

MACROECONOMIC IMBALANCES IN EMU AND THE EUROSISTEM

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Before the financial crisis, ECB officials tended to be critical of the lack of fiscal policy discipline in numerous EMU member countries but dismissed concerns about external current account imbalances within the currency union. Why should we be concerned about current account imbalances in EMU when nobody cares about current account imbalances among federal states in the United States, they asked. With hindsight, it is clear that the comparison with the United States was wrong and the complacency misplaced. The euro area lacks the degree of political, economic and financial integration that renders current account imbalances among its member countries benign.

In the United States, larger companies and banks operate nation-wide – much more strongly compared to the case within EMU. In addition, the US federal government softens economic disparities through transfers (notably through the social security system), while such transfer possibilities are strongly limited in Europe. In the rare cases when regional imbalances threaten economic and financial stability a central authority is available to manage the crisis. Thus, when imprudent lending by local savings banks in the state of Texas caused a financial crisis in the early 1980s, the US federal government stepped in and re-structured the sector. Against this, there are hardly any built-in mechanisms in EMU to correct unsustainable current account imbalances, and a permanent crisis mechanism is presently still under construction.

When excessive private and public borrowing from abroad lead to an unsustainable current account deficit, an EMU country is at risk of being suddenly

cut off from funding this deficit. A similar funding risk was discovered during the 1980s and 1990s in emerging market economies that had borrowed in foreign currency; a cut-off from the international capital markets was then dubbed in the economic literature a ‘sudden stop’. There is, however, an important difference between the ‘sudden stop’ of capital inflows experienced by emerging market economies in the past and the ‘sudden stop’ experienced by some EMU member countries today. In the former countries, the ‘sudden stop’ usually led to currency depreciation and, in some cases, to default on the foreign currency liabilities. In the latter, currency devaluation is impossible, but the system of euro-area central banks, the Eurosystem, has been pulled in to provide bridge financing. As a result, sizeable financial imbalances have developed within the Eurosystem. To return to market-based funding structures in EMU these imbalances will have to be unwound in the years ahead. This will require painful private and public sector de-leveraging over several years in a number of countries.

The remainder of this article is structured as follows: the first section describes the emergence of current account imbalances within the euro area during the period of easy private sector credit. The second section illustrates how the Eurosystem has helped to fund public sector deficits, followed by the third section which shows how the Eurosystem has replaced private capital flows to fund current account imbalances. The final section contains our concluding remarks.

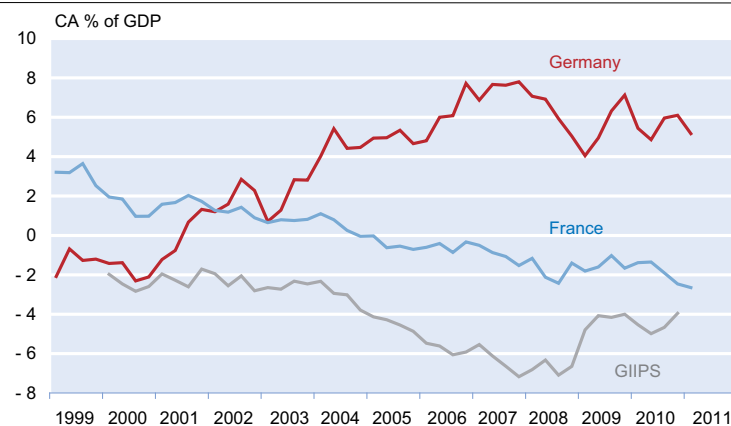
The rise of current account imbalances within EMU

Since the beginning of EMU the external current account of the euro area has been close to balance. The moderate imbalances that emerged from time to time appeared anything but threatening. Yet, below the surface, sizeable imbalances among EMU countries built up. A key driver of deficits was easy credit that allowed some countries to fund private and public saving-investment deficits. Thus, Greece, Ireland, Italy, Portugal and Spain, the so-called GIIPs countries that benefited from record low interest rates after



* Deutsche Bank.

Figure 1
Current account balances in EMU



Sources: Eurostat; Haver Analytics; Deutsche Bank.

the introduction of the euro, ran up a GDP weighted deficit of about 7 percent of GDP at the height of the credit bubble (Figure 1). Germany, on the other hand, which did not benefit from a drop in interest rates embarked on a policy of cost cutting to regain international competitiveness that was lost during the 1990s. At the same time, it ran up a current account surplus of up to 8 percent of GDP, roughly offsetting the deficit of the GIIPS countries (which together have a GDP similar to that of Germany).

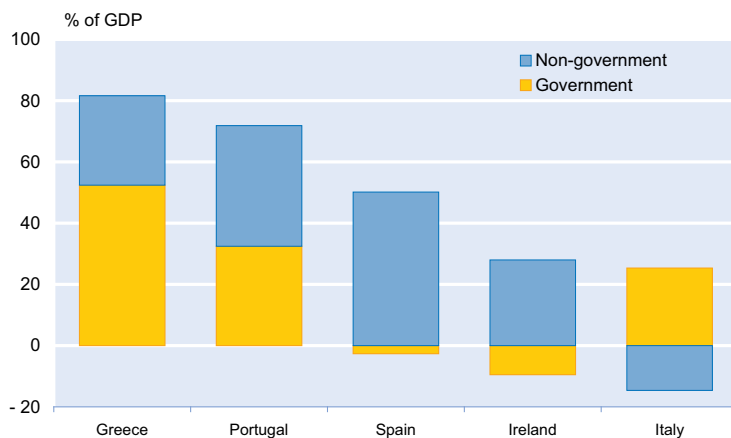
Both private and public sector savings-investment deficits contributed to the current account deficits in the GIIPS countries. Figure 2 shows the cumulated net borrowing of the private and public sector from abroad. Private and public sector net borrowing in principle add up to the current account balance, although in practice some statistical differences remain. The current account deficits of Greece and Portugal were induced by both public and private sector net borrowing. Against this, Spain's deficit was almost entirely the result of private sector borrowing. Ireland ran an external surplus thanks to private sector net lending. Italy ran a small current account deficit due to government borrowing that exceeded somewhat private sector lending.

Before the financial crisis the emergence of internal current account imbalances was not given much attention by many

observers and policy makers, including those at the ECB. It was expected that market forces would operate to smoothly correct these imbalances. However, many observers overlooked that insufficient financial and economic integration across euro-area countries prevented default risk diversification across countries, and that large current account deficits led to the accumulation of idiosyncratic risk on a country basis. To appreciate this point, consider first the case where only big banks operate in the whole of the euro area. The

big banks would manage credit risk across the euro area, and they would aim at eliminating country-specific, idiosyncratic risk through credit portfolio diversification. Moreover, these banks would not be subject to country-specific funding risks. Hence, a country-specific negative funding or credit shock would not lead to systemic risk. Consider now the case where banks operate only on a national basis. Borrowing in the common currency in any one EMU member country then creates roll-over risk. Foreign creditors can afford to refuse to roll maturing debt when they fear default as there is no need for them to reinvest redemptions in the country where they receive them. This is in stark contrast to the case of a country with its debt denominated in its own currency: redemptions there have to be reinvested eventually in the same country, although not necessarily by the same investor or into the same asset class. A 'sudden stop'

Figure 2
Cumulated net borrowing by the public and private sector, 1999–2007



Sources: Eurostat; Deutsche Bank.

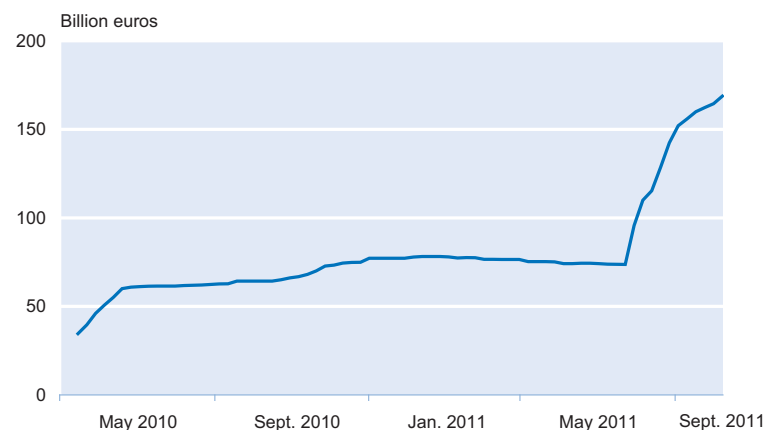
of funding of external deficits is therefore virtually impossible (although the currency can crash when investors attempt to sell it in a rush).

Eurosystem funding of government debt

In the previous section we discussed the failure to pay proper attention to the emergence of large current account imbalances in EMU and compared the roll-over risk for foreign debt in EMU countries to the risk of ‘sudden stops’ identified for emerging market economies in the past. In this and the following section we explore the role of the Eurosystem in temporarily reducing the risk of a ‘sudden stop’ by filling the funding gap created by investors’ refusal to roll outstanding debt. Let us first consider the case of government finances.

During most of the first ten years of EMU interest rate convergence was the dominant theme for investors in euro-area sovereign debt. With the risk of sovereign default seen as negligible, investors preferred the initially higher yielding debt of EMU countries with weaker government finances, until yield differentials had almost disappeared. When risk aversion suddenly surged during the financial crisis, investors began to shun the debt of euro-area countries with weak and dubious government

Figure 4
Holding of bonds under the ECB's Securities Market Programme (SMP)

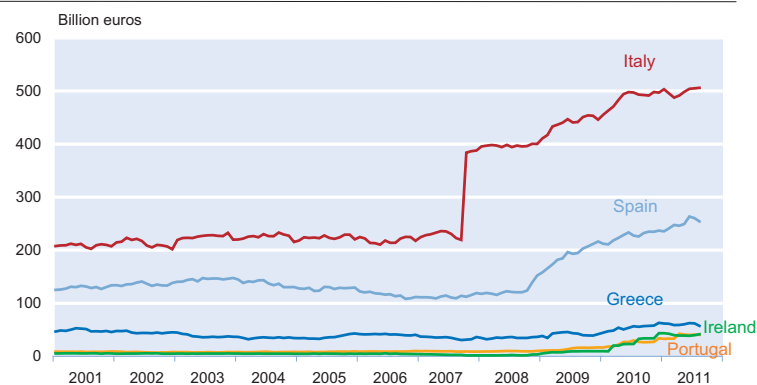


Sources: ECB; Deutsche Bank.

finances. At least initially and in part, funding of weak governments was taken over by the Eurosystem. Government bonds were sold to national banks, which funded these purchases by borrowing money from the Eurosystem, with the same bonds used as collateral for the loans. As a result, government bond holdings of commercial banks rose substantially as interest from other investors diminished (see Figure 3). In addition, the Eurosystem started to buy bonds of governments in financial difficulties directly in the secondary market in May 2010 when private sector funding dried up for a number of EMU countries (Figure 4). In September 2011, the ECB extended its securities markets programme to include also the purchase of Italian and Spanish government bonds.

The Eurosystem's involvement in the funding of government deficits can be defended on two grounds: First, markets may have reacted irrationally, denying solvent governments the roll of their outstanding debt and hence triggering a liquidity crisis. Second, with no other body available for crisis management, the Eurosystem had no other choice than to step in and to provide emergency liquidity support. Of course, the longer the Eurosystem's involvement in the funding of government deficits lasts, the more difficult becomes its defence and the more obvious become the structural flaws of EMU.

Figure 3
Bank credit to government



Note on Italian series: since October 2007 the statistics have included the balance sheet data of Cassa Depositi e Prestiti s.p.a, reclassified as a monetary and financial institution (MFI), similarly to what happened in Germany for the KfW (also a MFI).

Sources: WEFA/IFS; Deutsche Bank.

Table 1
Initial balance sheets of national central banks and commercial banks (in euros)

Bank of Greece		Bundesbank	
Assets	Liabilities	Assets	Liabilities
5,000	5,000	5,000	5,000
Loans to Greek bank	Greek bank deposits	Loans to German bank	German bank deposits
0	0	0	0
Claims on Eurosystem	Due to Eurosystem	Claims on Eurosystem	Due to Eurosystem
Greek bank		German bank	
Assets	Liabilities	Assets	Liabilities
10,000	10,000	10,000	10,000
Loans	Deposits	Loans	Deposits
5,000	5,000	5,000	5,000
Central bank liquidity	Due to Bank of Greece	Central bank liquidity	Due to Bundesbank

Source: Deutsche Bank.

Survival of the currency union in the long-term will depend to a significant extent on whether it will be possible to restore the two key principles of EMU: (1) the focus of the Eurosystem on price stability alone, which requires the end of its involvement in propping up governments and banks in financial difficulties; and (2) the full responsibility of national governments for their finances, which requires default as the ultimate sanction for failure to live up to this responsibility.

Eurosystem funding of current account imbalances

In the previous section we discussed the role of the Eurosystem in funding public sector financial imbalances. In this section we turn to its role in funding aggregate external current account imbalances. We first discuss the accounting mechanics of intra-EMU cross-border payments and then turn to recent developments within the Eurosystem's interbank payment system – Target2 (see also Sinn 2011; Sinn and Wollmershäuser 2011).

The accounting mechanics of intra-EMU cross border payments can be best illustrated with an example.

Assume that a Greek customer buys a good from a German supplier costing 5,000 euros. To finance the purchase he takes out a credit from his bank over the same amount. He now advises his bank to transfer the 5,000 euros to the bank of the German supplier. The Greek bank debits the customer's account and requests the Bank of Greece, where it has an account, to transfer 5,000 euros to *via* the ECB and the Bundesbank to the bank account of the German supplier. Following the transfer, the Bank of Greece has a liability of 5,000 euros towards the ECB (see Tables 1 and 2). The ECB passes the funds on to the Bundesbank for further transfer to the bank of the supplier, where they go on his account (it is as if the Bank of Greece had borrowed from the Bundesbank via the ECB to fund the purchase by the Greek customer). Now assume that the German bank of the supplier lends the 5,000 euros back to a Greek bank. In this case, the payment flows among the central banks reverse and their balances with the ECB equilibrate (Table 3). The German bank ends up with a 5,000 euros claim on the Greek bank, which has the same claim on its customer. Assume, alternatively, that the German bank refuses to re-cycle the funds to Greece. In this case, the German bank holds on to the

Table 2
Balance sheets after Greek customer pays 5,000 euros to German supplier (in euros)

Bank of Greece		Bundesbank	
Assets	Liabilities	Assets	Liabilities
10,000	5,000	5,000	10,000
Loans to Greek bank	Greek bank deposits	Loans to German bank	German bank deposits
0	5,000	5,000	0
Claims on Eurosystem	Due to Eurosystem	Claims on Eurosystem	Due to Eurosystem
Greek bank		German bank	
Assets	Liabilities	Assets	Liabilities
15,000	10,000	10,000	15,000
Loans	Deposits	Loans	Deposits
5,000	10,000	10,000	5,000
Central bank liquidity	Due to Bank of Greece	Central bank liquidity	Due to Bundesbank

Source: Deutsche Bank.

Table 3

Balance sheets after German bank lends 5,000 euros to Greek bank (in euros)

Bank of Greece		Bundesbank	
Assets	Liabilities	Assets	Liabilities
5,000	5,000	5,000	5,000
Loans to Greek bank	Greek bank deposits	Loans to German bank	German bank deposits
0	0	0	0
Claims on Eurosystem	Due to Eurosystem	Claims on Eurosystem	Due to Eurosystem
Greek bank		German bank	
Assets	Liabilities	Assets	Liabilities
15,000	15,000	15,000	15,000
Loans	Deposits	Loans	Deposits
5,000	5,000	5,000	5,000
Central bank liquidity	Due to Bank of Greece	Central bank liquidity	Due to Bundesbank

Source: Deutsche Bank.

money (and perhaps reduces its demand for funds from the Bundesbank) and the balances of the two central banks with the ECB don't equilibrate. Note that in latter case the stock of central bank liquidity has increased in the accounts of the German bank (exceeding its liabilities against the Bundesbank). At some point, the German bank may decide no longer to keep this liquidity on account at the Bundesbank and to purchase financial assets or extend credit in its home market. Thus, the funding of current account imbalances *via* the Eurosystem can fuel asset and/or consumer price inflation in the surplus country.

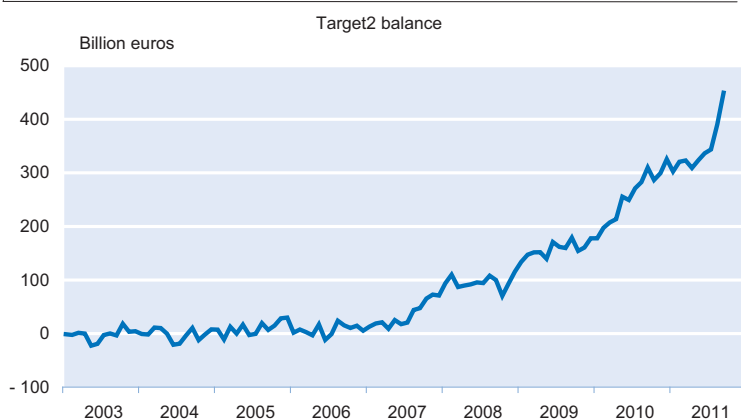
Figure 5 shows the evolution of the Target balances from the Bundesbank's point of view. Until 2008 the Bundesbank's net claims against the ECB were close to zero, indicating that private sector capital flows financed the current account imbalances within EMU. Since then, however, the Bundesbank's net claims have risen sharply as private sector flows dried up due to rising risk aversion in the interbank money

market. When Germany's surplus savings were no longer re-cycled by the private sector, the Eurosystem took over. The corollary to this development has been the increasing reliance of banks in the peripheral countries on the Eurosystem for the funding of their assets. Figure 6 shows the total refinancing operations of the ECB and the share of the five peripheral countries, Greece, Ireland, Italy, Portugal and Spain. In 2007, the five countries absorbed about 17 percent of the funds provided by the ECB under repurchase agreements, broadly in line with the size of their banking sectors relative to the euro area. When an increasing number of banks in these countries were cut off from the market, their share in the ECB's refinancing operations rose to around 75 percent.

In our example above we explained the emergence of imbalances within the Eurosystem as a result of trade flows that were not funded by private sector capital flows. However, imbalances can also emerge as a result of capital movements alone. Suppose a Greek saver decides to move his deposits to Germany. This operation leads to a debt in the Eurosystem account of the central bank of Greece and a surplus in the account of the Bundesbank. *Vice versa* sales of Greek government bonds to foreign investors – e.g. by a Greek bank to a German insurance company – reduce the liability of the Greek bank and the claim of Bundesbank.

Figure 7 compares changes in the Bundesbank's net position *vis-à-vis* the Eurosystem with developments of Germany's current

Figure 5
Claims of the Bundesbank against the ECB



Sources: Bundesbank; Deutsche Bank.

Figure 6
ECB refinancing operations (main and log-term refs)

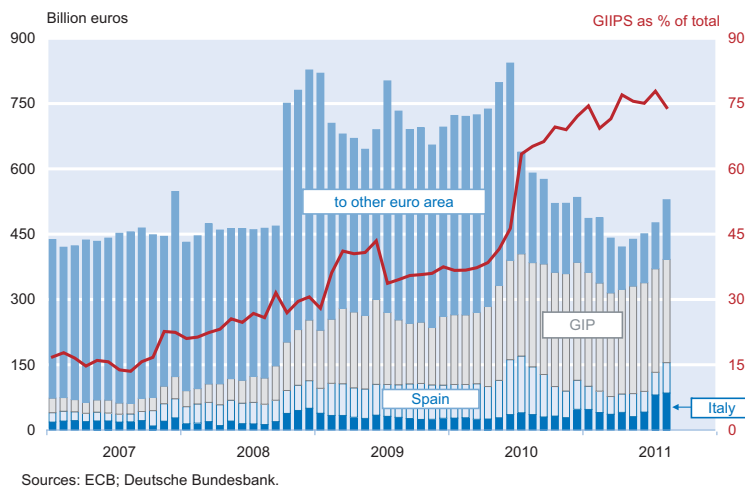
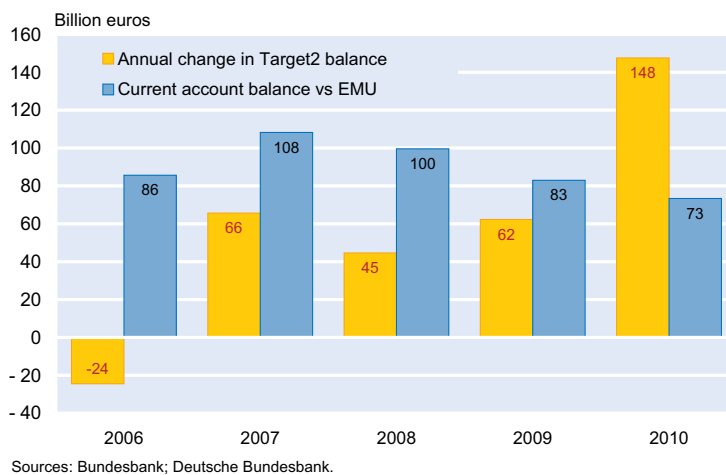


Figure 7
The Bundesbank's claims against the ECB and Germany's current account surplus



account. The fact that the Bundesbank's net claims against the Eurosystem rose faster than Germany's current account surplus suggests that there were also capital movements into Germany. In addition to money inflows from the export of goods and services, the rise in Target2 balances reflects capital inflows into Germany from other EMU countries as well as the repatriation of German investment abroad.

Table 4 shows net claims and liabilities of Eurosystem central banks against the ECB for the end of last year and the latest available observation. Apart from Germany, Luxembourg, Netherlands, and Finland are major creditors while Ireland, Greece and Portugal are the major debtors. The debt of these countries is quite large when compared to the size of their economies. Target2 positions have further increased in the course of 2011. The most significant deterioration occurred

in Italy, where a small net surplus of 3.4 billion euros turned into a large net liability of 103.5 billion euros. With the Italian current account balance *vis-à-vis* the euro area having changed only little during the first half of 2011, the recent deterioration hints at a rising deficit in the capital account.

Following the discovery of these imbalances, a lively debate emerged in Germany on how to interpret them. Some private sector economists suggested that the Bundesbank's net claim on the Eurosystem would add to Germany's exposure to troubled euro-area countries, while officials have downplayed these imbalances as purely technical. However, Garber (1998 and 2010) makes the much more important point that the Eurosystem's inter-bank payment scheme can be used to accommodate capital flight out of one or more EMU member countries into Germany (and other EMU member countries considered to be safe havens). Such a flight could occur if there were fears that a country's banking system could become insolvent.

Garber (2010) warns: "if the fiscal authorities in the EU were tough and pushed for restructuring [of government debt], then the flight would likely proceed to the point where a substantial part of the national balance sheet is intermediated by the ECB. If the ECB were to cease accepting the country's paper as collateral to end the haemorrhage, the outgoing payments could no longer be made and the country's banking system *de facto* would be cut off from the euro. If the country's authorities kept the banking system open for internal payments at least, the bank deposits in the country would float against the euro currency". In other words, the euro would break up.

In the longer-term, a mechanism would seem to be needed that prevents the unlimited rise of imbalances within the Eurosystem. In the United States, imbalances among the district Federal Reserve Banks aris-

Table 4
Net positions of Eurosystem central banks against the ECB (Target2)

	End-2010 billion euros	2011 billion euros	2011 % of GDP	Change since end-2010 billion euros
Germany	325.6	449.6 Sept	18%	+ 124.0
Luxembourg	67.9	72.4 Aug	163%	+ 4.5
Netherlands	40.5	64.8 Sept	11%	+ 24.3
Finland	19.7	43.4 Sept	23%	+ 23.7
Italy	3.4	- 103.5 Sept	- 7%	- 106.9
Malta	- 1.2	- 0.5 Aug	- 8%	+ 0.7
Slovenia	- 2.1	- 2.4 Aug	- 6%	- 0.3
Cyprus	- 6.4	- 7.9 Sept	- 43%	- 1.5
Slovakia	- 13.3			
Belgium	- 13.9	- 24.1 Sept	- 6%	- 10.2
ECB	- 21.2			
Austria	- 27.5	- 35.5 June	- 12%	- 8.0
France	- 28.3	- 33.5 Aug	- 2%	- 5.2
Spain	- 50.9	- 82.8 Sept	- 8%	- 31.9
Portugal	- 59.9	- 59.4 Aug	- 35%	+ 0.5
Greece	- 87.1	- 97.5 Aug	- 44%	- 10.4
Ireland	- 145.2	- 140.6 Aug	- 0.9	+ 4.6

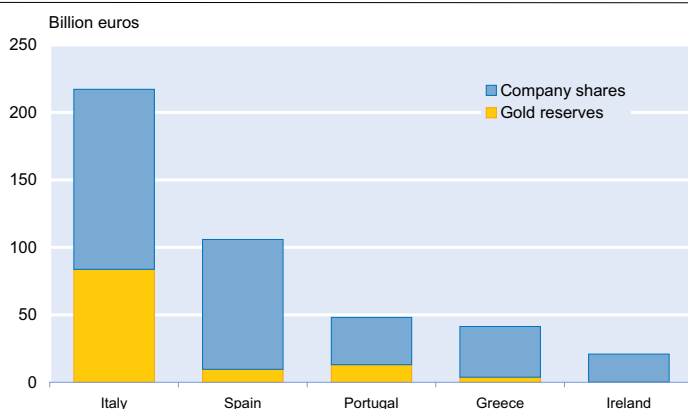
Sources: Bundesbank; National central banks; Eurostat; Deutsche Bank.

ing from inter-district payments (through Fedwire, the US pendant to Target2) are settled annually (with district Federal Reserve Banks paying in gold certificates). This ensures that regional central banks exert pressure on commercial banks to fund their inter-regional balances (or eliminate them if they can't fund them). The need for annual settlement within the Eurosystem would imply that national central banks would exert pressure on the commercial banks in their countries to look for private external funding of their assets or adjust the asset to the funds available from the market. A settlement could take place through the transfer of gold reserves and shares of

private companies, which belong to the government. As shown by Figure 8 such a transfer would considerably reduce the accumulated deficits *vis-à-vis* the ECB in certain cases. Moreover, a higher degree of financial integration would be needed to establish a firmer base for the common currency. Financial regulation and supervision, deposit insurance and a bank resolution scheme would need to be established at a euro area level. Banks would have to be encouraged to operate on a euro-area-wide basis so that country specific credit and funding risk could be diversified across the euro area.

What should be done?

Figure 8
Gold reserves and company shares of GIIPS countries in public ownership



Sources: International Financial Statistics; OECD.

As it became more difficult to fund internal and external imbalances in a number of EMU member countries, the Eurosystem stepped in and partly filled the gap. This has exposed the Eurosystem to the risk of sovereign and bank defaults and perhaps stiffened the opposition of ECB members against any sovereign debt restructuring, even when there are very serious doubts about the solvency of a country. In our opinion it would be too shortsighted to transfer a continuing financing of insolvent states and their banks from the Eurosystem to the public sector (as seems to be in the minds of some ECB members). This would let the opposition to EMU grow in the paying countries and could finally lead to a partition or separation of EMU. It is necessary, therefore, to correct the balance of payment deficits by reducing the deficits in the current account and the private capital account.

A correction of the balance of payments deficits can only be expected, however, if domestic goods, services and assets would become markedly cheaper relative to their foreign substitutes. A drop in asset prices should necessitate considerable write-downs of

the granted credits based on these assets. Credits to the state would also have to be written down correspondingly, as they with markedly reduced tax revenues in a nominally shrunken economy could no longer be served completely. To date, such an adjustment process in the private and public sectors are barely visible. But adjustment is urgent. For the willingness of the 'surplus' countries to finance deficits in the Eurosystem *via* their national central banks is likely to end when large parts of the population of the 'deficit' countries start to withdraw their money from the local banks and transfer it to the safe surplus countries. This would be a clear sign of the people of the deficit countries withdrawing from the liability for questionable bank credits to the private sector and the government and trying to shift possible losses *via* the Eurosystem to the communality of taxpayers in the euro area. If, however, the surplus countries refuse to accept the flight capital from the deficit countries, then the euro will have lost its function as common currency.

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