absence of exchange controls, this global co-operation must also encompass the management of the base interest rate for each currency (otherwise debt capital would flow irresistibly into the currency offering the best premium of base nominal interest rate over the anticipated rate of devaluation). Thus, the need for *global* economic stability requires that *all* nations must abandon the typical current use of the domestic base nominal interest rate as an instrument of domestic economic policy.

Instead, a global authority should establish and maintain a global, passive, *level-value* frame of reference for 'real' economic activity (i.e. production, trade and consumption).

1. Currency conversion rates (i.e. 'exchange rates') should be inflation-linked to the nominal cost of adding internationally-tradable value.
2. All debts should be inflation-linked, and the single global base *real* interest rate should be set to zero. This could be done either by inflation-linking debt directly, or by inflation-linking base *nominal* interest rates.
3. Cash-flows through financial schemes (such as welfare, mortgage, loan, insurance, pension and annuity schemes) should be set on the presumption of zero inflation, and should then be inflation-linked.

With the proposals outlined above, inflation would cease to be an economic factor:

1. The inflation-linking of currency-conversion rates would neutralise the impact of differential inflation on international trading competitiveness.
2. The combination of inflation-linked currency-conversion rates and inflation-linked debts would neutralise the 'market' in 'currencies'.
3. The global network of inflation-linked debt would provide a global, passive, *level-value* frame of reference for 'real' economic activity (i.e. production, trade and consumption).

Speculation against untenable currency-conversion rates would be neutralised. Global convergence and union of currencies would then be driven or limited only by the balance of administrative convenience, pricing transparency, nationalism and political machismo; but all subject to fundamental convergence of inflation rates.

INTRODUCTION

'Since I've become a central banker, I've learnt to mumble with great incoherence.

If I seem unduly clear to you, you must have misunderstood what I said.'

Alan Greenspan

'I know you believe you understand what you think I said, but I am not sure you realise that what you heard is not what I meant.'

Alan Greenspan

'The prestige accorded to modern economists, especially in politics and financial markets, shows that medieval alchemists were barking up the wrong tree. Base metals cannot be turned into gold by incantation, but people can get rich in financial markets and powerful in politics by propounding false theories or self-fulfilling prophecies.'

George Soros

*'The composition of this book has been for the author a long struggle of escape, and so must the reading of it be for most readers if the author's assault upon them is to be successful, - **a struggle of escape from habitual modes of thought and expression.** The ideas which are here expressed so laboriously are extremely simple and should be obvious. **The difficulty lies, not in the new ideas, but in escaping from the old ones,** which ramify into every corner of our minds.'*

Maynard Keynes

There is a general consensus at present that 'radical things must be done' with financial processes, but great controversy as to what those 'radical things' could or should be.

Unfortunately, because of limited public attention spans when compared to the perceived complexity of the issues, propositions are typically presented using the current hotchpotch of administrative processes as the frame of reference, and it is often difficult to distinguish form from substance through the fog of terminology and inter-dependencies. How many of the general public really understand the underlying relationship between inflation, currency-conversion rates (i.e. 'exchange rates'), interest rates, money-supply and debt? Indeed, how many economists, politicians and central bankers could genuinely claim to be able to articulate their understanding to the general public, or even to understand these relationships in the first place?

However, the *underlying concepts* themselves are *not* complex. The perception that they *are* complex arises mainly from the perverse and spurious complexity of many of the current administrative processes which most people, by default, use as the frame of reference for their understanding. Too many people are suffering from 'bureaucratic alienation'; give up trying to understand, and simply 'go with the flow'. They have to presume that the 'experts' know what they are doing, and have the community's best interests at heart, when all the evidence suggests that most 'experts' are renown (and remunerated) not so much for their *fundamental insights and goodwill*, but for their expertise in the use (and/or abuse) of the *current administrative processes*. At best, the 'experts' have a conflict of interest in commenting on radical analysis and proposals for reform.

This paper presents an outline case for radical re-engineering of the processes used to manage currency-conversion rates (i.e. 'exchange rates'), owed-wealth (i.e. debt), interest rates and cash-flows in a world prone to inflation in the magnitudes of the currencies used to enumerate value. Process re-engineering differs from conventional systems-development. Conventional systems-development reviews what is currently being *done* and seeks a better way of doing it. Over time, conventional systems-development results in a network of processes each

accommodating incoherent inter-dependencies. Process re-engineering seeks a deeper understanding of the nature of the issues under consideration, and attempts to address and resolve issues more directly 'at source'. Successful process re-engineering leads not only to a more rational, accurate, flexible and sophisticated resolution of the fundamental issues and requirements, but invariably also to much simpler and more transparent processes.

The requirement for simple transparent processes in a liberal democracy should not be underestimated. If liberal democracy is to survive and prosper, and if we citizens are to prosper in liberal democratic regimes, it is essential that social and economic justice is not only done, but is seen and *understood* to have been done. Without a solid base of coherent insight and understanding amongst the general population, the policy debate in a democracy will always be limited to what a politician can get into a sound-bite. With coherently re-engineered processes, we can hope to dispel 'bureaucratic alienation', raise the integrity of proposals and debate, and build the sense of one-nation community essential to the success of democracy.

The ultimate objective of process re-engineering is of course to define propositions for implementation to improve transparency and administrative efficiency. However, a more immediate objective of this review is simply to define a clearer frame of reference from which economists and politicians can develop and argue their policies. By working from radical analysis through to definition of administrative processes more closely aligned to the fundamentals, process re-engineering techniques can introduce new insights into the economic and political debates, and thereby facilitate an escape from the policy and process inheritance, and from 'habitual modes of thought and expression'.

Perhaps the most incoherent aspect of 'habitual modes of thought and expression' is the pre-eminent use of the expression 'money', and this is where we shall start our analysis. In doing

so, we must not start with the expression ‘money’, and ask what money *is* or *ought to be*. That would lock us into the 'habitual modes of thought and expression' from which we are trying to escape. Economists, central bankers and politicians cannot agree on even a *working* definition of ‘money’. The reason may well be because they are all fools or knaves. However, a much more likely reason is that there is no meaningful *economic* concept (as opposed to *administrative* concept) on which to ‘hang’ the expression ‘money’.

Experts have a habit of using ‘woolly’ words to cover gaps in their insight and understanding, and then obfuscating about the meaning of those words to disguise their lack of real insight and understanding from the general public. Early clinicians used the expression ‘the humours’ as part of their conventional wisdom, and many such clinicians built reputations and fortunes on their claimed insight into the nature of ‘the humours’. The clinician community re-enforced and built on each other’s theories out of self-interest. We now know that they were all talking complete codswallop. Many may well have been fools or knaves (or even both), but many were well-intentioned people groping their way forward in the manner of the partially-sighted leading the blind, and used such expressions as a form of smoke and mirrors to disguise their lack of full understanding, and to gain the confidence of their patients. Similarly, early physicists used the expression ‘the ether’ as the presumed carrier of light, and explored many theories about the nature of ‘the ether’. We now know that light does not need a carrier in that sense, so we know that their quest was doomed from the start.

Thus, we must start even further back into the basics. ‘Money’, whatever else it is, is a subset of wealth. Perhaps we should start by trying to define wealth, and only then try to define ‘moneyness’, the rather hazy distinction between money and non-money wealth and transactions.

WEALTH AND ‘MONEY’

Economics is about *wealth*; the creation, accumulation, distribution and dissipation of wealth.

Wealth can be categorised, as depicted in the table below, as non-money or money, and/or as owned or owed.

	<u>Non-Money</u>	<u>Money</u>
<u>Owned Wealth</u>	<ul style="list-style-type: none"> - Precious-Metal Bullion - Real Estate - Consumer Durables - Personal Expertise - Fixed Assets of Enterprises - Goodwill of Enterprises - etc. 	<ul style="list-style-type: none"> - Precious Metal Coins - Tobacco - Salt - etc.
<u>Owed Wealth</u>	<ul style="list-style-type: none"> - Mortgages - Deposit Accounts - Gilts and Bonds - Stocks and Shares - Trading Debts - Personal Debts - etc. 	<ul style="list-style-type: none"> - Cash (owed by the treasury) - Local 'Alternative Money' - Unsecured Loans - Hire Purchase - Current Accounts - Credit Accounts - etc.

In particular, we should note that the aggregate value of owed-wealth (including cash – documenting debts owed by the issuer to the bearer) is zero, has always been zero, and always will be zero. For every debt there is a borrower and a lender within the same economic system (and indeed, 'within' the same currency). The processes by which the global network of owed-wealth is managed and administered collectively comprise a zero-sum book-keeping exercise (albeit spuriously complex).

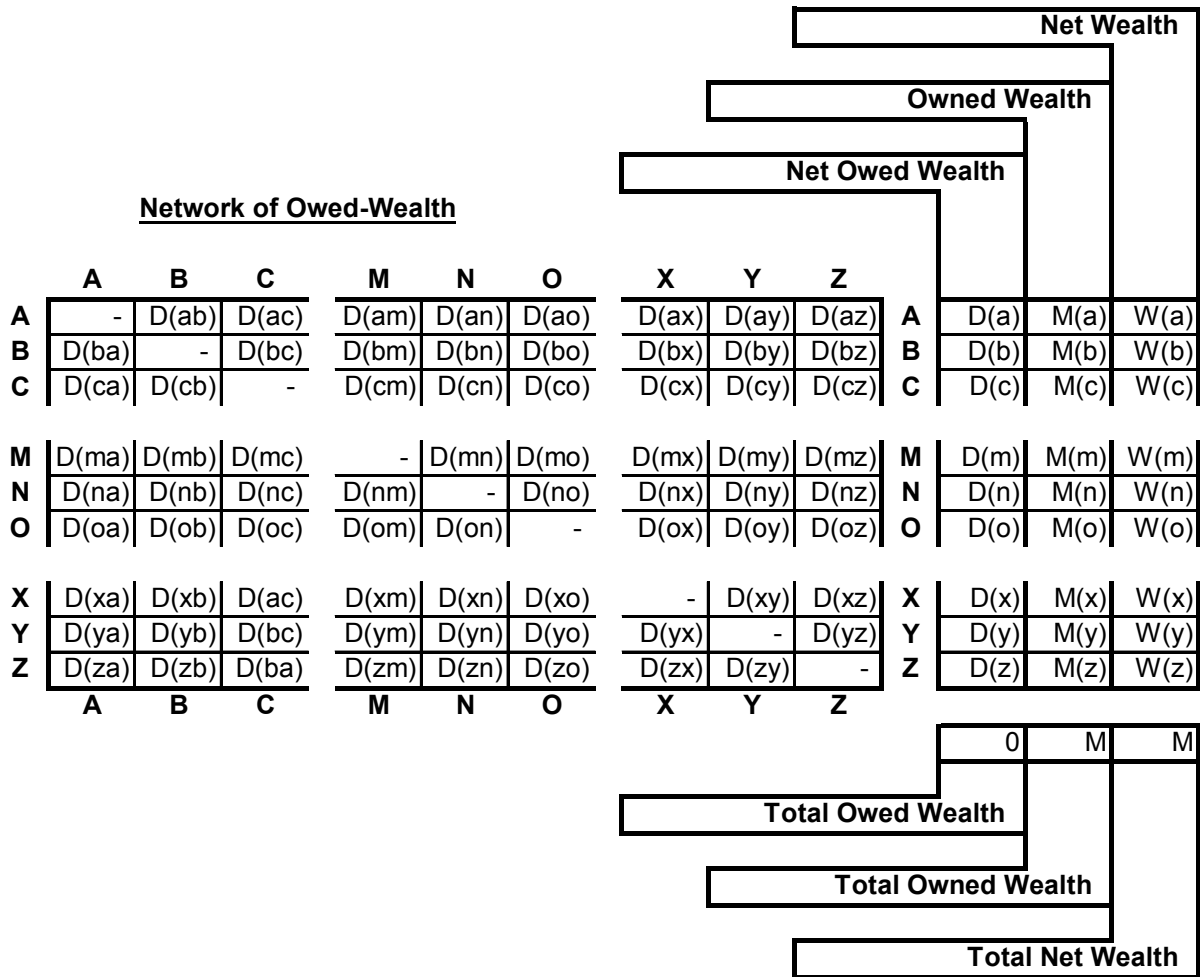
Conventional wisdom, and indeed much ‘alternative’ wisdom, makes a great deal of the rather hazy distinction between ‘money’ and ‘non-money’ wealth and transactions, and very little of what ought to be the ‘hard’ distinction between owned-wealth and owed-wealth. This paper

argues that this emphasis should be reversed, and that we should define a new *quantitative* economic paradigm from first principles; ignoring initially the rather hazy *qualitative* distinction between 'money' and 'non-money' wealth and transactions.

The relationship between the global network of owed-wealth, owned-wealth and net-wealth is illustrated in more detail in the diagram overleaf.

A New Economic Paradigm

Owned-Wealth and Owed-Wealth Status



Notes:

D(xy) is the debt owed to X by Y

D(xy) is equal and opposite to D(yx)

D(xx) is zero

D(x) is the owed wealth of X (i.e. owed to X)

D(x) is the sum of D(xa) to D(xz)

The sum of D(a) to D(z) is the sum of all D(xy) (i.e. zero)

M(x) is the owned wealth of X (i.e. owned by X)

M is the sum of M(a) to M(z) (i.e. the total of owned wealth)

W(x) is the sum of D(x) and M(x) (i.e. the net wealth of X)

The sum of W(a) to W(z) is M (i.e. the total of owned wealth)

THE GLOBAL NETWORK OF OWED-WEALTH

The global network of owed-wealth is (or ought to be) simply a zero-sum book-keeping exercise which 'keeps the score' on where we are on our non-barter trading and employment activity. Those who have sold more than they have bought accumulate a net positive balance, and those who have bought more than they have sold accumulate a net negative balance. The grand total (of course) is zero.

The zero-sum network of owed-wealth is a little bit like the matrix recording 'goals for' and 'goals against' in a football league. Teams which score more than they concede accumulate a positive net total, and vice versa. The grand total (of course) is zero. One can have a legitimate debate about the makeup of the governing body, the rules of the game, the skills of the players, and even the eyesight of the referee in awarding goals. These factors are all legitimate and fundamental parts of the game. The score, however, is simply a matter of passive objective recording (don't shoot the messenger!).

Similarly, in economic matters, one can have a legitimate discussion about market forces, economic incentives, business ethics, business law, business practices, tax policy, and even the even-handedness of the regulators. These factors are all legitimate and fundamental parts of the economic game. The score however (i.e. the zero-sum network of owed-wealth) is simply a matter of passive objective recording (don't shoot the messenger!).

In this zero-sum network of owed-wealth, there is no distinction made between 'money' and 'non-money' wealth and transactions. Thus, we can attempt to define a new *quantitative* economic paradigm from first principles; based on the 'hard' distinction between owned-wealth and owed-wealth, and ignoring initially the rather hazy *qualitative* distinction between 'money' and 'non-money' wealth and transactions.

CURRENCIES AND 'MONEY'

Unfortunately, we cannot simply put the concept of 'money' on a back-burner. One of the 'roles' of 'money' in conventional wisdom is to provide us with units of measure of value. We cannot talk about economics and value without such units. However, we must distinguish very clearly between that role and the other role encompassed in the current pre-eminent use of the expression 'money'. The two roles are as follows:

1. Units of measure of value.
2. Economically-neutral easily-transactable intermediate wealth.

Unfortunately, the latter concept requires 'money' to be valuable, whereas a unit of measure is merely a figure of speech and cannot possess the characteristic of value:

1. When we use the expression 'five dollars' as the value of a good, we are *enumerating* the 'market' value of the good in dollars; just as we might enumerate the weight of the good in tons. The ton does not in itself possess the characteristic of weight (one can drop a ton's-weight of lead on one's foot, but one cannot drop 'a ton' or even 'the ton' on one's foot). Similarly, the dollar does not in itself possess the characteristic of value. It is *the good* which possesses the characteristics of weight and value. The ton and the dollar are merely figures of speech; enabling us to *enumerate* the magnitude of that weight and value.
2. When we use the expression 'five dollars' as a quantity of 'money', we are using a shorthand expression for 'five dollar's-worth of money'. Usually, we are using a shorthand expression for 'five dollar's-worth of cash' whose value is *denominated* in dollars', or 'five dollar's-worth of funds-available in an account' in the banking system whose value is *denominated* in dollars'. This shorthand expression is very

convenient for practical day-to-day administration, but a very dangerous deceit if extended into economic theory. Using the shorthand expression, it is natural to go along with the idea of a 'quantity' of dollars in circulation, and with the idea of 'market' forces applying to the 'supply' and 'demand' for 'dollars'. However, we soon have to abandon such notions if we use the full expression. Demand for 'cash whose value is denominated in dollars' can no more be equated to demand for 'dollars' than demand for 'coffee futures contracts whose weight is denominated in tons' could be equated to demand for 'tons'. The supposed 'market' in 'currencies' is really a spuriously complex zero-sum book-keeping exercise in owed-wealth *denominated* incoherently in different currencies.

Thus, we must chose two different expressions to encompass the two distinct concepts:

1. The expression '*currencies*' could perhaps be reserved to encompass the concept of units of measure of value. As so-defined, currencies would be a *purely-administrative* factor in financial processes, rather than an economic factor.
2. The expression '*money*' could then be reserved solely to encompass the concept of economically-neutral easily-transactable intermediate wealth.

Unfortunately, there are difficulties even with this reduced scope of the expression '*money*':

1. How do we distinguish between the gold in a shoe buckle, and the gold in a coin used to pay for that shoe?
2. How can a gold coin be considered to be economically-neutral as a store of intermediate wealth, when the coin diverts resources into manufacture and circulation, wears a hole in your pocket, is easy to lose, is liable to theft, and has a value which varies over time?

3. How do we reconcile the fact that a French bank note would be accepted as money in France but not in Outer Mongolia?
4. How can a bank note be considered to be economically-neutral as a store of intermediate wealth, when it has a value which varies over time?
5. If I have a credit-card account with a limit of 1,000 dollars and a current balance of 400 dollars, should that count as *minus* 400 dollars' worth of money (because that debt will inhibit my spending power) or as *plus* 600 dollars' worth of money (because that represents my remaining spending power)?
6. If I have two bank current accounts, one with a positive balance of 600 dollars (i.e. in credit) and the other with a negative balance of 400 dollars (i.e. in overdraft), should that count as *plus* 600 dollars' worth of money, *plus* 200 dollars' worth of money, or *minus* 400 dollars' worth of money?
7. How do we distinguish between the 'funds-available' in my current account and the 'funds available' in my mortgage account, when my bank offers automated facilities to draw down additional funds from my mortgage account to top up my current account if it goes overdrawn?
8. Why is it that the most tangible manifestation of 'monetary' policy is the manipulation of base interest rates, when most people would consider that the most tangible characteristic of 'money' wealth is that it does not attract interest?

Thus, it would perhaps be more constructive to abandon the *quantitative* expression 'money', and to focus instead on '*moneyness*'; the rather hazy *qualitative* distinction between 'money' and 'non-money' wealth and transactions. The two distinct concepts encompassed in current usage of the expression 'money' could then be split as follows:

1. In this paper, the expression **Currencies** will be reserved for units of measure of value. As so-defined, currencies would be a *purely-administrative* factor in financial processes, rather than an economic factor.
2. In this paper, the expression **Moneyness** will be reserved for a characteristic of a financial regime. As so-defined, the expression would relate to the fluency with which debts created by trade and employment can be discharged.

We can define a 'theoretical ideal' for moneyness, and then work backwards through practical proposals to current options:

1. The 'theoretical ideal' for moneyness would be a 'God-like book-keeper in the sky', who would simply debit buyers/employers and credit sellers/employees in an inflation-linked zero-sum book-keeping system (inflation-linked to be economically-neutral as a store of intermediate wealth).
2. In the absence of such a God, the 'practical ideal' would be fluent processes which allowed traders and employers/employees to rationalise their debts into an inflation-linked zero-sum book-keeping system administered by the global banking system.
3. In practice, they have to resort to the range of current processes which allow them to rationalise their debts into the non-inflation-linked zero-sum book-keeping system currently administered by the global banking system (including cash - reflecting debts owed by the treasury to the bearer). Unfortunately, non-inflation-linked accounts in the banking system (including cash) are not economically-neutral as stores of wealth, and are therefore sub-optimal in their contribution to the moneyness characteristic of a financial regime.

4. In the absence of suitable zero-sum book-keeping systems, traders and employers/employees would have to resort to counter-trade or barter, which would represent a very low level of moneyness.

Now perhaps we can truly put the concept of 'money' and the expression 'money' on a back-burner, and concentrate on currencies and owed-wealth.

INFLATION, EXCHANGE RATES AND BASE INTEREST RATES

Irrespective of whether the UK joins the Euro, *global* economic stability requires *global* co-operation on the management of currency conversion rates (i.e. 'exchange rates'), including the US Dollar, the Japanese Yen and other currencies, as well as the European currencies. In the absence of exchange controls, this global co-operation must also encompass the management of the base interest rate for each currency (otherwise debt capital would flow irresistibly into the currency offering the best premium of base nominal interest rate over the anticipated rate of devaluation). Thus, the need for *global* economic stability requires that *all* nations must abandon the typical current use of the domestic base nominal interest rate as an instrument of domestic economic policy.

Instead, a global authority should establish and maintain a global, passive, *level-value* frame of reference for 'real' economic activity (i.e. production, trade and consumption).

1. Currency conversion rates (i.e. 'exchange rates') should be inflation-linked to the nominal cost of adding internationally-tradable value.
2. All debts should be inflation-linked, and the single global base *real* interest rate should be set to zero. This could be done either by inflation-linking debt directly, or by inflation-linking base *nominal* interest rates.

3. Cash-flows through financial schemes (such as welfare, mortgage, loan, insurance, pension and annuity schemes) should be set on the presumption of zero inflation, and should then be inflation-linked.

These proposals might appear rather radical at first sight, but are actually no more than a normalisation of the de-facto position. After all, even the most ardent advocates of the conventional options would agree that, *in the long run*:

1. Currency-conversion rates ***must anyway*** reflect the relative nominal cost of adding transportable value, and must therefore track relative inflation in the nominal cost of adding transportable value. Otherwise whole currency areas would go bust.
2. Without exchange controls, nominal base interest rates ***must anyway*** complement anticipated changes in currency-conversion rates, and must therefore reflect anticipated relative inflation. Otherwise, independent economic agents would try to build up a positive position in their owed-wealth administered in the currency offering the best premium of nominal base interest rate over the anticipated rate of devaluation, and to build up a negative position in their owed-wealth administered in the currency offering the worst (or negative) premium of nominal base interest rate over the anticipated rate of devaluation. Such 'speculation' would force currency-conversion rates away from a passive reflection of the relative nominal cost of adding transportable value, and whole currency areas would go bust (as above).

With the proposals outlined above, inflation would cease to be an economic factor:

1. The inflation-linking of currency-conversion rates would neutralise the impact of differential inflation on international trading competitiveness.
2. The combination of inflation-linked currency-conversion rates and inflation-linked debts would neutralise the 'market' in 'currencies'.

3. The global network of inflation-linked debt would provide a global, passive, *level-value* frame of reference for 'real' economic activity (i.e. production, trade and consumption).

Speculation against untenable currency-conversion rates would be neutralised. Global convergence and union of currencies would then be driven or limited only by the balance of administrative convenience, pricing transparency, nationalism and political machismo; but all subject to fundamental convergence of inflation rates.

BASE INTEREST RATES AS A TOOL OF ECONOMIC POLICY

The loss of 'sovereignty' over domestic base interest rates would in fact be no great loss. Manipulation of interest rates is simply too feeble to counter the tidal pressures of business cycles directly. All such attempts are hostage to the marginal propensity to consume and/or to invest 'against the grain' of market sentiments:

1. Realistic levels of real interest are unlikely to influence demand to the required extent or with the required degree of control. Retail demand is frequently funded by borrowing at real interest rates of 15-30%, and entrepreneurs are typically looking for a 20-40% real return on capital (i.e. a three to five year payback). Neither are likely to be influenced sufficiently by 'fine-tuning' of real interest rates against the boom/bust grain. An employee anticipating good times will cheerfully borrow to increase spending and/or consumption in spite of slightly more expensive credit, and an entrepreneur anticipating a boom in demand will cheerfully borrow to invest in stocks, productive capacity and production. An employee anticipating redundancy will not increase spending and/or consumption just because he has access to slightly

cheaper credit, nor will an entrepreneur anticipating a slump in demand invest in stocks, productive capacity and production.

2. A real interest rate of 10% will not pre-empt and/or dampen a boom in asset prices rising at a real rate of 20%, nor will a real interest rate of minus 10% pre-empt and/or dampen a slump in asset prices falling at a real rate of minus 20%.

Current experience in Japan illustrates that, whatever the communal interest and however low real interest rates are set, private citizens and entrepreneurs faced with the prospect of hard times will simply save any spare wealth. Faced with the prospect of good times, private citizens and entrepreneurs will simply borrow to spend and/or invest.

When manipulation of the real interest rate works at all (decreasingly frequently, and hopelessly inaccurately), it is only by 'smoke and mirrors spin-doctoring'. In the face of economic instability, politicians and central bankers attempt to persuade economic agents that the boom/bust is about to reverse, in the hope that those economic agents will then act in such a way that their own actions reverse the boom/bust. As the fluency and transparency of financial processes has developed, 'smoke and mirrors spin-doctoring' has proved hopelessly inadequate as an instrument of economic policy. Most politicians, central bankers and economist now accept publicly that the base real interest rate is ineffective as a macro-economic tool in the short-to-medium term. Most would admit privately that the long-term is anyway too far away to manage with such a blunt tool.

Note here that although entrepreneurs typically complain vociferously about a high real interest rate in times of distress, their real concern is not with the high real interest rate per se. Their real concern is typically their presumption (justified with current processes) that:

1. A high real interest rate typically leads to a high valuation for the currency and an adverse effect on international competitiveness.

2. A high real interest rate typically leads to an inappropriate repayment cash-flow. To quote an extreme example, with inflation at 20% and a real interest rate of 5% (nominal interest rate of 26%), a borrower with a typical current 20 year mortgage would have to repay over 20% of the *value* of the mortgage in the first year!

Neither of these factors would apply if currency-conversion rates (i.e. 'exchange rates'), debt and cash-flows were inflation-linked as proposed.

Current experience in the UK illustrates a further major deficiency in the (attempted) use of the base real interest rate as an instrument of domestic economic policy. The UK currently needs (unrealistically) high interest rates to dampen a boom in house prices, but a low (or negative) interest rates to dampen a slump in manufacturing industries. The UK cannot do both! This argument suggests that, if we wish to use interest rates as an instrument of economic policy, we should not only resist the Euro, we should seek to establish regional and/or city currencies, and different interest rates for different types of debt! The result would be economic anarchy.

Fortunately, there are many other, *purely-domestic*, instruments with which to dampen swings in economic activity: credit controls; taxation; benefits; communal current spending; and/or the timing of communal investment. Thus, manipulation of real interest rates should be abandoned as an instrument of global and domestic economic policy.

Of these *purely-domestic instruments*, *the timing of communal investment* can be directed accurately according to geographic need, is least disruptive to the continuity of communal services, and maintains a steady accumulation of national wealth during hard times.

ADMINISTRATION OF BANK ACCOUNTS

This section extends the concept of a global, passive, *level-value* frame of reference for 'real' economic activity (i.e. production, trade and consumption) from macro economics and central banking down into the administration of business and personal bank accounts.

The administration of business and personal bank accounts should be regulated as follows:

1. All lending into the banking system (i.e. deposits, etc.) should incur a real interest rate discount of zero. That is, all lending into the banking system should be inflation-linked passively to *maintain* its original value.
2. All borrowing from the banking system (i.e. overdrafts, mortgages, loans, credit accounts, etc.) should incur a real interest rate premium of zero. That is, all borrowing from the banking system should be inflation-linked passively to *maintain* its original value.

Thus, 'interest-rate differentials' would be excluded altogether as a source of bank income and profits. Banks would have to cover their operational expenses and lending risks through specific and overt charges for what they *did*, rather than by covert slush-funding of interest-rate differentials on the debts on which they '*sat*'.

Specifically:

1. Banks should levy separate itemised '*up-front*' *charges* to cover the following:
 - a. The operational costs associated with routine setup *and routine discharge*.
 - b. The operational costs associated with assessing and securing each loan or extension.

c. The potential cost of ultimate loss associated with each loan or extension.

After all, *all* of this liability is incurred at the instant of extending the loan.

2. Banks should levy separate itemised on-going charges, *agreed 'up-front'*, to cover the following:

a. The operational costs associated with routine account-maintenance.

b. The operational costs associated with routine transaction-processing.

c. The operational costs associated with monitoring each loan or extension.

d. The **additional** operational costs associated with recovery from a **default** situation.