

Proposed ECB debt relief program, to help Greece and other Eurozone countries

Dr. John Simister (Senior Lecturer in Economics, Manchester Metropolitan University, UK)

Email: j.g.simister@mmu.ac.uk

Introduction

This paper investigates government debt in countries using the Euro – especially Greece; it argues that the European Central Bank (ECB) should correct for previous decisions. Greece's current financial crisis is part of a wider problem, which will cause huge problems in other Eurozone countries unless EU institutions intervene.

Stiglitz (2015) wrote "the economics behind the program that the "troika" (the European Commission, the European Central Bank, and the International Monetary Fund) foisted on Greece five years ago has been abysmal, resulting in a 25% decline in the country's GDP. I can think of no depression, ever, that has been so deliberate and had such catastrophic consequences [...] It is startling that the troika has refused to accept responsibility for any of this or admit how bad its forecasts and models have been. But what is even more surprising is that Europe's leaders have not even learned". To be fair, IMF director Christine Lagarde apologised in 2013 for damage imposed by the Troika on Greece (Elliott et al., 2013). To some extent, ECB supported Greece in recent years; however, many economists criticise ECB – including Keynesian economists (e.g. Krugman: Blackstone, 2014), and Monetarist economists (e.g. Christensen, 2013).

This paper outlines a straightforward solution, likely to be acceptable to all European countries; it would cost almost nothing to Europe's taxpayers, but greatly improve debt levels of every Eurozone country. It would deliver results almost immediately, and would not need new legislation.

Problems facing the Eurozone

Stiglitz (2011: 591) wrote "The standard macroeconomic models have failed, by all the most important tests of scientific theory. They did not predict that the financial crisis would happen; and when it did, they understated its effects. Monetary authorities allowed bubbles to grow and focused on keeping inflation low, partly because the

standard models suggested that low inflation was necessary and almost sufficient for efficiency and growth. After the crisis broke, policymakers relying on the models floundered. Notwithstanding the diversity of macroeconomics, the sum of these failures points to the need for a fundamental re-examination”.

There are many reasons for Greece’s current financial crisis, including overspending by previous Greek governments; and the international financial crisis which began in USA around 2007 – caused largely by the U.S. ‘subprime’ housing bubble. Blanchard et al. (2010: 447-51) suggest it may take decades of austerity for some countries to recover from huge government debts since 2007. Many economists consider austerity (adopted in many countries such as Greece) to be a mistake; but Eurozone governments cannot solve the problem using Keynesian policies, due to EU rules such as the Growth & Stability Pact (Konstantinos, Dimitrios & Simister, 2015a).

John Perkins (cited in Nevradakis, 2014) wrote “In the United States, we never believed that a banker would tell us to buy a \$500,000 house if in fact we could really only afford a \$300,000 house. We thought it was in the bank’s interest not to foreclose. But that changed a few years ago, and bankers told people who they knew could only afford a \$300,000 house to buy a \$500,000 house. “Tighten your belt, in a few years that house will be worth a million dollars; you’ll make a lot of money” . . . in fact, the value of the house went down; the market dropped out; the banks foreclosed on these houses, repackaged them, and sold them again. Double whammy. The people were told, “you were stupid; you were greedy; why did you buy such an expensive house?” [...] Something very similar on a larger scale happened in so many countries around the world, including Greece”.

There is currently a risk of Greek default; this danger was described as the sovereign equivalent of Lehman Brothers bankruptcy in USA (Ardagna & Caselli, 2012: 7). This risk increased in July 2015, when Greece failed to repay a debt to IMF. It has been suggested that Greece is being punished as a warning to other countries: “A bailout may encourage Greece to over-borrow in the future. More importantly, a bailout of Greece may lull other Euro-area governments into believing they will also be bailed out, thus indulging in over-borrowing as well [...] there is a range of austerity / assistance combinations that make the deal painful enough for the recipient country as not to wish to go through the same experience again. And, by observing the painful sacrifices undertaken by the recipient of the bailout (not to mention a Greek prime minister losing his job in the process), other countries as well should be able to infer that over-borrowing is not rewarded” (Ardagna & Caselli, 2012: 9). Gaffey (2015) points out that “QE is designed to be a neutral policy which benefits each member equally [...] Greece has not been included in the bond-buying scheme”.

It is not clear what the ECB has been doing, in response to crises in Greece and other countries. “The ECB has only published the weekly amount of bonds purchased without unveiling any other details, neither about the composition and maturity of the purchases nor the criteria for purchases or the planned amount of the programme. Data on weekly purchases suggest that the ECB has embarked on market intervention intermittently [...] The ECB’s lack of transparency appears even greater if compared to the UK and US [...] In disclosing detailed information, the BoE and the FED aimed to ensure the accountability of both programmes to British and American taxpayers. The ECB failed in this respect” (Gros et al., 2012: 5-6). Regarding the ECB’s role as ‘lender of last resort’, “there has been considerable uncertainty regarding the ECB’s authority and intentions, in contrast to the certainty regarding those of the Fed” (Winecoff, 2014: 452, footnote 19).

Next, consider government debt in Eurozone countries, shown by debt-to-GDP ratios in Table 1. Reinhart & Rogoff (2010, 2013) claimed it is dangerous for a country to have a government debt-to-GDP ratio over 90%, because it is associated with negative GDP growth (presumably because paying interest on government debt takes much of the government’s revenue, requiring less government expenditure and/or higher taxes). Pescatori, Sandri & Simon (2014) confirmed the key claim of Reinhart and Rogoff: a debt-to-GDP ratio over 90% appears to cause an economy to turn to negative growth. Greek debt is currently around 177% of GDP (see Table 1 below). However, there is hope: among countries which reduced their debt-to-GDP ratio, economic growth can occur (Pescatori, Sandri & Simon, 2014) – which suggests a bailout by ECB or another agency could allow countries to escape from the debt trap.

Table 1: debt-to-GDP ratio in Europe by country, 2013 and 2014

Country		2013	2014
Eurozone countries	Austria	81	85
	Belgium	104	107
	Cyprus	102	108
	Estonia	10	11
	Finland	56	59
	France	92	95
	Germany	77	75
	Greece	175	177
	Ireland	123	110
	Italy	129	132
	Latvia	38	40
	Lithuania	39	41
	Luxembourg	24	24
	Malta	69	68
	Netherlands	69	69
	Portugal	129.7	130.2
	Slovakia	55	54
	Slovenia	70	81
	Spain	92	98
Countries not in the Eurozone	Bulgaria	18	28
	Croatia	81	85
	Czech Republic	45	43
	Denmark	45	45
	Hungary	77	77
	Norway	29	26
	Poland	56	50
	Romania	38	40
	Sweden	39	44
	United Kingdom	87	89

Source: Eurostat (2015a)

Table 1 shows a clear division between Eurozone and non-Eurozone countries: no country outside the Eurozone has a debt-to-GDP ratio over 90%, which Reinhart & Rogoff (2010) consider dangerous. Among Eurozone countries, however, eight countries are in this danger zone (shaded, in Table 1). Greece has the worst debt problem; but if Greece were forced out of the Eurozone, seven other countries may face imminent crisis. Among countries with a debt-to-GDP ratio over 90% in 2013, the ratio fell in Ireland from 2013 to 2014, but rose in all but one of the at-risk countries: Belgium, Cyprus, France, Greece, Italy, Portugal and Spain.

After the 2008 global crisis (associated with the collapse of Lehman Brothers bank), rich citizens in rich Eurozone countries (such as Luxembourg and Germany) were at risk of losing their savings; at this point, we might expect the ECB to step in and prevent contagion, but EU institutions (including ECB) left support for commercial banks to national governments. Many writers claim ECB has not carried out its role adequately: “evidence of the effectiveness of the ECB approach is not encouraging” (Gros et al., 2012: 9); “while the ECB responded massively to the crisis through ‘credit easing’, it was trying at the same time to minimise its own risk. Yet this implies that its policy cannot be fully effective [...] The attempt by the ECB to limit its own risk is understandable, yet the

consequences for the effectiveness of the policy should also be fully understood” (Gros et al., 2012: 10). Yves Mersch (2015a), an ECB executive, acknowledged criticisms of the ECB.

Mario Draghi (2015) still appears to blame Greek governments for Greece’s problems: “a strong and credible agreement with Greece is needed, not only in the interest of Greece, but also of the euro area as a whole. While all actors will now need to go the extra mile, the ball lies squarely in the camp of the Greek government to take the necessary steps”. The ECB President said on 15th June 2015 “It should be absolutely clear that the decision on whether to conclude the review of the current programme and disburse further financial support to Greece lies entirely with the Eurogroup, so ultimately with euro area Member States. Hence this is a political decision that will have to be taken by elected policymakers, not by central bankers” (Draghi, 2015). But political agreements between governments are very difficult, due to “time-constrained nature of EU negotiations (which is due to the difficulty of bringing together 27 heads of government and assorted heads of European institutions for more than a few hours every few months)” (Ardagna & Caselli, 2012: 20). If ECB wait for politicians to agree, many Eurozone countries may go bankrupt. Winecoff (2014: 452) compares ECB with USA’s Federal Reserve Bank (Fed): “during the crisis, institutions responded according to their mandates: The Fed acted to stabilize the financial sector while the ECB attempted to maintain price stability within the eurozone without overly exposing itself to the European banking system”. This seems to support Draghi’s claim that ECB is powerless, but it referred to the period 2009-2012; since the Court of Justice of the European Union (2015) decision in January 2015, ECB can (and does) use QE.

In denial?

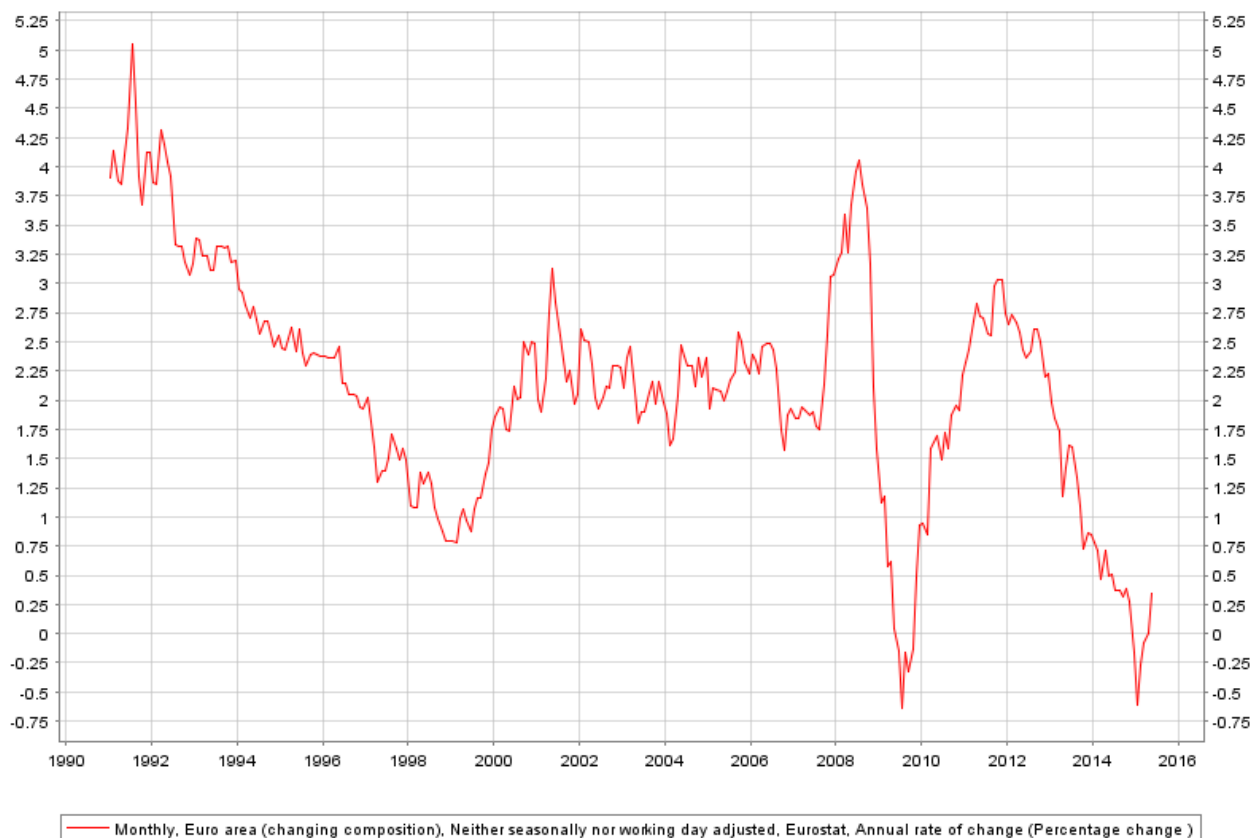
On 30th May 2015, ECB vice-president Constâncio said “Recent figures confirm that our policy is indeed working according to plan. Conditions in a host of asset markets, from equities to bonds or foreign exchange, have reacted in the expected way through the portfolio rebalancing transmission channel of monetary policy [...] The economic recovery in the euro area is now broader and it is firming itself but still in need of achieving higher investment to make it more self-sustained. ECB policies are working and making a significant contribution to the normalisation of economic conditions in the short term” (Constâncio, 2015). Similarly, on 25th June 2015, Yves Mersch said “Our forceful monetary policy measures were first, necessary, second, timely, and, third, effective. The economic recovery is now proceeding at a moderate pace. And we see encouraging signs that it is broadening” (Mersch, 2015a). These positive speeches are out of step with recent events in Greece, where banks limit how much cash customers can withdraw. “In Europe, where the financial crisis transformed into sovereign debt crises in several countries, the current phase of the **denial** cycle is marked by an official policy approach predicated on the assumption that normal growth can be restored through a mix of austerity, forbearance, and growth” (Reinhart & Rogoff, 2013: 3; emphasis added). ECB executives might be ‘in denial’; Miner (2011: 3) wrote “wouldn’t it be better for Europe to end the denial and pursue a structural solution to circumvent a financial catastrophe?”

Miner (2011) suggested some European problems are due to ‘cognitive dissonance’ among decision-makers. “Festinger studied how the cult members coped with the conflict between their conviction and reality. Since the group had committed considerable expense in support of its view, altering course was simply too costly. Instead, the leadership addressed the problem by assigning a longer time horizon to their expectation and encouraging followers to escalate their commitment. This helped some members avoid the pain of reversing ideology [...] this paradoxical story is analogous to the political psychology of the European debt crisis. At this stage, it should be apparent that liquidity alone is not the answer. Equally evident (at least for me) is that austerity is not the cure. Nevertheless, policymakers remain committed, at considerable cost, to a prescription of bailouts and belt tightening. The recent European Council proposal for Greece offers more of the same – billions in additional liquidity and blind faith in austerity. Conspicuously absent are meaningful structural solutions” (Miner, 2011: 1).

Yves Mersch said on 2nd July 2015, “there are many types of stories – some rooted in fantasy, some in fiction, and some in reality. The T2S story is a reality [...] To celebrate this great achievement, I would like to invite you for a drink in the beautiful garden outside” (Mersch, 2015b). It seems the closer Greece gets to disaster, the more ECB officials congratulate themselves. Perhaps senior ECB staff cannot imagine poverty: Radow (2014) reported annual salaries of €378,240 for Mario Draghi; €324,216 for Vitor Constâncio; and €281,833 for Yves Mersch.

Another disappointment is that Eurozone inflation has not been kept at about 2% per year, as ECB is required to do: “The primary objective of the ECB’s monetary policy is to maintain price stability. The ECB aims at inflation rates of below, but close to, 2% per year” (ECB, 2015b). But “Two types of target misses have been experienced under the euro: first, persistent target misses in the upward direction prior to the crisis and, second, a crass target undershooting in more recent times [...] The possibility that the ECB may have been insufficiently accommodative during the period under review here is increasingly becoming conventional wisdom today” (Bibow, 2015: 6). Warner (2015) wrote “For a long time now, the ECB has fallen woefully short of meeting its mandated inflation target”. ECB assess inflation using ‘Harmonised Index of Consumer Prices’ (HICP): ECB (2015c). Chart 1 shows how unsuccessful ECB has been, in maintaining inflation at the appropriate rate: inflation has often been far from the 2% target.

Chart 1: Eurozone index of consumer prices, 1991 to 2015



Source: ECB (2015c)

“ECB have committed to ploughing around €1.1 trillion into the Eurozone economy by buying €60 billion-worth of sovereign assets each month until September 2016” (Gaffey, 2015). But Warner (2015) wrote “one thing is certain about the apparently open-ended programme of quantitative easing promised yesterday after months of ECB infighting [...] it won’t do the job, or anything close”. Some economists suggest other ways ECB can resolve the Greek crisis, e.g. carry out QE differently: rather than purchasing assets, €60 Billion per month can be used to finance Eurozone governments, or be paid to citizens – called ‘QE for the people’ (Jourdan, 2015). Muellbauer (2014) suggests ECB gives 500 Euros to every adult in the Eurozone, an approach called ‘helicopter money’. This paper offers an alternative, explained below: ECB should pay off some of Eurozone government debt.

A possible solution for the Eurozone

Watt (2015: 8-9) wrote “a modest recovery could be achieved, given a more favourable global economic environment, if Greece were permitted to loosen the fiscal straitjacket somewhat and, crucially, provided effective steps are finally taken by the ECB to quickly get inflation back on target. Clearly the latter is not a given. But for as long as the ECB is not fulfilling its mandate, lectures to the Greek electorate on debt sustainability seem rather misplaced, if not slightly absurd”. Watt implies that ECB failed up to now, and doubts that ECB will adopt suitable policies from now on. Most economists would accept “without a healthy dose of inflation, it is much harder for households, firms and governments to reduce their debt burdens” (Odendahl, 2015); “the ECB should announce that it aims to reach 2 per cent inflation on average over the next five years (an approach called ‘price-level targeting’). It might sound innocuous, but the word 'average' makes all the difference: since inflation is currently low and likely to remain low for a while, the ECB would commit to overshooting on inflation in the future. In other words, such a target would require the ECB to tolerate a mild boom in the eurozone to get the 3 per cent inflation necessary to reach a 2 per cent average over five years”.

The proposal in this paper is for ECB to increase Eurozone prices: printing money would enable inflation to return to the ECB target (Warner, 2015), and the extra money then used by ECB to pay some Eurozone government debt. Details of this plan are in the appendix to this paper. Predicted results are shown in Table 2.

Table 2: amount of debt relief, and debt-to-GDP ratios before & after ECB debt relief program

country	<i>ECB debt relief (Billion Euros)</i>	<i>Debt-to-GDP ratio, 2014 (%)</i>	<i>Debt-to-GDP ratio after debt relief (%)</i>
Austria	8	85	78
Belgium	11	107	99
Cyprus	1	108	98
Estonia	1	11	4
Finland	5	59	54
France	64	95	87
Germany	78	75	68
Greece	11	177	163
Ireland	4	110	102
Italy	59	132	122
Latvia	2	40	30
Lithuania	3	41	31
Luxembourg	1	24	21
Malta	0.4	68	60
Netherlands	16	69	63
Portugal	10	130	118
Slovakia	5	54	44
Slovenia	2	81	72
Spain	45	98	89

Source: see appendix

Table 2 reports the expected outcome of the proposed ECB debt relief program, as detailed in the appendix. There is an improvement for Greece, from the 2014 debt-to-GDP ratio of 177, down to about 163 (if ECB act as proposed). All Eurozone countries show an improved debt ratio in Table 2 – often taking them near the 90% threshold discussed

by Reinhart & Rogoff, and even taking France & Spain outside this 'danger zone'. The €11 Billion for Greece could pay off debts to IMF and other lenders.

Conclusion

Eight Eurozone countries, including Greece, have unsustainably high debt-to-GDP ratios (according to the 90% ratio, claimed by Reinhart & Rogoff and others). Eurozone citizens may feel that as soon as Greece has been expelled from the Euro, other countries can relax. But Martin (2014) reports that German Bundesbank chief Jens Weidmann criticised the ECB's decision to buy stock from Greece and Cyprus; and that Stark, a former ECB executive board member, said the ECB was "giving in to financial market expectations and political pressure from France and Italy". It seems plausible that if Greece leaves the Euro, financial markets will observe this lack of EU support – and expect seven more countries to leave the Euro, one-by-one, in the next few months. The Euro might not survive.

"Regarding the price component of nominal output, the first issue is the average inflation rate of the Euro Area. The ECB target is just under 2%. Currently inflation is around 0.3%. Merely by virtue of the ECB "doing its job" and raising the inflation rate by 1.7 percentage points, assuming the Greek inflation rate moves in tandem, would bring about a fall in the debt-to-GDP ratio of almost 3 percentage points every year just by the mechanical effect of higher nominal output growth" (Watt, 2015: 7). Other economists agree the 2% target too low (Blackstone, 2014). Surprisingly, ECB kept Eurozone inflation well below the target for most of the last seven years, and expect inflation to remain below target for years: "the June ECB staff projections now envisage inflation to average at 0.3% in 2015, 1.5% in 2016 and 1.8% in 2017" (Mersch, 2015a). Astonishingly, the latest data from Eurostat (2015b) shows the Eurozone returned to negative inflation, from May to June 2015: many economists consider deflation a cause of Japan's economic problems in recent decades (Ito & Rose, 2006) – if prices fall, it makes sense to delay household purchases.

To deal with these problems, increasing the money supply has been recommended by many economists, including Christensen (2013); Mankiw & Weinzierl (2011: 246); Simister (2015a); and Paul Krugman (Blackstone, 2014). This paper suggests intervention by ECB to reduce debt, by printing money. Printing more Euro notes & coins would increase inflation and make debts (in Greece & other Eurozone countries) more affordable; and allow the new cash to be used to pay debts. Regarding effects on Eurozone citizens: the additional 5.27% inflation might seem unfair, because it reduces the real value of savings. But savers would have expected inflation to be about 2% per year – this one-off price rise simply corrects for the low interest-rate (averaging 1.245% over the last seven years). There is no reason to delay: ECB should raise Eurozone prices now – "ECB does have the power to make a commitment that is purely focused on inflation (and hence firmly in line with its mandate)" (Odendahl, 2015). If debts become manageable, Greece can thrive: Simister (2015b) reports encouraging evidence.

Table 2 indicates that even after initiating the proposed 5.27% price-rise, several countries will still have a debt-to-GDP ratio over 90%, so ideas in this paper are only part of the solution. New schemes such as encouraging jobs, apprenticeships, and investment, as recommended by visionaries such as Commissioner Marianne Thyssen (2015) and President Jean-Claude Juncker (2014), are also needed to create a Europe where every citizen has a decent chance in life.

Bibliography

- Ardagna S. & Caselli F. (2012), 'The political economy of the Greek debt crisis: a tale of two bailouts', Centre for Economic Performance special paper 25, <http://cep.lse.ac.uk/pubs/download/special/cepsp25.pdf> downloaded 19th June 2015.
- Barro R.J. (2010), Intermediate macro first edition, Cengage Learning: Mason, Ohio.
- Batini N., Callegari G. & Melina G. (2012), 'Successful austerity in the United States, Europe and Japan', IMF Working Paper WP/12/190: www.imf.org/external/pubs/ft/wp/2012/wp12190.pdf
- Bershidsky L. (2015), "How Greece's Bank Bailout Benefited Greeks", Bloomberg view: 7th July 2015, www.bloombergvew.com/articles/2015-07-07/how-greece-s-bank-bailout-benefited-greeks downloaded 11th July 2015.
- Bibow J. (2015), "The euro's savior? Assessing the ECB's crisis management performance and potential for crisis resolution", Institut für Makroökonomie und Konjunkturforschung / Macroeconomic Policy Institute: Study 42 (June), www.boeckler.de/pdf/p_imk_study_42_2015.pdf downloaded 11th July 2015.
- Blackstone B. (2014), 'At ECB conference, Krugman attacks inflation target', Wall Street Journal: 27th May 2014, <http://blogs.wsj.com/economics/2014/05/27/at-ecb-conference-krugman-attacks-inflation-target/> downloaded 10th July 2015.
- Blanchard O., Amighini A. & Giavazzi F. (2010), Macroeconomics: a European perspective, Pearson: Harlow.
- Constâncio V. (2015), 'Monetary Policy and the European recovery': speech by Vítor Constâncio, Vice-President of the ECB, at the XXXI Reunión Círculo de Economía, Barcelona: 30th May 2015, www.ecb.europa.eu/press/key/date/2015/html/sp150530.en.html downloaded 9th July 2015.
- Christensen L. (2013), 'A simple monetary policy rule to end the euro crisis', The Market Monetarist 29th March 2013, <http://marketmonetarist.com/2013/03/29/a-simple-monetary-policy-rule-to-end-the-euro-crisis/> downloaded 9th July 2015.
- Court of Justice of the European Union (2015), 'Advocate General's Opinion in Case C-62/14, Peter Gauweiler and Others v Deutscher Bundestag', PRESS RELEASE No 2/15: Luxembourg, 14 January 2015. <http://curia.europa.eu/jcms/upload/docs/application/pdf/2015-01/cp150002en.pdf> downloaded 10th July 2015.
- Draghi M. (2015), 'Introductory statement by Mario Draghi', Hearing at the European Parliament's Economic and Monetary Affairs Committee, Brussels: 15th June 2015, www.ecb.europa.eu/press/key/date/2015/html/sp150615_1.en.html downloaded 9th July 2015.
- ECB (2015a), 'Monetary developments in the euro area', April 2015 edition (released 29th May), <https://www.ecb.europa.eu/press/pr/stats/md/html/index.en.html> downloaded 15th June 2015.
- ECB (2015b), 'Monetary policy', <https://www.ecb.europa.eu/mopo/html/index.en.html> downloaded 25th June 2015.
- ECB (2015c), 'Measuring inflation in the Euro area: The Harmonised Index of Consumer Prices (HICP) – Annual percentage changes', <https://www.ecb.europa.eu/stats/prices/hicp/html/inflation.en.html> downloaded 25th June 2015.
- Elliott L., Inman P. & Smith H. (2013), 'IMF admits: we failed to realise the damage austerity would do to Greece', The Guardian: 5th June 2013, www.theguardian.com/business/2013/jun/05/imf-underestimated-damage-austerity-would-do-to-greece downloaded 11th July 2015.

- European Commission (2015), 'Phase 4: Three stages to EMU', http://ec.europa.eu/economy_finance/euro/emu/road/three_stages_en.htm downloaded 26th June 2015.
- Eurostat (2015a), 'Government consolidated gross debt' [gov_10dd_edpt1], <http://appsso.eurostat.ec.europa.eu/nui/setupDownloads.do> downloaded 11th July 2015.
- Eurostat (2015b), 'All-items HICP', HICP (2005 = 100) - monthly data (index)' [prc_hicp_midx], http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_hicp_midx&lang=en downloaded 11th July 2015.
- Eurostat (2015c), 'Population on 1 January by age, sex and NUTS 2 region' [demo_r_d2jan], http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_r_d2jan&lang=en downloaded 11th July 2015.
- Gaffey C. (2015), 'Germany and Greece Losers in ECB's Quantitative Easing Plan', *Newsweek*: 15th March 2015. <http://europe.newsweek.com/germany-and-greece-losers-ecbs-quantitative-easing-plan-313740> downloaded 21st June 2015.
- Gros D., Alcidi C. & Giovanni A. (2012), 'Central Banks in times of crisis: the FED versus the ECB', Centre for European Policy Studies, Brussels: Policy Brief 276, www.ceps.eu/publications/central-banks-times-crisis-fed-vs-ecb downloaded 10th July 2015.
- Ito T. & Rose A.K. (2006), 'Monetary policy under very low inflation in the Pacific Rim', in Ito T. & Mishkin F.S. (editors), *Two decades of Japanese monetary policy and the deflation problem*: NBER-EASE, volume 15, University of Chicago Press, Chicago.
- Jourdan S. (2015), 'EUROPE: 19 economists call on the ECB to make 'QE for the people' in a letter to the Financial Times', Basic Income Earth Network: March 27th 2015, www.basicincome.org/news/2015/03/europe-quantitative-easing-for-people/ downloaded 27th June 2015.
- Juncker J.-C. (2014), 'Mission letter: Commissioner employment, social affairs, skills and labour mobility', European Commission: Brussels. http://ec.europa.eu/commission/sites/cwt/files/commissioner_mission_letters/thyssen_en_1.pdf downloaded 20th June 2015.
- Konstantinos K., Dimitrios S. & Simister J. (2015), 'The Stability and Growth Pact, and balanced budget fiscal stimulus: Evidence from Germany and Italy', *Intereconomics* 50(1): 32-9.
- Martin M. (2014), 'ECB's plans to buy rebundled debt draw criticism from Germany', Reuters *Business News*: 5th Oct 2014, <http://uk.reuters.com/article/2014/10/05/uk-ecb-germany-idUKKCN0HU0FL20141005> downloaded 10th July 2015.
- Mauro P., Romeu R., Binder A. & Zaman A. (2013), 'A modern history of fiscal prudence and profligacy', IMF Working Paper WP/13/5, IMF Fiscal Affairs Department, www.imf.org/external/pubs/ft/wp/2013/wp1305.pdf downloaded 9th July 2015.
- Mersch Y. (2015a), 'On European Unity: Economic and Institutional Challenges Facing Europe', Speech by Yves Mersch, Member of the Executive Board of the ECB, European Economics & Financial Centre, London: 25th June 2015, www.ecb.europa.eu/press/key/date/2015/html/sp150625.en.html downloaded 27th June 2015.
- Mersch Y. (2015b) 'Translating a shared vision into a winning story: Closing Remarks at the T2S launch celebration by Yves Mersch, Member of the Executive Board of the ECB, Milan: 2nd July 2015, www.ecb.europa.eu/press/key/date/2015/html/sp150702_1.en.html downloaded 9th July 2015.

- Minerd S. (2011), "Europe's Cognitive Dissonance", *Market Perspectives*: 27th July 2011, <http://guggenheimpartners.com/perspectives/media/europe%E2%80%99s-cognitive-dissonance> downloaded 9th July 2015.
- Muellbauer J. (2014), 'Combatting Eurozone deflation: QE for the people', 23rd December 2014, www.voxeu.org/article/combatting-eurozone-deflation-qe-people downloaded 11th July 2015.
- Nevradakis M. (2014), 'An Economic Hit Man Speaks Out: John Perkins on How Greece Has Fallen Victim to "Economic Hit Men"', *Truthout*: 11th September 2014, www.truth-out.org/news/item/26112-an-economic-hit-man-speaks-out-john-perkins-on-how-greece-has-fallen-victim-to-economic-hit-men downloaded 9th July 2015.
- Odendahl C. (2015), 'Quantitative easing alone will not ward off deflation', *Centre for European Reform*: 21st January 2015, <http://www.cer.org.uk/insights/quantitative-easing-alone-will-not-ward-deflation> downloaded 27th June 2015.
- Pescatori A., Sandri D. & Simon J. (2014), 'Debt and growth: is there a magic threshold?' IMF working paper WP/14/34.
- Randow J. (2014), 'ECB Report Shows Draghi Pay More Than Twice as High as Fed Chief', *Bloomberg Business*: 20th February 2014, www.bloomberg.com/news/articles/2014-02-20/ecb-report-shows-draghi-pay-more-than-twice-as-high-as-fed-chief downloaded 9th July 2015.
- Reinhart C.M. & Rogoff K.S. (2010), 'Growth in a Time of Debt', NBER Working Paper 15639, www.nber.org/papers/w15639
- Reinhart C.M. & Rogoff K.S. (2013), 'Financial and sovereign debt crises: some lessons learned and those forgotten', IMF Working Paper WP/13/266.
- Rossana R.J. (2011), *Macroeconomics*, Routledge: Oxford.
- Simister J. (2015a), 'A 5% correction by the ECB can fund the Thyssen plan', *Work, Attitudes and Spending Working Paper WAS-15-01*, 28th June 2015: www.was-survey.org/uploads/3/3/1/9/3319031/greece_and_the_thyssen_plan.pdf downloaded 11th July 2015.
- Simister J. (2015b), 'Successful collaboration between Eurozone countries: a case study of Germany and Greece', 'Work, Attitudes and Spending' Working Paper WAS-15-02, 7th July 2015: www.was-survey.org/uploads/3/3/1/9/3319031/productivity_in_eurozone_can_be_explained_by_investment_and_wages.pdf downloaded 11th July 2015.
- Stiglitz J.E. (2011), 'Rethinking macroeconomics: what failed, and how to repair it', *Journal of the European Economic Association* 9(4): 591-645.
- Stiglitz J.E. (2015), "Europe's Attack on Greek Democracy", *Project Syndicate*: 29th June 2015, www.project-syndicate.org/commentary/greece-referendum-troika-eurozone-by-joseph-e--stiglitz-2015-06#GSIeITjMLGKkMocc.99 downloaded 12th July 2015.
- Thyssen M. (2015), 'Employment: Commission proposes €8.7 million from Globalisation Fund to help media workers in Greece', press release by European Commission on 3rd February 2015, http://europa.eu/rapid/press-release_IP-15-4082_en.htm downloaded 19th June 2015.
- Warner J. (2015), 'Why printing money won't work for Europe', *The Telegraph*: 23rd January 2015, www.telegraph.co.uk/finance/economics/11362615/Why-printing-money-wont-work-for-Europe.html downloaded 25th June 2015.

Watt A. (2015), 'Is Greek Debt Really Unsustainable?' Institut für Makroökonomie und Konjunkturforschung / Macroeconomic Policy Institute, Social Europe Occasional Paper: January 2015, www.socialeurope.eu/wp-content/uploads/2015/01/OP6.pdf downloaded 9th July 2015.

Wincoff W.K. (2014), 'Bank regulation, macroeconomic management, and monetary incentives in OECD economies', *International Studies Quarterly* 58: 448-61.

Appendix: **Data and methods**

Following conventional economic analysis, this paper uses gross (rather than net) debt-to-GDP ratio. Data on debt-to-GDP ratios are from Eurostat (2015): "The indicator is defined (in the Maastricht Treaty) as consolidated general government gross debt at nominal (face) value, outstanding at the end of the year in the following categories of government liabilities (as defined in ESA2010): currency and deposits, debt securities and loans". Inflation is calculated from Harmonised Index of Consumer Prices (HICP), from Eurostat (2015b).

Moderate inflation can help Greece and other troubled Eurozone countries; but inflation must be used carefully. Barro (2010: 185) wrote "The head of the central bank does not just wake up in the morning and happen to think that it would be nice if the nominal quantity of money were higher or lower by 10%. Usually, the changes in M^s are responses to economic events; the changes happen because the monetary authority is trying to accomplish some important economic objective [such as] to target the inflation rate".

The 'solution' discussed in this paper applies conventional economic analysis, discussed in Barro (2010): for example, the quantity theory of money assumes an increase in the money supply tends to raise prices. This paper uses June 2008 as the reference period: from introduction of the Euro in 1999 (European Commission, 2015) to June 2008, Eurozone inflation averaged 2.04% per year (author's analysis of data from Eurostat, 2015b); this is close to the target of 'just under' 2% per year. However, from June 2008 to June 2015, inflation averaged 1.245%: i.e. below the target rate. The plan is to raise the price level to what prices would have been, if annual inflation had been 1.99% rather than 1.245% over this seven-year period. The correction required is a 5.27% price-rise: $(101.99 / 101.245)^7$ (calculation details are available on request from the author).

Next, we need to find out how to create a 5.27% price-rise; as discussed in Barro (2010), the obvious solution is to print money. Economists usually assume the price level is proportional to the money supply, the 'quantity theory of money' (Barro, 2010: 184). This is complicated by the fact that Euro notes & coins are in people's purses and wallets, and also in bank vaults; and commercial banks create money by 'fractional reserves' (Simister, 2015a). For simplicity, this paper assumes M1 is the appropriate way to measure money supply. The latest data in ECB (2015a) is for April 2015, in which M1 was €6,192 Billion. A 5.27% increase in M1 implies an extra €326 Billion of notes & coins should be printed.

ECB would then spend these €326 Billion to help Eurozone governments. The approach adopted in this paper is to divide this new money between countries in proportion to their 2014 populations (using data from Eurostat, 2015c); this division by population is used to create Table 2. It would be useful to predict the effects of this policy, but this is complicated: for example, printing money may affect commercial interest-rates – depending on the demand for money (Barro, 2010: 210). There are two ways in which printing money helps the debt-to-GDP ratio:

- (i) It allows ECB to pay €326 Billion of Eurozone governments' debt;
- (ii) The inflation generated (5.27%) makes the remaining debt easier for governments to pay.

For this paper, benefit (i) is calculated by dividing €326 Billion between 19 countries, as shown in Table 2. Benefit (ii) is estimated by assuming government debt is fixed in nominal terms, whereas GDP rises with inflation; this makes the debt-to-GDP ratio fall. Each of these effects (i) and (ii) tends to reduce the debt-to-GDP ratio by 5.27%, under assumptions adopted for this paper; so the overall effect, shown in Table 2, is a reduction of debt-to-GDP ratios by (5.27% multiplied by 2). We would expect effects of benefit (i) to be almost immediate; this paper does not attempt to predict how fast benefit (ii) would happen, but it may occur within a few months of ECB printing extra money.

It would be possible to adjust the above plan, to give a fairer outcome. “In Europe, especially in countries where sovereign debts have increased sharply due to bank bailouts, a crisis of confidence has emerged with the widening of bond yield spreads and risk insurance on credit default swaps between these countries and other euro zone members, most importantly Germany. While the sovereign debt increases have been most pronounced in only a few euro zone countries (notably in Greece, Ireland and Portugal, and more recently Spain and Italy), they have become a perceived problem for the area as a whole because of the potentially severe contagion effects” (Batini et al., 2012: 40). Hence, it may be appropriate to give more money to Greece & Spain than to most Eurozone countries, because they spent large amounts of money bailing out commercial banks: “In total, therefore, Greek banks received about 45 billion euros from the bailouts, more than the 41 billion Europe allocated to Spain’s bank recapitalization” (Bershidsky, 2015). Greeks may consider it unfair that because Greece has large commercial banks, Greek taxpayers end up with huge debts. Simister (2015a: 3) wrote “Some Eurozone countries seem to be victims of their own success. For example, Spain had a successful financial sector before 2008 [...] the global financial crisis around 2008 caused huge losses, which the Spanish government resolved – making Spanish taxpayers vulnerable to costs associated with supporting Spanish banks, from bank failures in UK, France and Germany”. On average, Greek and Spanish citizens are much poorer than savers in Germany and Luxembourg (for example). And “almost none of the huge amount of money loaned to Greece has actually gone there. It has gone to pay out private-sector creditors – including German and French banks. Greece has gotten but a pittance, but it has paid a high price to preserve these countries’ banking systems” (Stiglitz, 2015). It seems unjust that so much of the cost of the 2007 global crisis fell on Greek taxpayers; EU institutions could compensate for this unfairness, by adjusting the distribution in Table 2 to give Greece and other deserving countries a larger share of the new €326 Billion.