Tim Legierse

Limited direct Greek contagion through banking sector

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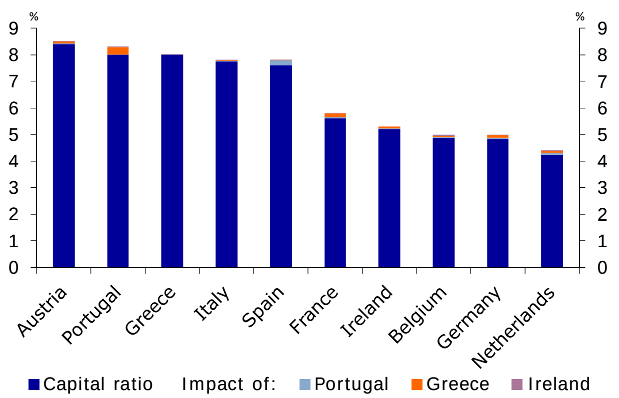
In the discussion on whether or not governments should bail out Greece, it has often been argued that by providing loans to Greece, the other eurozone governments are rescuing their domestic banks. While it is true that a large part of Greek government debt is held by foreign banks, the direct impact of a Greek default on euro zone bank capital ratios would be very limited.

When discussing the pros and cons of bailing out Greece, it has often been noted that a large share of Greek government debt is held by foreign banks. As such, by avoiding a Greek default eurozone governments would be acting in their self-interest by shielding their domestic banks from big losses. Capital Economics[1], an economics consultancy, estimates that around half of Greek government debt is held by other eurozone members. Less than half of this is held by banks (the rest largely by insurance companies and pension funds). So at most a quarter of Greek debt is held on eurozone bank balance sheets. Still, the billions of exposure that have been circulating in the media look quite frightening (€68.7bn for France, €39.3bn for Germany, €10.6bn for The Netherlands). It seems that the risk of direct contagion is indeed quite real.

It's not the big bang that should bother us most ...

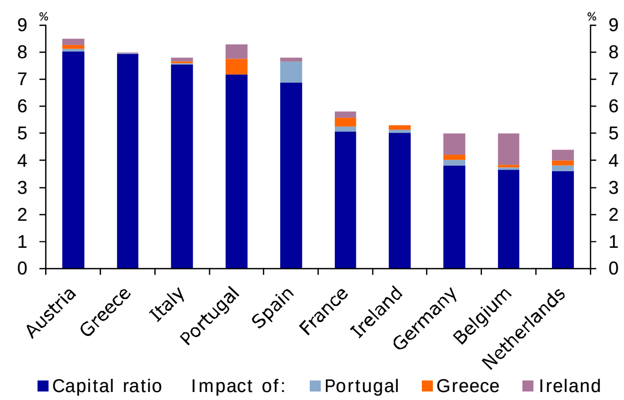
Using BIS (Bank of International Settlement) data on the exposure of eurozone banks to Greek debt and ECB (European Central Bank) data on the consolidated bank balance sheets of eurozone countries we have calculated the impact of a Greek sovereign default on the capital ratio of the banking system in 10 eurozone countries[2]. We make two alternative calculations[3]. BIS provides the breakdown of *total* Greek debt by country. They also provide a breakdown of foreign held debt by sector, which are banks, public sector and non-bank private sector. About 45% of Greek foreign held debt is government debt. So if we assume that *all* countries hold the same proportion of Greek debt in the three categories we can calculate the amount of Greek *government* debt by each county. Standard & Poor's assigns[4] Greece a recovery rating that implies an average 30%-50% recovery rate. Taking the high end of this estimate[5], we calculate the losses that result to countries' banking sectors from a 50% loss on Greek government debt and the impact of these losses on the capital ratio. The result is given in figure 1 where the blue bar indicates the remaining capital ratio after losses. The drawback of this calculation is that we are not sure about the composition of Greek debt by

Figure 1: Impact of sovereign default



Source: BIS, ECB, Rabobank

Figure 2: Impact of total country default



Source: BIS, ECB, Rabobank

[1] Capital Economics European Economic Focus, "Default whys and wherefores", 30th Apr. 2010.
[2] On May 6 2010, the Institute of International Finance (IIF) published a note with similar calculations.
[3] All data are for the fourth quarter of 2009.
[4] Standard & Poor's Research Update, "Greece Long- and Short-Term Ratings lowered to 'BB+/B'; Outlook negative; '4' Recovery rating assigned to sovereign debt", April 27 2010.
[5] Looking at historic recovery rates of sovereign defaults in the emerging countries, even a 50% recovery rate seems very pessimistic

sector in different countries. In figure 2 we make an alternative calculation by applying a haircut of 50% on the *total* Greek debt that is held by eurozone banks (i.e. we do not make any distinction between public and private sector debt). Of course, this is really the worst case scenario and we believe the true impact will lie somewhere in between. Surprisingly, the direct impact of a Greek default on the capital ratio of other eurozone banking systems is rather limited even in this highly pessimistic scenario. The estimated impact is 0.6%-points at most, which ironically holds for Portugal.

Given that markets are worried about contagion and (looking at the Bund spread of both countries) Portugal and Ireland seem next in line, we also calculated the impact of a Portuguese and Irish default, again applying a 50% loss. The government share of total debt held by foreign banks is 24% for Portugal and only 4% for Ireland. This explains the big difference between figure 1 and 2 for Ireland. The total *direct* impact on the capital ratios of a joint sovereign default in the three countries that currently look most vulnerable is still not very impressive. If we let the entire country default, assuming a 50% recovery rate, the impact on some countries becomes quite large. Portuguese banks are relatively heavily exposed to both Greece and Ireland. Spanish banks would suffer from a country-wide default of Portugal. Belgium and Germany are heavily exposed to Ireland. Overall, in the very pessimistic (and perhaps not all too realistic) scenario of country-wide defaults in the three eurozone countries that currently pay the highest interest rate spreads over Germany, the impact on the capital ratio in our 10 eurozone countries ranges from a 0.05%-point decline in Greece to a 1.35%-point decline in Belgium. Perhaps most worrying is that Portugal is not just one of the main suspects of financial markets, but is also relatively heavily exposed to Greek debt.

… but the devil is typically in the details

The limited impact of default in the countries we have considered is due to the limited size of their economies. Although the debt ratios of the countries are big in terms of their own economic size and a sizeable portion of it is held by foreign banks, relative to the size of other economies and the capital ratios and reserves of the banking sectors the debts of Greece, Portugal and Ireland are not very large. Regrettably, this does not imply that a default of these countries would be relatively painless. As noted for Greece, only part of the debt that is held abroad is on the balance sheet of banks. Direct losses would also have an impact on pension funds and insurance companies. Also, even if the direct losses for the banking system as a whole seem benign, that does not rule out a big impact on individual institutions. The process of finding out which institutions are most exposed may well lead to financial stress similar to what we've seen during the subprime crisis and after the fall of Lehman Brothers. The process of looking for the most exposed individual institutions is already in full swing, with the Financial Times today reporting on the resulting market worries. Besides that, coming to grips with an actual default by a eurozone sovereign will lead to further stress in financial markets. We should also remember that at the start of the subprime problems, banking system capital buffers were thought to be large enough to absorb the direct losses. And like the size of the Greek economy, the balance sheet of Lehman Brothers was relatively small. Also, in this exercise we extend a Greek default to repayment problems in Portugal and Ireland. But if that scenario would actually play out, the reaction in financial markets may well focus on other Southern European countries. If we would extend this analysis to Spain and Italy, the third and fourth biggest economies of the eurozone, the results will certainly not look as benign as those in figure 1 and 2. So trying to estimate the direct impact of losses and the capacity of banks to absorb them will surely underestimate the total impact of a sovereign default.

In this note, we surely do not wish to downplay the impact on financial markets and banking systems in the eurozone of a sovereign default in Greece or another small eurozone economy. But the direct exposure of the banking sectors in the 10 countries in our analysis is limited. So the argument that governments should help Greece because the implication of not doing so would be further government recapitalisation of these countries' banks is not borne out by the data. Such a case can only be made by explaining the impact of financial market stress, when a Greek default would turn out to lead to a situation similar to what we have observed after the failure of Lehman Brothers.

Rabobank

Rabobank Economic Research Department

	Tel.	E-mail:
Wim Boonstra (Chief Economist)	66617	W.W.Boonstra@rn.rabobank.nl
Joost van den Akker (deputy head)	62654	J.Akker@rn.rabobank.nl
International Macro Research		
Allard Bruinshoofd*	63272	W.A.Bruinshoofd@rn.rabobank.nl
Shahin Kamalodin	31106	S.A.Kamalodin@rn.rabobank.nl
Tim Legierse	62677	T.Legierse@rn.rabobank.nl
Bas van Tuijl	31618	A.B.Tuijl@rn.rabobank.nl
National Macro Research		
Ruth van de Belt	60143	R.Belt@rn.rabobank.nl
Martijn de Jong-Tennekes	64490	D.M.Jong@rn.rabobank.nl
Danijela Piljic	31104	D.Piljic@rn.rabobank.nl
Hans Stegeman*	31407	H.W.Stegeman@rn.rabobank.nl
Anke Struijs	31408	A.C.A.Struijs@rn.rabobank.nl
Maarten van der Molen	64214	M.T.Molen@rn.rabobank.nl
Emerging Countries Research		
Erwin Blaauw	62648	E.R.Blaauw@rn.rabobank.nl
Leendert Colijn	67063	L.Colijn@rn.rabobank.nl
Jeroen van IJzerloo*	62406	J.IJzerloo@rn.rabobank.nl
Herwin Loman	31105	H.Loman@rn.rabobank.nl
Reintje Maasdam	31403	R.Maasdam@rn.rabobank.nl
Ashwin Matabadal	61601	A.R.K.Matabadal@rn.rabobank.nl
Joke Oudelaar	30749	J.A.G.Oudelaar@rn.rabobank.nl
Financial Sector Research		
Hans Groeneveld	31400	J.M.Groeneveld@rn.rabobank.nl
Dick Scherjon	31405	D.P.Scherjon@rn.rabobank.nl
August Sjauw-Koen-Fa	31406	A.R.Sjauw@rn.rabobank.nl
Bouke de Vries*	61195	Y.B.Vries@rn.rabobank.nl
Nicole Smolders	79108	N.M.P.Smolders@rn.rabobank.nl
Yvette Jörissen	64934	Y.M.Jörissen@rn.rabobank.nl
	+31 30 21 xxxxx	

**team head*

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Tim Legierse

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