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# **High Noon at the EU corral. An economic plan for Europe, September 2011**

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# High Noon at the EU corral.

## An economic plan for Europe, September 2011

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### Summary

The 2007+ credit crunch and economic crisis put European governments in severe debt, with talk about a Greek partial default. It also put the European banks into a zombie condition, while under Basel III the capital requirement rises from 8% to 10.5% (which requirement does not cover public debt since that is considered reliable). Fiscal measures concern tax structures and that Germany and Holland eliminate their surpluses on the external account. A monetary measure is that the European Central Bank as lender of last resort helps to prevent a crisis of confidence. The ECB can create capital and neutralise this by higher reserve requirements. Two reasonable measures are: (1) EUR 400 billion of European Recovery Capital (ERC) will reduce Greek and Italian debt to 100% of their GDP (using 2010 data). Greece and Italy on their part can have a wealth tax or create 40 year leases (implicitly at 10 billion per year excluding interest) like Hong Kong once was for investment areas under foreign law (think of Magna Graecia). (2) EUR 400 billion can be injected in eurozone equity (and not eurozone bonds) in banks to allow the increase from the 8% to the 10.5% target. This equity can be managed by newly created independent ERC Investment Banks (ERBs), where the shares are allocated to eurozone member states in proportion to their GDP. This partial nationalisation would reduce eurozone national debts by 4.3% of GDP.

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## (1) Introduction

An economic plan for Europe contains (1) better governance, (2) investments for employment and growth, (3) fiscal policy based upon functional finance, and (4) monetary stability.

The main worry these days concerns (4) monetary stability, the euro and national debts, see also the popular media.<sup>1</sup> However, the angles (1) – (3) are equally relevant & urgent.

The very stability of the monetary system is not quite at stake. The Central Bank can always print money and thus redeem government debt, see the discussion of fiat money in “A better way to account for fiat money at the Central Bank”, my (2005b). There are two stages of monetary crisis: (i) stability is under discussion, (ii) a crisis of confidence. Instability would only arise under a crisis of confidence. However, now that stability has become at least a topic of discussion, we will benefit much from also looking the issues (1) – (3) to resolve the risk that instability indeed occurs as such a crisis of confidence.

Is the ECB a real Central Bank, as defined by the economic textbooks, e.g. Dornbusch & Fisher (1994) ? It can print money and thus it is. As explained in that article on fiat money, and see the Annual Report 2010, ECB (2011), the ECB still adopts the (wrong) accounting standard that euro notes are a liability that must be balanced by government bonds. The ECB cannot legally buy government bonds “directly” from governments, which relates to this (wrong) accounting practice but also to the problem that the ECB serves more governments (without a common tax base). Due to the credit crunch the ECB opened a window on the secondary market. This better fits the purposes of a Central Bank, yet it causes tensions within the European design, see Jensen (2011) in the context of Jürgen Stark’s resignation from the ECB on September 9.<sup>2</sup> Sibert (2011) rightly observes that the monetary legitimacy and effectiveness are damaged. Is it business as (un-) usual or are there failures of design ? The discussion below will suggest some improvements on design (a new treaty).

A major presumption in current reactions is that Germany and Holland are doing well and that Southern Europe is the cause of current problems (and why not include the new Eastern member states, not all yet in the eurozone). Most reactions then seek the solution in the relation between the EU and the member states that fail. French president Sarkozy suggests a “European economic government” and German kanzler Merkel supports more leadership though not in those terms, see WSJ (2011). The Dutch Prime Minister Rutte and Minister of Finance De Jager (2011) propose a EU Commissioner on the budgets of the member states, so that the EU Commission could infringe upon the budget rights of national parliaments. The EU Stability and Growth Pact (SGP) already formulates budgetary rules and these political leaders seek the solution in ‘finally’ effective ways of implementing them, like putting the rules in national laws or even constitutions, see the Euro Plus Pact, European Council (2011). However, the SGP failed not only in implementation but also in the rules. Some awareness of this exists within the Euro Plus Pact. However, it ought to be recognized that Germany and Holland systematically run export surpluses. With their aggressive policies they contribute as much to the problem than the deficit countries. These very governments now want to impose more discipline on their victims. If it would be feasible then it might be great but unfortunately it doesn’t make much sense. A feasible solution requires a restructure within Germany and Holland as well. A solution lies rather at the national level too.

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<sup>1</sup> For example The Economist (2011a), the Maybrit Illner program on German TV, ZDF (2011) (a good test for one’s command of German), or Bloomberg Businessweek (2011).

<sup>2</sup> Majagic (2010) (in Dutch) suggests the following storyline: The ECB under Stark’s insistence required specified austerity programs from the Italian government. The Italian government complied and the ECB bought Italian debt. The Italian government reneged on that austerity. The ECB did not put a stop to buying Italian debt. Stark resigned for personal reasons.

Greek debt has the separate cause of improper accounting, see the European Commission (2010). Here, the whole eurozone accepted Greece and thus it bears common responsibility for its own mistake. The no bail-out clause can be thought to hold only with respect to conditions of entry and not to falsely acquired entry. Investors who accepted Greek debt might be expected to be smarter than governments and second-guess the eurozone but it seems fair to accept that they didn't, since the idea is that one must be able to trust public institutions. Hence, losses on Greek debt cannot be shifted to banks and pension funds that hold it. The eurozone can acquire that debt and then hold Greece accountable for the improper accounting. It is a subsequent decision whether the eurozone still accepts Greek membership but the current Treaty has only voluntary exit. The real problem is the international restoration of mutual confidence between eurozone member states at lowest cost and overall fairness.

The differences in a table (and see the paper for details):

<i>EU (Euro Plus Pact and July 21)</i>	<i>This paper</i>
The fundamental problem lies with the credit crunch (not our fault)	The fundamental problem lies with stagflation. The credit crunch was a fault
The problem lies in national debt of Southern Europe	The problem lies also with surplus countries and zombie banks
Redesign the EU for more control	That is counterproductive. Have Economic Supreme Courts at the national level
Funds from national budgets and tax payers (notably from Northern Europe)	Likely counterproductive too. ECB capital creation and 25% nationalisation of banks
The ECB design is fine	Some redesign of the ECB (Regime II)
Economic theory as it is	Better economic theory
Business as usual	Better policies, other taxes, more investments, external equilibrium
Greece had "inappropriate governance" w.r.t. its statistical bureau <sup>3</sup>	Yes, and Holland still has a breach to scientific integrity at its Central Planning Bureau (CPB) <sup>4</sup>

Developments are rather fast, whence even the title of this paper is stamped September 2011. A drawback of this paper is that it uses data of 2010 while current levels of debt will be higher. The Greek debt to GDP ratio will now be higher since its GDP is dropping. However, this paper is about stability and hence some general points will remain valid for a longer period. This paper only develops an example and figures can be adjusted.

This present paper extends on my contributions to Vox EU (2009b), the UK Lib Dem Voice (2010a) and the Royal Economic Society Newsletter (2011). The references below mention more of my papers on the 2007+ crisis, see (2008, 2009a-g, 2010ab). Please observe with respect to the refereed journals that I am not in an academic position and under severe constraints, so that having at least a working paper is currently the optimal solution. Academic economists can discuss the analysis and then it will be refereed in the process.

In the public mind it is "High Noon at the EU corral" (mixing three films). Let us use our brains instead of gun power. Let us first look at the whole and then at the separate topics.

<sup>3</sup> See the European Commission (2010), Spiegel online (2010) and <http://schott.blogs.nytimes.com/2010/08/10/greek-statistics/>

<sup>4</sup> <http://www.dataweb.nl/~cool/Papers/Drgtpe/Crisis-2007plus/2009-04-28-Boycott-Holland.html>

## (2) Stagflation since 1965

Much of this discussion was already relevant before the 2007+ crisis. The basic problem was and is known under the name of stagflation. It has been with us since about 1965 and the finance by debts of the Vietnam War. Governments have been trying to understand the causes of stagflation and guessing at its cure. Old approaches were vulgar Keynesianism and monetarism. The US government since the Reagan presidency tried deregulation of markets including the finance sector – let us call this ‘neoliberal economics’. This seemed to work and the policy was copied by other governments that wanted their sectors to be competitive. It however only repressed stagflation. The 2007+ shock to the financial system forced stagflation into the open again, and with a vengeance. The shock has been cushioned by the rise of national debts but governments now seem to run out of options. Re-regulating banks might cause massive unemployment. There however exists a sound solution, as explained below.

It may be an eye-opener that the current world economic crisis was caused by reliance upon wrong economic assumptions. One has to make these mental steps:

Step 1) The solution requires not merely repair of what appeared to be wrong or what advisors already knew that was wrong. Instead we require a redesign of economic theory. Economic advisors thus must go back to the drawing board and must show a willingness to re-educate themselves. Others must check that they do.

Step 2) Which new analysis ? The analysis here is based upon my book *Definition & Reality in the General Theory of Political Economy* (DRGTPE), with background papers 1989-1992, first edition 2000, second edition 2005. I worked at the Dutch Central Planning Bureau 1982-1991 ([www.cpb.nl](http://www.cpb.nl)). The fall of the Berlin wall caused the internal memo (1989), the advice of a parliamentary enquiry (1990) and finally DRGTPE. This analysis is not commonly known. A medical doctor without the proper diagnosis is not likely to find the proper treatment. Political leaders and economic advisors neglect DRGTPE and arrive at a wrong diagnosis and counterproductive treatment. DRGTPE will have to be digested by economists if the world is to find the proper resolution of the current crisis.

Step 3) Parliaments are advised to make sure that the economic advisors to the government have digested DRGTPE. Best is that parliaments have an enquiry and test whether the advisors have studied it and understand the analysis.<sup>5</sup>

Though DRGTPE is relevant for the world economic crisis, this present article will look into the case of the EU and/or the Eurozone, for short Europe.<sup>6</sup>

The analysis in DRGTPE concentrates on governance, employment and functional finance, and regards the monetary system as of secondary importance. This present paper can be seen as a summary of DRGTPE in the light of the current crisis in Europe, with some additional new comments on the monetary system.

DRGTPE has a short statement that warns about developments in financial markets. It thus may be counted as one of the warnings before the 2007+ crisis. DRGTPE does not extend on the financial markets however since others already did so. The key contribution of DRGTPE lies in the solution of the primary problem of stagflation and not in the repetition on the

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<sup>5</sup> If Paul Krugman would happen to read this: see my critique in DRGTPE.

<sup>6</sup> It might be important what perspective one has on Europe. My suggestion would be that the EU devolves into an economic area and that Russia and Turkey would join, but this suggestion is not vital to the analysis here.

secondary problem. However, at this moment the monetary system has been mismanaged to such large extent that the very stability of the system becomes a topic of discussion (which still differs from a crisis of confidence). Hence it seems warranted that this present short paper looks into some consequences for the monetary system. In 2008 it was an understandable decision to let Lehman Brothers fall, as a warning to the sector, and knowing (or US secretary Henry Paulson must have assumed so) that the effects could be neutralized partly by expansion of liquidity and credit. Now however such expansion would no longer be temporary. See below for what may be suggested instead.

Let us look into the other angles before looking into the monetary system.

### **(3) Investment**

Examples can be found in the economic situations after World War I and World War II. In the first case John Maynard Keynes concluded that Germany could not repay its debt. In the last case, the US had a surplus position and Europe needed to borrow dollars to rebuild. Keynes rightly concluded, see Skidelsky (2000), that the US could not require Europe to have austerity programs since those would reduce economic activity and reduce the capacity to repay. The responsibility for sound lending does not fall only on the debtor but also on the creditor. The message didn't get across in the creation of IMF and WB (that also have wrong names, IMF is a bank and WB is a fund), but eventually there was the Marshall Plan. See Colignatus (2009e) for a discussion of the Dutch surplus and the economic error made there.

(PM. There is the surplus of China and the deficit of the US, with similar conclusions. PM. After the fall of the Berlin wall, Western Germany became creditor for Eastern Germany. However, one neglected the analysis in DRGTPE and the event was much more costly than needed.)

Rather than punishing Greece, Italy, Spain, Portugal and Ireland, it would do better to 'punish' Germany and Holland by raising wages there, and have them invest at home. Capital flows from Germany and Holland currently look for investments abroad and meet with losses from risky ventures. It would be better if those countries take away limitations at home that currently make home investments seem less attractive. One element would be more realism on such risky ventures abroad. Another element would be that the Germans and Dutch become at least as critical on their own economies as they require of the other nations.

Obviously, though, Southern European countries might make foreign investments more attractive by creating investment areas like Hong Kong once was a lease in China. For Italy one would think of the South, e.g. Magna Graecia of antiquity, e.g. see Ferguson (2008) on Pythagoras. Areas with laws and customs from elsewhere, or possibly local law but foreign execution, might draw in stable investment from elsewhere, and allow economic convergence over a long period of time. Greece is apparently thinking in this direction given the lease of part of Piraeus to China. Nevertheless, to pay off foreign debt, Greece must be able to export e.g. to Germany and Holland, and thus changes in those Northern countries remain a necessary part of the solution.

China made the transformation from its command economy to its current hybrid state by basically fixing its state enterprises at their level and allowing more freedom for new activities. While Greece and Italy would restructure they may partly rely on this mechanism. Journalist De Koning (2011) reports on Thatcher-era type of labour unions in brown coal mining in Greece that also use their power to shut down electricity. Rather than breaking down society as Thatcher did, with the incomplete understanding of stagflation, a policy can be sought in partial restructuring and partial new investments in new energy sources.

See DRGTPE on investment banks, and their role w.r.t. imbalances within the EU. The SGP can be extended with a debt mark-up that is channeled into them. Thus, a country with public debt rising above 60% would put a rising percentage of new debt into its investment banks, and possibly this mark up would not be counted as neutral (with liability = asset) but as an increase of SGP debt. That mark-up might as well be equal to the debt ratio itself. Thus a country that raises its debt from 60% to 61% would have to invest 61% of that 1%, and may use the remainder 39% for other expenditure. A four year moving cumulated surplus on the external account with eurozone nations requires transmission of 10% of that surplus to investment banks of eurozone external account deficit nations, in proportion to the deficit.

#### **(4) Functional finance**

Current fiscal policy tries to reduce the marginal tax rate to enhance incentives for work, investment and growth. This results into low exemption in direct taxes plus a shift towards VAT and social insurance without exemption at all. This however neglects dynamics and the dynamic marginal tax rate. In a proper analysis, see DRGTPE, exemption would be at subsistence, VAT would be say 1%, and social insurance would have exemption too. Labour costs at the minimum optimally satisfy the rule that exemption = net = gross.

In the 1950s that rule generally held in the OECD area, and we enjoyed full employment. Over time, policy shifted toward the wrong analysis about marginal tax rates. That was a major cause for the shift of the Phillipscurve, whence stagflation.

The tax restructuring would allow Southern Europe to reduce wage costs (lower VAT and lower wages) and Northern Europe to stimulate demand (lower VAT and same wages). Of course the minimum wage costs would still need to satisfy above rule.

See DRGTPE for more on functional finance, also on outlays and debt.

#### **(5) Governance**

The strongest interactions in Europe are at the national level while meddling from the EU can be counterproductive. People want to belong to the EU and not be bitten by it. The way forward is by consensus and not by majorities imposing on minorities. Instead of looking at EU measures like Sarkozy, Merkel and Rutte suggest, it seems better to first improve the situation at the national level.

Good governance at the national level requires that the Trias Politica model of democracy with Executive, Legislative and Judiciary powers is extended with a fourth constitutional power, an Economic Supreme Court (ESC). This ESC must be grounded in science but has the power to veto the budget if it contains wrong information. DRGTPE contains a draft constitutional amendment. Obviously, nations can already start behaving as if that amendment would already be in place. The actual change of the constitution might take more time but would only formalize that behaviour and commitment for the future.

Budgetary rules like in the EU Stability and Growth Pact are better not enshrined in the constitution, as Sarkozy and Merkel propose, since this destroys the flexibility required for difficult times such as now. But the information needs to be accurate, as judged best by an Economic Supreme Court rooted in economic science. For statistics of the past there has grown an awareness that these should not be left to politicians and bureaucrats and journalism, and now the next step in the enlightenment of the human race concerns the expectations on the present and future. Forecasts on what politicians will do will affect the economy, and vice versa, and it is best left to science to sort this out. The various national ESCs can exchange information and create an anchor for the EU as a whole.

Rutte & De Jager (2011) propose to evict a country from the Eurozone as a final measure. The basic literature on money clarifies that the best way to destroy a country is to destroy its currency. The Dutch government has no stated goal to destroy the Greek economy and supposedly only wants to clarify what is at stake so that the disaster is avoided. At best it is a curious line of reasoning, possibly caused by Dutch internal political instability. The best reply from other EU countries would be that Holland should first adopt an Economic Supreme Court before its government's view on economic matters deserve serious consideration. This would also require Holland to resolve its current internal censorship of economic science and abuse of power at its own Central Planning Bureau.

The creation of the European Stabilisation Mechanism (ESM) works around the current rules on the ECB, its handling of public debt, and the no bail-out clause. It is the kind of creativity that suggests that we do not have to adapt the rules so that the basic structure remains intact. Instead of such suggestions, one would rather like to see an integrated system such that the ECB can better monitor the economy. To resolve this, DRGTPE in 2005 already advised that countries first adopt their ESC and that the discussion on the Central Bank is done in that new environment. It seems that this window of opportunity has closed by the 2007+ crisis and that indeed some emergency measures must be taken. Still, it would be useful to first have the national Economic Supreme Courts and then the discussion on a new treaty for the euro.

## **(6) ECB and financial markets**

While the former sections mainly summarise what has been explained elsewhere before, we now arrive at the monetary system, and some points are new compared to DRGTPE.

### **6.1 General**

There are the following general points:

- (a) A monetary system without a joint fiscal framework is asking for problems. Yet it is alright to see how far one can go. (See **Appendix D** for lessons on a world currency.)
- (b) There is the regulatory mismatch that government debt does not fall under the Basel capital requirement while a sovereign default apparently still is thought to be possible. Eurozone members have different rates of interests, and banks are supposed to buy CDSs and make write-offs, but they are not regulated with the capital requirement.
- (c) Adaptation of Basel III may not be sufficient, since a capital requirement for public debt need not be sufficient under an actual default. It is a design question whether the burden of default falls on the creditor or on a lender of last resort.
- (d) If government debt is risky, but not all in the same manner, then we need rating agencies to make the distinction as well, though such rating might also be done within the ECB.
- (e) Credit Default Swaps (CDSs) should rather be illegal for public debt since they create the illusion of the certainty of money (with AIG as illusional lender of last resort), while the monopoly of money resides within the Central Bank. Solutions in the market would rather be looked for in finding collateral rather than different rates of interest and CDSs. Efficiency is served by banks specialised in establishing collateral and if needed collecting it, but such banks need regulation again.

Example: Government default might be implemented as a systematic lottery. Suppose that eurozone countries may issue public debt above 70% of GDP only if that has a stated risk of default by a lottery, with a rising schedule as debt is rising. The lottery merely raises the rate of interest. For example, a EUR 100 million bond issue at 5% interest, in 1000 pieces, and 10% lottery default on each EUR 100 thousand principal, means actually a quite certain loss of EUR 10 million and a gain of 5% on 90 million,



thus a net loss for potential buyers. If the going rate is 5% then the bond would sell only for EUR 90 million. National debt nominally rises by 100 million though, till the actual lottery is drawn. An investor who buys the bond for EUR 100 million would require a market rate of interest of  $(10 + 5) / 90 = 16.7\%$ . The mechanism would internalise the notion of default and would force countries quicker into the SGP danger zone where they 'really' have to take action. Having such lotteries however would be a curious ritual, with unnecessary uncertainty for buyers of single pieces. It is simpler to have effective implementation of SGP rules plus their required extension. And a lottery implementation is not the same as a real default.

## 6.2 Eurozone bonds

Eurozone bonds (rather than eurobonds, since there already is an eurobond market) are counterproductive since the current bond market tends to provide the automatic and transparent warning signals that we look for. Positive are De Grauwe & Moesen (2009) and negative is Gros (2011), the latter with the more convincing argument.

(PM. Eurozone countries unsatisfied with their risk rating can set up a separate government bond bank (GGB). To participate, governments pay an insurance rate or provide collateral, set by the GGB for the individual government. Deposits are in individual accounts and may to some extent be pooled. One can imagine GGB bonds. If this is successful then the ECB gets some competition, but likely it appears infeasible since upbeat countries do not wish to pool risks with downbeat countries, while all dream that risky commercial banks can accept risks by providing CDSs ...)

## 6.3 European Central Bank

Wyplosz (2011) reminds us of the lender of last resort: "All the ECB has to do is to guarantee public debts. Such a move does not have to be expensive. The ECB can simply guarantee the rollover at face value of maturing sovereign debts. This should immediately stop the sovereign debt crisis."

The point is that this very mechanism was forbidden in the Treaty, since it would seduce member states to issue debt at will and let others bear the burden. With the euro in dire straits in the credit crunch, the ECB found a 'loophole' in the Treaty by purchasing bonds on the secondary market. As said, Jensen (2011) remarks in the context of the resignation of Jürgen Stark, we may consider this loophole to be contrary to the intentions of the Treaty. Sibert (2011) criticises the impact on legitimacy and effectiveness.

Indeed, the ECB, by using secondary markets in 2010, stabilized markets for a while, but it created instability again in 2011 by subsequently demanding from political leaders to resolve the issue, so that there now arises the European Stabilisation Mechanism (ESM). Default due to bad fiscal policy of a member state can indeed be treated as differing from a threat to the monetary system as a whole.

Thus the Eurozone needs to come to terms with the possibilities of (a) ECB market activity, (b) default on public debt (without the IMF stepping in). For monetary policy, the ECB can distinguish **Regime I** for normal activity and **Regime II** for particular countries under serious risk of default. The policy choice on what we do now can be based upon what we want for the future: is government debt going to be reliable or not? And if this is desired and if we don't have a common fiscal statute, can we then still use our common monetary resources?

(ad a) Forbidding activity on primary public debt markets (and possibly secondary markets) runs counter to the notion of a Central Bank. There can be standard quota based upon GDP,

with longer term error correction mechanisms, and short term discretion for emergencies. A major conclusion is: in a new treaty the ECB can be seen as having a role in both the primary and the secondary market for public debt.

The ECB then decides upon the regime choice too. We may also use the criterion of 100% debt to GDP. (Distrust in Germany and Holland about voting power of other nations is fed by their wrong conception of the causes of stagflation and their own role in that. A more crucial question is: can Germany and Holland trust economic scientist of other nations, if they already censor their own ?)

(ad b) Regime II arises for these reasons: (i) Common money without a common fiscal base so that there is discussion about who should bear the burden, (ii) The Basel regulatory mismatch on government debt. The lack of a Regime II provision in the Treaty is a serious design flaw. Having a no bail-out clause is too simplistic in terms of the severity of such problems and the complexity of handling it. This case requires a bit longer discussion.

(PM. There may be a third historical reason: (iii) undermining of the SGP targets by Germany and France, in part because these targets were somewhat inflexible and incomplete. Germany then tried to repair its position, by stimulating exports, but this shifted problems to other nations.)

A guarantee for public debt can be seen as a free and automatic CDS. With the intended European Stabilisation Mechanism (ESM) considered as part of the economic system, some insurance on public debt however might be alright (though the German Constitutional Court might block it). One reason to consider such a CDS is for pension funds, that need long term security and are crucial for system stability in a wider sense. Commercial banks are better suited both to create the market estimate of an actual default, and to require collateral if needed.

When we consider how the ECB might create an additional insurance for pension funds then we meet the problem of common money without common tax. The Banque de France took care of the franc and French national debt denoted in francs had a close relation to the value of the franc itself. Within the eurozone this close link is broken.

Example: Suppose that the ECB is involved in a CDS of public debt for pension funds. It can set a rate of for example 30% of interest when public debt is in the range of 100% - 110% of GDP, and only for pension funds, for at most 50% of the pension fund capital, and under the condition that when the country debt ratio rises above 110% then such insured debt loses insurance in three years in linear fashion per day from 100% insured to 0% insured. Regard country X with 100% debt that pays 6% for 10 year paper. A pension fund fearing default may channel 1.8% to the ECB for insurance. It may also sell its paper but then the price and its capital drop and the country's rate rises. If all X's public debt is kept by pension funds all over the eurozone and if they all insure themselves, then  $100\% * 1.8\% = 1.8\%$  of X's GDP flows annually into the ECB as the total insurance premium. This flow of money out of the economy needs to be compensated by creation of money elsewhere in the system. All insurance money at the ECB is only recorded as a figure on the computer screen while the ECB as lender of last resort can create such figures at will anyway. (X may be tempted to declare itself bankrupt and cash 100% of its GDP from the ECB. One wonders whether we really need safeguards for this to happen.) It might be wiser to have a rule for pension funds to the same effect (and have them be their own rating agency).

With a 100% debt to GDP as a rule for Regime II, this then applies now for Greece and Italy. We look at a better way to deal with it below (section 6.6).

(PM. There is a discussion by Sinn (2011), Storbeck (2011) and Buiters et al. (2011) about the ECB Target2 system.)

#### **6.4 Shadow banking**

Pomerleano (2011): “In response to the crisis, the reforms in financial regulation address threats to the banking system by increasing capital and providing for liquidity in the banking system. This article argues that the measures miss the point of the recent crisis. The liquidity crisis in the shadow banking system was a major source of financial and economic instability.” Obviously, shadow banking ought to be brought into regulation as well. Apparently Basel I created the possibility of off-balance items and this can be restored.

#### **6.5 Mortgages**

It is curious to bail out banks but leave home owners stuck with too high mortgages on once overvalued homes – which would still be risky loans for the banks. Bailing out home owners would help both them and the banks at the same time. A haircut on mortgages would be the best measure (and revival of conservative standards of course), and subsequently we have to resolve the bank capital issue. For clarity we consider only public debt below, but a similar scheme can be done for mortgages. PM. Advised reading is Leamer (2009).

#### **6.6 Bank capital**

Subsequently, there is the issue of the capital base of EU (zombie) banks. See Wyplosz (2011), Onado (2011) and Baldwin (2011). Though the modern saying would be “Beware of Greeks carrying debt” it is also enlightening to consider Varoufakis & Stuart (2011)<sup>7</sup> and Stavrou (2011) on the zombie banks, and note that they are in the company of Lagarde (IMF) and Roubini in FT (2011), whereas the ECB rather appears to be in a curious state of denial.

Gual (2011) criticizes Lagarde, claiming that banks are recovering and that the problem lies with government debt. He rightly remarks that government debt is considered so reliable under Basel I to III that it is not included in the capital adequacy requirement. It is curious that governments now blame banks for accepting government debt. However, Gual neglects that banks first got into problems because of the subprime mortgage crisis and that governments had to save them, whence the government debts arose.

The story remains this: incomplete understanding of stagflation, financial deregulation and the US debt finance of the Iraq war gave us the subprime mortgage crisis and the recession, that wiped out much of bank capital, and now there is the risk on public debt. Greek debt was not allowed to default, perhaps as a matter of principle but at least because of the impact on the banking system. If the European banks had a strong capital base then they might be able to carry the future risk of default of some European sovereign debt, and then a reregulation of the ECB and its possible backing of sovereign debt would not be needed.

Unfortunately banks are in the transition from Basel II to Basel III with the total capital requirement going from 8% now to 10.5% by 2019, see BIS (2010). Banks have the challenge to create 32% profit on their equity of 8% to arrive at that the requirement of 10.5%. The ECB refinancing interest rate of 1.5% (while inflation is 2.5% and thus negative real rate of interest) may partly be so low to allow banks to generate profits for that required growth in

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<sup>7</sup> Their main proposal of a ‘tranche transfer’ or swap of 60% of GDP of national debt for eurozone bonds created by the ECB however is not convincing since we still want markets to rate nations, but then rather in terms of collateral and not in terms of a higher rate of interest.

capital. That latter process however is not only slow and untimely but also a sizeable subsidy from the monetary system to bank equity owners.

A solution approach is as follows.

The European Central Bank (ECB) can inject risk-carrying capital into banks that do not satisfy the new 10.5% capital requirement, and neutralize the potential inflationary effect by a higher reserve requirement. The operation is tantamount to printing money and neutralizing it. See **Appendix A** for a bank balance sheet and check how it would work out. The operation can be done overnight and achieve the stability that current plans only foresee for 2019. The capital involved can be called the European Recovery Capital (ERC), and represents the equivalent of a TARP for the Eurozone banks. (Europe did not have a TARP but national governments acted in that manner, for example the Dutch nationalisation of ABN-AMRO. Apparently it wasn't enough.)

Capital requirements are a bit academic when there are no emergencies, and when money consists of digits on the computer emergencies can meet with a credit line to the Central Bank. The 10.5% requirement is not based upon deep science but upon the wisdom of those who allowed financial deregulation. Such requirements protect less against systematic events and are primarily relevant for individual emergencies, when a single bank does not wish to alert the Central Bank and closer scrutiny. With a proper system in a re-regulated world, 8% might still have been alright (or even less). Assuming the wisdom of Basel III however, the flexibility of fiat money still allows the creation of the ERC in said manner.

The same method can be used with respect to an overhang of public debt. We will consider EUR 400 billion for Greek and Italian debt and the same amount for the Basel III update. This example is discussed below. See **Appendix B** for the balance sheets and see **Appendix C** for the underlying data used from the ECB and Eurostat.

Properties are:

(a) The ECB determines which banks receive mandatory ERC for Basel III. (a1) It might require a nationalisation-freeze for a half year to sort things out. (a2) Because of competition all banks qualify though solvable banks may opt out. (a3) The ECB should not own equity in banks that it oversees. Hence, with reference to the discussion in DRGTPE of investment banks, eurozone countries create their national ERC investment banks (ERBs), that receive the ERC from the ECB, and that manage their ERC-shares in the national banks. (Those might be sold and invested in ventures.) Shares in ERC are based upon GDP, so that e.g. in ERB-Germany all eurozone countries have shares in proportion to their GDP. This reduces the effect from moral hazard that countries with many bad banks would profit from a larger injection of ERC. Of course they profit since their bad bank sector is saved but they lose equity value.

(b) Bank equity in the eurozone is EUR 1.6 trillion (ECB, consolidated banking data for June 2010). A 32% increase in equity might be overdone since there will be some solvent banks. Let us suppose 25%. This means an ERC of EUR 400 billion or 4.3% of GDP. Given the proportional allocation all eurozone debt rates are reduced by this percentage.

(c) If the new capital is common equity then the current bank equity holders lose voting rights and stock market value, since the future profits will be distributed over a larger equity base. The injection would amount to a partial nationalisation of banks, in this case eurozoneation. This would be acceptable. (i) It fits the idea that owners of bank equity are partially responsible for the current crisis and may be expected to bear part of the loss. (ii) Underfunded banks lose more equity value and well funded banks lose less. (iii)

The operation actually saves banks from insolvency and thus some gratitude from them would be appreciated. (iv) Banks can be expected to understand that the hidden subsidy to banks ought to stop.

(d) With a return on equity of about 5%, bank profits are about EUR 80 billion. If equity is deluted from EUR 1.6 trillion to EUR 2 trillion because of the ERC, the rate of return drops to 4%. If 5% still is the opportunity rate, the EUR 64 billion going to the original equity holders represents a capitalized value of EUR 1.28 trillion. Thus, they incur a capital loss of EUR 320 billion. This would be the effective nationalisation of the banks. It would be acceptable. Note that the return of equity of 5% is after deduction of costs, which also contain high salaries and bonuses. Restructuring this would raise profitability. PM 1. Current problems are inadequate competition, and banks that are too big to fail. Hence the second step after this ERC project is to cut up banks in smaller ones. PM 2. It remains an issue how to recover improper profits made in the past, such as selling CDSs. Is anything legally allowed if it is not explicitly forbidden? One could consider to allow only instruments that existed in 1960, and start anew with 'evidence based finance'.

(e) Subsequently there is public debt. We can calculate Greek debt at either nominal or defaulted value. It depends upon who should learn the deeper lesson. When there is a default, those lose: (e1) banks that sold CDSs, (e2) banks that hold Greek debt without CDS. When there is no default, those lose: (e3) banks that bet on a default, (e4) banks that bought CDS for nought. In all cases, losses are bailed out partially by the ERC however. Given the wider consequences of a default however, e.g. for pension funds, it seems the wiser road not to default. See also the comment in the introduction on the Greek entry based upon improper statistics. The paper to be neutralised would be located at the ECB and not at banks and pension funds. If the ECB would not have sufficient Greek debt then it could first buy up sufficient amounts up to the required ERC. The rate of interest would drop and the creation of money in circulation will require a higher reserve requirement. Since the ERC is not quite an eurozonebond but rather eurozone-equity, the nominal effect is that the eurozone takes over part of Greek debt. The question remains what Greece should do under the no bail-out idea: see below.

(f) Greek debt in 2010 is 143% of GDP. We might however allow the same scheme also to Italy (119%), Spain (60%), Portugal (93%) and Ireland (96%) (Eurostat 2010, file tsieb090). If we put the threshold of public debt at 100% of GDP then only Greece and Italy qualify, and this requires EUR 98 billion for Greece and EUR 294 billion for Italy, together EUR 392 billion.

(g) It is simplest to disregard joint effects. The Greek debt percentages of 143% might first be reduced by 4.3% with lower need for neutralisation. Also, 25% of Greek bank equity is EUR 8 billion and this might be subtracted too. These marginal effects can best be neglected unless there is a specific reason to call attention to them.

(h) Greek GDP is 2.5% of the eurozone, and 16.8% for Italy. It might be argued that those shares in the ERC of EUR 400 billion of (a) and (b) should be forfeited, i.e. EUR 10 billion for Greece and EUR 67 billion for Italy. In this case it can be argued however that these amounts reflect the values for bank equity under point (g). Thus the Greek and Italian shares in ERC dilute their national bank equity by approximately the same amount, and this allows for a decent position of their governments in the discussion in the national theater, where governments must oppose bank equity holders. While equity holders in Greece and Italy lose such amounts, their governments gain those amounts in eurozone banking (plus, indeed, some restructuring of their national debts).

(i) Above can be done because of fiat money. The ECB can hold EUR 392 billion of Greek and Italian debt ad infinitum, and there would be no official default, to suit the rating agencies. To arrive at the level of debt of 100% of GDP, Greece and Italy can each sell an extremely valuable pebble from their own soil to the ECB to redeem their debt, which pebbles however better not be marked so that they may inadvertently be lost without a trace during a walk in the woods. Alternatively we might think of two cubes of ice, with national stamps, that could be stored in a glass in the ECB's president's office, melt and evaporate, or inadvertently drunk by some hapless visitor. Perhaps the ECB ought to have a vase with flowers for that purpose. This risky Greek and Italian debt overhang is then liquidated too. If the rating agencies would sternly criticize the ECB, so be it. Given the no bail-out clause it can be doubted whether the general public would be satisfied with the pebbles or ice cubes. The suggestion then is that the Greek and Italian governments devise a plan along the lines of section 3 above, where they indicate regions in their countries that could benefit from foreign investments. Since Greece and Italy would receive EUR 400 billion in reduction of their national debt, a lease period of 40 years would value the lease at EUR 10 billion per year excluding interest. (100 years would seem a rather long period.)

This approach obviously still leaves room for policy makers to amend and fill in details. The main point of the plan is to give a general outline for crisis management, against the background of a proper analysis of stagflation as discussed in DRGTPE.

The credit crunch was caused by too much credit chasing too many financial ways for profit and too few ways in the real economy. Inflation showed up in assets and not in the Consumer Price Index. Above plan essentially uses credit again. The ERC and ERB still are allocations to the financial sector. The focus should next be on that real economy and sterilising the credit overhang still out there.

## 6.7 Fairness

There are some issues of fairness:

(a) Hau (2011b) on the bailout of banks: "this socialisation of private losses implies a gigantic redistribution of wealth to the 5% richest in the world who own roughly 70% of all financial assets". The equity tranche of EUR 400 billion comes at a price for bank stock holders. This probably does not even out with the original damage done by the banking system by the subprime mortgage crisis though. The tranche of EUR 400 billion to repair the value of Greek and Italian sovereign debt is a direct hand-out. The argument lies in the stability of the system. For Greece there is the argument on entry via improper accounting, for Italy there is the omission in the Treaty of the Regime II for the ECB.

(b) Spain, Portugal and Ireland may wonder why only Greece and Italy are helped. But Germany and Slovakia etcetera might wonder too. This present paper has used the arbitrary line of 100% debt to GDP, using 2010 data. The reason lies ultimately in the overall stability of the monetary system as a whole. Conditions are hopefully such that Greece and Italy are willing to accept them but the other eurozone nations not.

(c) There is the eurozone plan of July 21 with the "voluntary haircut" by markets. The idea seems to be that public debt shouldn't default and that the rating agencies don't have to declare a default (otherwise swaps would have to be paid with unforeseen consequences). Hau (2011a), Cabral (2011) and Dixon (2011a) criticise the plan on the grounds (c1) that the haircut is calculated on dubious discounting, (c2) that it actually would be a subsidy to banks (again the 5% richest) and (c3) that it would increase Greek debt. Dutch Prime Minister Rutte was severely criticised in Dutch parliament for making calculation errors, but apparently Dutch parliament did not delve into the issue of the proper discount rate. Dixon (2011a) contains a "Greek Barber" applet where one can calculate the cost to the taxpayer. I have not tried to look into this issue. The analysis as a whole is misguided if it does not take account of

DRGTPE. Why only Greece and not Italy and not the banks ? The problems created by Germany and Holland need to be tackled too. Government planning is subject to gross error when there is no Economic Supreme Court. It suffices to reject the July 21 plan and start thinking along the lines as suggested in this article.

Does fairness require concessions from Greece and Italy ? In the public mind, the creation of investment zones in these countries could be regarded as collateral (no bail-out) for the restructuring of their debt. To the extent that these nations would dislike the measure (what did Garibaldi and Venizelos fight for ? (Answer: Europe ?)) it would be a constant reminder that their governments need to put their houses into order to prevent similar events in the future. It is doubtful whether such investment zones can or even should be made mandatory and the debt nations can offer alternatives of course. Dixon (2011b) reports on the option of a wealth tax, for example. Even then, the governments must bring their houses into order, and investments zones would be a benefit and not a burden. These issues depend upon the local situation. Alesina & Giavazzi (2011) look back at the context of Jürgen Stark's resignation and judge that Italy is in a "state of denial". They conclude: "We offer a prediction: Italy will soon enter a recession. The budget may not be balanced, but the country will be kept afloat, inside the euro, by the continuing ECB bond purchases. These purchases – like an aspirin for a patient who has pneumonia – will delude Italians that the pneumonia is gone, while it is still there." My suggestion is that both nations create their Economic Supreme Courts and ask their advice. Subsequently, it is wise to also invest in Northern Africa, given the 'Arab Spring', and it may be that Southern Europe is a good 'springboard' for that.

## 6.8 Comparison

This article was written before the September 17 issue of *The Economist* (2011b) came to my attention. Its longer discussion of the eurozone woe makes good material for comparison of views. Since it might be that Europe falls into Japanese-style stagnation it may be wise to trace differences in view with some detail.

- (1) "It requires urgent action on a huge scale. Unless Germany rises to the challenge, disaster looms." (p9) Agreed.
- (2) "A rescue must do four things fast. First, it must make clear which of Europe's governments are deemed illiquid and which are insolvent, giving unlimited backing to the solvent governments but restructuring the debt of those that can never repay it. Second it has to shore up Europe's banks to ensure they can withstand a sovereign default. Third, it needs to shift the euro zone's macroeconomic policy from its obsession with budget-cutting towards an agenda for growth. And finally, it must start the process of designing a new system to stop such a mess ever being created again." (p9) This paper provides those four answers. The Regime II default risk, and example criterion of 100% debt to GDP, requires an amendment to the euro Treaty, and puts Greece and Italy into restructuring, which we can already do. This paper shores up banks and creates investment banks.
- (3) "And mere budget-cutting does not deal with the real cause of the mess, which is a loss of credibility." (p9) Well, governments have been told that budget-cutting was necessary to restore confidence ... We want governments to adhere to the SGP targets, don't we ? The loss of credibility rather arises from the mess itself, due to a lack of understanding of stagflation.
- (4) "Europe's leaders have repeatedly denied that Greece is insolvent (when everyone knows it is) (...) The latest, inadequate plan for a second Greek bail-out, agreed in a summit in July, should be thrown away and rewritten." (p9) Agreed.
- (5) "a renewed programme of structural reform and liberalisation" (p9). But we already have the Lisbon agenda that hardly works because markets are stagnating ... The Economist does not see (a) the problem caused by Germany and Holland, (b) the problem in the tax structure, (c) the analysis on stagflation.

- (6) “A Greek default would threaten many banks (...) a scheme to shore up banks (...) peripheral governments may need euro-zone money. Ideally that would come from the European Financial Stability Facility (EFSF) (...) to set up a euro-zone bank fund, together with a euro-zone bank-resolution authority”. This is unclear. It only translates as “Banks carry the Greek default but Germany carries the banks”. It seems wiser to do as in this present paper: (a) neutralize the risky part of Greek and Italian debt in the monetary system, (b) nationalise part of bank equity by eurozone equity injection.
- (7) “None of this will work unless the Europeans create a firewall around the solvent governments.” (p9) “The ECB must declare that it stands behind all solvent countries’ sovereign debts (...) It would be a nonsense if the ECB’s dogged defence of monetary rigour led, say, to an Italian default and a global depression.” (p10) It is not quite “monetary rigour” that is at stake here but the legal restrictions in the Treaty. We might make Greece solvent again, but it could start all over again and then be backed by the ECB ... The Economist is right in its worry that the Treaty is too rigid in some respects, but all-out backing is too much.
- (8) “Put our plan to many Europeans (...) and they may moan that this is not what they were promised when the euro was set up. Completely true, and sadly irrelevant. The issue now is not whether the euro was mis-sold or whether it was a terrible idea in the first place; it is whether it is worth saving.” (p10) Nicely said. However, it does help to establish whether the euro was a good idea, since it gives a perspective on future action. Possibly we shore up the euro now but there is another unforeseen Krach in 2030, and thus if the euro were a bad idea, we could use a decade to get rid of it. My suggestion is that a common currency is a good idea, and that the treaties on the euro and the SGP were only inadequate.
- (9) “furious Germans will demand that Greece is thrown out (or bullied out) of the euro to frighten the others. (...) but a threat to expel Italy or Spain is empty: they are too big and too tightly tied to the EU.” (p10). Agreed. But The Economist does not provide a solution for Italy either. Greece is apparently bailed out by a default but Italy ?
- (10) “once Greece defaults and restructures, its economy stands a good chance of making a credible start on its long journey to economic health.” (p10) I beg to be sceptic. (a) Germany and Holland have to cut their export surpluses too, to give Southern Europe some breathing space. (b) Greece and Italy can provide collateral, e.g. as a wealth tax or such investment zone leases. Universities and technological centres in the sun can become Europe’s California (but build against the earthquakes and killer bees).
- (11) “Or a new supervisory role for euro-zone governments, or, heaven forbid, the useless European Parliament?” (p10) Not really useless (and the eurozone has no parliament).
- (12) “(...) our rescue plan begins a democratic deficit that needs to be fixed if steps towards closer fiscal union are to work. But there must be ways for good governments to force bad ones to keep in line that do not require the building of a huge federal superstate.” (p10) The Economist then mentions the super-commissioner proposed by the Dutch government or Merkel’s suggestion of involvement of the European Court of Justice. But these examples increase the democratic deficit. Apparently The Economist has no idea how to implement control exactly, and how to make this democratic. Well, this article proposes the Economic Supreme Courts at the national level, all based in economic science and open to the public (see the draft amendment in DRGTPE).
- (13) “For the ECB to stand behind less prudent countries may be unwelcome for Germans; but letting the euro fall to bits is much, much worse.” (p10) Agreed, but, the issue is not either this or that. A plan contains the four aspects that this paper started with, and presents a balanced whole.

Charlemagne (p28), bank reform (p31), Bagehot (p34) and the nice special briefing (p63-66) do not change this comparison. In sum, The Economist September 17 issue mentions the various aspects to consider and rightly emphasises the importance for markets of backing by the ECB, like this article has done too. However, there is quite a difference with respect to the underlying analysis and the amount of detail in how a full plan would look like.



## (7) Conclusion

Due to fiat money and the existence of a lender of last resort, the eurozone problems are essentially issues of management and not of lack of resources.

The rules on the ECB and the EU Stability and Growth Pact are tested under the conditions of the credit crunch. While the US had the Troubled Assets Relief Plan (TARP) and quantitative easing, the eurozone apparently had less co-ordination (and bank bail-outs by nation), so that consequences showed up more in public debt. Investments are low so savings indeed flow to public debt. The eurozone has 85% debt to GDP and the US has 98%.

The rules on the ECB and euro assume a Regime I of normal policy but have the design flaw of having no Regime II of countries at risk of default. Stating 'no bail-out' is too simplistic. The eurozone has the additional problems of (a) aggressive export policies of Germany and Holland, (b) governance issues both in nations and the EU project itself, requiring the creation of Economic Supreme Courts at the national level, and (c) the entry of Greece because of improper statistics. These issues can be resolved, and special attention may be given to the recovery of investments.

An example has been given so that it is easier to understand what the figures mean. EUR 400 billion of European Recovery Capital (ERC) can be allocated from the ECB to ERC Investment Banks (ERBs) to repair zombie banks. Another same sum can be used for the debt problems of Greece and Italy. It is not suggested that this would be enough but it represents 25% of eurozone bank equity (a partial nationalisation) and allows Greece and Italy to reduce debt to 100% of GDP (figures for 2010). One could use a similar approach for mortgages.

The 2005 book *Definition & Reality in the General Theory of Political Economy* (DRGTPE) dealt with (1) better governance, (2) investments for employment and growth, and (3) fiscal policy based upon functional finance. It finds a natural extension with respect to (4) stability of the monetary system. This is not really a surprise since DRGTPE assumed fiat money and the Central Bank as lender of last resort.

See **Appendix D** for lessons for a world currency.

## Appendix A. Balance sheet of a bank

The Central Bank (CB) can inject capital into the bank as new equity, to satisfy the higher capital requirement, and neutralize the loan capacity by a higher reserve requirement with respect to deposits.

In the sheet below, the base situation is Basel II, the injection is zero and the capital requirement is 8%, measured against commercial loans of 100 (regarding government bills as safe). For clarity also an Income Statement is concocted. Cash earns 0%, reserves at the CB earn 0.75%, government bills 5% and so on. This bank makes a profit of 0.81. With respect to its own equity capital (worth W) of 8 this is a rate of return of 10.1%. If the going market rate is 6% then the stock market or fair accounting value of the bank is 13.5.

If the capital requirement rises to 10.5% under Basel III then the CB can inject 2.5 of equity capital (which then is transferred to the ERC Investment Bank), which also causes the Reserves at CB (RCB) to rise to 12.5, and the reserve ratio to rise to 13.5%. This is not shown in a separate sheet since one can easily see how it works.

There are two effects:

1. Since government bills are not restrained by capital or reserve requirements, the bank can directly use the 2.5 capital injection to buy government bills and increase profits.
2. In the short term the bank still is constrained by the capital requirement with respect to commercial loans. But the bank will be tempted to increase its equity and then take advantage of the reserve ratio to expand into commercial loans.

These effects can be neutralized by also raising the reserve requirement, so that the capital injection is kept as reserves at the CB. If the injection is large then a separate reserve requirement rule may be introduced such that the CB capital injection is kept as a separate reserve, to be used only for special occasions.

Balance Sheet for a Bank					
	<b>Assets</b>			<b>Liabilities</b>	
C	Cash	5	D	Deposits	130
RCB	Reserves at CB	10	LCB	Loans from CB	10
G	Govt. Bills	33	W	Own capital	8
L	Comm. Loans	100		CB cap. injection	0
	<b>Total</b>	<b>148</b>		<b>Total</b>	<b>148</b>
	CB = Central Bank				
R	Reserves C+RCB	15			
	Res. Req. R / D	11.5%			
	Cap. Req. W / L	8.0%			
	Income Statement				
	<b>Revenues</b>			<b>Expenses</b>	
	0% Cash	0		2% Deposits	2.6
	0.75% Reserves at CB	0.075		1.50% Loans from CB	0.15
	5% Govt. Bills	1.485		Operations	4
	6% Comm. Loans	6		0.1013 Profit / Loss	0.81
	<b>Total</b>	<b>7.56</b>		<b>Total</b>	<b>7.56</b>
	6% Gen. bank stock return				
	Stock value	13.5			

## Appendix B. Current situation versus alternative

The balance sheet of the ECB can be taken from its 2010 annual report, ECB (2011). Note that the ECB is relatively small with respect to the whole Eurosystem that includes the national central banks (NCBs). We maintain the (wrong) method of accounting for fiat money (see Colignatus (2005b)). For the other data see **Appendix C**.

The tables assume that the overhang of debt of Greece and Italy above the 100% GDP mark, consisting of almost EUR 400 billion, also poisons the eurozone banks. The Basel II 8% capital adequacy mark does not cover public debt and thus is flattered with respect to this 'risk'.

The comparison of the current situation with the alternative clarifies that in total EUR 800 billion is needed: (a) to neutralize the risk due to Greece and Italy (RGI), (b) to bring the capital requirement from 8% to 10.5%.

Current situation				Adaptation for the European Recovery Capital			
Balance Sheet for the ECB 2010 (billion euro)				Balance Sheet for the ECB 2010 - Adapted for ERC			
<b>Assets</b>		<b>Liabilities</b>		<b>Assets</b>		<b>Liabilities</b>	
Gold	17	Banknotes	67	Gold	17	Banknotes	67
Non-euro claims	40	Eurozone members	40	Non-euro claims	40	Eurozone members	40
SMP	18	Target2 / SMP	21	SMP	18	Target2 / SMP	21
Intra euro claims	67	Other	31	Intra euro claims	67	Other	31
Other	22	Own capital	5	Risk Gr & It (RGI)	400	Dep. ECB for RGI	400
<b>Total</b>	<b>164</b>	<b>Total</b>	<b>164</b>	2 cubes of ice	400	Risk Gr & It (RGI)	400
				Equity from ERC	400	Dep. ECB for ERC	400
				Other	22	Own capital	5
				<b>Total</b>	<b>1364</b>	<b>Total</b>	<b>1364</b>
Balance Sheet for banks 2010 (billion euro)				Balance Sheet for banks 2010 (billion euro)			
<b>Assets</b>		<b>Liabilities</b>		<b>Assets</b>		<b>Liabilities</b>	
Other assets	31760	Other liabilities	30603	Other assets	31760	Other liabilities	30603
Risk Gr & It (RGI)	400	Own capital	1557	Dep. ECB for RGI	400	Own capital	1557
<b>Total</b>	<b>32160</b>	<b>Total</b>	<b>32160</b>	Dep. ECB for ERC	400	Equity from ERC	400
				<b>Total</b>	<b>32560</b>	<b>Total</b>	<b>32560</b>
Balance Sheet for Greece and Italy 2010 (billion euro)				Balance Sheet for Greece and Italy 2010 (billion euro)			
<b>Assets</b>		<b>Liabilities</b>		<b>Assets</b>		<b>Liabilities</b>	
100% GDP	1779	Other outstanding	1779	100% GDP	1779	Other outstanding	1779
2 cubes of ice	393	Risk Gr & It (RGI)	400	<b>Total</b>	<b>1779</b>	<b>Total</b>	<b>1779</b>
<b>Total</b>	<b>2172</b>	<b>Total</b>	<b>2172</b>				

From the same source as used in **Appendix C**, it can be calculated (not shown) that eurozone cash and reserve holdings are EUR 611 billion and that total deposits are EUR 16.7 trillion. A reserve ratio of 3.7% is implied. The injection of EUR 800 billion would more than double that rate. It thus remains feasible to neutralize the injection by a higher reserve requirement. It still remains a good option however to keep the deposits used for equity in a separate account, to be used only in special occasions.

It is not shown how the ECB balance sheet again shrinks as the RGI are eliminated from both columns and the ice cubes melt and evaporate. The creation of ERBs is not shown either. Remember that accounting at a Central Bank is a monetary issue and not one of FASB.

## Appendix C. Data on eurozone GDP, debt and bank equity

The GDP and debt data for the eurozone are taken from Eurostat (tsieb090 file). The bank assets and equity are from the ECB. PM. The Equity / Asset ratio would be un-informative since assets have various risks.

25% of bank equity amounts to EUR 389 billion. If this is rounded to EUR 400 billion and allocated in proportion of GDP then the last column arises.

When Greek and Italian debt is set at 100% of GDP then this requires  $EUR\ 98 + 294 = 393$  (due to rounding) billion for redemption by the ECB.

General government gross debt, Percentage of GDP and billion Euros; Bank assets and equity								
	D/GDP %	D=Debt	GDP	GDP	Assets	Equity	25% xGDP	Share
Year	2010	2010	2010	Share	2010 (june)	2010 (june)		
Euro area (17 ctrs)	85.1	7837	9209	100.0	32160	1557	389	400
Belgium	96.8	341	352	3.8	1245	54	14	15
Germany	83.2	2080	2500	27.1	9383	331	83	109
Estonia	6.6	1	14	0.2	31	2	1	1
Ireland	96.2	148	154	1.7	1430	65	16	7
Greece	142.8	329	230	2.5	499	31	8	10
Spain	60.1	639	1063	11.5	3877	230	58	46
France	81.7	1591	1948	21.1	6745	305	76	85
Italy	119.0	1843	1549	16.8	2764	210	53	67
Cyprus	60.8	11	17	0.2	162	9	2	1
Luxembourg	18.4	8	42	0.5	817	47	12	2
Malta	68.0	4	6	0.1	52	10	2	0
Netherlands	62.7	371	592	6.4	2852	114	29	26
Austria	72.3	205	284	3.1	1193	85	21	12
Portugal	93.0	160	173	1.9	532	32	8	7
Slovenia	38.0	14	36	0.4	57	4	1	2
Slovakia	41.0	27	66	0.7	54	5	1	3
Finland	48.4	87	180	2.0	466	23	6	8
GreeceNew	100	230	230					
Greece - GreeceNew		98					8	10
ItalyNew	100	1549	1549					
Italy - ItalyNew		294					53	67
Greece + Italy (delta)		393						

Sources: Eurostat tsieb090

and ECB June 2010 <http://www.ecb.int/stats/money/consolidated/html/index.en.html>

## Appendix D. Lessons for a world currency

It is a dogma amongst economic theorists that a common currency also requires a common fiscality. Government debt must be redeemable by either printing money or collecting tax. While governments always can tax, the printing of money would be especially relevant for debt in foreign hands that cannot be taxed (except by defaulting). A reason for governments to be able to print money is seigniorage. Economic growth and a constant velocity of money results into a rise in demand for money that can be met by printing money. Nominal economic growth of 5% (say 2% inflation and 3% real growth) would mean government revenue of 5%.

However, this argument may also be turned around. We might wish that governments cannot redeem debt by printing money. If we restrain governments from printing money to redeem debt we may still allow them to keep this seigniorage.

(Seigniorage however can be hidden in the banking system and fall to private hands. For example, the US Federal Reserve Bank (US Fed) is property of US banks and records banknotes in circulation as a debt by the government to the US Fed, even though the notes are printed by the US Treasury. It is a matter of discussion whether this kind of banking activity is like any other economic enterprise that seeks profits.)

Let the World Central Bank (WCB) (rather than IMF) create the common currency “solidus” (based upon fiat money rather than the golden Roman original). Governments satisfying its rules can join and yearly receive banknotes to the extent of seigniorage. This requires adequate national accounting, inspections and such. Rules can be like the Eurozone SGP extended with equilibrium on the external account and investment clauses. When the sol is used for international reserves (like the dollar) then proceeds from this are also shared by the participating countries. (Countries joining later miss out on part of that.)

Countries that participate can use the sol as standard of measurement, medium of exchange, and store of value. Present currencies can be exchanged at some exchange rate, and then disappear (or kept dormant for extreme situations). For example: 1 solidus = 10 euro (making the cent useful again). (See DRGTPE for targeting 0% inflation.)

Governments can put out debt in terms of sol. This debt can be covered by the capacity to tax. The national central bank uses debt for open market operations to manage liquidity, the rate of interest and term structure.

When a participating government puts out too much debt, such that redemption cannot be achieved by either its cash holdings, taxation or rolling over with other debt (e.g. from friendly nations), then the government lacks a national central bank that can print money at will. Default would become an issue. (Awakening of a dormant national currency would amount to defaulting.)

Part of the rules of the WCB would concern the range of national debt when preventing a default becomes an issue. There would be a role for the World Investment Bank. The national Economic Supreme Courts would have provided some guidance and co-ordination such that such cases would rather be extreme, and for individual cases only and not system wide.

In the City of London, Argentina currently might take a \$ 100 billion loan, buy up assets in the USA, transport them to Buenos Aires, and then declare itself bankrupt. This might also happen in terms of the sol, and also in gradual steps as in the past. The USA might do something similar with respect to the world. Monitor and prevent it.

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Colignatus is the name of Thomas Cool in science.

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