A recipe for a country to gradually and possibly exit from the eurozone through a parallel emergency currency realised via the mobile phone network

(This was submission for the Wolfson Economics Prize,
slightly updated afterwards)

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20 January 2012

Summary

Today's information technology and mobile phone networks make it possible for eurozone governments, or even non-government entities, to establish and run a national parallel (to the euro) paperless monetary system at very low cost and launch it on very short notice. The workings of such a system run by the government, is described and discussed. Such systems may ameliorate the dire state of affairs in the hardest affected eurozone countries, by strongly and quickly decreasing unemployment and increasing business activity, including activity that enables the country to better service debt in euros. Since the proposed monetary system exists in parallel with euros, there is no abrupt break with the current monetary arrangements. Instead one gets a slower controllable process where the management of, and balance between, the two parallel systems may be gradually adjusted based on how things develop. This process at any time allows the choice between two options: reverting to a pure euro system, or ramping up use of the parallel currency with an ulterior goal of leaving the euro completely and reinstating a national currency.

"Worldly wisdom teaches that it is better for the reputation to fail conventionally than to succeed unconventionally"

- John Maynard Keynes

1. Introduction

I have written about parallel emergency currencies on several earlier occasions, for instance (Andresen, 2010). At the time of this submission, the situation in most eurozone countries has worsened considerably.

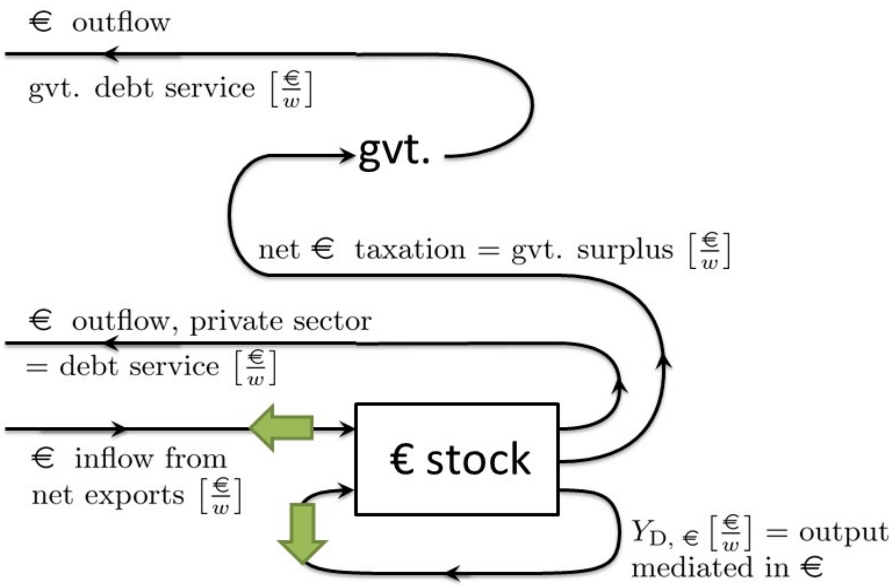

Figure 1

Figure 1 above indicates the problematic state of a eurozone country that has excessive euro debt. The thick arrows are flows of goods and services, while the thin arrows are money (euro) flows[1]. The government has to extract euros out of the non-government economy to service its debt, by taxing more than it spends. The private sector also extracts euros, sending these to foreign creditors. The only way to counter these two "bloodletting" flows from the domestic economy is to increase net exports to a level that surpasses the sum of the two outgoing flows. This is exceedingly difficult, especially after debt service burdens have increased steeply due to risk-caused increases in interest levels on new euro loans, and because of idle production capacity due to the crisis.

Debt could be partly written off and/or the debt service rates could be ameliorated, but to the degree the creditors refuse this, the domestic economy will be increasingly starved for money. Firms and individuals simply do not have enough of the necessary instrument for the conducting of regular economic activity. This again leads to lower government income due to reduced tax payments and larger social outlays. The crisis is also amplified by increasing pessimism among individuals and firms: to the degree they possess euros, they hold back in spending, hiring and investment – and/or they move their money out of the country. All this contributes to further pessimism. We have an unstable downward spiral.

[1] A time unit is indicated as w = week, but the choice of time unit is arbitrary and does not matter for the purposes of this essay.

Politically, both the EU elite and the elites in the crisis countries are strong supporters of the euro. There is also a majority in the general populace for staying with the euro – not due to enthusiasm, but mostly based on fear of what will happen if one reverts to a national currency. The elites, being politically and strategically wedded to the EU and euro project, see only one option: sticking with the euro and hoping for an internal devaluation of wages and prices to enhance the crisis country's competitiveness so much that future net exports will enable it to service its debts. This is a painful and slow process for the population (lasting several years). Furthermore, the outcome is doubtful, especially since trading partner countries in the eurozone are trying the same recipe. There is a now a dramatic trend towards lower living standards and less social safety for the masses. Seen from the position of the elites, this implies increased danger of grave social upheaval.

A way to avoid this is to furnish both households and firms with an additional universally accepted means of exchange, so that the large amount of unemployed may get jobs, and firms' spare capacity may be utilised. A euro crisis country has a large output gap, and such a gap may be nearly closed without giving rise to dangerous inflation effects. Utilisation (and very fast activation) of this idle capacity may be achieved by nationally issued "parallel money". This will quickly reduce unemployment and enable people and firms to exchange goods and services. It will also increase confidence, put a brake on the downward spiral, and even – as it will be argued below – enhance the circulation and net national acquisition of euros.

This proposed parallel medium of exchange will from now on be termed "emergency currency", abbreviated "EC". A unit of this currency will also be called "EC".

2. The proposal – background

What is to be proposed here, resembles a national and extremely efficient version of a Local Exchange Trading System (LETS) or a local currency system[2]. LETS are traditionally motivated by the need for barter, and strongly improves the situation by utilising a local medium of exchange. Members gain points by supplying goods or services to other members. Such points gained are in the next round used to buy goods or services from other participants. The big advantage is that this enables economic activities locally which would else not have taken place due to lack of the regular medium of exchange, money. A LETS system has traditionally been managed by some trusted person(s) keeping tally of everyones' points account, in modern times on a computer. This is done when reports of exchanges are received. Such a system is only manageable when it is confined to some local community, and it is dependent on some key persons being willing to spend time and effort to create and run it. Another factor limiting the geographical and population scope of such schemes is that participants need to know which other agents (persons, firms) are also in the scheme, and what sort of services or goods they offer.
A local currency system does a similar job as a LETS scheme. In that case one has circulating

[2] Many LETS systems have been, or are, succesful. The reader is referred to http://en.wikipedia.org/wiki/LETS which gives an introduction. One of most successful cases of the LETS-similar scheme of circulating a local currency, was the one in the town of Wörgl in Austria during the Great Depression. A reason for the scheme's success was that it implemented Silvio Gesell's (http://en.wikipedia.org/wiki/Silvio_Gesell) proposal of levying a fee on money held (i.e. a negative interest on liquids, called "demurrage"). This led to a very high speed of circulation. For more on this, see http://en.wikipedia.org/wiki/Local_currency or (Fisher, 1933).

paper currency resembling regular money, something that eliminates the need for account updates with each transaction, but which may be legally difficult to uphold due to the state's monopoly on money issuance.

A LETS-like scheme must do the following:

- account for transactions (or run a local monetary system)
- give participants an easy and fast way to find other participants in the system and what they offer (or demand), and on what conditions.

Today, with most people – even the less well-off – having mobile phones, and also access to the Internet (whether at home, work or elsewhere), both challenges may be elegantly and cheaply met, and "the local community" may be expanded to an entire country[3]. Also, when the scheme encompasses a country as a whole and is run by the government, the need for informing other (potential) participants about one's own participation vanishes.

3. The proposal – how does it work?

Transactions are done via mobile phone/SMS and automatically received and accounted for on a server with ample capacity at the country's Central Bank. Such a *mobile banking* system may be implemented through one of the technically proven schemes already in succesful operation in some developing countries (Hughes and Lonie (2007)). There are no physical/paper EC's in circulation. The government has an EC account at the Central Bank. This account is debited whenever the government pays wages or pensions, or buys goods or services. All citizens and domestic firms have accounts there too, also interested foreign entities (but we will expect EC's to circulate only domestically in an initial phase). By this EC's are created out of thin air, or "printed" by the Central Bank[4]. (This EC creation raises the question of inflation, which will be discussed further below.)

The government pays employees, pensioners and suppliers both in EC's and euros. The proportions may be adjusted based on how the process develops. Taxes are also collected in a mix of the two currencies. The government-issued EC will be fiat money, and will have some intrinsic value since it may be used by the public to settle tax obligations (as argued by "MMT = modern monetary theory ", (Wray , 2006)). An EC will therefore be initially accepted to some degree as a means of payment by an agent ─ individual or firm ─ that is obliged to pay taxes (more further below on this).

Employees and firms offering goods and services will gradually – as the scheme gets more popular – decide to accept a certain share of EC's as payment, while the rest must still be in euros. While the government pays wages and taxes in a government-decided mix of the two currencies, the mix in private sector transactions may be decided freely by the involved parties, and will differ

[3] Even if it is not a topic for this submission, this scheme could also be useful for non-EU-countries, or such national regions that have authority to collect region-based taxes, like near-bankrupt U.S. states. There EC's could be issued by the state government, with immediate positive results.

[4] I am not going into the political issue of Central Bank independence in this proposal. A national emergency currency may be issued by a government if the national parliament mandates this. Assigning the country's Central Bank the task of running such a system is then a technical and practical matter. In principle however, any trusted institution backed and controlled by a government, could do this.

between trades. Both the government mix and private sector mix will necessarily have to be adjusted with time and circumstances. Employers and employees may negotiate the share of wages being paid in EC's, based on how things develop.

Figure 2, which should be compared to figure 1 introduced earlier, shows the system with exchanges in EC's in parallel with euros. The additional circulatory system is indicated at the bottom. The public utilises stocks of both EC's and euros for exchanges, and output flow Y_D consists of two components, one a flow in euros and the other in EC's. The thick arrows indicate the physical flow of goods and services in the opposite direction corresponding to these monetary flows.

A very important point is indicated by the dotted arrow with a plus sign: *By enabling activation of idle labour and production capacity, exports increase. Thus, even if this extra activity is mediated (partly) with EC's, this enhances the ability of the country to service its debt burden in euros.*

Another positive effect is that pessimism is reduced. This will decrease the liquidity preference of individuals and firms that possess euros but have been holding back in their spending. Money velocity in euros will become greater: *for a given amount of euro* ("€ stock" in the figure) *in circulation, the output flow* $Y_{D,€}$ *will increase, i.e. we get increased money velocity.*

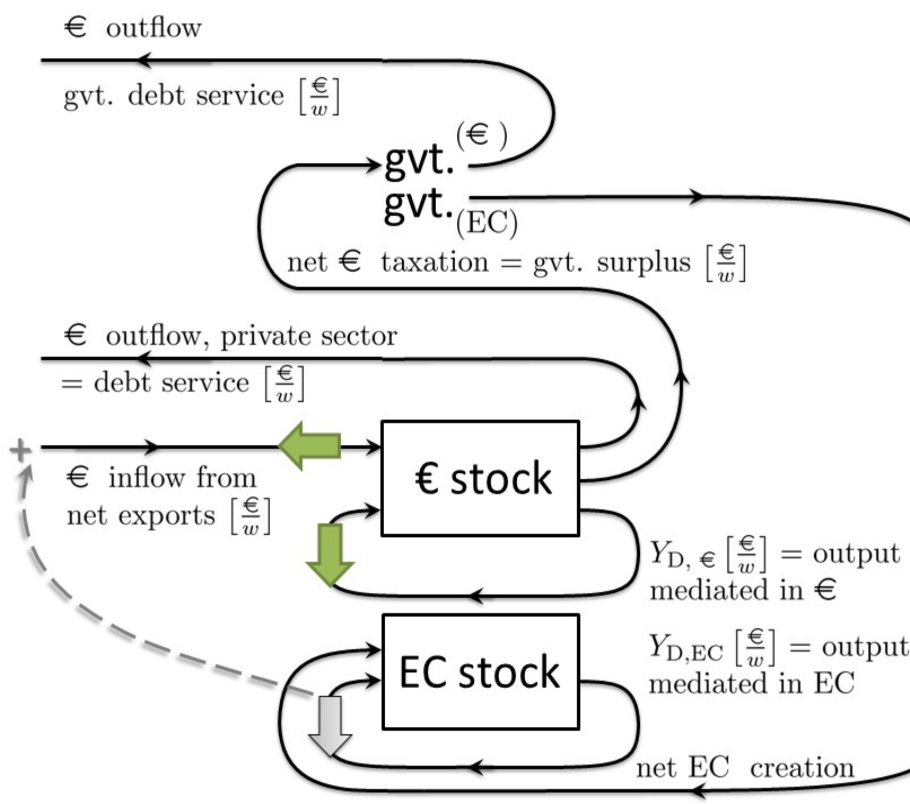

Figure 2

3. Advantages of mobile phone EC's, versus bills and coins

One advantage of implementing this parallel monetary system via the mobile phone network as opposed to with bills and coins, is that it can be up and running very quickly after a government has decided to do it, so that its positive effects may have been demonstrated before the EU system is able to marshal forces to terminate it. It will then be very difficult to quash, due to gained popular support. It will also be dramatically cheaper to start, and to run.

Another advantage is that since EC's do not involve bills and coins, there are no possibilities for confusing EC's with euro currency when executing transactions. Psychologically there is also because of this, weaker connotations with historical episodes where paper currency issued in crisis situations have ended in hyperinflation.

A further advantage of an electronic EC is that tax avoidance in this currency is impossible, since any transaction occurs via accounts in the Central Bank. A black economy in ECs is easy to curb for the same reason.

3. Discussion

The discussion will be done by addressing some counterarguments against, or expected questions about, the EC proposal.

The question of "confidence"

The EC is a *fiat currency*, not purely based on faith. From the outset it will enjoy a certain minimum of confidence since it is legal tender, issued by the government. And confidence is strengthened because it may be used to pay (a share of) taxes, as already mentioned.

One may in spite of this expect that initial confidence will be quite low. The EC will probably be met with derision and cynicism among many, not the least because of widespread distrust in authorities that until now haven't done much to ameliorate the effects of the crisis.

To discuss the prospects of an EC, it might be useful to define two entities, *"trust"* and *"need"*. Even if trust is low at the outset, need is very high: people and firms will have the choice of trying out an EC that is paid out to individuals and offered to firms, or not using or accepting it at all. So some initial use of the EC should be expected becase of the alternative of no work or no sale is considered even worse. Need will ensure some EC circulation, even if trust is low. With time, a positive feedback process will emerge: agents observe that transactions with EC's are happening, and this will increase trust, leading to more acceptance of EC's, and so on. A mechanism resembling contagion will be at work. While trust increases, need will go somewhat down as EC activity picks up, but will remain high as long as unemployment and the output gap is large. The dynamics of the process will probably be that EC use will stabilise at a level that is high enough to make a significant positive difference regarding poverty, employment and domestic activity.

Inflation in EC's?

This topic has already been touched upon, but I will elaborate: Assume that the government declares at the outset that the exchange rate EC to euro ought to be unity, and that firms are asked not to set *prices* in EC's high, but instead safeguard themselves in the start-up period by setting the initial EC *share* of an item's price low. What the government recommends will of course not necessarily be followed by vendors, but many will try this as a starting point. We should expect that firms (and individuals) that offer products or services where the dominant input factors are domestic, will be most willing to try offering a significant share of EC's in what they accept as payment. At the other end we have products that are imported, and the domestic input factors are subordinate: cars and petrol are examples. Here one can expect that only with time will such sellers start accepting EC's, and the share will never become high. But there will be a mechanism at work in the right direction also there: when EC use has reached a significant level for other consumer items, for instance food (where domestic input factors are dominant), import-based firms can negotiate a lower wage share being paid in euros and the rest in EC's, this then allowing them to accept a share of EC's in the items they sell.

An important aside to this is that one should expect the existence of circulating EC's to enhance domestic production. To some degree this will lead to import substitution, cet. par. increasing exports which is a good thing concerning the ability to service euro debt.

Regardless of possible government declarations about how the parallel currency ought to be used, one should expect the EC to lose value from parity with the euro. And floating the EC versus the euro must be accepted, there is no point in trying to uphold an artificially favourable exchange rate by this creating a black market. That said, the government has control not only over the creation of EC's, but also their removal from circulation through taxation. Runaway inflation may be avoided in such a setting, assuming a certain vigilance. And as already argued: as long as the economy is far away from full employment and firms have significant idle capacity, inflation pressures are not strong. The most important inflation mechanism impacting EC's will probably be another, and be at work in the start-up phase: Lack of trust will lead to agents setting prices in EC's high, to play safe. But such distrust-based inflation will probably peter out as trust increases and the EC's value will be mostly decided by supply and demand. Then one might see the EC appreciating in value, after the initial distrust-based inflationary episode.

Interest and lending in EC's?

The introduction of an EC is as already emphasised an emergency measure. The primary purpose of the EC is to give agents some *medium of exchange* – period – to enable them to transact with each other. Therefore the questions of EC credit, vetting and lending to interested parties, EC bonds, setting an EC interest rate – need not be resolved until after the initial phase, where the EC system has approached some sort of stable and reasonably large transaction activity level. But if the EC becomes an important currency for a given national economy, it is technically straightforward to enable lending in EC's. The Central Bank can outsource vetting of prospective EC borrowers to commercial banks, so that these become "EC franchisees". To fund such lending the Central Bank may offer interest-bearing EC time deposits, or sell EC bonds. But the banks should only be intermediaries, all EC accounts should reside at the Central Bank. In this sense there would be a 100% reserve system for the EC's.

Foreign ownership of EC's?

This is also an issue which will not be imminent, but may be addressed as the EC process unfolds. Technically, there is no problem allowing foreign individuals, firms or banks to have an EC account at the Central Bank. If foreign parties accept part or entire payment in EC's this is of course a good thing. This may occur if domestic vendors offer items payable with EC's, items that are attractive for some foreigners.

Euro debt and euro capital flight

One may at this stage protest that introducing an EC does not in itself solve the euro debt problem. It also does not solve the problem of rich citizens moving their euros out of the country to avoid taxes or in fear of losses due to collapse of domestic banks.

To the first objection about euro debt, one may reply that without a parallel medium of exchange an economy is wholly dependent on euros to uphold domestic activity. This puts the country in a very weak position when negotiating debt writedowns and/or lower interest rates and longer repayment times on existing debt. The creditors know that the country is wholly dependent on additional borrowing or rolling over of euro debt. With EC's constituting an alternative medium of exchange, the balance of power in negotations is shifted in favour of the indebted country.

Furthermore, by enabling the economy to run much closer to full capacity and employing a much larger share of the population, the ability to export increases, and by this the ability to service euro debt. The automatic stabilisers will also be at work, giving the government more tax income, and reducing its expenses for unemployed benefits and other social costs due to the crisis.

The problem of euro capital flight is not solved by introducing EC's, except that increased domestic economic confidence may after a while induce some agents to repatriate their euros. But this will probably not make a significant difference. A government may of course declare that all foreign euro deposits must be trasferred to domestic banks within – say – three months, and if this does no happen, the asset is declared forfeit. Then the holder must either spend the money overseas, or smuggle it into the country as cash with the danger of being caught. Whether this type of regulation should or can be implemented, is also a question of how far an EU member country can go without (too much) transgression of Brussels rules and regulations. Anyway, the issue of capital flight is there regardless of whether the EC proposal is implemented or not, and must be adressed somehow. And it has more serious effects without a parallel EC system in operation.

In breach of EU regulations?

I have touched upon this earlier. Probably there will be strident objections from Brussels that the euro is the only legally allowed currency for an eurozone country. I do not dispute that this is the case, and do not presume to possess legal knowledge or expertise. But the EC is sorely needed, it will make a big difference, and is technically easy to implement. So my position is that the crisis country should go for it, but act fast and with creativity. One measure may be to direct the system from the Treasury, but outsource the running of it to another institution than the Central Bank. One could avoid using the terms "money" or "currency", and instead call it an "emergency exchange system", using "points" for transactions or some such. Such maneuvres may seem ridiculous and futile, but they could perhaps be useful in a conflict with the EU over interpretation of rules and regulations. A more important point in favour of going ahead with an electronic EC is that it will be up and running and already have demonstrated its benefits before any legal process against it set in motion by Brussels has run its course.

4. Summing up: far better than the bleak alternatives

A parallel electronic emergency currency will – with immediate effects – ameliorate the strongly and persistently lowered living standards for most people in crisis countries, which is the bleak and only future (lasting many years, possibly a decade or more) that the EU and crisis country governments have been able to come up with. By the proposed scheme it should be possible to activate the immense underused potential that the hard-hit eurozone countries have, unemployed or underemployed people, to give many a better life and the country a return to social stability. It will primarily stimulate domestic production. It will also give euro-indebted countries a much better position in their bargaining for partial debt relief or less heavy euro debt service burdens.[5]

Finally, it enables a gradual and controlled transition (back) to a national currency, if that is what is wanted. This proposal gives the national assembly in a crisis country the freedom to deliberate and make such a grave decision at any chosen time, and base it on experience with how the parallel currency and the economy have fared.

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[5] If, however, a government does not wish to implement an EC system, regardless of how bad the alternatives are, the option is today there for non-government entities or even an innovative mobile phone company, to create an "electronic exchange association" encompassing the entire country using a similar technical solution. For more on this, the reader is referred to (Andresen, 2010).