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THE GREEK DEBT TRAP: AN ESCAPE PLAN

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1 INTRODUCTION

The European policy stance toward the Greek public debt tragedy can be summarised as three refusals:

- No additional funding beyond what has already been committed so far;
- No restructuring of official loans;
- No default and exit from the euro area.

Instead, discussion of debt relief for Greece has focused on stronger external enforcement of targets, some further interest rate cuts on bilateral loans to Greece, exchanging the European Central Bank's Greek bond holdings (which were acquired through the Securities Market Programme in 2010), buying-back traded Greek bonds at their current low price, or extending official loan facilities. However, these options are insufficient, as we demonstrate in this Policy Contribution.

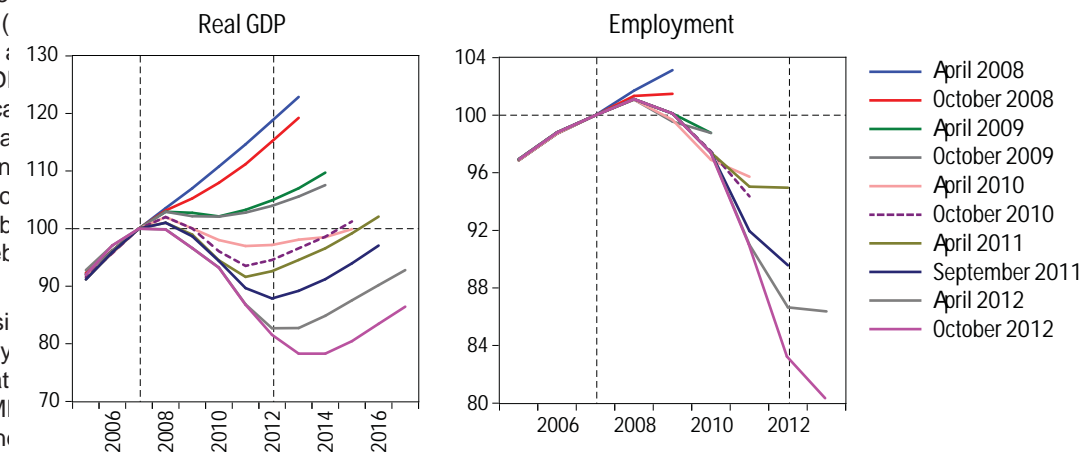
debt exchange in March/April 2012 (Appendix 1). Such a debt ratio is more than three-times the 60 percent of GDP Maastricht limit and it is generally thought that Greece would not be able to borrow from the market at a reasonable interest rate until the ratio falls well below 100 percent of GDP. While policy slippages have also contributed to the skyrocketing debt ratio, the ever-worsening economic outlook has had a decisive role. Figure 1 shows that the Greek outlook has worsened substantially in every update of the International Monetary Fund's World Economic Outlook (WEO) since April 2008, including the most recent update from April 2012. Greece's cumulative real GDP contraction is expected to be 22 percent relative to the 2007 peak, while the cumulative employment fall is 21 percent: really dramatic figures. The number of employed people in 2013 will be lower than any time since 1980.

1. The IMF October 2012 World Economic Outlook foresees a peak in the Greek debt/GDP ratio of 182 percent of GDP in 2013, but this projection quickly became outdated because of the 22 October 2012 Eurostat data revision, which revised upward the 2011 debt ratio by 5.2 percentage points of GDP (the consequence of a downward revision of GDP). The March 2012 fiscal adjustment and privatisation targets of the second financial assistance programme are unlikely to be met, increasing the debt ratio further.

2. The October 2012 version of the WEO does not consider the recent data revision: chaining IMF growth forecasts to the revised data, the contraction in real output would reach 24 percent from 2007

Without corrective measures, the Greek public debt ratio will exceed 190 percent of GDP in the next few years to come, despite the success of the Greek consolidation in the short term. With an increasing debt ratio, more fiscal consolidation is needed which in the short term

Figure 1: GDP and employment outlooks for Greece, changing IMF forecasts (2007=100)



Source: IMF World Economic Outlook published on the dates indicated in the legend. Note: IMF publishes GDP projections 2 years ahead, while employment projections are published only for two years ahead. The two vertical lines indicate the 2008 and 2012 updates. GDP is measured in constant prices.

has a negative impact on output. But as Table 1 indicates, there is only a small expected change in public debt of €11.9 billion in 2012. As follow each other, the government and parliament may be unable or unwilling to pass new measures, perhaps due to social pressure and unrest. That can lead to a collapse of the government, domestic political paralysis and stopping of external financial assistance. Without external financial assistance, the Greek state may default, which could culminate in an accelerated and possibly uncontrolled exit from the euro and with devastating consequences both inside and outside Greece. The prospect of euro Payment Notes, as part of the debt exchange discourages private investments and increases incentives for tax evasion and capital flight, thereby dragging growth down further and worsening the fiscal situation (Darvas, 2012). Restoring public debt sustainability, and the resisting euro exit speculation, is a necessary (though not sufficient) condition for stopping further economic contraction.

This Policy Contribution analyses various options for bringing down Greek public debt to a sustainable level and concludes that the refusals of no new funding, no restructuring of official loans, and no default and exit from the area are inconsistent. There are no easy solutions. One or more of these refusals needs to be given up. We make a proposal on how the Greek public debt overhang can be addressed for the benefit of both Greece and its official lenders.

2 GREEK PUBLIC DEBT BEFORE AND AFTER THE DEBT EXCHANGE

Unfortunately, it is very difficult to get accurate data on the composition of Greek public debt according to both creditors and instruments because national and Eurostat statistics differ. The latest comprehensive reviews, European Commission (2012) and IMF (2012a), were published in March 2012. For total public debt we used the Eurostat general government gross debt statistics for 2011 (which are also used by the Commission and the IMF in designing the financial assistance programme). For the 2012 figure we use the October 2012 WEO projection. From available information, our estimates for the composition of debt are indicated in Table 1.

Table 1: Estimated composition of Greek public debt at end 2011 and 2012

(€bns)	2011	2012	Change
Restructured old bonds/new issues	199.2	62.8	-136.5
Hold-outs	6.4	5.5	-0.9
ECB/NCBs holdings	56.5	45.1	-11.4
Short-term securities	15.1	15.1	0
IMF loans	20.7	27.2	6.5
Bilateral EU loans	53.1	53.1	0
EFSF loans (PSI Payment and Accrued Interest Note)	0	34.5	34.5
EFSF loans (2nd programme)	0	96.5	96.5
Others	4.7	4	-0.6
Total	355.7	343.8	-11.9
Total (% GDP)	170.6	176.1	5.5

Sources and notes: without a single consistent database, we are obliged to use data from different sources. 2011 data: total (both in € billions and as % of GDP) is from Eurostat (2012); see Appendix 1 for the amount of restructured bonds and hold-outs; data on ECB/NCBs holdings are from the invitation memorandum for the debt exchange; data on short-term securities are from Ministry of Finance of the Hellenic Republic (2012a); IMF loans and Bilateral EU loans are from IMF (2012a); 'Others' were calculated as residual. 2012 data: total (in € billions) is from the IMF (2012b); new Greek bonds after the restructuring are 31.5 percent of the face amount of restructured bonds (see Appendix 1); for the change in holdouts see Appendix 1; the decline in ECB/NCBs holdings is from Table 19 of European Commission (2012); the March 2012 programme envisioned a €10 billion reduction in short-term borrowing, yet due to the delay in the disbursement of official loans, we do not assume any reduction; IMF loans are from IMF (2012a); EFSF loans for PSI sweetener and accrued interest is from the EFSF website; the decline in 'Others' was calculated using block 'C. Maturing EFSF loans (2nd programme)' was derived as residual, ie we assumed that EFSF will fill up all financing gap in 2012. Total as % of GDP was calculated using an estimated GDP for 2012, which is based on the 22 October 2012 release of the 2011 GDP by Eurostat and the annual percent change in GDP in 2012 forecast by IMF (2012b).

3. See <http://www.efsf.europa.eu/about/operations/index.htm>

4. See Eurogroup statement, 21 February 2012, for the commitments (retroactive reduction of the spread to 150 basis points of the

3.2 Debt reduction without a direct loss to official lenders

- assume to be 83 percent of the notional;
- c) Buy-back of all privately-held debt at a 7 percent exit yield (financed from an EFSF/ESM loan);

As an acknowledgement of the unsustainability of the Greek public debt trajectory, IMF Managing Director Christine Lagarde in September 2012 suggested considering the writing off some European loans to Greece, according to Bloomberg (2012). This proposal has been resisted by European lenders so far. The current position of some major European policymakers is no write-off, no new lending, but also no default exit from the euro. Instead, they are considering proposals such as lengthening the maturity and reducing the interest rate on current bilateral loans, passing to Greece the capital gain from the current Greek bond holdings of the European Central Bank, or buying-back privately held debt at their current low market prices.

- d) Purchase of state assets by an internationally-controlled (eg EU or EBRD-EIB-WB (European Bank for Reconstruction and Development-European Investment Bank-World Bank)) holding company mandated to restructure and sell them, which we consider as front-loading of €20 billion in privatisation receipts;
- e) The combination of these four measures.

Reducing the spread on bilateral loans

The EFSF lending rates to Greece are based on the current Greek borrowing cost of the EFSF with a minuscule surcharge to cover the operational costs of the EFSF. A reduction of the EFSF lending rate to Greece would involve a direct loss for euro-area partners and therefore we only consider a reduction of the lending rate on bilateral loans.

Without market access, this just changes the composition of official lending, initially, the interest rate charged on bilateral all new borrowing has to be provided by European partners in any case. Yet lengthening the maturity of bilateral loans would help from a private relations perspective, because in this case the additional commitment from the EFSF/ESM would be less. Also, a case can be made for lengthening the maturity of IMF lending to keep them involved for as long as euro-area partners are involved, thereby reducing the future financing need from euro-area partners.

Since the spread was cut to 150 basis points on 21 February 2011, the spread could be further reduced, though the resulting lending rate would be below the actual 3-month borrowing rate. For example, Spain and Italy, since the 3-month Euribor is 0.20 percent per year now. We therefore assume a 50 basis point spread in our calculations, which could allow for the compensation of countries with actual borrowing rates above the new lending rate to Greece and therefore no country would face a direct loss. This is an easily implementable option because it requires only the consent of euro-area lenders. The ECB holding with new bonds worth as much as the actual purchase value by the ECB, would just eliminate the profits European partners would make from Greek rescue operations. Therefore, in our calculations we assess these options, plus the frontloading of privatisation receipts:

The three other options could lead to a reduction of the nominal value of Greek public debt without causing direct losses to euro-area partners. Reducing the lending rate of bilateral loans close to actual borrowing costs, and exchanging the ECB holding with new bonds worth as much as the actual purchase value by the ECB, would just eliminate the profits European partners would make from Greek rescue operations. Therefore, in our calculations we assess these options, plus the frontloading of privatisation receipts:

Exchange ECB/NCBs holdings at the purchase price

- a) Reducing the lending rate on bilateral loans by 50 basis points over the 3-month Euribor through the Securities Markets Programme (SMP)
 - b) Exchange ECB/national central bank (NCB) holdings at the purchase price, which were
- In Darvas, Gouardo, Pisani-Ferry and Sapir (2011), using market information and investment bank assessments, we estimated that the ECB holdings through the Securities Markets Programme (SMP) amounted to €49.5 billion at face value and €40 billion at market value. This implies an average

assumptions of our baseline scenario (see Appendix 2).

4 DISCUSSION

Our analysis confirms that there is a sizable financing gap for Greece even after the reduction of the lending rate on bilateral loans, the exchange of ECB-held bonds, the buy-back of privately-held debt and the frontloading of a significant proportion of privatisation receipts. This leaves three options:

the European commitments and to reduce the lending rate to zero (or alternatively, writing-off part of the IMF claims). Similarly, the legal framework of the EFSF should be amended accordingly, yet the ESM treaty need not be changed, because the remaining financing capacity of the EFSF is sufficient to cover Greece's additional financing needs.

Additional safeguards

By itself, the proposal so far would not necessarily be sufficient for avoiding similar difficulties in the future. There are risks in meeting the primary balance targets, and economic outcomes may also turn out to be worse than currently assumed.

- Concerning the fiscal balance, a realistic target should be set for the structural primary balance and then enforced. In exchange for the zero-

baseline macroeconomic scenario and all the possible assets have been considered for complete concessionary financing of the privatisation, but still the public debt trajectory from 2021 (and zero-rate financing up to 2020) remains unsustainable.

Greece and its official lenders may agree that whenever the debt would fall below a certain rate, the Greek tragedy underlines that a threshold, then Greece will not reduce the total public debt resolution mechanism should ratio further, but will gradually pay back the debt in place as suggested by Gianviti et al relief it enjoyed between 2013 and 2020 through (2010). This should be more effective than the the zero-interest rate lending. Calibrating the current troika-based setup, since policymakers of such repayment is complicated by the the European Commission, the ECB and the uncertainties about when and under what; along with euro-area politicians, insisted for financing conditions will Greece be able to return that no private debt restructuring is to market borrowing. needed. By doing so they prolonged the uncertainty of the Greek situation, which has

Implications for other countries, PSI and the ESM contributed to the deeper than expected GDP contraction, and fostered the socialisation of

Would an OSI for Greece provide disincentives for other countries implementing painful reforms and fiscal adjustments? Should all future ESM lending be indexed to GDP? The answer is clearly on the second question of indexing ESM lending both questions. to GDP, zero-rate lending and GDP-indexing of

The first question was already raised about the operations of the ESM. Again, these options restructuring of Greek privately-held debt should be used only when a very last-resort OSI is was considered a major argument against it applying to a country for which growth forecasts will 2011. Yet by end-2011 it became clear that it had to be as poor as for Greece (Figure 1) and Greek public debt situation is unsustainable. The private sector involvement plus accelerated are not aware of evidence that policymakers privatisation efforts did not lead to a sustainable other countries facing financial difficulties, public debt trajectory.

as Ireland and Portugal, tried to follow the Greek example and request private-sector involvement. -oOo-

In contrast, recent reports on Ireland and Portugal suggest that their programme targets are on track. The euro area is at a very critical juncture. and markets also appreciate the progress policymakers have to recognise the impossibility two countries have made, as reflected by the trilemma of no additional funding, no significant decline in their secondary market restructuring of official loans, and no default and government bond yields. Similarly, we exit from the euro. While the choice about which expect adverse incentive effects following the three refusals to give up will be ultimately eventual OSI for Greece. OSI would come as a political support a resolution that would benefit both last resort after GDP has collapsed by about a quarter, privately-held debt has been restructured. Greece and its official lenders.

APPENDIX 1: THE GREEK PUBLIC DEBT EXCHANGE

In March and April 2012, the Hellenic Republic exchanged €199.2 billion face value bonds, out of which €205.6 billion offered for exchange, which was the largest debt restructuring in history according to Zettelmeyer, Trebesch and Gulati (2012). Holders of all restructured bonds (ie Greek-law government bonds, Greek-law bonds by state owned enterprises with a state guarantee, foreign-law government bonds and guaranteed bonds) received an identical bundle of four instruments

- 1 'PSI Payment Notes' cash sweetener': 15 percent of the face amount of the exchanged bonds in the form of one and two year maturity EFSF bonds (Greece pays back to EFSF by 2042);
- 2 'New Greek bonds': 31.5 percent of the face amount of the exchanged bonds in the form of 20 year maturity English-law bonds of the Greek government maturing between 2023 and 2042, having a coupon rate of 2 percent per year in 2013-2015, 3 percent per year in 2016-2020, 3.65 percent per year in 2021 and 4.3 percent per year in 2022 and later;
- 3 'GDP warrants': a set of detachable GDP-linked securities paying at most 1 percent per year on the notional amount of the outstanding new Greek bonds, contingent on reaching pre-specified nominal GDP level targets (increasing from €210 billion in 2014 to €266.5 billion in 2020) and real GDP growth targets (rates between 2.3 and 2.9 percent during 2014-2020 and 2 percent after 2020);
- 4 'PSI Accrued Interest Notes': 15 percent month zero-coupon EFSF debt to cover accrued interest from the PSI interest payment till the debt exchange, which actually amounted to €4.8 billion (Greece pays back to the EFSF by 2037).

16. The only bond-specific instrument was the fourth item, PSI Accrued Interest Notes, which compensated for the unpaid interest of each bond up to the debt exchange.

17. Note that the market price of the new bonds fell to about 15 percent of their face value (see Figure 4). Therefore, compared to the face amount of the restructured bonds, investors received 15 percent of high

Consequently, there was a reduction of 53.5 percent in the nominal face amount of eligible bonds. The new bonds carry a slightly lower interest rate than the original bonds, even when considering the GDP warrants. Zettelmeyer, Trebesch and Gulati (2012) estimate that in net present value terms from the perspective of the Greek government, the debt relief amounted to 60.2 percent of the face amount of the bonds, which is about €120 billion, or 54.5 percent of GDP.

However, according to IMF (2012a) the restructuring triggered losses of about €25 billion for domestic banks, which are to be covered by the Greek government from official borrowing. From the point of view of the sovereign this lowers the actual debt reduction.

The Greek government bond holdings of the ECB and national central banks (NCBs), which amount to €56.5 billion according to the invitation memorandum for the debt exchange, were excluded from the debt exchange.

Table 2 summarises the results of the debt exchange.

Table 2: Results of the debt exchange

Source: Table A3 of Zettelmeyer, Trebesch and Gulati (2012). Note on the face value of restructured bonds: Ministry of the Hellenic Republic (2012a, 2012b) report an aggregate face value of €198.1bn for three phases of the PSI. However, on 25 April 2012 Ministry of Finance press release 'Following the settlement, the Republic will have restructured

- no exchange rate change.
- ECB holdings: we assume 5 percent per year.
- Short term bills: we assume 5 percent per year, which is very close to the actual borrowing rate in the first half of 2012 according to Ministry of Finance of the Hellenic Republic (2012b).
- IMF lending: Table 21 of IMF (2012a) presents interest and service charges.
- Bilateral loans: they are linked to the 3-month Euribor with a 150 basis points spread. We use the German zero coupon yield curve (source: Bundesbank) to calculate the implied future 1-year rate on German Bunds using the Expectation Hypothesis of the Term Structure (EHTS) with no term premium, and assumed that the 3-month Euribor will be 20 basis points below the 1-year German Bund yield.
- EFSF/ESM lending: the actual lending rate is linked to the borrowing cost of the EFSF/ESM with minor surcharges. Applying the EHTS with zero term premium to the German zero coupon yield curve, we calculated the implied future 1-year, 3-year, 5-year, 10-year and 15-year German Bund yields and assumed that each of these five maturities account for one-fifth of the EFSF and the ESM borrowing. We assume the following EFSF/ESM borrowing spreads over German Bunds (which roughly corresponds to current spreads): 10 basis points at 1-year maturity, 30 basis points at 3-year maturity, 50 basis points at 5-year maturity, 65 basis points at 10-year maturity and 70 basis points at 15-year maturity. We assumed that the lending rate to Greece is 15 basis points above the EFSF/ESM borrowing costs.
- Others: we assume 5 percent per year.

Table 5 presents the resulting interest rate assumptions of our calculations. The average interest rate is below the March 2012 programme assumption, which is justified by the general decline in interest rates from March to October 2012. Also, for 2030, the IMF assumed market access presumably at a borrowing rate above the rate of ESM lending, thereby the difference between the March 2012 programme and our scenario in 2030 is larger.

Table 5: Interest rate assumptions of the baseline scenario

For covering the resulting gross borrowing needs, we take all but EFSF/ESM financing given, do not assume market access for medium and long-term bonds, but assume that all financing gaps will be provided by the EFSF and ESM. That is, we know the amortisation profile of the new Greek bonds, the holdouts, ECB/NCBs holdings, IMF loans and bilateral loans. For 'Others' we assume a linear amortisation until 2021. For short-term bills we assume that their stock will remain stable at €15.1 billion, due to the uncertainties of official funding, even though the March 2012 financial assistance programme assumed a sizeable reduction of short-term borrowing.

We assume no market access for medium and long term bonds. The reason for this is that market access would be extremely unlikely given the very high level of public debt. Also, the large and further growing share of official lending would make private investors cautious, because in the event of an adverse shock, such as slower growth or budgetary slippages, the official sector may be treated preferentially.

Consequently, the EFSF/ESM financing is derived as residual and determined from the gross borrowing needs of Greece.