

'Grexit': Who would pay for it?

Cinzia Alcidi, Alessandro Giovannini and Daniel Gros

No. 272, 23 May 2012

What would be the cost if Greece were to exit from the eurozone? This much debated question cannot be answered with a single number. The consequences of Greece's exit would depend decisively on the exact circumstances of events in the country itself as well as the general state of financial markets in the eurozone.

The 'immaterial' costs of a Greek exit cannot be quantified into a figure. It comprises in the short run contagion in the form of even higher risk premia for countries like Spain and Italy and the risk of bank runs throughout the peripheral countries.

The 'tangible' cost would come in the form of a likely default of Greece on its remaining foreign debt. After the PSI (private sector involvement), Greece owes relatively little to foreign private creditors, but a lot to official creditors (principally the EFSF and the ECB).

Why would an exit from the eurozone precipitate a default on its foreign debt? At present Greek GDP amounts to about €200 billion (per annum). If Greece were to (re-)introduce the drachma, the new currency is likely to depreciate by about 50% (even more if the Argentine experience is of any guide), which would cause the Greek GDP to fall probably proportionally or below €100 billion. The revenues of the Greek government would also fall in a similar proportion, from about €85 billion today to around €40 billion. These

meagre resources should be compared to a total of over €300 billion that the Greek government owes to its foreign creditors. At first sight it appears that the foreign official creditors would have to write off most of their claims on the country. (We leave aside here the current €22 billion of claims the IMF has on Greece which are indisputably senior and likely to be serviced in full.)

This is the outlook in the short run. A longer run view, however, leads to somewhat different conclusions. After the initial overshooting, the exchange rate is likely to return to a longer-run equilibrium and growth is likely to slowly resume closing the output gap. Experience with similar cases of emerging markets suggests that after ten years nominal GDP should return to at least its previous level, say about €200 billion. Moreover, exports are likely to grow by more than GDP, thus increasing over time the capacity of the country to service foreign debt. Exports (in 'hard currency') might well double over a decade bringing them from €52 billion (goods plus services) today to about €100 billion. At that point, the country will have a much higher debt service capacity. Whether or not it is sufficient to service the existing mountain of debt will depend decisively on the interest rate.

However, before addressing this question, we start asking why 'euro exit' has so suddenly become a real prospect.

Cinzia Alcidi is LUISS Research Fellow at CEPS, Alessandro Giovannini is a Research Assistant at CEPS and Daniel Gros is Director of CEPS.

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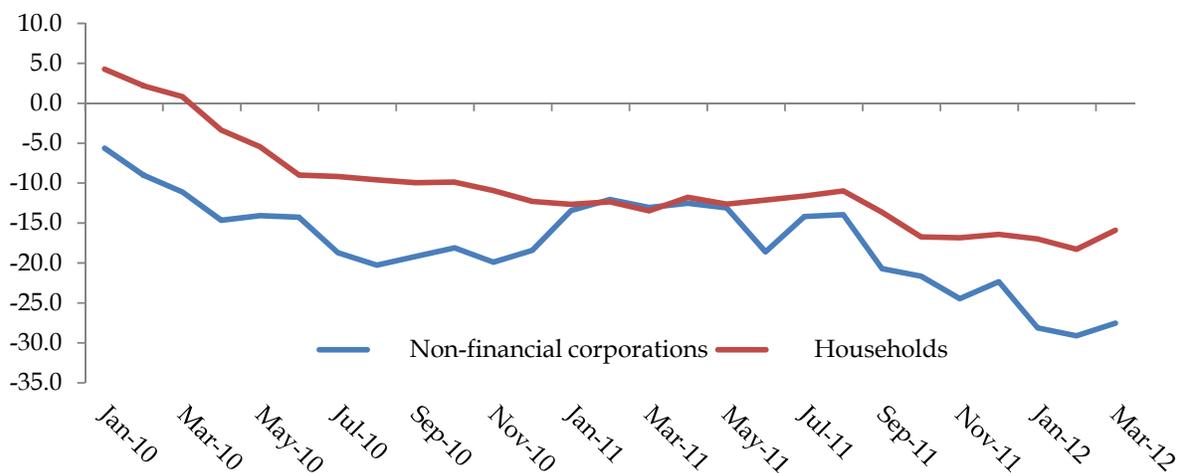
How did we get to this point?

At the official level, nobody seems to want a eurozone without Greece: neither the Greeks (opinion polls suggest three-quarters of the population want to remain in the eurozone)

nor the European policy-makers who continue to affirm that the European Union's main

objective is to keep a eurozone with 17 countries. What has thus led to talk about a 'Grexit'? The main reason is that as of early May the ongoing deposit flight has apparently accelerated so much that it could turn into a real bank run. There is the very real possibility that Greece could have no more fresh money in its banking system.

Figure 1. Greek deposits and repos: 12-month percentage changes



Source: Bank of Greece, 2012.

The classic form of a bank run occurs when savers withdraw their deposits in the form of cash (as happened e.g. with Northern Rock), but this does not seem to have occurred in Greece so far at least. Until late April, as Figure 1 depicts, deposits fell rather continuously at a rate of about 20% per annum. However, the total loss of deposits of over €50 billion has not shown up in a corresponding increase in cash in circulation. An alternative route for Greeks to try to protect their money is to open a bank account abroad (preferably in Germany) and transfer funds from Greece to the German account with a simple transfer order. However, this route has to overcome several administrative hurdles, including the hassle of opening a bank account in Germany, which is difficult without being able to show an address in Germany. This does not seem to have happened on a large scale.

A much simpler way of insuring oneself against the return of the drachma, however, is

to buy German government bonds with the money parked in Greek savings accounts. This involves few costs, no administrative hurdles and seems now to have become the preferred vehicle of capital flight.

However, this option is feasible only to the extent that the ECB provides Greek banks with the funds to make these operations (by transferring money to a German bank or buying German bonds). So far, the ECB has continued to allow the Greek banking system to have access to its normal refinancing 'windows'. However, the quality of the securities that Greek banks have been able to provide as collateral has continuously declined and since the PSI has cut the value of the €50 billion in Greek government bonds held by Greek banks, the bank themselves are technically close to bankruptcy (their equity is negative or very close to zero).

However, the ECB cannot lend to insolvent banks. This is why the Greek banks will soon be shut off from the normal 'repo operations'

and the only way the Greek banking system can be kept afloat is via the emergency liquidity assistance (ELA), which is channelled via the Greek central bank. Even this move, however, will require the release of the EFSF bonds to Greek banks, which are needed as a recapitalisation instrument (agreed in the second bail-out plan).

The ‘tangible’ cost: The risk transfer from private to public sector

The one aspect of the cost of a Greek exit that can be quantified is the losses that European banks, the ECB and the EFSF/ESM are likely to suffer from a disorderly exit, followed by large currency devaluation. Indeed, the latter would reduce significantly the capacity of the Greek government to service debt in euro. Given that Greece is, despite its collapsing economy, still running a current account deficit of 7% of GDP, most observers believe that any ‘new’ drachma will have to depreciate by 50%. As this will cut the debt service capacity of both the Greek private and public sector in half, one can assume roughly a loss rate of one-half as well. (We neglect here the ‘new’ Greek government bonds that were created under PSI and which have a face value of over €70 billion, but which trade in

the market at less than 20% of their face value.)

Table 1 shows the outstanding claims on Greece as of end 2011, which amounted then to the equivalent to about €70 billion. With a loss rate of 50%, this should be bearable for the European banking system (except perhaps for the Portuguese banking system for which the exposure to Greece represents close to 5% of GDP).

Table 1 also clearly shows how European banks have progressively and drastically cut their exposure to Greece by around €65 billion (\$90.5 billion) since the crisis broke (more than 50% in two years). Between them, French and German banks hold the largest exposures, with that of French banks now more than three times that of German banks. This is probably due to the fact that some French banks have majority shares in some banks in Greece. This might also be the reason why German banks cut their total exposure by over 70%, while French banks cut theirs by ‘only’ 40%. As a result, the claims of German banks on Greece have dropped from representing around 25% of total European banking exposure in 2009 to 15% at end of 2011; conversely, the share of French banks has risen from 40% to 50%.

Table 1. Exposure of European BIS reporting banks (\$ million)

	December 2009		Dec 09/ Dec 11		December 2011	
	Total claims	% European claims	Absolute change	% change	Total claims	% European claims
European banks	193,521		-103,048	-53.2	90,473	
France	78,818	40.7	-34,465	-43.7	44,353	49
Germany	45,003	23.3	-31,648	-70.3	13,355	14.8
United Kingdom	15,352	7.9	-4,815	-31.4	10,537	11.6
Netherlands	12,209	6.3	-8,724	-71.5	3,485	3.9
Portugal	9,800	5.1	-1,679	-17.1	8,121	9
Ireland	8,574	4.4	-8,382	-97.8	192	0.2
Italy	6,858	3.5	-4,672	-68.1	2,186	2.4
Austria	4,767	2.5	-2,446	-51.3	2,321	2.6
Belgium	4,207	2.2	-3,485	-82.8	722	0.8
Spain	1,206	0.6	-237	-19.7	969	1.1
Sweden	681	0.4	-388	-57	293	0.3

Source: Authors' elaboration on BIS Banking Statistics, Table 9D: Consolidated foreign claims of reporting banks - ultimate risk basis, European banks claims vis-à-vis Greece.

We now turn our attention to an analysis of the evolution of (banks') foreign claims vis-à-vis Greece by sector (see figures in the Annex). While the cutting vis-a-vis the public sector has been fairly constant at around 20% in each quarter between 2010 and 2011 (roughly €3 billion per quarter, considering only France and Germany), there was a sudden quickening in the exit process in the banking sector between June 2011 and September 2011, especially by German banks (-50% over the previous period) and French banks (-60%). Finally, it is interesting to observe that the exposure of eurozone banks towards the non-bank private sector has remained in the last two years more or less stable: French banks (which represents around 80% of the eurozone exposure in this sector) have cut only 5% of their exposure (around €1.5 billion) while German banks have reduced their exposure by one and a half times this amount, cutting around 35% of their exposure.¹

How such a drastic cut in the exposure of European banks vis-a-vis Greece can be reconciled with its persistent current account deficit? This has been possible only because of the funding that Greece has received from the official sector. As a result, most of the reduction in the exposure of the banks has been transferred to the balance sheet of the public sector, mainly through the EFSF and the ECB involvement. There has thus been a massive indirect bail-out of eurozone banks, which started even before the EFSF intervention during the debt restructuring process.

A stiff bill for the eurozone?

This leads to the next question: what is the exposure of the euro area official sector? The total is staggering: over €300 billion if one tallies up the various channels through which Greece has received support.

¹ Note that BIS data on German banks exposure are marked as estimates and may underestimate the real size of the claims.

At the moment, the eurozone member states have already committed about €160 billion in official assistance to Greece, through the first package of bilateral loans ('GLF', €53 billion) and the EFSF (total so far: €108 billion).² To this one has to add the exposure of the ECB, which amounts to a similar amount, as the Eurosystem has a direct exposure through its lending to Greek banks (€103 billion)³ and the Securities Markets Program (SMP), under which the ECB bought Greek bonds worth about €50 billion.⁴

Any losses on these different forms of official support would have to be split among euro area member countries. The distribution of losses among the 'share-holders' of the ECB would be very similar to the losses from EFSF lending. But with one difference: under the EFSF assistance program to Greece, neither the Ireland nor the Portugal have to provide official guarantees due to their "step-out creditor" position, so all the EFSF potential losses in this program would be split only among remaining MS.

Table 2 shows the exposure for each member country separately taking into account the exact distribution keys.

² In recent months, the EFSF has disbursed several loans to Greece as contribution in the PSI operation (€70 billion) and as part of the second assistance programme to the public finances (€13 billion) and to banking sector recapitalisation (€25 billion).

³ The Eurosystem (i.e. the National Central Banks of the eurozone) is connected to the Greek system by the TARGET2 system: the balance sheet of the Bank of Greece shows a liability of €103 billion towards the Eurosystem.

⁴ The portfolio composition of the SMP has not been revealed, but a plausible assumption is to consider that after August 2011 (that is, when the ECB started to also buy Spanish and Italian bonds), the ECB did not buy other Greek bonds and that two-thirds of the existing stock at that time was represented by Greek government securities. Under this assumption, €50 billion (face value) of Greek bonds are still on the ECB's balance sheet.

Table 2. Exposure of official sector by country: National central banks and sovereigns (€ million)

	GLF	EFSF	SMP	TARGET2	Total
Germany	14,719	31,217	13,912	28,749	88,598
France	11,054	23,443	10,448	21,589	66,534
Italy	9,713	20,600	9,181	18,971	58,465
Spain	6,454	13,689	6,101	12,606	38,850
Netherlands	3,100	6,574	2,930	6,055	18,659
Belgium	1,885	3,998	1,782	3,682	11,348
Austria	1,509	3,201	1,426	2,948	9,084
Finland	975	2,067	921	1,904	5,866
Portugal	1,361	0	1,286	2,657	5,304
Ireland	863	0	816	1,686	3,365
Slovak Republic	539	1,143	509	1,053	3,244
Slovenia	256	542	242	499	1,538
Estonia	139	295	132	272	837
Luxembourg	136	288	128	265	817
Cyprus	106	226	101	208	640
Malta	49	104	46	96	296
TOTAL	52,800,	107,900	50,000	103,000	313,000

Note: The ECB's losses are subtracted by the amount of Greek capital paid-up and the Greek share is redistributed among the remaining 16 countries according to their relative shares.

Source: Authors' calculation on ECB, EC, EFSF data.

Given that most banks depend on government support under the worst case scenario, it makes sense, especially for some countries, to aggregate the exposure of banks and that of the official sector. The official exposure is distributed essentially proportional to GDP (the shares both in the ECB and EFSF are similar to GDP weights). Given the large differences in private sector exposure, a somewhat differentiated picture emerges. Germany and France, for example, record about the same total exposure (close to €100 billion in each case), but Germany's exposure is considerably smaller (5 vs 4xx) as a % of GDP. The country with the highest total exposure is the one that can least afford it: Portugal. This is mainly due to the surprisingly high exposure of Portuguese banks to Greece (a classic case of a gamble for resurrection that went awry?).

Table 3. Total (private plus official) exposure by country (€ billion) vis-a-vis Greece

	Official	Private	Total	As % GDP
France	66,534	34,757	101,290	5%
Germany	88,598	10,465	99,063	4%
Italy	58,465	1,713	60,178	4%
Spain	38,850	759	39,609	4%
Netherlands	18,659	2,731	21,390	4%
Belgium	11,348	566	11,914	3%
Portugal	5,304	6,364	11,668	7%
Austria	9,084	1,819	10,903	4%
Finland	5,866	20	5,887	3%
Ireland	3,365	150	3,516	2%
Euro area	313,000	59,000	372,000	4%

Note: The ECB's losses are subtracted by the amount of Greek capital paid-up and the Greek share is redistributed.

Note also that data for the private sector are as of end of 2011, while for the official sector is May 2012.

Conclusion

At present the eurozone countries are sitting on an aggregate exposure to Greece exceeding €300 billion. Should the country exit the eurozone, it would certainly not be able to service its debt in the short run when the exchange rate overshoots. Over the longer run, the debt service capacity of the country should improve again (this would also be the case if the country remains in the euro zone).

Given that an exit is likely to be followed by a U-type pattern in debt service capacity, it might be best to look at the present value over a longer period. Greece is starting with an export base (of goods and services) of about €52 billion per annum. In ten years, this figure might well double in current euro terms, helped by an explicit devaluation (drachma) or an internal devaluation (if it remained in the eurozone). After that, exports should grow in line with nominal GDP, i.e. around 4% per annum. Over 30 years the present value of this time path of exports would be considerable, but would vary strongly with the interest rate.

Using the current rate on German government debt (1.5%) per annum, the present value of Greek export revenues would be close to €3 trillion, implying that debt service would, on average, amount to about 10% of exports, which should be feasible even for Greece.

However, at the interest rate the Spanish and Italian governments pay at present, i.e. around 6.5%, the present value of Greek export revenues would be much lower, around €1.4 trillion) implying a debt service burden of around 25%, which might be above the willingness of the Greek society to transfer resources to foreigners. Whether or not an exit zone from the euro is followed by default on the official debt depends decisively on the willingness (and ability) of Greece's euro partners to wait and finance the bridge between the short and the long run.

Annex 1. Evolution of exposure of selected eurozone countries

Figure 1.1 Total banking foreign claims on Greece (\$ million)

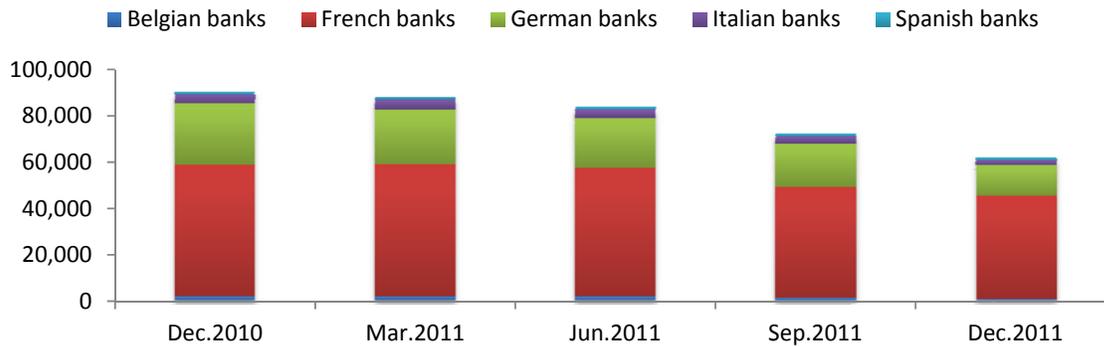


Figure 1.2 Banking foreign claims on Greek public sector (\$ million)

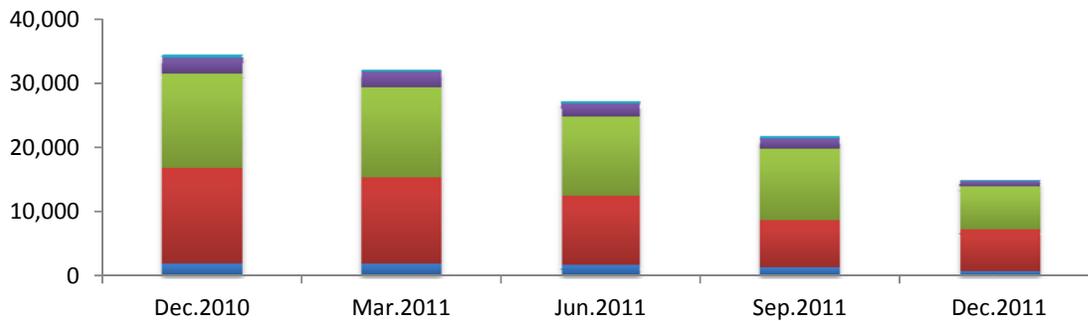


Figure 1.3 Banking foreign claims on Greek banking sector (\$ million)

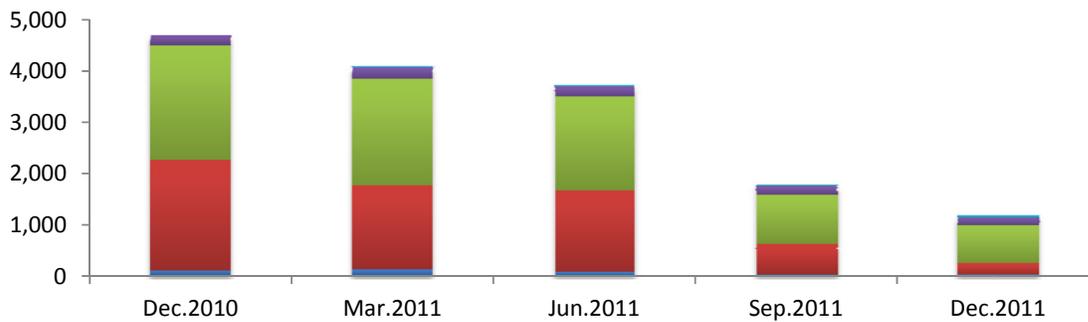
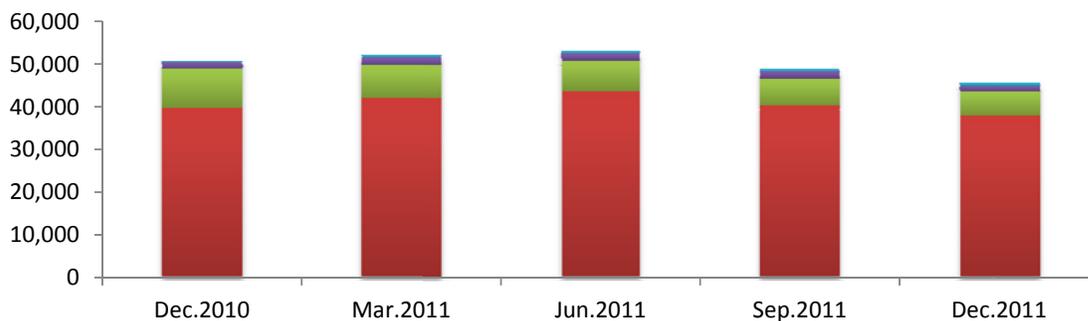


Figure 1.4 Banking foreign claims on Greek private-non banking sector (\$ million)



Source: Authors' elaboration on BIS data, 2012.