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REAL AND VIRTUAL MONEY
HOW TO AVOID FINANCIAL MELTDOWN

by

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ABSTRACT

A propositional foundation is offered for macroeconomics in terms of 'real' and 'virtual' money, and 'well' and 'badly' behaved economies, all of which are defined. The unique characteristics of commodity money, and specifically gold, render it incomparably proof against both inflation and meltdown. The worldwide failure of the Phillips curve in the early 1970s is explained as a direct result of the cancelled dollar gold standard in August 1971. This signalled an era of 'bad' behaviour, which was compounded in the UK when the cash ratio method of credit control was terminated one month later, causing unprecedented inflation. Two 'Resolutions' are offered for recovering 'good' behaviour.

GENESIS

This paper owes its genesis both to William Rees-Mogg's short book *The Reigning Error*¹ on the gold standard, and to Professor Glyn Davies' monumental study, *A History of Money*.² For further enlightenment I have turned to M. Burda and C. Wyplosz's standard work, *Macroeconomics - a European text*.³ Raw data have been taken primarily from F. Capie and A. Webber, *A Monetary History of the United Kingdom, 1870-1982*, Volume I.⁴

THE UNIQUENESS OF COMMODITY MONEY

Michael Stewart, in his book *Keynes and After*, voiced in 1967 an impatience with gold not uncommon today:

In any case, it is high time the world grew up and stopped regulating its affairs by reference to the

¹ William Rees-Mogg, *The Reigning Error - The Crisis of World Inflation* (London: Hamish Hamilton, 1974).

² Glyn Davies, *A History of Money* (Cardiff: University of Wales Press, 1994; paperback edition, with revisions and Postscript, 1996). Foreword by The Right Honourable Viscount Tonypanfy, PC, DCL. I am deeply indebted to Professor Davies for the warm encouragement and valuable editorial advice with which he greeted my original draft.

³ M. Burda and C. Wyplosz, *Macroeconomics - A European Text* (Oxford: OUP, Second edition 1997).

⁴ F. Capie and A. Webber, *A Monetary History of the United Kingdom, 1870-1982*, Volume I: Data, Sources, Methods (London: George Allen & Unwin, 1985).

production of one relatively useless mineral.⁵

Beyond the fact that 'useless' is scarcely a description of gold in our technological age, I believe he was economically mistaken. Let me begin to explain why by introducing the concept of *commodity money*, turning to Burda and Wyplosz for their definition of it as

forms of money that have intrinsic value in other uses, or derive their value from the commodity out of which they are made, chiefly gold or silver.⁶

We shall call this Definition 1 (D1). They might with full justification have included cowrie shells, of which Davies writes:

Of all forms of money, including even the precious metals, the cowrie was current over a far greater space and for a far greater length of time than any other.⁷

Oil ('liquid gold') is also today a commodity quoted in the press, but owes its value not to any intrinsic attractiveness but to its essence as a consumable good. Hence, for all its dominant role in the world economy, it would make a poor choice for a currency: if present trends continue, one day there will be none of it left! Hence for the purposes of this paper, references to commodity money in today's context are intended to denote metallic money, and specifically gold.

D1 contrasts with the definition given by Burda and Wyplosz for *fiat money*, as

money which the state declares to be legal tender although its intrinsic value may be little or nothing.⁸

which we adopt as D2. Upon this foundation they begin to draw a priceless distinction:

Money is an asset for those who hold it. With the exception of commodity money, however, it is always someone else's liability,⁹

which they elaborate as follows:

This is why, in the end, modern money - in contrast to gold or silver money - ultimately rests on the trust of agents in their own economies. To bolster this trust, regulations are designed to enhance the creditworthiness of the banking sector. Yet, banking panics may occur in troubled times, when the value of such regulation may be called into question. Out of concern for their wealth, people withdraw their deposits to acquire foreign currencies or other non-financial assets such as gold or durable goods. When the chain of confidence breaks down in one place, the whole fragile edifice can come tumbling down.¹⁰

There is thus a qualitative distinction between commodity money and all other forms. I believe that this distinction is fundamental to the whole subject of economics. Upon it I wish to build a second distinction, between 'real' and 'virtual' money, as follows.

⁵ Michael Stewart, *Keynes and After* (Harmondsworth: Penguin 1967, revised 1969) p.230.

⁶ Op. cit. p.573.

⁷ Op. cit. p.35.

⁸ Op. cit. p.577.

⁹ Op. cit. p.195.

¹⁰ Ibid. pp.196-197.

REAL AND VIRTUAL MONEY

I define as *real money*,

whatever is *perceived* in a given economy and at a given time to be money in its most available (liquid) form (D3).

Often in the past this role has been assumed by commodity money (D1). In today's economies real money is usually thought of as fiat money (D2) such as cash (banknotes plus coins). It is to the real money of the day that we look for the anchor to our currency.

I now define *virtual money* - called money-substitutes by Davies¹¹ and also sometimes designated quasi-money - as

any form of money which is at least one step in liquidity removed from what at any time is perceived to be real money (D4).

In this category for instance came banknotes in the days when real money was metallic (gold or silver commodity money). Today there is a whole battery of different types of virtual money of varying liquidity, including bank and building society accounts of various kinds, cheques, Treasury bills, certificates of deposit and so forth, and arguments rage as to which if any of the various measures of money supply M0, M1, M2 etc each of these belong. Virtual money is present in all but the simplest economies and owes its presence to the convenience it offers - for instance in terms of transfer or physical transportation. Without it economic life of any complexity would be very difficult.

Through this window I believe we can helpfully view the currency issues of our day.

WELL AND BADLY BEHAVED ECONOMIES

Borrowing a concept from mathematics, I now want to define a *well behaved economy* (D5) as one

(a) in which *cause and effect* may be readily discerned (D5(a)), and

(b) which can be usefully described in terms of relatively *simple relationships* (D5(b)),

and a *badly behaved economy* (D6) as the converse of this. I should stress that good and bad behaviour in this sense are not measures of prosperity. An economy can be well behaved whether it is in boom or in bust. There is normal behaviour appropriate to each phase in the business cycle. Further, there are degrees of good and bad behaviour depending on the extent to which the two criteria are, or are not, met. Let me then illustrate the criteria.

First, as an instance of *cause and effect* I would cite the mechanism whereby the use of metallic money generates stable prices as argued by Professor Ivor Pearce in the following extract:

¹¹ Op. cit. pp.400, 653.

What we call money today is not money at all in any rational sense of the word. Anything which is really money must have an exact and lasting value defined in terms of commodities.

Our predecessors went to extraordinary lengths to meet this elementary requirement. One pound sterling in the early 14th Century meant one pound (troy) weight of fine silver. To own a silver penny meant to own a piece of silver weighing $1/240^{12}$ lb.

The value of this object would not fall below its cost of production; for if it cost two silver pence to mine one pennyworth of silver nobody would mine it. And if it cost only one half-penny to dig out one pennyworth of silver, 100 percent profit could be made from mining. More silver would appear and the price of commodities would rise until the cost of mining or importing one penny became again one penny.

Nobody needed to control the money supply. Both the value and the quantity of money was determined in the market just as any other commodity. This is the simple mechanism which kept the cost of living more or less constant for many hundreds of years.¹³

Second, to illustrate *simple relationship* I offer in the first instance the portion of Figure 1 to the left of the vertical line placed at 16 September 1971, and the reverse on the right of this threshold. The graph depicts the Keynesian relationship between the income velocity of money supply measures M1 and M3 and the yield (%) of Consols¹⁴ between 1922 and 1982.Q3.¹⁵ Income velocity is defined here as GNP divided by the appropriate measure of money supply. Consols were chosen for their purity as irredeemable in representing long term interest rates.

In order to quantify the change from 'good behaviour' to bad I have computed the correlation coefficients between the Consols yield and each of the two money supply velocities as follows:

	Pre-16.9.1971	Post-16.9.1971
M1 velocity: Consols yield	0.9452	0.5032
M3 velocity: Consols yield	0.8884	0.0914

So before the threshold date both M1 (particularly) and M3 exhibit a high correlation with Consols yield. After that date this relationship is significantly lost in the case of M1, and totally obliterated for M3.

The 'simple relationship' that existed prior to the threshold date between the Consols percentage yield (denoted C) and M1 velocity (denoted V_{m1}) may be modelled by the linear function

¹² Author's correction for 1/243, believed to be a slip in the original.

¹³ Professor Ivor Pearce, 'Let's get back to proper money', *The Sunday Telegraph*, 11 April 1982.

¹⁴ As defined by Capie and Webber, op. cit. chapter 14 §IX pp.316-320.

¹⁵ The data were extracted from Capie and Webber, op. cit. as follows:

M1 Velocity annual (1922-1962): Table I(9) col IV.

M1 Velocity quarterly (1963.Q1-1982.Q3): Table I(7) col VII.

M3 Velocity annual (1922-1962): Table I(9) col V.

M3 Velocity quarterly (1963.Q1-1982.Q3): Table I(8) col VII.

Yield on Consols annual (1922-1962) and quarterly (1963.Q1-1982.Q3): Table III(10) col VIII.

Capie and Webber do not provide a comprehensive table for M1 or M3 velocity sampling the whole period either annually or quarterly.

$$C = 2.084 * V_{M1} - 1.696$$

where the residual errors over 75 data points have a standard deviation of less than 0.648.

The theory behind this relationship is described in F. W. Paish's edition of *Benham's Economics*.¹⁶ I have not seen it documented in any textbook written after 1971.

A second instance in which good behaviour is characterised by a simple relationship is to be found in the Phillips curve.

In 1958 A. W. Phillips wrote a paper¹⁷ which made his name a household word in economics circles ever since. In a brilliant survey of the UK economy from 1861 to 1957 he argued for and seemingly demonstrated what was an inverse trade-off relationship between the rates of unemployment and wage inflation. On this priceless discovery the hopes of many macroeconomists were raised high. The Phillips curve was indeed one of the archetypal simple relationships apparently characterising well behaved economies.

Phillips gave the equation of the curve as the relationship

$$y + 0.900 = 9.638x^{-1.394}$$

or

$$\log(y + 0.900) = 0.984 - 1.394 \log x$$

where

y is the rate of change of money wage rates, percent per year
 x is the percentage level of unemployment.¹⁸

It is illustrated in Figure 2 against a background of (price inflation¹⁹ v unemployment) values for the UK between 1914 and 1970.²⁰ As can be seen, with the exception of the four erratic years 1921, 1922, 1940, and 1941 to which we shall return, the fit is wholly credible: data points are more or less evenly distributed either side of the curve. This is quite impressive, considering that the time span includes two world wars and a variety of monetary regimes.

¹⁶ F. W. Paish, *Benham's Economics - A General Introduction*, Eighth edition (Pitman Paperbacks, 1967) pp.391-6.

¹⁷ A. W. Phillips, 'The Relation Between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom', *Economica*, November 1958, pp. 283-299.

¹⁸ Op. cit. p.290. The curve crosses the x axis close to $x = 5.48$, that is, the expected rate of unemployment when inflation is zero.

¹⁹ For convenience: although Phillips himself argued closely from wage inflation, it is now normal to view it in terms of price inflation without, it is felt, any loss of generality.

²⁰ The sources for Figure 2 and Figure 3 are
 1914-1986: M. Parkin and R. Bade, *Modern Macroeconomics* (Philip Allan, Second Edition 1988) pp.37-39.
 1987-1997 Unemployment: *Annual Abstract of Statistics 1998* (Office for National Statistics), Table 6.1 (Crown Copyright 2000).
 1987-1997 Retail Price Index: *Whitaker's Almanack 1999*, 131st Edition, ed. Hilary Marsden (London: The Stationery Office Ltd, 1998)

However such hopes began to be dashed in the 1970s when the relationship seemed to break down as high inflation and high unemployment were both experienced simultaneously - bad behaviour in the extreme - in the UK and elsewhere. While such 'stagflation' itself proved mercifully to be a temporary phenomenon, the regularity detected by Phillips was never recovered. Such a failure of the Phillips relationship is depicted in Figure 3 in relation to the UK between 1971 and 1997. As can be seen, all the data points lie to the right of/above the curve, which can in no sense be said to summarise them. Bad behaviour has prevailed.

We have here therefore a second such 'simple relationship' which we believe typifies well behaved economies and is largely absent from badly behaved ones.

Let us now examine the reasons for the dramatic change from an exhibition of exceedingly good behaviour in the UK economy to one of very poor which I have dated to 16 September 1971. There are two such, the first a global external shock to real money, the second a self-inflicted blow to UK virtual money, and they occurred within one month of each other. We will look at the fate of the virtual component first.

ABOLITION OF THE CASH RATIO 16 SEPTEMBER 1971

Under the 'cash ratio' system of credit control which operated in Britain between 1945 and 1971, the London clearing banks were obliged to ensure that the ratio of (real) cash which they held to (virtual) account deposits never fell below 8%. This system rendered a highly efficient means of controlling credit and so money supply in the banking sector. The discipline so imposed between the virtual and real components of the money supply contributed to the traditional 'well behaved' economy illustrated in the left portion of Figure 1 and in Figure 2. It is also depicted in the left hand portion of Figure 4, where the 8% cash ratio can be seen maintained as the almost horizontal stretch of the London clearing banks' curve between 1945 and 1971.²¹ During this time the Retail Price Index grows only modestly (though rather faster than earlier in the century when for all banks the cash ratio often exceeded 10%).

However on 16 September 1971 the cash ratio limit was removed by the Heath government as part of the unfortunate 'dash for growth'. It was replaced by a very much less efficient system of 'Competition and Credit Control' which while quite justifiably applying to all banks and quasi-banks such as the emerging building societies,²² nevertheless lacked in its 'reserve asset ratio' the disciplinary teeth of its predecessor. The result was a credit explosion of disastrous proportions. The Secondary Banking Crisis which followed in December 1973 threatened the whole British banking world with collapse. Rescue was however achieved by the magnificent 'Lifeboat' operation launched by the Bank of England on 29 December. Nevertheless

²¹ The data for Figure 4 are computed from Capie and Webber, op.cit:

London Clearing Banks:

Cash = Table III(7) col I.

Deposits = Table III(4) col I.

All UK Banks:

Cash = Table II(2) col III.

Deposits = Table II(1) col IV (Demand, DD),

+ Table II(1) col VI (Time, TD)

+ Table III(2) col IV (Other, OD).

²² This is described in detail in Capie and Webber, op.cit. pp. 11, 222, as well as Davies, op. cit. pp. 406-7, 420-423.

inflation, as can be seen from the right hand portion of Figure 4, took off at a rate scarcely seen in Britain's history, which took successive governments years to subdue. Even Mrs Thatcher's famed monetarist experiment, which did not include the restoration of the cash ratio, proved disappointing in terms of inflation statistics.²³ 'Bad' behaviour had prevailed as depicted on the right hand side of Figure 1. The reserve asset ratio was finally abolished in August 1981. I understand that present day cash ratios are of the order of 1%.

INFLATION

We turn now to the ever-present topic of inflation. I take on board here Lord Rees-Mogg's case²⁴ that currencies founded on the gold standard are by their very nature proof against endemic monotonic price inflation. Lord Rees-Mogg founds his argument on the table 'Prices since 1661', which he has reproduced from *The Economist* of July 13 1974, and which forms Table 1 to this paper. In the opinion of the present writer he has proved his case well beyond all reasonable doubt.

We can see from this table that between 1661 and 1914, for most of which Britain was subject to first a silver,²⁵ then a gold standard, prices actually underwent a net *fall* of 9%. In the interim they had both risen and fallen, so that the index recrossed eleven times its starting value of 100. This astonishing performance - contrasted below with expectations under present day 'low' inflation - is convincingly attributed by Lord Rees-Mogg to the prevailing metallic standard. Such a standard is defined by the discipline of convertibility - the right, guaranteed by government, to convert (virtual) paper money into the equivalent in (real) precious metal.

In 1914 convertibility was suspended, never since to be restored in Britain in respect of coinage, although world currency ties with gold were not finally severed until on 15 August 1971 President Nixon unilaterally terminated the Bretton Woods agreement which since the end of World War II had made gold available to the world at \$35 per ounce. As can be seen from the end of Table 1, British prices then rose faster than ever before.

Lord Rees-Mogg is in very good company. Hear for instance Alan Greenspan, longstanding Chairman of the US Federal Reserve System:

In the absence of the gold standard, there is no way to protect savings from confiscation through inflation.²⁶

Capie and Webber likewise write of 'the automatic safeguard against inflation provided by the gold standard'.²⁷

Hear also the comment of Professor Davies - no advocate of a return to the gold standard in our present age - when surveying the historical rise in the acceptance and circulation of banknotes in Europe:

²³ Davies, op. cit. pp.397, 432.

²⁴ Op. cit, Chapter Four, 'The Case for Gold'.

²⁵ Davies, op. cit. p.284.

²⁶ Alan Greenspan, *Gold and Economic Freedom* (1966), quoted by William Rees-Mogg, article 'Is Gold only for fools?' (*The Times*, 20 November 1997).

²⁷ Op. cit. p.212.

Printed money supplemented minted money, moderately at first when linked together through the principle and practice of 'convertibility', but later without limit when governments found it expedient to abandon convertibility despite the inflation which inevitably followed, and *which in turn could be cured only by relinking paper money to gold or silver or some combination of both*²⁸ (my italics).

I therefore write as Proposition 1:

Commodity currencies are by their nature, at least in the long run, not subject to price inflation as long as the discipline of convertibility is maintained (P1).

We can now make a very pertinent observation. We have noted above the rampant inflation which arose when the cash ratio limit disciplining the relationship between (real) cash and (virtual) clearing bank deposits was removed in 1971. Both then and according to P1 under commodity currencies, the critical factor in preventing inflation was the maintenance of the discipline linking the virtual to the real components of the currency; when that discipline is removed, inflation soars. So we can now posit Proposition 2:

A major cause of inflation is the severing or relaxing of the link of discipline which binds virtual to real money (P2).

This kind of cancer is one manifestation of bad behaviour, afflicting primarily the virtual component, be it multiplying banknotes or mushrooming credit. Another manifestation arises when the real component moves further and further away from commodity money. This latter we now illustrate from the history of the Phillips curve.

THE VANISHING PHILLIPS CURVE

For the account of the external shock to the UK economy in 1971 relating to real money, we return to the Phillips relationship, which in the early 1970s ceased to work, not just in the UK but in countries all the world over. Burda and Wyplosz comment on 'the puzzle of the vanishing Phillips curve':

Over nearly a century, the inverse relationship between inflation and unemployment seemed relatively robust. Yet the breakdown occurred in all countries at about the same time and in a similar systematic fashion. The challenge is to explain the existence of a Phillips curve and its disappearance, as well as the striking similarity between different countries' experiences.²⁹

Let us make three observations.

(1) The Phillips relationship worked excellently during the years 1861 to 1914, during which the full classical gold standard was operative in the UK and many other countries.

(2) It is claimed to have gone on working also from the end of the First World War until the late 1960s.³⁰ During much of this time there was widespread use of a gold

²⁸ Op. cit. p.642.

²⁹ Burda and Wyplosz, op. cit. p. 304.

³⁰ Ibid.

exchange standard, based first on the dollar and the pound (while Britain was subject to a gold bullion standard 1925-1931), then on the dollar only - the Bretton Woods system which started at the end of the Second World War. This 'dollar standard' began to peter out in 1968, finally ceasing on 15 August 1971 as described above.

(3) This termination of the Bretton Woods gold exchange standard was by its very nature a massive simultaneous shock to all the world's major currencies. It also coincides with the beginning of the simultaneous failure of the Phillips relationship in 'all countries' noted above.

It would appear that we do not have to look very far for an explanation of the mystery. So we declare Proposition 3:

The Phillips curve relationship works exceedingly well in the presence of a full gold standard, sometimes even of a remote or partial one, but cannot be relied upon to do so otherwise (P3).

What has happened here is a progressive moving of real money in different seductive steps and in different countries away from its natural anchor in the commodity gold. Finally in 1971 the anchor was cut loose altogether and all over the world the inflationary balloon went up. So the explanation is very simple. The Phillips curve is traditionally viewed as a relationship between the forces which produce inflation and those which produce unemployment within a closed economy. When an external shock is received of the magnitude of the cancelling of Bretton Woods which affects the first of these very much more than the second, the pre-existing relationship is by definition broken. There is no mystery. Effect has as usual followed cause. From which, recalling D5(a), we may derive Proposition 4:

The world economy itself is susceptible to description in terms of good and bad behaviour (P4).

(See for instance the success of the International Gold Standard in the last quarter of the nineteenth century described in Davies' section 'The final triumph of the full gold standard, 1850-1914'.³¹)

In Britain this abandonment of the dollar standard occurred just one month before the hapless abolition of the cash ratio limit discussed above. The effect was the doubly catastrophic 'stagflation', the very antithesis of the previously well authenticated Phillips relationship, as depicted in Figure 3. The writer can personally recall the distant echoes of consternation in the Treasury as this later became recognised. Our well behaved economy had quite understandably gone beserk!

We are now in a position to explain the erratic years 1921, 1922, 1940 and 1941 on Figure 2 which appear to breach the Phillips relationship exhibited by the rest of the plot. In each of these years the pound was related to gold by no form of gold standard, not even a remote or partial one. P3 therefore applies. We should not be surprised.

We can now posit Proposition 5,

³¹ Op. cit. pp.354-364.

An economy falls increasingly into the risk of bad behaviour the further the real component of its money supply drifts from commodity money (P5),

and its converse Proposition 6:

An economy may be expected to show a strong propensity towards good behaviour when the real component of its money supply is commodity money (P6).

From P4 and P6 we can predict Proposition 7:

The world economy will behave increasingly well when its real money supply reverts to gold (P7).

This Proposition is in acknowledged conflict with some prevailing currency trends.

This analysis, that the year 1971 represented a watershed in the UK and world economies, finds some support in an essay by Dr Charles Hickson of the University of Belfast in a small volume on money transmission put out by the Association for Payment Clearing Services in 1995.³² It would appear that M2, which used to exhibit a relatively constant velocity, ceased to do so 'beginning from mid-to-late nineteen-seventies', thereby embarrassing the Monetarists, whose models then consistently over-estimated the effect of money growth upon prices. Their search for a new definition of money which would restore the status quo and enable them once more to predict future price levels has so far, it seems, been in vain.³³

I would suggest that this problem is not far removed from that discussed in relation to Figure 1, allowing for a lag of a few years after 1971 before it became apparent.

THE M-WORD

There is a further ill relating to the real component of an economy, which occasionally flashes across our newspaper headlines, but which we mostly prefer not even to think about. It is *meltdown*, which I define as

the total loss of confidence in an economy (D7),

global meltdown being

the total loss of confidence in the world economy (D8).

So horrendous is it that it does not even get an entry in the current Penguin Dictionary of Economics.³⁴ Davies, who is deeply concerned about the ending of inflation, makes no

³² Dr Charles Hickson, 'A Critique on Money: An Institutional Perspective', *Payments - Past, Present and Future* (APACS, 1995), pp.109-134. This writer owes his copy to the kindness of Professor Davies.

³³ Op. cit. p.112.

³⁴ Graham Bannock, R. E. Baxter and Evan Davis, *The Penguin Dictionary of Economics*, Sixth Edition (London: Penguin, 1998).

reference to meltdown in his index and I have not found the word used anywhere in his book. Burda and Wyplosz do not mention it in their Glossary. But its reality will be known to any economist who in recent years has had cause to shudder at the news from Russia or the Far East, and as such it forms the subject matter of George Soros' recent book, *The Crisis of Global Capitalism*.³⁵ It is the extreme of the 'banking panics' to which Burda and Wyplosz refer in the quotation on p.2 of this paper, as a result of which 'the whole fragile edifice can come tumbling down'.

This loss of confidence is, I suggest, primarily an inadequacy of the real component of the currency affected. We have already seen that fiat money (D2) depends for its effectiveness upon public confidence, whereas commodity money (D1), possessing an intrinsic worth of its own, does not. That is, in traditional textbook terms, commodity money is a store of value in its own right, and as seen above, no one's liability. Any wise and wealthy Russian who ten or twenty years ago managed to sell his surplus roubles on the black market for, shall we say, krugerrands would understand. During the recent meltdown of the Russian economy he will have had far fewer anxieties than his less wise but equally wealthy neighbours.

This leads us to Proposition 8:

The closer the real component of an economy is to commodity money - the precious metals - the more likely it is to be proof against meltdown (P8).

THE FREE LUNCH³⁶

In 1914, on the eve of the First World War and as previously between 1797 and 1821 on account of the Napoleonic wars, gold convertibility was cancelled within Britain. Prior to that, banknotes issued by the Bank of England were contracts, bearing as today a slogan to the effect 'I promise to pay the bearer on demand the sum of...!', showing the sovereign's head and signed by the Governor of the Bank of England. They were issuable to the public in exchange for an equivalent sum of gold coins, on the understanding that the same amount of gold coinage would be returned to the bearer upon representation to the Bank. As such they functioned as transferable cheques made out in round numbers of pounds.

Renunciation of convertibility was therefore a breach of contract made by the Bank with every money-bearing citizen of the land. Gold sovereigns which had been lent by the public to the Bank in exchange for banknotes were - and without warning - never returned. In today's terms, this would be the equivalent of all banks unilaterally and instantaneously refusing to cash cheques or to issue cash in any other way. Real money is thus abolished. Economic activity would continue for as long as people trusted the virtual money that remained, but they would never see the real stuff again. The cashless society would have arrived - the ultimate triumph of convenience over sanity.

Small wonder then that after the war there was a universal expectation that such contracts would be made good again by restoration of convertibility, as previously in 1821 after the Napoleonic Wars. Such hopes were disappointed. Churchill's creation of the 'gold bullion

³⁵ George Soros, *The Crisis of Global Capitalism [Open Society Endangered]* (London: Little, Brown, 1998).

³⁶ I owe some of the fundamental ideas in this section to John Laughland, *The Tainted Source - The Undemocratic Origins of the European Idea* (London: Warner, 1998), Chapter V 'Money Matters'.

standard' in 1925 (doomed from its start by pegging the currency to the then unrealistically high pre-war value of £3 17s 10½d per fine ounce of gold) did not include a return to gold coinage. Instead, following a policy traced by Davies to Ricardo,³⁷ gold was available only as bullion for foreign exchange.

As far as ordinary citizens were concerned, the severance in 1914 of the link between real and virtual money caused the understanding of 'real money' to slip without due recognition from gold coinage to (previously virtual) banknotes plus non-gold coins. But, as today, the promise remaining on those banknotes was a fiction. The breach of contract was never made good. Today now that the anchor has been cast away, all you can get for a banknote is another piece of paper, a number on a computer screen, a bag of token coins, or some good or service whose value with few exceptions diminishes monotonically. We have grown used to ignoring the promise which is no longer kept, while our currency, which serves reasonably as a medium of exchange, performs only moderately as a store of value.

The Bank of England has therefore been enjoying a 'free lunch' ever since 1914. And as always, there is a hidden price. Slowly at first, but increasingly obviously as the century went on, Britain found itself to be the victim of endemic, ineradicable inflation such as never before. If therefore my argument is correct, our present self-inflating currency is founded upon a breach of contract and sustained by general connivance in a fiction. This is no way to do business! We should not be surprised if yet again effect follows cause.

Put another way, it would appear that by continuing to issue banknotes bearing promises which are null and void, the Bank of England have themselves caused what they themselves - in the quotation given in the next section - declare to be their own 'central problem', preventing inflation. One can but sympathise.

THE SITUATION TODAY: 'LOW' INFLATION

Today inflation no longer runs at the horrendous rate of 19% or so per annum which prompted Lord Rees-Mogg's book in 1974. Nevertheless, even in these days of 'low' inflation, we have been acclimatised to the belief that inflation of some kind is now a necessary fact of life, a monster that can at best be tamed but never killed. So we applaud governments and banking systems which minimise it,³⁸ without any suspicion that it is a disease that can even in principle be cured by the right prescription. Even Davies, who is more sanguine than most, still writes of

the appealingly simple but misleading and excessively costly goal of zero inflation.³⁹

So 'low' inflation is today regarded as an adequate target for modern banks and governments. Hear for instance the Bank of England:

The central problem for monetary policy is how to maintain the value of the currency - ie price stability. Since the Bank of England was granted operational independence in May 1997, this has been defined

³⁷ Davies, op. cit. p.374.

³⁸ Davies, op. cit. p.429.

³⁹ Op. cit. p.671.

by the Government's 2½% target for inflation on the RPIX measure.⁴⁰

Similarly also an acceptance of inflation is institutionalised in the very first of the EMU convergence criteria of the Treaty of Maastricht:

The criterion on price stability referred to in the first indent of Article 109j(1) of this Treaty shall mean that a Member State has a price performance that is sustainable and an average rate of inflation that does not exceed by more than 1½ percentage points that of, at most, the three best performing Member States in terms of price stability.⁴¹

This acceptance that inflation is inevitable is echoed by the European Movement, until recently British champions of the European Single Currency:

Low inflation, guaranteed by an independent central bank, will protect the value of personal savings.⁴²

Yet it was not always thus. As we have seen from Table 1, the situation which has prevailed since 1934 in which retail prices never fall is only a modern phenomenon. Previously, at least since 1661, prices in Britain have both risen and fallen. So Davies writes how in 1951

Britain...was beginning to experience a new kind of long-run persistent inflation, in which price levels seemed to have lost their previous tendency to fall during cyclical recessions.⁴³

The date 1934 is significant as being a lag of just three years following the demise of Churchill's gold bullion standard, and only two years before the publication of Keynes' *General Theory*.

In relation to the last thirty years, a 'low' annual inflation rate of 2½% might well be regarded today as a triumph by a proud government. It is however worth considering some of the implications of such a success.

A price index which began today at 100 and increased annually by 2½% would after 253 years reach a value of 51,658. At a rate of only 3½% per annum this becomes 602,433. We may compare this with the change already noted from Table 1 in the same time interval between 1661 and 1914, when under metallic standards the price index reproduced there actually *fell* from 100 to 91.

In previous centuries it has always been possible through good management of the currency to recover price stability and even reduce prices following years of abuse or neglect. This prospect, made possible by a metallic standard, is no longer offered to us. Without a currency basis in a commodity which has intrinsic value in its own right (D1), prices have no anchor. So Davies begins a paragraph in his chapter 'Global Money in Historical Perspective' with,

⁴⁰ *Economic models at the Bank of England*, (Bank of England, 1999) p.3.

⁴¹ *Treaty on European Union* (7 February 1992), Protocol 'On the Convergence Criteria Referred to in Article 109j of the Treaty Establishing the European Community', Article 1.

⁴² *The European single currency*, European Movement, January 2000. The rather quaint 'guaranteed' is left unexplained. The usual effect of inflation, high or low, is to *reduce* the value of savings. Hence 'progressively erode' would seem more accurate than 'protect'. Language is too precious a gift to be abused.

⁴³ *Op. cit.* p.397.

When modern paper money released prices from their metallic anchors...⁴⁴.

That, once untethered, prices then rise rather than fall, is simply a consequence of human greed, the limiting of whose effects must surely rank as one of the fundamental tasks of the economist.⁴⁵

It has been fashionable since Keynes to decry the stringencies of the commodity money through which this now vanished price stability was achieved. Michael Stewart, quoted at the start of this essay, is simply following in the tradition of Keynes's comments about the 'Golden Yoke'.⁴⁶ So Davies can write that the Cunliffe Report of December 1919 was

calculated to please the City - and to crucify the economy on an outdated cross of gold.⁴⁷

When the Gold Standard (Amendment) Act was passed on 21 September 1931 abolishing the gold bullion standard, Davies comments that

the gold shackles had been broken for ever.⁴⁸

Without beginning to suggest that there may be a pain-free solution to any of our economic ills, I would argue from the above calculations that the punitive consequences of even 'low' inflation sustained monotonically without limit would ultimately be at least as destructive of British society as anything experienced under the (sometimes misapplied) gold standard.

CONCLUSION

We live in an age dominated very much by the convenience afforded us by the rapid advances of automation and communications technology. Possibilities lie open to us for extending the variety and quantity of convenience-based virtual money as never before. Today's computer screen money is 'virtual' in the most literal sense imaginable. Those who deify technology will be tempted as never before to cut our economic anchor and abandon real money altogether.

However, we should observe three cautionary tales. The first is Professor Davies' gory account of how a single rogue operator in February 1995 managed in a very short time to bring down Barings, a merchant bank which had acquired its high reputation during more than two centuries of trading.⁴⁹

The second recalls the fear-inspiring Y2K 'millennium bug', now quickly forgotten, to combat whose terrors billions were spent all over the globe.

⁴⁴ Op. cit. p.644.

⁴⁵ I am indebted to my cousin Commodore James Fanshawe, R.N. for his insight that the 'human frailty of greed' is indeed the fundamental problem of economics (letter 21 September 1999). Whilst human nature remains what it is I cannot imagine a cashless society working.

⁴⁶ J. M. Keynes, 'Is the pound over-valued?' *New Republic*, New York, 6 May 1925, quoted in Davies. op. cit. p. 378.

⁴⁷ Op. cit. p.374; see also pp.644, 653.

⁴⁸ Op. cit. p.382.

⁴⁹ Op. cit. pp.664-6.

The third relates how the 'love bug' virus, propagated through the internet in May 2000 by just one young man, is estimated to have crashed in a single day approximately half of the world's computers.

At the best of times, technology makes a very unreliable god. Today it offers greater power to the unscrupulous and the foolish than ever before. To place more and more of our faith in virtual, fiat money, on account of its ever increasing speed and convenience, is to ignore the constancy of human nature and court a wholly unnecessary but highly probable nemesis. *Unless we recover our anchor in commodity money our currency may one day drift away altogether.* This threat applies both to the euro and to the floating pound as at present constituted, in both of which inflation is institutionalised and, since both as fiat money depend ultimately upon the fickleness of human confidence, neither offers any real security against global meltdown.

Learning therefore the lessons of P1 to P8, I would suggest two Resolutions by means of which we can begin to protect our currency and our economy. Taken together they offer a security (from meltdown, P8) and a stability (from price inflation, P1 and P2) which are afforded by none of the available alternatives. The Resolutions may be thought of as

a *discipline* for virtual money (R1), and
an *anchor* for real money (R2).

So:

We should take whatever steps we can to ensure that all forms of virtual money are tethered by firm discipline to those that are more real (R1).

Thirty years ago this would have meant restoring the cash ratio, which, being variable and administered by the private sector, would have offered an excellent tool for regulating the money supply in addition to today's overloaded interest rate mechanism. Should this prove temporarily inappropriate, other means must be devised. Next:

At each juncture we should choose the option which will lead our real money more closely back to a base of gold (R2).

John Laughland suggests a way ahead as,

The Bank of England should be privatised; it should mint a gold coin, the sovereign;⁵⁰ and banknotes should be issued which are convertible on demand into it.⁵¹

For more detailed proposals we may turn to Lord Rees-Mogg's chapter 'Conquering the Monster'.⁵² Even if immediate return proves not to be practical, as Hayek reluctantly concluded,⁵³ nevertheless it could profitably become a longer term intention as we begin to

⁵⁰ Some rough calculations suggest that a gold coin worth £20 would weigh about the same as a present day 20p piece; while one worth £50 would have about the same weight as a 50p piece. So although a gold £5 might not be feasible until prices have fallen markedly, £5 notes could still be redeemable four at a time.

⁵¹ John Laughland, 'The Bank of England should be privatised; it should mint a gold sovereign; and banknotes should be convertible on demand', *The Times*, 12 January 1999.

⁵² *The Reigning Error*, Chapter Five.

⁵³ Davies, op. cit. p.648.

see R1 being carried out. Our model for this process might well be the step by step approach to the gold standard adopted by Britain in the early nineteenth century prior to its formalisation in the Bank Charter Act of 1844.⁵⁴ One option for consideration before actual gold coinage were feasible might be a form of gold bullion standard as a stepping stone, this time at a realistic price. At least we would have the lessons of history to guide us. Following R2, for instance, would have averted the crisis which erupted when the Treasury began to sell off up to half of Britain's gold reserves in July 1999. On that occasion widespread disaster was averted only by the timely intervention of Wim Duisenberg, President of the European Central Bank.

These two Resolutions, if followed, should introduce progressively, even if not painlessly, 'better' behaviour into the economy (P6), including, I predict from P3, the return of the Phillips relationship.

The conclusion drawn from P1 with P6 and demonstrated in Table 1, that under a well behaved economy inflation is in the long run zero, would seem to have considerable implications for presentations of the macroeconomy, such as the familiar AS-AD schema, in which inflation is a major variable.

Since a well behaved economy is ex hypothesi (D5) easier to understand, and therefore to predict and so control than a badly behaved one, there is a strong case for giving a high priority to implementing R1 and R2 so as to restore good behaviour, rather than attempting to manage in the traditional way a badly behaved economy with ever-increasing complexity and opacity. This may mean putting right some historical mistakes.

Failure to grasp the nettle however will deprive us of any hope of returning to an economy which is by its very nature immune to endemic inflation; and will condemn us to live in perpetual and increasing fear of national or global meltdown, from which we will have then no trustworthy defence and no obvious means of recovery.

Security from these twin maladies is offered to us by neither the euro nor the floating pound. However at least if we retain control of our own economy we shall afford ourselves the leisure to determine the way ahead, and the political authority to implement our own decisions, once reached, upon our own currency. Subsequently, those who speak of Britain 'taking a lead' in matters economic may yet find a genuine opportunity to do so.

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⁵⁴ Davies, op. cit. pp.303-315.

Table 1: Prices since 1661 (1661=100)*

Figures for each decade are along a horizontal line: e.g. that for 1667=88, for 1944=195.

	0	1	2	3	4	5	6	7	8	9
166-		100	103	101	96	96	92	88	88	84
167-	85	84	81	80	86	92	88	81	82	87
168-	85	82	82	80	81	83	84	74	74	73
169-	75	76	75	78	87	87	89	90	95	98
170-	85	74	73	70	73	66	75	65	68	79
171-	90	100	75	72	76	77	73	70	69	72
172-	75	74	68	66	70	72	75	71	73	77
173-	70	65	66	63	65	66	64	69	67	66
174-	74	80	73	70	62	63	69	67	70	71
175-	70	67	69	67	67	68	68	81	78	74
176-	73	70	70	74	75	78	79	81	80	73
177-	74	79	87	88	86	84	84	80	87	82
178-	81	85	86	95	93	89	88	87	90	87
179-	92	90	90	95	101	109	114	110	110	118
180-	157	169	129	115	119	138	136	138	151	157
181-	153	152	175	180	155	141	127	140	144	128
182-	115	105	101	104	106	115	102	102	97	95
183-	95	97	95	93	97	97	107	102	103	113
184-	111	105	96	91	94	95	95	100	87	82
185-	82	79	82	97	108	108	108	110	96	100
186-	104	100	104	105	103	102	104	102	100	93
187-	95	100	111	110	105	102	100	95	88	85
188-	89	86	88	88	82	76	72	70	73	73
189-	76	75	71	71	64	62	63	64	68	73
190-	79	75	75	75	72	75	81	84	76	80
191-	84	86	91	91	91	116	146	193	207	222
192-	270	167	141	139	150	146	136	131	129	124
193-	104	89	86	85	103	103	106	110	113	113
194-	152	205	195	177	195	191	191	205	219	227
195-	234	251	269	273	276	287	301	312	319	319
196-	322	333	347	354	365	379	396	404	425	446
197-	474	513	545	595						

*Linked index. Main sources: Mitchell and Deane, *Abstracts of British Historical Statistics*, and Department of Employment, *British Labour Statistics Historical Abstract 1886-1968*.

Basic Series: Schruppeter-Gilboy price index 1661-1697 (1697=100) and 1696-1823 (1701=100); Rousseaux price indexes 1800-1923 (1865 to 1885=100); Sauerbeck Statist price indexes 1846-1938 (1867 to 1877=100); DE index of the internal purchasing power of the pound 1914-1968 (1963=100).

Series rebased on 1661=100 using the multipliers 1697=100, 0.9174; 1701=100, 0.7399; 1865-1885=100, 0.8679; 1867-1877=100, 1.0761; 1963=100, 5.5417.

Source: *The Economist*, July 13, 1974, as reproduced in William Rees-Mogg, *The Reigning Error* (London: Hamish Hamilton, 1974), p.69.