

Free money, currency substitution and regional currencies

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Abstract

A stable currency contributes to the common good, by (inter alia) reducing transactions costs and making the outcomes of long-term contracts more certain. Unfortunately, government monopolies on the issue of money provide an incentive for abuse. There is a temptation to finance expenditure by excessive seigniorage through over-issuing money, generating inflation. In 1976 Friedrich Hayek proposed the "denationalisation" of money, arguing that the idea of legal tender (by which the government monopoly is enforced) should be scrapped, and that competing currencies be allowed to circulate freely. The converse of Gresham's Law should then hold: economic actors could punish issuers of bad money by switching to a superior product (with lower inflation, and hence lower transactions costs). This, in turn, should provide a measure of monetary discipline on governments and central banks, as the loss of ability to issue money (and to exert control thereby on credit creation) is significant.

This paper examines two types of cases where something approaching free money has existed. The first is a case study based on my research into currency substitution in (Turkish) North Cyprus during the 1990's. The Turkish Lira is the official currency of the territory, but was then subject to very high rates of inflation (around 80% per year) and consequent depreciation against other currencies. To shore up the currency, the Turkish Central Bank periodically raised interest rates to well over 100%, causing considerable welfare costs to both Turkey and North Cyprus. While some made windfall profits from the high interest rates, the majority suffered from the effects of rising prices, compounded by fiscal drag that raised the real tax burden on wage-earners. However, unlike in Turkey, residents of North Cyprus were free to open foreign-currency bank accounts, and U.S. dollars, Deutschmarks, and (British) pounds sterling were all generally acceptable for transactions. Data from bank deposits in the Turkish Cypriot banks allow me to

measure the growth of currency substitution, and also changes in the proportions of foreign-currency deposits by currency.

Secondly, the paper looks at the history of private money in the United States. This material draws on my research into the scrip schemes of the Great Depression and later. Although some local currencies have significant benefits to some groups of people, they involve higher transaction costs than using the government's legal tender, as they are not accepted in payment beyond a given locality, and so will tend to be successful only if there are good reasons for using them. In themselves, though, they may provide some form of monetary discipline on monopoly issuers, as potential new entrants into the money supply business should the official currency suffer debasement. Just as Hayek's prophetic warning on the dangers of government abuse of monopoly on currency issue has helped restrain Central Banks, making currency issue a contestable market imposes more discipline on issuers to the benefit of all.

Introduction

Imagine a late night conversation in a dorm near here:

LARRY: We should do something to commemorate the founders of Hillsdale College. A statue, or commission a work of art, or something.

ANNE: Great idea! But how would we pay for it? People are fed up with collections, requests for money for churches, support the troops, get the troops out, support Mitt Romney, ditch Hillary; support Denis Kucinich...

RUTH: We could have a sponsored car wash...

ANNE: Been there, done, that, and last time we didn't make much. With the drought and this global warming thing, people have begun to think that, for cars, staying home and staying dirty is the thing.

ADAM: We could just issue our own money.

LARRY: But who would use it?

ADAM: Well, everyone. We'd get people to buy it for dollars, and we'd get the local shops to accept it – and the College as well, of course – and so we'd have money to buy the statue, or artwork, or whatever.

RUTH: So we get everyone to use our money, and we spend their dollars on the statue. Great – until people get fed up with Hillsdale money, and want their real dollars back. We won't have them, and I foresee an unpleasant conversation with the Police Department.

ADAM: No, we have their dollars to give them back, if they want them.

RUTH: But then, if we have to store the dollars, we won't have any money for the artwork. And we'll have to worry about somebody breaking in to Larry's room and stealing all those dollars. Not the greatest plan in the history of the world, Adam.

ADAM: No, we don't store the dollars, except for a few. We put them in the bank. After a year, the interest we earn from the bank will be enough to pay for the statue. And it will have cost nobody anything. All we have to do is to persuade people that it's good to use our money rather than dollars. Think of the advantages: businesses will like it, because it means people will spend their money locally. People round here will like it, because they can say that they don't depend on the government for their money; it's genuinely free money. And even the bank will like it – see how they're always trying to persuade us to open accounts with them?

LARRY: So, after a year, we get the statue, the people of Hillsdale feel good, and no-one loses, right?

I'm guessing that conversations like this don't (often) happen; or, if they do, no-one acts on Adam's ideas. That is, for most of the time, people are sufficiently satisfied with using government-issued money not to seek out alternatives, even when the Government makes no attempt to enforce its monopoly on monetary emissions by legal means.¹

¹ According to Lewis B. Solomon (Local Currency: A Legal and Policy Analysis, *The Kansas Journal of Law and Public Policy*, Winter 1996 pp. 59-86) neither the Constitution nor Federal Law prevents the private issue of money in the United States, although states are forbidden from emitting bills of credit, and some state codes prohibit the paying of workers in scrip. Vermont would seem to be the most scrip-friendly state at present.

It is generally thought that monopolies are bad – reducing choice and consumer surplus. So it makes sense to pose the question as to whether the seeming monopoly powers that governments today have over the issue of money is truly beneficial. Do the benefits of a medium of exchange that must be accepted by legal decree outweigh the costs involved, especially when there is the potential for a government to resort to inflation as a way of financing spending?

There are obvious advantages of having uniformity in money. Easily recognising what is, and what is not, money is obviously helpful. Before the Civil War, when State-chartered banks issued bank notes, both notes of dubious value (from wildcat banks) and counterfeits were common. Notes traded at a discount from par based on the distance from the issuing bank, and estimates put the level of counterfeits at around a third or more of the total notes in circulation.² Bank Note Reporters, books that listed all known legitimate notes and details of known counterfeits, were as necessary to businesses as computer antivirus software is today.

A common unit of account makes transactions easier; money is more readily identified as such, and conversion costs are reduced. One of the benefits touted for the Euro for the citizens of EU member states that have adopted it is the greater transparency of prices across borders, the elimination of the costs of converting between currencies, and the elimination of exchange rate risk on delayed payments across borders.³ The chief perceived costs for these countries that decided to adopt the Euro were largely the threats of price-rises, the costs of converting machines to accept the new money, and the confusion it was felt people would feel from having to deal with an unfamiliar set of notes and coins.⁴

² William P. Dolan, *United States Large Size Paper Money 1861-1923* (Utica, NY: self-published, 1968) p. 15

³ There is now a vast literature on the costs and benefits of the adoption of the Euro in 2002. The European Union's website (at http://ec.europa.eu/economy_finance/euro/benefits/benefits_main_en.htm) lists the major advantages (although the theoretical work on optimal currency areas is not reviewed).

⁴ A Reuters news report, Cypriots puzzle over coming currency change (15th June, 2007), documents examples of these types of fears. Similar fears were voiced at the time of Britain's decimalisation in 1971; fears that were largely groundless (see Chaos Theory, *The Guardian* 15th August 2007 for a modern version of how Britons coped). The changeover to the Euro, like British decimalization, proceeded more quickly,

A stable currency that maintains its purchasing power over time confers further benefits. The risks involved in accepting deferred payments are reduced, encouraging the making of contracts, and so encouraging investment, stimulating output and economic growth. While a low rate of inflation, as long as it is stable and predictable, may be beneficial, the fear is that it is all too easy for inflation to get out of hand. The problem with a monopoly on the issue of currency is that the issuer would seem, *prima facie*, to have an incentive to overissue. The issuer can take advantage of the seigniorage that accrues to the first user, while imposing costs (in terms of reductions in purchasing power) on subsequent users and on those holding previously-issued money. Turkey during the 1980's presents a good example of the abuse of this power: to finance the building of the Atatürk Dam (and the rest of the Southeast Anatolia irrigation project). Turgut Özal deliberately created large quantities of new money, producing inflation rates of well over 60% per year. To prevent such abuses, Friedrich Hayek recommended that the only way to ensure monetary stability was to remove the monopoly on monetary issue held by governments: to denationalise money. Only in this way, he thought, could the cycle of inflation and deflation be broken, government spending constrained, and economic nationalism weakened. Or, if this idea were deemed impractical, then a gold standard system was the least worst of the remaining options, as it limits the ability of a government to issue money.⁵

But there may be some significant impediments to a monopoly issuer's ability to produce too much money. Firstly, it may be possible for consumers and businesses to "punish" the issuer of money by reducing their holdings of money – by switching to other monies or by moving money into other kinds of assets. Turks have long kept savings in gold, something the high inflation of the 1980's and 90's did nothing to discourage. The net result is likely to be (even) higher inflation, as the velocity of circulation increases as the money supply rises. Secondly, realising this, and because of the costs of overissuing in

and with much less fuss, than had been predicted. More seriously, one can join Britain's Prime Minister, Gordon Brown in doubting that Euroland really is an optimal currency area.

⁵ F. A. Hayek, *Denationalisation of Money* (London: Institute of Economic Affairs, Hobart Paper 70, 1976, 1978, 1990).

terms of foregone investment, the issuer may have an incentive to exercise restraint. To be able to receive a continuing income from seigniorage, it is in the issuer's interests to aim for high growth in incomes, which generates greater demand for money, which can then be met by increasing the money supply without increasing inflation. Further, given the poor reputations of governments for the operation of appropriate monetary policy to ensure price stability, governments might try to commit themselves to controlling monetary emissions, either by some constitutional rule, or through ceding monetary control to an independent central bank, or (for small countries) adopting a currency board arrangement. In as far as the private sector finds these commitments credible; a benign monopoly can be the result.

An alternative policy would be to remove the issuer's monopoly: to allow free competition between different types of money, Hayek's denationalization of money. The rest of this paper explores this option by examining two case studies: North Cyprus in the period from 1987, and the United States in the 1930's. In both of these cases, the official legal tender was defective: high inflation in Turkey meant that the Turkish Lira, the *de facto* official currency of North Cyprus had ceased to be a good store of value (there was too much money); whereas in the U.S. Great Depression the problem was a lack of purchasing power – a cash shortage plus hoarding of banknotes (there was too little money). When a currency ceases to be a good store of value currency substitution (“dollarisation”) is the likely result; when the only available monies cease to be an effective medium of exchange, or is defective in some other way, some form of monetary substitute – scrip – is likely to appear. However, if there are no strong reasons not to use the official government-issued money, the use of substitutes is likely to be very limited.

North Cyprus

The self-declared Turkish Republic of Northern Cyprus (TRNC) covers the northern third of the Mediterranean island of Cyprus. It is the result of the division on the island in 1974, when Turkish troops invaded to protect the Turkish Cypriot community from

potential genocide after a coup engineered in Greece installed a former terrorist as head of the (Greek) Cypriot government. The TRNC is recognized only by Turkey, and is subject to a number of embargoes.⁶ As a result, the only foreign banks operating are from Turkey, which compete with a number of local Turkish Cypriot banks.

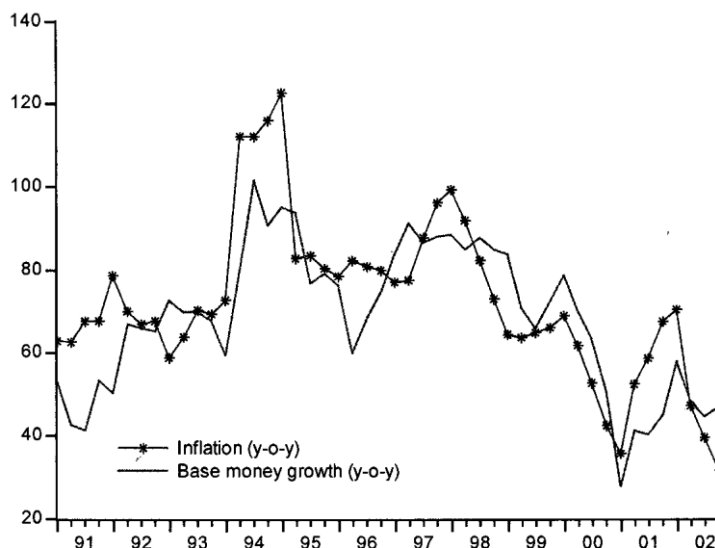
The official currency of Cyprus is the Cyprus pound (CYP), which is to be replaced with the euro in January 2008. The Cyprus pound was held at parity with sterling via a pseudo-currency board arrangement from independence until the collapse of the Bretton Woods system in the early 1970's. It continued to be used in North Cyprus until 1978, when the Turkish Lira replaced it, and all CYP-denominated bank accounts were changed into Turkish Lira (TRL) at the then-official exchange rate.⁷

However, no restrictions were placed on the use of foreign currencies, or on the holding of foreign currency deposits in local banks, and, given the high rates of inflation associated with the Turkish Lira there was a considerable incentive to keep one's savings in foreign currencies.⁸

⁶ The recent history of Cyprus is contested, and used as a weapon by both Greek and Turkish Cypriots to justify their own positions. A vast literature exists on the causes and cures of the "Cyprus Problem".

⁷ Which, of course, was not as beneficial as the black market rate? David Matthews (*The Cyprus Tapes* London and Nicosia, Rüstem, 1987) recounts the surreal experience of trying to obtain TL for sterling at a branch of Barclay's Bank: the teller is prepared only to exchange the sterling into Cyprus Pounds, as that is the official currency of Cyprus. He does, however, suggest that Mr Matthews just visit one of the exchange bureaux to obtain TL for the Cyprus pounds.

⁸ Unlike their compatriots in Turkey, the Turkish Cypriots were more likely to use foreign currency rather than gold for their savings.



Base Money Growth and Inflation in Turkey, 1991-2002

Source: İlker Domaç, *Explaining and Forecasting Inflation in Turkey*

In addition, by the late 1980's, an inflow of foreign currency from the arrival of expatriate Turks from Germany on holiday, of students from third countries (higher education was seen as an engine of economic growth),⁹ British expatriates and an Austrian United Nations contingent, plus a flow of Cyprus pounds from Turkish Cypriots employed by the Dhekelia British Sovereign Base Area administration, meant that it was expedient for businesses to accept foreign currencies for transactions. Everyday transactions for groceries and the like took place in TRL (which was still a reasonable medium of exchange, as Turkey avoided the excesses of hyperinflation), but prices for expensive goods were more often quoted in foreign currency. Jewellery was generally priced in Deutschmarks (DEM, as German Turks were a major market), rents in United States dollars (USD – a major market being University students), houses and land in pounds sterling (GBP, as a substitute for Cyprus Pounds, and because of the large number of repatriating London Cypriots). Any of the above-mentioned currencies were accepted; businesses displayed their exchange rates, kept a calculator handy, and, during the periodic Turkish Lira crises, one ear to the radio to hear of any significant exchange rate movements. Banks offered both current and deposit accounts in TRL, GBP, USD and

⁹ See Sevgin Akış and Jonathan Warner, Development through higher education: the case of North Cyprus *Sosyal Bilimler Dergisi* (Journal of Social Sciences) vol. 2 No. 1 1995 Bosphorous University, Istanbul.

DEM, providing a natural experiment to examine the relative attractiveness of the currencies to account holders.

Over time, the constant-price value of both Turkish Lira and foreign currency deposits has increased. The proportion of deposits in foreign currency has fluctuated (measured in current TRL terms), but this fluctuation comprises two separate effects. Firstly, the current TRL value of foreign currency deposits will change as the TRL exchange rate changes. During the 1980's and 1990's the TRL suffered from periods of crisis and rapid depreciation, interspersed with periods of near-stability. For example, in February 1994 inflation peaked at around 125%; but after the TRL collapsed early in the year, the Turkish Central Bank raised interest rates on one-year TRL-denominated bonds to 200%, ensuring that the currency remained stable for the rest of the year.¹⁰ Appropriate switching between currencies to take advantage of high real interest rates (or by anticipating the Turkish Central Bank's reaction to a plummeting currency) opened up profit opportunities for speculators with a high risk tolerance. Given that the TRL value of foreign deposits increased rapidly, it seems that few bank depositors in North Cyprus took advantage of this opportunity, being instead happy to sit on the gains they had made. The table below shows the proportions of deposits in TRL and foreign currency, valued in current values at market exchange rates; the index figures show how the proportions of deposits in TRL and foreign exchange have changed since 1987. The large increase in the relative size of foreign exchange deposits in 1994 is largely explained by the rapid decline in the TRL's exchange value; the recovery since 1998 at least partial by the relatively high rates of interest paid on Turkish Lira deposits, and the considerable real appreciation of the TRL in recent years, especially following the successful stabilization plan of the Justice and Development Party government, elected in 2002.

¹⁰ Given the monetary policies of the Turkish administrations, it is not surprising that İsmail Seyrek (Purchasing Power Parity and the Turkish Exchange Rate, *Akdeniz İ.İ.B.F. Dergisi* 6 [2003] pp. 151-169) found that Purchasing Power Parity did not explain short-run changes in the TRL exchange rate.

DATE	%TRL	%FOREX	TRL index	FOREX index
1987	57.32	42.77	100	100
1988	47.73	52.27	83.	122
1989	61.17	38.83	107	91
1990	67.33	32.67	118	77
1991	59.70	40.23	104	94
1992	54.01	45.99	94	108
1993	50.10	49.90	88	117
1994	33.69	66.31	59	155
1995	33.85	66.15	59	155
1996	30.56	69.44	53	162
1997	31.11	68.89	54	161
1998	32.17	67.83	56	159
1999	35.95	64.05	63	150
2000	43.03	56.97	75	133
2001	36.17	63.83	63	149
2002	41.12	58.88	72	138
2003	46.02	53.98	80	126
2004	43.33	56.67	76	133
2005	50.36	49.64	88	116
2006	49.47	50.53	86	118

Source: calculated from data provided by Ramadan Erkiner of the TRNC Central Bank

Given the high rates of inflation of TRL prices in Turkey, this means that the real exchange rate of the TRL went through cycles of steady rises, followed by large corrections.

Secondly, changes in the relative size of TL and foreign currency deposits would be due to depositors' switching between currencies. To isolate this latter effect, I examine the growth of relative shares of currency deposits in each of the four currencies in which bank accounts were generally available.¹¹

¹¹ The Euro replaced the Deutschmark in 2002. I have converted reported Euro deposits back into DEM at the exchange rate used for conversion of the DEM when the Euro was launched.

Date	GBP Index	DEM/EUR Index	USD Index	CYP Index
Dec-87	100	100	100	100
Jul-88	103	101	92	105
Dec-88	114	90	85	107
Apr-89	113	80	96	110
Jun-89	117	81	88	117
Aug-89	122	80	80	131
Oct-90	112	76	100	200
Feb-91	115	68	103	220
Jun-91	116	63	106	241
Apr-92	119	67	98	215
Oct-92	131	60	87	110
Feb-93	124	61	96	191
Dec-94	134	53	90	152
Mar-96	134	52	89	146
Dec-97	135	48	93	127
Jan-02	132	30	120	79
Dec-02	128	41	116	77
Dec-03	130	45	107	105
Dec-04	125	58	100	116
Dec-05	129	71	80	119
Dec-06	114	76	100	121
May-07	107	85	103	103

Source: Calculated from various editions of the TRNC Central Bank Review, and from statistics on the Bank's website. See appendix for method of calculation and supporting data.

The table shows the proportion of total foreign exchange deposits by currency, relative to the proportion in the base period (December 1987). Thus a number greater than 100 shows that a relatively greater proportion of foreign exchange deposits were held in that currency, a number of less than 100 indicates a smaller proportion¹². The volatility of the CYP index is probably due to the relatively small size of the deposits – generally around one per cent of the total foreign currency deposits in the North Cyprus banking system, plus enduring fears that CYP deposits might once again be seized and compulsorily converted to TRL¹³.

¹² The rationale behind presenting the data this way is that the effects of exchange rate changes between the currencies are eliminated; however, differential interest rates paid on the deposits would mean that the relative size of the deposits in the various currencies would change over time, if no additional deposits or withdrawals were made. See appendix.

¹³ The low levels recorded in 2002 perhaps reflect the increased sabre-rattling at that time; after the *de facto* border between the two parts of the island opened in April 2003, the CYP once again became attractive.

There are a few clear trends to be seen: the proportion of foreign deposits in USD fluctuates, but seems to return to the same relative size. The relative attractiveness of DEM deposits declined prior to 2002: the introduction of the Euro has no doubt caused EUR deposits to exceed the old DEM proportions. To say very much more based on the data would be to speculate.¹⁴

If one makes the assumption that the choice of currency in which to keep one's savings is made on a rational basis, then it would seem that there is considerable inertia, or perhaps satisficing behaviour. There is no strong evidence of currency-switching to take account of interest rate differentials. There may, of course, be speculation based on the expected future trends in the relative value of the different currencies, but the effects of the actions of different speculators would then largely cancel each other out. One might predict that foreign exchange deposits will fall as a proportion of total deposits over time, as the stability of the TRL has increased dramatically since 2002, with inflation down to below 10%. But the failure to squeeze inflation further, the political uncertainty in Turkey which might cause a run on the TRL, and the use of the Euro in South Cyprus from next year makes it prudent to keep deposits in Euros, at least.

Scrip and Community Currencies: The Great Depression and Beyond

The downside of using foreign currency when your own government's currency is defective is that the seigniorage obtained from producing the currency flows to a foreign country. Using one's own government's money means that the seigniorage remains within the country, but may not be used for the benefit of the region where I live. The people of Hillsdale don't get their statue this way. One complaint in the United States between the Civil War and 1913 concerned the flow of funds to New York, as the

With (South) Cyprus adopting the Euro in January 2008, one would expect the relative attractiveness of the Euro to rise over the next several months.

¹⁴ Thus, for example, the rise and then fall in the proportion of sterling deposits might be due to the growth in the number of repatriating London Cypriots, or to changes in perceived volatility in sterling, or be a consequence of the fall of the DEM and rise of the Euro.

National Bank Act of 1863 allowed banks to deposit some of their reserve requirements with banks in major cities, while still being able to list those deposits as reserves. In New York, higher rates of return could be earned on the reserves.¹⁵ Local currencies are an attempt to keep purchasing power within a community or region, and/or to keep the seigniorage for good works within the community, as our mythical student friends were discussing. Unlike North Cyprus, there is no history of the significant use of foreign currency; foreign notes were not readily available.

The Great Depression in the United States was probably made worse by inappropriate monetary policy.¹⁶ Loss of output, rising unemployment and deflation were compounded by a lack of cash. Banks folded at a worrying rate, encouraging depositors to remove funds from banks in anticipation of potential trouble, and to keep cash at home under a mattress. As prices were falling, cash produced a positive return, and spending was discouraged. Cash shortages meant that more attention was given to the production and use of substitutes for cash.

In various places across the country, scrip schemes – the issue of local currencies – sprang up with the aim of financing work for the unemployed, and/or of stimulating business. The use of scrip wasn't new: scrip had long been issued by mining and lumber companies¹⁷ and by banks and clearing house associations during financial panics (such as that in 1907).¹⁸ During the Bank Holidays just prior to and after President Roosevelt's inauguration, clearing house and merchant-issued scrip once again appeared. But local

¹⁵ The New York banks could offer higher rates as they used the inflow of deposits for stock market call loans, with worrying consequences in 1907 and 1929. See Thibault de Saint Phalle, *The Federal Reserve: An Intentional Mystery* (New York: Praeger, 1985) pp. 47-8.

¹⁶ Milton Friedman and Anna Schwartz *A monetary history of the United States, 1867-1960* (Princeton: Princeton University Press, 1963) chapter 7. "The failure of the Federal Reserve System to prevent the [monetary] collapse reflected not the impotence of monetary policy but rather the particular policies followed by the monetary authorities and, in smaller degree, the particular monetary arrangements in existence" (p. 300).

¹⁷ See, for example, Richard H. Timberlake, Private Production of Scrip-Money in the Isolated Community *Journal of Money, Credit and Banking* Vol. 19 Issue 4 (November 1987) pp. 437-447. Such company scrip has had a bad reputation, something Price V. Fishback addresses in his *Did Coal Miners "Owe Their Souls to the Company Store"?* Theory and Evidence from the Early 1900s *The Journal of Economic History*, Vol. 46 Issue 4 (December 1986) pp. 1011-1029.

¹⁸ For a contemporary description see A Piatt Andrew, Substitutes for Cash in the Panic of 1907, *The Quarterly Journal of Economics* vol. 22 Issue 4 (August 1908) pp. 497-516.

communities also issued scrip, perhaps the most interesting of these experiments being the self-redeeming stamp scrips. These mirrored the ideas of Silvio Gesell, but with a rather different motivation. Gesellian currencies depreciate in value over time, which Gesell saw as removing a perceived unfairness that allows money-holders to force holders of goods to lower prices by refusing to buy. To maintain their purchasing power, a stamp must be affixed to the money every week or so. Stamps would be sold by the issuing authority, producing a *de facto* tax on hoarding money and encouraging the rate of circulation. While the idea has never been popular, Keynes saw that Gesell had part of the answer to the problem of a liquidity trap that rendered monetary policy impotent, but abolishing the zero per cent lower bound on nominal interest rates.¹⁹ Interestingly, perhaps, it seems that a Gesellian type policy was not seriously considered during the long deflation in Japan during the 1990's, despite its promise in eliminating the lower limit of zero on nominal interest rates.²⁰

Instead, the main purpose of the stamped monies of the 1930's was to generate financial resources for the relief of the unemployed: as money ran short, property taxes remained unpaid and unemployment rose, local governments found the burden of providing for the poor increasingly difficult. Although stamp scrip schemes were used in California in early 1932, it was the scheme in Hawarden, Iowa, that captured the national imagination, being featured in newspaper articles across the country, in a Pathe newsreel report, and in at least one book.²¹ A visit from the Yale economist Irving Fisher, who was advocating for a national stamp scrip scheme at the time, suggested that this was more than just a local solution. The originator of the Hawarden Plan, Charles J. Zylstra, was elected to the

¹⁹ Gesell's ideas are explained in part 4 ("Free Money") of his *The Natural Economic Order* (originally published in German in 1906; translated into English and published by *** in 1929. Keynes thought that Gesell was on the right track, but that his theory was incomplete, see *The General Theory of Employment, Interest and Money* (1936; Harcourt, Bruce and World, 1965) pp.355 ff.

²⁰ See Marvin Goodfriend, Overcoming the Zero Bound on Interest Rate Policy *Journal of Money, Credit and Banking* Vol. 32 No. 4 (November 2000) pp. 1007-1035, and Willem H. Buiter and Nikolaos Panigirtzoglou, Overcoming the Zero Bound on Nominal Interest Rates with a Negative Interest on Currency: Gesell's Solution *The Economic Journal* Vol. 113 (October) 2003, pp. 723-746. On a proposed solution for Japan see Mitsuhiro Fukao. The Effects of 'Gesell' (Currency) Taxes in Promoting Japan's Economic Recovery, Hi-Stat Discussion Paper No. 94, downloaded 16th August 2007 from <http://ideas.repec.org/p/hst/hstdps/d05-94.html>.

²¹ Wayne Weishaar and Wayne W. Parrish, *Men Without Money* (New York: G P Putnam's Sons, 1933).

Iowa legislature on the strength of his idea, and was also invited to address organizations such as the Russell Sage foundation.²²

The Hawarden scheme worked like this: unemployed men were put to work on projects of municipal improvement and paid \$1.60 for an eight-hour day, 60c in cash, and a \$1 scrip certificate, issued by the City Council. They could use the certificate to buy a dollar's worth of goods at any of the participating local businesses, paying 3c for a redemption stamp (issued by, and purchased from the City Council) to affix to the certificate. The certificate could then be used by the business for further local purchases of \$1, with another stamp being affixed each time the scrip changed hands. When a total of 36 stamps had been affixed, the scrip could then be redeemed at par at the City offices. The proceeds from the stamp sales meant that there was always enough money in the kitty to redeem the incoming scrip. The initial \$300 issue of scrip would have done \$10,800 worth of business by the time it was redeemed, business, argued Zylstra and his fellow scrip evangelists, that otherwise would not have been done. The poor were helped, the hungry fed, community cohesion fostered as people could Do Something together to fight a great national problem, and business stimulated all at no cost to the municipal finances.²³ All this for a three-cent surcharge, a *de facto* sales tax, on each scrip transaction!

Zylstra's instructions on how to use the scrip (displayed in all businesses accepting it) ended with the declaration:

The 3 cent redemption stamp represents a 3% discount on that part of our transactions done with coupons. This coupon would not have been here except through the hands of an unemployed member of our community. All new business so created also directs 36 times this amount of business to be done in our city and 3% is therefore a reasonable amount spent for advertising.

And on the back of each scrip certificate was written:

²² "Makes Trip to New York", *Hawarden Independent* November 2, 1933.

²³ Hawarden remained in surplus throughout the Depression; ironically, it could probably have managed without scrip.

BY USING THIS COUPON IN YOUR TRANSACTIONS YOU PROMOTE
EMPLOYMENT AND AN EARLY RETURN TO PROSPERITY. YOUR 3
CENT STAMP MAKES THIS POSSIBLE.

The idea of stamped scrip looks good for our students' plan as well. If they could pay for the statue with scrip, then the sale of stamps would raise enough money to redeem the certificates as they came in, meaning that the statue could be built at no cost to them.

After seeing Hawarden's example, other towns in Iowa and further afield adopted similar schemes, albeit with local variations.²⁴ Fisher advocated a system whereby a stamp had to be affixed every two weeks (in Gesellian fashion),²⁵ which was tried in communities such as Red Oak, Iowa. Certificates of lower face value (50c rather than a dollar) seemed to work better, as there was less of a demand for change.²⁶ Schemes where a stamp had to be affixed at each transaction, or on a certain date if the scrip were not used, tended to work better than ones that required a stamp only for each transaction. If real money were available, why not use it, rather than having to pay 3c (or whatever) for the privilege of spending it? Thus the Chamber of Commerce of Pella (Iowa), which issued scrip in early 1933, based on the Hawarden model, was still debating how to get the remaining certificates out of circulation as late as the middle of 1937; conversely, South Haven, Michigan, which required stamps twice a week, or Rock Rapids, Iowa, which required a stamp every five days, worked much more effectively and quickly.

Attempts to extend stamped scrip more broadly did not fare well. In early 1933 Zylstra pushed a bill through the Iowa state legislature permitting counties to issue scrip (one

²⁴ For an account of stamp scrip schemes in Oklahoma see Loren Gatch, "Money Matters: The Stamp Scrip Movement in Depression-Era Oklahoma" *The Chronicles of Oklahoma* Vol. LXXXIV (Fall 2006) pp. 260-287. For the Hawarden scheme see Sarah Elvins, Scrip Money and Slump Cures: Iowa's Experiments with Alternative Currency during the Great Depression *The Annals of Iowa* Third Series, Vol. 64 No. 3 (Summer) 2005 pp. 221-245 and my Charles Zylstra and Stamped Scrip: How a Dutch Immigrant Sought a Solution to the Great Depression, in *Dutch Immigrants on the Plains* (ed. Paul Fessler, et al., Holland, Michigan: The Joint Archives of Holland, 2006) pp.162-180. *The Standard Catalog of Depression Scrip of the United States* by Ralph A. Mitchell and Neil Shafer (Iola, WI: Krause Publications, 1984) gives a comprehensive listing of issues across the country.

²⁵ See Irving Fisher, *Stamp Scrip* (New York: Adelphi 1933)

²⁶ Change was generally given in the form of a credit note, or the purchaser was asked to pay for an extra stamp. As a dollar in 1932 was worth the equivalent of over \$13 today, this problem was significant for many scrip users.

dollar certificates, requiring fifty 2c stamps for redemption), but only three (of 99) counties did so. So unsuccessful was the largest issue, in Polk County (which includes Des Moines) that it produced a law suit from an aggrieved citizen, and further legislation to allow redemption of the scrip notes a year earlier than had been initially mandated.²⁷ By May 1934 the *New York Times* reported that scrip was rapidly losing its attractiveness, as “real cash from Federal CWA [Civil Works Administration] and PWA [Public Works Administration] sources and improving business indices apparently have lessened desire for the paper certificates.”²⁸ The Social Credit government in Alberta tried a large Province-wide issue of scrip in 1936 (a dollar certificate requiring a 1c stamp a week for 104 weeks), but this was abandoned after only eight months.²⁹

Scrip quickly lost its allure when “real” money became available. There was some thought at the beginning of the Roosevelt Bank Holiday that a nation-wide scrip scheme might be the answer, but this idea was scotched within a week of Roosevelt’s inauguration.³⁰ Instead, new Federal Reserve notes began to flow through the system, making stamp scrip unattractive, although there were attempts to revive scrip through the Townsend Plan and the California Ham and Eggs campaign. This sought to provide pensions (allowing the Old Folk to breakfast on ham and eggs each week when the new scrip certificate arrived).³¹

There are still advocates of Gesellian money today, particularly in Germany, where most of the current regional currencies are *Schwundgeld* (depreciating money). As Gerhard

²⁷ Details in my *County Stamp Scrip in Iowa 1933-34*, paper presented at the Missouri Valley Historical Society annual meeting, Omaha, March 2006

²⁸ Real Money Makes Iowa Forget Scrip, *New York Times* May 6, 1934 p. N2. The headline was somewhat of an exaggeration: the smaller county schemes in Winneshiek and Cass Counties were still functioning relatively smoothly, and scrip was still circulating (albeit slowly) in several towns.

²⁹ An excellent contemporary analysis argues that the government was not really committed to scrip – the main reason for the issue was to be seen to be Doing Something while it tried to work out how to implement Major Douglas’s obscure ideas. See V. F. Coe, “Dated Stamp Scrip in Alberta,” *The Canadian Journal of Economics and Political Science* vol. 4 no. 1 (February 1938), pp. 60-91

³⁰ During the first week of the Roosevelt Administration Treasury Secretary Woodin seemed to indicate that the President was in favour of a nation-wide scrip plan, only to reverse himself a few days later. But he may well have had clearing-house scrip in mind, rather than stamp scrip.

³¹ See, for example, Daniel Hanne, “Ham and Eggs” Left and Right: The California Scrip Pension Initiatives of 1938 and 1939 *Southern California Quarterly* No. 82 (2000) pp. 183-230.

Rösl demonstrates, such currencies lead to net welfare losses, when an alternative is available.³² The prediction, therefore, is that their usage will not expand beyond a core group of enthusiasts, for whom the psychological benefits of making and using their own money exceeds the costs. Not good news for our students, for whose project stamped money would be a great way of raising funds.

Other regional currencies that do not rely on stamps also exist. The motivation for establishing them is often to keep business within a defined geographic area, and to prevent the flow of seigniorage to the centre.³³ Also, as some of the notes and coins produced are attractive to collectors, there is (real) money to be made from issuing nice-looking currency. For example, Salt Spring Island, a 70 square-mile island off Vancouver, does well from the large number of tourists who visit each year, and take away Salt Spring dollars as souvenirs.³⁴ If Hillsdale had a thriving tourist trade, our students might be able to emulate this.

More prosaically, the modern Chamber of Commerce scrip (HAPP scrip) in Hawarden can be purchased by businesses as a way of rewarding their employees (or customers), while ensuring that the scrip is spent locally. At Christmas, in some recent years the Chamber of Commerce will sell scrip at a discount to consumers, to encourage spending at home.³⁵ Similarly, in Sioux Center, Iowa, a Charity Scrip scheme is in operation to raise money for the local Christian school, a type of scrip that might work for the would-be statue-builders. Merchants take the school-issued scrip at par, but pay a proportion of the receipt (usually 5%) back to the school. But this type of scrip requires that people see the benefit of the scrip before they will use it. The main users of the Sioux Center scrip are the parents (or grandparents) of Christian School children, as the proceeds go to

³² Gerhard Rösl Regional Currencies in Germany – local competition for the Euro? Deutsche Bundesbank Discussion Paper Series One: Economic Studies No. 43/2006. Rösl estimates the net welfare losses of all Gesellian currencies in Germany at roughly €200,000, which is negligibly small. However, if all the Euros in Germany were replaced by Gesellian currency, the welfare loss would be around €130 billion.

³³ Deidre Kent, *Healthy Money, Healthy Planet* (Nelson, New Zealand: Craig Potton, 2005) examines the role of various kinds of local currency in promoting local development.

³⁴ See the website, <http://www.saltspringdollars.com/welcome.htm> for details. It's significant that the "home page" for the currency is aimed primarily at collectors.

³⁵ Although, because of the way sales tax operates, an across-the-board price reduction of 15% would be worth more than scrip sold at a 15% discount, the Chamber of Commerce prefers the scrip route.

named accounts for that child's school fees. Perhaps this is a possibility for the students, but only if there is sufficient local support for the statue. Otherwise, why would anyone want the scrip?

Conclusions

In general, people are happy to use government-issued currency, unless there is something defective about it, or there are financial (or other) advantages to be gained from using a substitute.³⁶ In most cases, the first choice of a substitute will be a foreign currency, that is, money issued by another government. It is only when this avenue is unavailable that thoughts will turn to scrip, which, in general, is less generally acceptable than a "real" currency.

Despite predictions to the contrary, the Euro has not achieved the status of general acceptability in Britain; people are happy to stick with the GBP. Regional currencies in Germany (despite the argument concerning keeping seigniorage local) have not been run away successes. High transactions costs tend to outweigh the benefits of these local currencies. Even if there are no stamping costs, the costs of using such currencies are greater than those of using the country's legal tender, if only in terms of inconvenience in not being able to use it other than at a specified set of local businesses..

Therefore, a government monopoly on the issue of money is not likely to be challenged, unless the money is defective as a store of value or a medium of exchange. This means that the government probably has no need to enforce a currency monopoly, unless it plans to abuse that monopoly power. In the absence of any legal restrictions on competitors, currency-issuing becomes a contestable market, with relatively low entry costs. As these entry costs fall (through electronic trading of real and new electronic currencies), people gain more choice in the money they chose to use, thus making the exploitation of a

³⁶ Perhaps the scrip is available at a discount, or some theft-proof medium of exchange is necessary. For examples, see my paper *Money, Community and Community Money*, presented at the Monetary Regionalisation Conference, Bauhaus Universität, Weimar, September 2006.

monopoly on currency issuance more difficult. More bad news for our students, it seems: they could face competition in their attempt to create a local currency. Perhaps a car wash is necessary, after all.

Appendix

The attempt to calculate change in allocation of bank balances between different currencies in North Cyprus presents a methodological problem. To convert deposits into a common unit using current exchange rates means that the effects of exchange rate movements will be captured, along with any change in the own-currency balances of each currency. To strip out (most) of the effects of exchange rate movements, I indexed the number of units of the currency, as a proportion of the total units of foreign currency, to the proportionate amount in 1987. (This produces the same results as converting all currencies to a common unit, using 1987 exchange rates.) There seems to be no strong correlations between currency choice, as expressed as proportions of bank deposits, and the exchange rates and interest rate differentials between the currencies. Inertia rather than speculation seems to be the main motivation. Data, unfortunately, are incomplete: the TRNC Central Bank stopped publishing detailed data in 1998, and has data only from 2002 on its website (<http://www.kkctcmb.trnc.net/>). The data from which the second table in the text is derived are below. A re-working of the figures to include only term deposits accounts (both 6-month and one-year accounts are reported) does not lead to any substantial differences. The proportion of deposits (sight and term) in external accounts declined substantially during the 1990's.

Date	GBP	DEM	EUR	USD	CYP	Total USD	Total units	GBP Unit share	DEM Unit share	USD Unit share	CYP unit share	GBP Index share
Dec-87	20899.4	12796.1		11710.8	377.8	59122	45784.1	45.64772	27.94879	25.57831	0.825177	100
Jul-88	22641.3	13588.9		11332.9	417.6	61901.8	47980.7	47.18835	28.3216	23.61971	0.87035	103.375
Dec-88	32956.6	15991		13818.5	560.9	83506.1	63327	52.04194	25.25147	21.82087	0.88572	114.0078
Apr-89	33808.3	14780.7		16176.6	596.2	82229.8	65361.8	51.72486	22.61367	24.74932	0.912154	113.3131
Jun-89	35992.4	15237.5		15077.5	648.7	80404.7	66956.1	53.75522	22.75745	22.51849	0.968844	117.761
Aug-89	37987.8	15226.9		13884.4	735.6	83120.7	67834.7	56.00054	22.44707	20.46799	1.084401	122.6798
Oct-90	31921.8	13240.9		15789.4	1025.1	88659.7	61977.2	51.50572	21.36415	25.47614	1.653995	112.8331
Feb-91	31759	11491.8		15825.7	1096	86398	60172.5	52.77992	19.09809	26.30055	1.82143	115.6244
Jun-91	35184	11708.7		17927.9	1317.1	83848.5	66137.7	53.1981	17.70352	27.10693	1.991451	116.5405
Apr-92	55862.6	19193.6		25680.9	1818.5	138203.7	102555.6	54.47055	18.71531	25.04095	1.773184	119.3281
Oct-92	77154.8	21682.5		28664.3	1169.4	167970.8	128671	59.96285	16.85112	22.2772	0.908829	131.36
Feb-93	78513.2	23758.3		34205.3	2180.7	165465.4	138657.5	56.62384	17.13452	24.66891	1.572724	124.0453
Dec-94	132695.6	32112.5		50201	2732.4	283394.2	217741.5	60.9418	14.74799	23.05532	1.254883	133.5046
Mar-96	154602.1	36608.4		57620.4	3036.7	324363.6	251867.6	61.38229	14.53478	22.87726	1.205673	134.4696
Dec-97	207190	44685.6		80201.1	3513.9	454764.8	335590.6	61.73892	13.31551	23.89849	1.047079	135.2508
Jan 02	251200.3	34970.56	17880.1	127422.8	2704.2		416297.9	60.34148	8.400371	30.60856	0.649583	132.1895
Dec 02	317258.3	61744.02	31569.1	162308	3478.9		544789.2	58.23505	11.33356	29.79281	0.638577	127.5749
Dec 03	401762.9	85795.54	43866.4	185919	5884		679361.4	59.13831	12.62885	27.36673	0.866107	129.5537
Dec 04	523638.1	148280	75814.1	234758.5	8788.2		915464.8	57.19915	16.19724	25.64364	0.959971	125.3056
Dec 05	581019.8	196859.1	100652.1	202297.4	9745.5		989921.8	58.6935	19.88633	20.43569	0.984472	128.5793
Dec 06	618210.2	252241.4	128968.5	302903.1	11841.2		1185196	52.16101	21.28268	25.55722	0.999092	114.2686
May 07	547796	266125.3	136067.2	293811.4	9453.6		1117186	49.03354	23.82103	26.29923	0.846197	107.4173