THIRD CHAPTER

Euro area in crisis

This Text is a translation of the german version, published in the annual report 2011/12 of the German Council of Economic Experts (Status: 18 November 2011).

The key points at a glance

The sovereign debt crisis that broke out in Spring 2010 and was initially limited to Greece has since then expanded rapidly and led to a profound crisis of confidence. Since treasury bonds have traditionally formed the secure core of the financial system, the uncertainty has increasingly spilled over into the banking sector, which has in turn impacted negatively on the credit rating of public-sector borrowers.

Neither the ambitious consolidation programmes in the countries in difficulty nor the rescue plans, floated on an ever larger scale, have been able to fundamentally change this vicious circle to date. The euro area's increasing instability contrasts with conditions in Japan, the United States and the United Kingdom, countries which despite far higher budget deficits during the same period have been able to secure refinancing at historically low interest rates. This discrepancy reflects the **constitutive element of a monetary union** that bars its member states from taking the comfortable albeit highly questionable route of central bank financing from the viewpoint of stability policy.

In order to prevent the rising cost of refinancing resulting in problems of solvency, the guaranteed capital of the EFSF was appreciably upped. Since it was also granted the option of partial coverage thereof, it can secure government loans that are four to five times higher than the means available to it as direct loans. This noteworthy **rescue attempt** was then cast into question by the announcement shortly thereafter that Greece intended to hold a referendum. It is thus also unclear whether the urgently required write-off of 50 per cent of the debt on Greek bonds will take place as planned.

It has still to transpire whether the "maximization" of the EFSF will calm the markets such that Spain and Italy can obtain refinancing at acceptable terms. If things develop unfavourably, then the strategy of a gradual expansion of the EFSF will come up against its limits. There would then be the danger that the monetary union would **break up in an uncontrolled fashion** or of the **unlimited purchase of treasury bonds** by the ECB, a step that would be highly questionable.

Then at the latest steps that go further will have to be considered. The focus would have to be on finding a solution to the short-term liquidity problems faced by Spain and Italy, and also devising a credible strategy to reduce government debt in Europe. One candidate concept is the "**European redemption pact**" outlined in this chapter. It is designed to use a common consolidation pact and binding national debt caps to bring government debt down below the 60 per cent limit set in the Maastricht Treaty. At the same time, it gives the participating states the opportunity to finance themselves to a limited extent via a fund for which all are jointly liable. The scope of the fund derives from the level of a member state's debt that exceeds the 60 per cent level of the Maastricht Treaty. The member states must offer **comprehensive collateral**, in particular by pledging currency reserves totalling 20 per cent of the loans financed by the fund. Current payments to the fund would be guaranteed by national tax revenue specially dedicated to this end.

Moreover, it will be important to further strengthen the fiscal discipline called for by the stability and growth pact. The Commission should be granted the decisive role in all relevant steps in the procedures relating to excessive debt. Also worth examining would be a solution that goes even further and is aligned to European competition law whereby the Council would be stripped of any influence on the deficit procedure.

I. Monetary Union: long-term stabilization still to happen

126. With the expansion of the European Financial Stability Facility (EFSF) rescue fund resolved on 29 September 2011 and its agreement on 26 October 2011 to maximize the EFSF's capacity to grant loans, German Parliament made **a considerable contribution to stabilizing** the European Monetary Union. This raised Germany's liability for the EFSF from € 123 billion to € 211 billion, whereby given the fact that the EFSF funds can be leveraged, the probability of the full liability being due has risen.

127. The German public's concern is understandable given the increasing liability for euro area member states. Yet without the unresolved expansion of the rescue plan, the European financial system has increasingly entered a situation such as was reminiscent of that observed in September 2008 in the wake of the Lehman bankruptcy. Since treasury bonds were traditionally considered the safe core of the financial system, the growing distrust in recent months about the creditworthiness of public issuers has led to a loss of confidence in European banks, which has in turn impaired the assessment of the solvency of the member states. The **danger of a systemic crisis** arose.

To date, neither the ambitious austerity measures in the problem countries nor the rescue plans agreed over the last 18 months have fundamentally changed this vicious circle. This also applies to the European Central Bank's (ECB) extensive purchases of bonds. And thus in recent weeks, the risk premium on public bonds as compared with German treasury bonds shows just how market mistrust spread to seize hold of ever more euro area countries. Most recently, even the return on French Treasuries was a percentage point higher than that on German paper.

128. With the expansion of the rescue plan as now resolved there is a chance that at least for the immediate future **the markets will relax**. Together with the strengthening of European banks' equity base, the foundations have thus been laid for the urgently required 'hair cut' for Greek debt, which, without such an anchoring, could have triggered imponderable risks of contagion and chain reactions.

However, we should have no illusions: the package now resolved is not the definitive solution to the euro area's problems. It does, however, offer politicians a **window of opportunity** and they must cogently use the time gained to create an overall governance for the euro area that rests not just on sound government financing but also on a stable financial system. This is not to advocate overly hasty measures. The single most important contribution to steadying the markets must be forthcoming in the problem countries – they must consistently implement the austerity measures announced. Together with the EFSF's stronger clout this should succeed in stabilizing market confidence in euro area governments' finances. That should be the first focus of efforts.

129. However we cannot exclude in particular in the event of a more unfavourable economic climate and in light of the increasingly uncertain political situation in Greece that investors remain uncertain and this makes the per se not easy task of consolidation even harder. In the

event of such an unfavourable scenario, the strategy pursued since last year of gradually expanding the EFSF would come up against its limits. There would then be the danger that the monetary union would break up in an uncontrolled fashion or of the unlimited purchase of treasury bonds by the ECB, a step that would be highly questionable.

At the latest at that point steps that go further should be assessed. They would have to make certain that instead of always accumulating more debt, a strategy was initiated that at long last guarantees to reduce debt by those involved making credible commitments to long-term consolidation and structural reforms. One concept for this would be the "**European redemption pact**" developed in this chapter. This is a strategy that is intended by means of a common consolidation pact and binding national debt caps to credibly reduce government debt to below the 60 per cent mark set in the Maastricht Treaty. In return it gives the participant states the opportunity to finance their debt in part via a fund for which all are jointly liable.

To this end, each country participating must guarantee 20 per cent of its loan by pleading currency reserves (gold or foreign exchange holdings). The scope of the fund derives from the sum of the government debt held by the member states that exceeds the 60 per cent level set in the Maastricht Treaty. The fund is created by each member state effecting its on-going refinancing (for mature treasury bonds and new debt) through fund bonds, for which joint and several liability is assumed. If each country has exhausted its scope for financing, binding repayment occurs that is hedged by the fact that national tax revenue would be made available. The decisive thing is that the fund would abolish itself over time.

130. After successful expiry of the redemption phase, each country would only have a debt ratio of 60 per cent. Once this state would be achieved, which will hardly be possible in the near future, one alternative would be to strengthen market discipline for the bonds henceforth only issued as a country's sole responsibility by introducing a **strict insolvency regime** for public-sector debt instruments. Another alternative would be a solution in which the volume of debt not exceeding the 60 per cent mark is held as bonds for which there is joint liability, in this way ensuring the **core of the financial system is stable**.

II. From debt crisis to systemic crisis

131. The debt crisis that broke out in spring 2010 and was initially limited to Greece has since continued to spread and has now spawned a profound **crisis of confidence**. It has now embroiled five euro area member states, who together account for one third of the EMU's economic output. The ever more unfavourable view of the creditworthiness of public issuers has impacted negatively on the credit rating of countless euro area banks that are in part to a great degree exposed to treasury bonds from the problem countries. The uncertainty these processes trigger among consumers and investors as well as the severe austerity programmes in the problem countries are causing the euro area economic cycle to cool, which in turn impacts negatively on the countries' financing situation and the banks' credit ratings.

132. While in spring 2010 it was still possible to debate whether the crisis was one of the euro or a debt crisis in individual member states, there is no mistaking the fact that the nega-

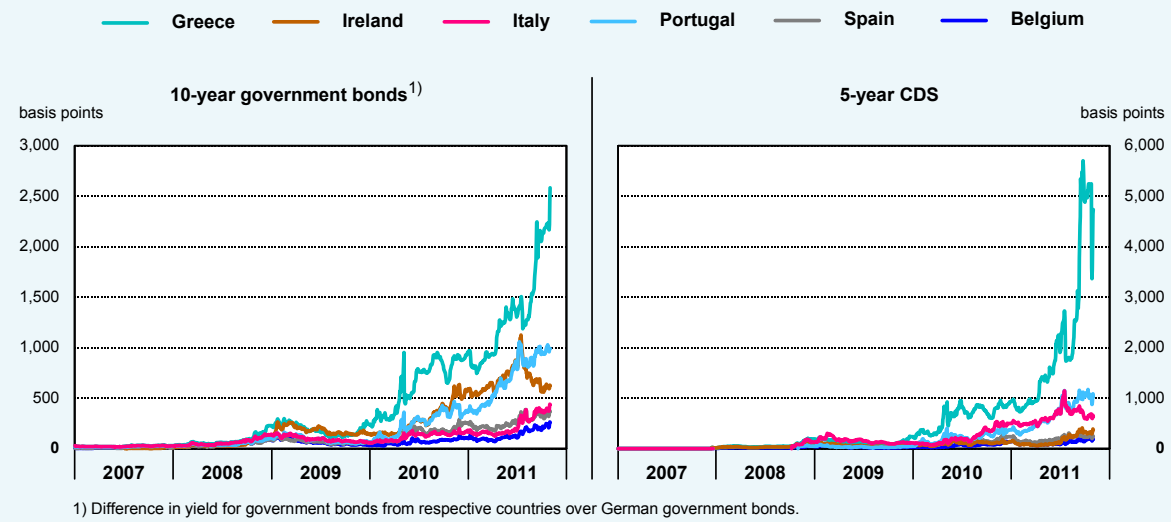
tive **self-reinforcing and contagious processes** could threaten the existence of the monetary union. The greatest flashpoints would be the economic situation in Greece, which given the highly unstable economic trend could at any point drift into uncontrolled insolvency. The growing investor mistrust of Italy and Spain's solvency is also disquieting. Given a volume of government debt in the two countries of around € 3 trillion and the fact that EU member states' treasury bonds continue to be classified by the banking regulators and the insurance regulators as absolutely secure assets, it must be ensured that the acute liquidity problems in these countries do not culminate in a solvency crisis.

1. Growing uncertainty in the financial markets

133. Investors' distrust of the solvency of the individual euro area member states can be seen clearly from the **risk premiums on public-sector bonds** and the premiums for hedging against issuer default (credit default swaps) (Chart 20).

Chart 20

Risk premiums for government bonds and CDS from selected euro area countries



1) Difference in yield for government bonds from respective countries over German government bonds.

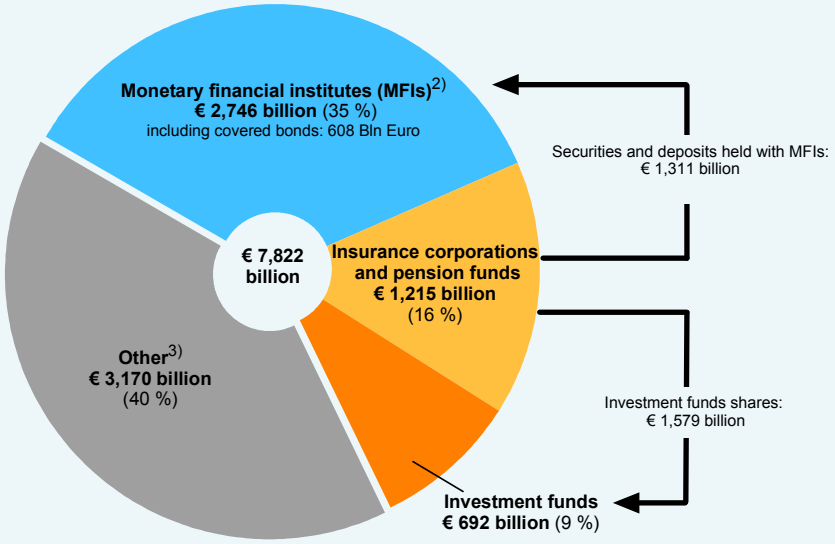
Source: Thomson Financial Datastream

While the interest mark-up compared to German federal bonds had not exceeded 100 basis points for all member states as at October 2008, in the problem countries they have since risen ever further in a series of waves. At a relatively early date Ireland and Greece were affected by investor distrust, such that in May 2010 Greece already needed a support programme. Ireland had to seek shelter beneath the EFSF umbrella in December 2010, Portugal followed in May 2011. In early August 2011 investors set their sights on Spain and Italy. The rise in risk premiums this triggered was braked by the ECB entering the market and buying bonds on a large scale. The risk mark-up for the six EMU members compared to German bunds is now more than two percentage points. These issuers account for 44 per cent of the total volume of public bonds in the euro area, totalling almost € 8 trillion (Chart 21).

134. Public-sector bonds in the industrialized nations have for decades generally been considered the **absolutely safe core** of the financial system. This is reflected in the relevant statutory stipulations, such that banks today need not hold a capital reserve as a risk cushion for bonds from the European Economic Area. Moreover, there are no large exposure restrictions for treasury bonds, such as would necessitate diversification. Euro area public sector bonds are likewise rated unconditionally as first-class securities for use as cover for covered bonds and as assets by insurance companies.

Chart 21

Government debt in the Euro area financial system[1)]



1) Status: end of 2010.– 2) Credits to and securities from general government.– 3) Not include in the Euro area financial system; basically held by Euro area non-financial institutes and non-euro area residents.

Sources: ECB, ECBC

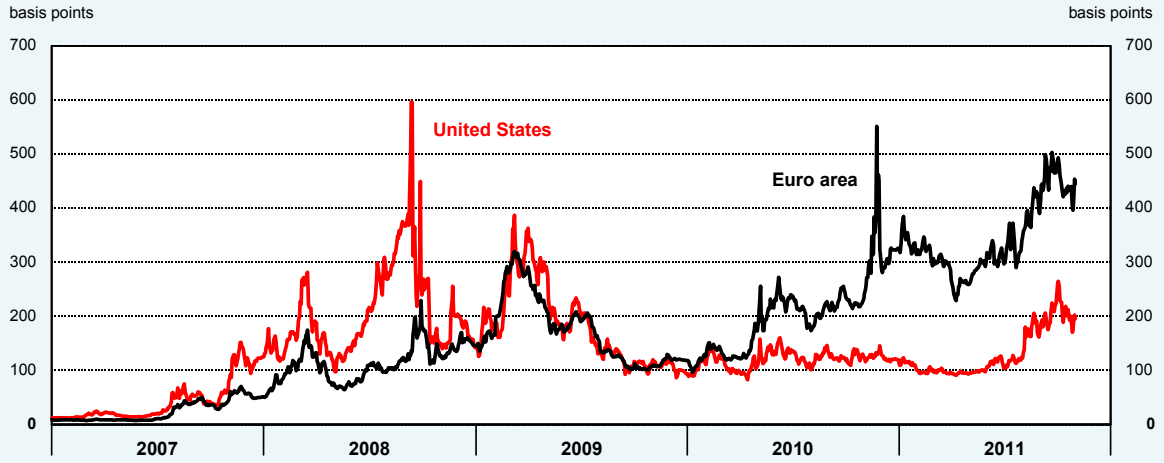
As at year-end 2010, the euro area banks held loans to the public sector and securities issued by public entities totalling € 2.7 trillion, or around 8.5 per cent of their assets. Treasury bonds of € 608 billion served as collateral for the covered bonds issued by these financial institutions. The insurance companies and pension funds in the euro area member states held treasury bonds of € 1.2 trillion, or around 17.5 per cent of their assets. These institutes also carried an exposure of € 1.3 trillion to euro area banks and held shares in investment funds amounting to € 1.6 trillion, the portfolios of which included government paper totalling € 692 billion.

It therefore comes as no surprise that the doubts as to the solvency of public-sector issuers have impacted negatively in recent months on ratings of **euro area financial institutions**. Just how far this has impaired their creditworthiness can be seen from the fact that the CDS spreads for euro area banks is now higher than it was in the wake of the Lehman Brothers bankruptcy in September 2008. By contrast, the CDS spreads for US banks is still below that level, as US treasury bonds (despite the minor but closely watched downgrading by Standard & Poor's on 5 August 2011) continue to be considered a 'safe haven' (Chart 22, page 82). Yet

US banks that have strong links to European counterparts are in danger of being sucked into the euro debt crisis, as the rumours about Morgan Stanley in October 2011 showed.

Chart 22

CDS spreads for banks in the Euro area and the United States[1)]



1) Equally weighted averaged senior five-year CDS spreads for the banking sector.

Source: Thomson Financial Datastream

135. The sharp on-going increase in reliance on the ECB's **deposit facility**, which can be seen as a kind of "caution kitty" for banks, is further proof that the mutual trust among euro area financial institutions is dwindling. Above all in Ireland, Greece and Italy, banks have found it ever harder to secure refinancing in the interbank market. Moreover, in Greece bank deposits by companies and private individuals have notably dropped.

Accordingly, for banks in the problem countries **financing through the ECB** became more important, a fact that is reflected in the increasing proportion of the regular refinancing transactions for which they accounted and above all over the last two months in the sharp climb in balances in TARGET, the ECB's payment transfer system. In particular, banks in Ireland are making use of this form of refinancing, followed by their Italian and Greek counterparts. Since Greek and Irish banks hardly have any collateral for the refinancing through the ECB; they have most recently had to rely on refinancing from their national central banks under its Emergency Liquidity Assistance (ELA) system.

Box 7

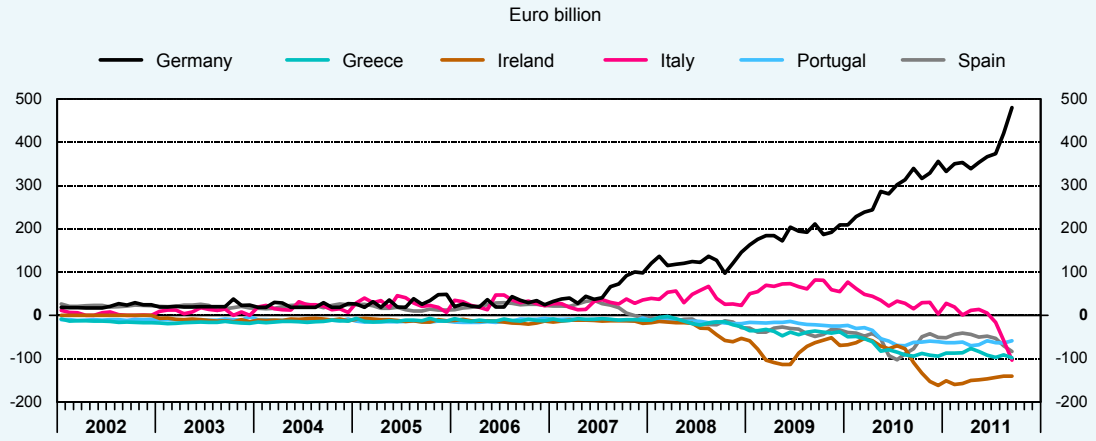
Rising TARGET balances highlight growing financial system uncertainty

Payments between commercial banks in the euro system are transacted using the TARGET2 system (**T**rans-European **A**utomated **R**eal-time **G**ross settlement **E**xpress **T**ransfer system). While commercial banks have to immediately net the balances arising in such a system, the national central banks involved can run up quite considerable balances. In the phase from 1999 to 2007 these were comparatively slight. However, that changed in the years that followed such that by September 2011 a balance of more than € 700 billion had aggregated. The German

Bundesbank reports in its balance position other assets in the Eurosystem – which is mainly driven by TARGET balances – an amount of €480 billion, followed by the Dutch central bank, with net receivables of € 90 billion and Luxembourg with € 80 billion. The highest debt item is carried by Ireland, with € 140 billion, second place going to Italy and Greece with € 100 billion each (Chart 23). High negative balances are also carried by Spain (€ 80 billion) and Portugal (€ 60 billion).

Chart 23

TARGET balances of selected Euro area member states[1)]



1) Trans-European Automated Real-time Gross settlement Express Transfer system; real-time gross settlement (RTGS) system through which banks can make interbank and customer payments; included in the balance sheet item other assets/liabilities in the Eurosystem.

Sources: National Centralbanks

The fact that these items mushroomed sparked a **lively controversy** over the causes and effects thereof. In terms of the balance mechanism, a country's TARGET balance reflects the difference between its current account balance and the capital account balance with the other members of the euro area. The rising negative TARGET balance of individual members states can therefore be attributed either to current account deficits that have no longer been financed by the inflow of private capital, or to the outflows of private capital which were no longer offset by inflows (Sinn und Wollmershäuser, 2011).

To give an **example** of how this works: A German bank has a receivable from an Irish bank that comes due and which it no longer wishes to extend. The Irish bank effects repayment by transfer from its account with the Irish central bank to the German bank's account with the German Bundesbank. The Bundesbank thus then holds a net receivable from the TARGET system, the Irish central bank a net liability. The German bank uses its increased credit balance with the German Bundesbank to lower its higher-interest refinancing loans. The transaction lowers the Irish commercial bank's credit balance with its central bank. Since that credit balance is required to fulfil its minimum reserve requirement, it has to offset this by taking up more credit from the Irish central bank.

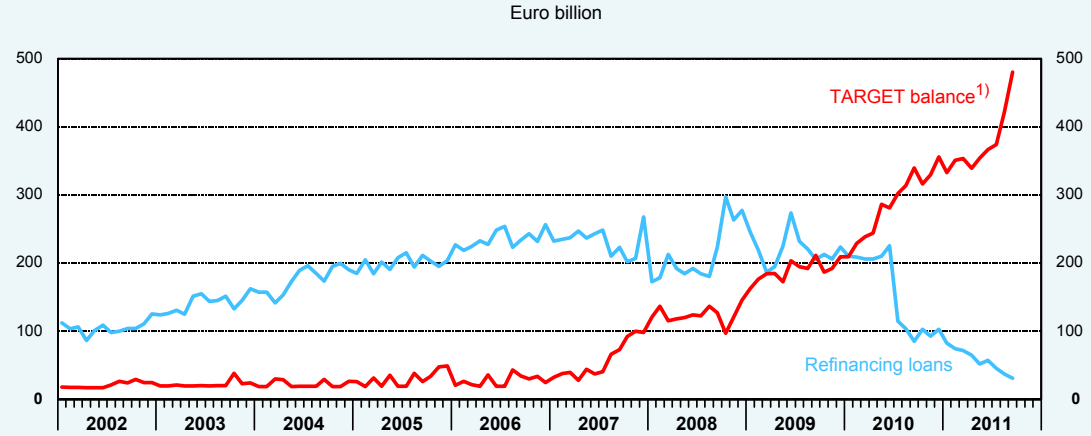
The effects described here with the example of a capital outflow would occur the same way if an Irish company were to buy a German machine and make a corresponding transfer from its Irish bank account to that of the German supplier at a German bank. TARGET balances can also arise if an Irish bank account resolves to transfer part of his credit balance from an Irish to a German bank. Here, the transactions are identical to that just described.

As a result of such transactions, the **refinancing credits granted by the German Bundesbank**

have dropped from around € 213 billion on average for 2008 to of late only € 31 billion (Chart 24). At the same time, refinancing credits granted by the Irish central bank to Irish banks have risen from € 51 billion to € 100 billion. It bears noting here that above all since August 2010 these banks have received additional financing of € 40 billion in the form of emergency financing by the Irish central bank (Emergency Liquidity Assistance, ELA).

Chart 24

Deutsche Bundesbank TARGET balance and refinancing loans



1) Trans-European Automated Real-time Gross settlement Express Transfer system; real-time gross settlement (RTGS) system through which banks can make interbank and customer payments; included in the balance sheet item other assets/liabilities in the Eurosystem.

Source: Deutsche Bundesbank

Irrespective of the fact that TARGET loans can be used to finance service and thoroughbred financial transactions, the frequent assumption in the debate is that the TARGET balances are primarily used to finance current-account deficits in the problem countries. One criticism is thus that the rising TARGET balances slow down adjustment processes in the countries on the EMU's periphery or have in fact prevented such happening. What gets overlooked here is that the aggregate **current account deficits of the GIPS countries** (Greece, Ireland, Portugal and Spain) have fallen from their peak of € 165 billion in 2007 to € 62 billion in 2011. Moreover, the linkage of national TARGET balances and current account balances is not that clear. Thus, Ireland is on the one hand by far the largest net borrower in the TARGET system, but on the other the only problem country with a current account surplus for 2011 and for the years 2009 to 2011 a balanced current account. Conversely, Spain, which in 2011 posted what was by far the highest current account deficit in absolute terms (€ 32 billion), had a comparatively low negative TARGET balance. Only in the cases of Portugal and Greece can we discern an arithmetic concordance of TARGET balance and current account balance.

The impression is thus wrong that the German Bundesbank has with its TARGET surplus of € 480 billion financed the GIPS countries' cumulative current account deficit. Given a German current account surplus of a total of € 74 billion vis-à-vis these four countries in the period from Q1 2008 to Q2 2011, the larger portion of the TARGET balance was probably used to finance banks in the problem countries that are no longer able to find follow-up financing in the private market for liabilities owed to German banks that have become due.

All in all, the rising TARGET balances thus primarily reflect the **growing uncertainty in the financial markets**, in particular the dwindling confidence in the banks in the problem countries. For this reason, in the current situation it would be extremely risky to limit national central banks' ability to tap the TARGET system. This would mean that financial transactions would no longer be unconditionally possible within the EMU, which would ipso facto spell the collapse of the euro.

The TARGET balances can therefore only be kept to limits and be reduced by restoring confidence in the member states' banks. What will count decisively here is the emphatic strengthening of the asset quality of these banks, first and foremost the treasury bonds.

For all the justified concern on the trend for TARGET balances, it is quite unjustified to deduce from it an **impaired ability by the banks** in the surplus countries **to grant loans**. For example, the "credit hurdle" surveyed by ifo-Institut as of 2003 shows that German companies have since then never been so little affected on the loans side as they were in the summer and fall of 2011.

In terms of the balance mechanism, the rising TARGET receivables held by the German Bundesbank mean that the extent to which German commercial banks have to cover their demand for central bank money by resorting to refinancing loans is decreasing swiftly as central bank money flows to them in the form of euro area credit transfers. This does not impact on their decision to grant new loans to domestic corporations, loans that given the minimum reserve requirement and cash deductions go hand in hand with banks' need for central bank money. To this end, they can at any time make **use of unlimited additional refinancing loans** from the Bundesbank. Since the ECB has since the financial crisis pursued a refinancing policy based on a constant allocation rate this would not involve higher refinancing rates.

There is also **no technical ceiling for TARGET balances**. If the current trend persists, a point will indeed soon be reached where German banks' refinancing loan transactions drop to more or less zero. Should there then be further inflows into Germany, German banks would switch from being net debtors to net creditor vis-à-vis the German Bundesbank. In order in such a case to avoid the overnight rate falling to zero, the ECB would have to offer interest-bearing investment opportunities for the excess central bank money. This can either make use of the deposit facility, which would then have to bear higher interest than at present, or by issuing short-term ECB bonds. Such a constellation is frequently to be seen in countries with a high level of foreign exchange market intervention.

Finally, there is no overlooking the fact that the TARGET balances entail a **liability risk** for Germany. Although initially the member states are liable for the negative TARGET balances of their central bank, should a member state in fact have to default, the loss would have to be borne by the ECB and would thus, in line with the German 27 per cent share of the ECB's capital, spell a corresponding loss in assets for Germany. The loss participation does thus not depend on the scale of a potential positive TARGET balance.

2. Ever more extensive rescue plans without an enduring effect

136. The spiralling uncertainty to be seen since early 2010 highlights the fact that the rescue programmes to date have not succeeded in emphatically stabilizing the situation. New assistance packages constantly became necessary owing to market pressure (Table 9, page 86):

- On 2 May 2010 the euro area member states and the International Monetary Fund (IMF) granted liquidity assistance to **Greece** of a total of € 110 billion.
- On 9 May 2010 the resolution followed to create the EFSF and thus a **rescue umbrella** accessible to all euro area member states **limited to three years** and with a guarantee volume of € 440 billion. The rescue umbrella also included additional credit facilities of € 250 billion through the IMF and € 60 billion via the European Financial Stabilisation Mecha-

nism emergency funding programme by the European Commission. Given the excess collateralization needed to obtain a first-class rating, the EFSF initially only had an effective credit volume of € 250 billion. To date, the larger part of the assistance was made available through bilateral loans, followed by IMF and EFSF funds. The EFSF has to date only discussed a sum of € 9.1 billion.

– Since the EFSF was only established as a temporary institution, the heads of state and government resolved in October 2010 to establish a permanent rescue programme, the **European Stability Mechanism** (ESM) as of June 2013, key components of which were resolved in March 2011. In order to be able to guarantee an effective loans capacity of € 500 billion, the member states agreed a combination of paid-in and on-call capital through guarantees. The paid-in capital of € 80 billion is thus to meant to compare with € 620 billion on-call capital. The resolutions envisage that Germany will as of 2013 pay in € 22 billion in several tranches and hold guarantees on call of € 168.3 billion. The ESM explicitly foresees the possible involvement of private creditors if a country is in a solvency crisis rather than a liquidity crisis. However, this depends on an analysis of whether the country in question can shoulder the debt.

Table 9

Assistance for European crisis countries and lending power of the crisis funnds[1)]

Euro billion

deptor countries	EFSF[2)]				EFSM[3)]	IMF[4)]				Bilateral loans
	1st package	2nd package[5)]	new 2nd package[5)]	total		1st package	2nd package[5)]	new 2nd package[5)]	total	1st package[5)]
Greece (scheduled)	–	(73)	96.7	96.7	–	30	(36)	33.3	63.3	(80)
of which paid out	**–**	**–**	**0**	**0**	**–**	**17.9**	**–**	**0**	**17.9**	**47.1**
Portugal (scheduled)			26		26			26		–
of which paid out			**5.8**		**14.1**			**10.4**		**–**
Ireland (scheduled)			17.7		22.5			22.5		4.8
of which paid out			**3.3**		**13.9**			**8.7**		**4.8**
Bank recapitalisation[6)]			50		X			X		X
Total (scheduled)			190.4		48.5			111.8		84.8
of which paid out			**9.1**		**28**			**37**		**51.9**
Total lending power			440		60			X		X
Remaining lending power			430.9		32.0			X		X
Remaining lending power if all scheduled disbursement are made			249.6		11.5			X		X

1) Status: early October 2011.– 2) European Financial Stability Facility.– 3) European Financial Stabilisation Mechanism.– 4) International Monetary Fund.– 5) Originally planned: € 80 billion (on 21 July 2011 the heads of state and government resolved a second package to finance Greece, intended to replace the first one. On 28 October 2011 they agreed on a package totalling € 130 billion. The second package will therefore come into effect, meaning that the sixth tranche for Greece will presumably be paid from the first package.– 6) Assumption (takes its cue from the recapitalisation requirement calculated by the EBA in October 2011 for the banks in Ireland, Italy, Portugal and Spain).

Source: EU

– In order to be able to guarantee the EFSF an effective loans capacity of € 440 billion, at the crisis summit on 21 July 2011 a decision was taken to increase the volume guaranteed by the EFSF to € 780 billion. Germany's contribution thus rises from € 123 billion to € 211 billion. Moreover, it was also resolved to expand the **scope for action**. In particular, the

facility is henceforth able to acquire bonds in the secondary market and use its funds to recapitalize banks. Finally, it is henceforth authorized to lend to problem countries at a clearly reduced interest premium.

– The **European Central Bank** decided as early as May 2010 to purchase treasury bonds (Securities Markets Programme, SMP) in order to help ease the situation in the bond markets in this way. All in all, its bond holdings rose swiftly by around € 75 billion. In August 2011 the ECB once again entered the capital market to limit the rise in interest on Italian and Spanish bonds. To date, its bond portfolio has thus grown by an additional figure of some € 100 billion.

3. Cogent stabilization programme has not impacted the markets

137. Despite the ever more extensive rescue programmes, the financial markets have become ever more uncertain, something that it is hard to reconcile with the fact that in the countries with especially high deficits (a.k.a. the GIPS countries: Greece, Ireland, Portugal and Spain), especially severe **austerity programmes** have been launched that have led to a tangible improvement in the budget situation (Table 10). If we take 2009 as the starting point, then the

Table 10

Financing balances of Euro area member states and highly indebted G7 countries

Period	Euro area problem countries						Highly indebted G7 member states				As information: Germany
	Greece	**I**reland	**P**ortugal	**S**pain	**Average[1] GIPS**	**I**taly	United Kingdom	United States	Japan	**Average[1]**	
	In relation to nominal GDP (%)										
1992	–11.5	– 2.9	– 3.3	– 3.9	**– 5.0**	–10.4	– 6.3	– 5.9	0.8	**– 4.2**	– 2.4
1993	–12.4	– 2.7	– 6.1	– 6.6	**– 7.2**	–10.0	– 7.8	– 5.1	– 2.4	**– 4.7**	– 3.0
1994	– 9.0	– 1.9	– 5.6	– 6.0	**– 6.2**	– 9.1	– 6.6	– 3.7	– 3.7	**– 4.0**	– 2.5
1995	– 7.0	– 2.0	– 3.4	– 6.5	**– 5.9**	– 7.4	– 5.7	– 3.3	– 4.6	**– 3.9**	– 9.5
1996	– 6.8	– 0.1	– 2.9	– 4.9	**– 4.6**	– 7.0	– 4.0	– 2.3	– 5.1	**– 3.2**	– 3.4
1997	– 6.0	1.4	– 1.7	– 3.4	**– 3.2**	– 2.7	– 2.1	– 0.9	– 4.0	**– 1.8**	– 2.8
1998	– 3.9	2.2	– 1.8	– 3.2	**– 2.7**	– 3.1	– 0.1	0.3	– 5.6	**– 1.1**	– 2.3
1999	– 3.1	2.6	– 0.9	– 1.4	**– 1.3**	– 1.8	0.9	0.7	– 7.4	**– 1.1**	– 1.6
2000	– 3.7	4.7	– 1.1	– 1.0	**– 0.9**	– 0.9	1.3	1.5	– 7.6	**– 0.5**	1.1
2001	– 4.3	0.8	– 2.4	– 0.7	**– 1.3**	– 3.1	0.6	– 0.6	– 6.3	**– 1.7**	– 3.1
2002	– 4.8	– 0.5	– 1.0	– 0.5	**– 1.2**	– 3.0	– 2.0	– 3.9	– 8.0	**– 4.6**	– 3.8
2003	– 5.7	0.3	0.0	– 0.2	**– 1.0**	– 3.5	– 3.3	– 4.9	– 8.0	**– 5.4**	– 4.2
2004	– 7.4	1.3	– 0.2	– 0.3	**– 1.3**	– 3.6	– 3.4	– 4.4	– 6.2	**– 4.7**	– 3.8
2005	– 5.3	1.7	– 2.5	1.0	**– 0.3**	– 4.4	– 3.3	– 3.2	– 4.8	**– 3.6**	– 3.3
2006	– 6.1	2.9	– 0.4	2.0	**0.6**	– 3.3	– 2.6	– 2.0	– 4.0	**– 2.5**	– 1.7
2007	– 6.7	0.1	– 3.2	1.9	**– 0.2**	– 1.5	– 2.7	– 2.7	– 2.4	**– 2.7**	0.2
2008	– 9.8	– 7.3	– 3.5	– 4.1	**– 5.2**	– 2.7	– 4.9	– 6.5	– 4.2	**– 5.9**	– 0.1
2009	–15.5	–14.2	–10.1	–11.1	**–12.0**	– 5.3	–10.3	–12.8	–10.3	**–12.0**	– 3.2
2010	–10.4	–32.0	– 9.1	– 9.2	**–11.3**	– 4.5	–10.2	–10.3	– 9.2	**–10.1**	– 4.3
2011	– 8.5	–10.3	– 5.9	– 6.1	**– 6.8**	– 4.0	– 8.5	– 9.6	–10.3	**– 9.7**	– 1.1
	Development in the period 2009-2011 (percentage points)										
2009/ 2011	**7.0**	**3.9**	**4.2**	**5.0**	**5.2**	**1.3**	**1.8**	**3.2**	**– 0.0**	**2.4**	**2.1**

1) Weighted with the GDP on the basis of purchasing power parities (PPPs)

Source: BEA, IMF and own estimates

deficit in all four countries has decreased considerably, with Greece having cut its deficit by 7.0 percentage points over two years and thus on balance having achieved the greatest consolidation. Given the prior aberrant developments, the deficits do however remain very high. This year, Ireland will post a budget deficit of 10 per cent and will thus top Greece 8.5 per cent.

Greece's especially hard-hitting savings measures are clear from the "**Financial Pain Index**" calculated by the "Financial Times". According to it, in 2011 the cuts programmes and tax increases spell a 13.7 per cent reduction in income for the average Greek household, which is more than double the cuts in Ireland (6.7 per cent) and Spain (4.8 per cent).

138. It bears considering here that the less favourable economic conditions, the on-going rise in debt levels, and higher interest rate have all posed an additional strain on public-sector finances that counteracts the efforts to consolidate. These factors can be isolated if, instead of taking the actual budget balance, one focuses on **the primary budget adjusted for cyclical effects**; this indicator is the product of the difference between the revenue and expenditure after adjusting for cyclical factors, whereby interest expense is not included on the expenditure side (Table 11). The IMF calculated in September 2011 that Greece had actually cut its deficit by almost 13 percentage points if judged by this indicator. Even considering the fact that this value should now be set slightly higher, the country has in other words far more strongly consolidated its budget than have Ireland, Portugal or Spain.

With a primary surplus after adjusting for cyclical factors of 1.9 per cent in 2011, Italy stands out positively from the GIPS countries and in particular from the highly indebted G7 countries outside the euro area.

Table 11

Primary balance of Euro area countries and highly indebted G7 member states adjusted for the economic cycle[1)]

Period	Euro area problem countries						Highly indebted G7 member states				As information: Germany
	Greece	**I**reland	**P**ortugal	**S**pain	**Average**[2)] **GIPS**	**I**taly	United Kingdom	United States	Japan	**Average**[2)]	
	In relation to nominal GDP (%)										
2006	– 3.5	– 4.8	– 1.0	2.1	**– 1.8**	0.7	– 1.3	– 0.0	– 3.4	**– 1.6**	1.2
2007	– 5.3	– 7.9	– 0.6	1.3	**– 3.1**	2.5	– 1.7	– 0.1	– 2.1	**– 1.3**	2.5
2008	– 8.3	–12.5	– 0.4	– 4.2	**– 6.4**	2.4	– 4.3	– 2.5	– 3.0	**– 3.3**	1.9
2009	–13.1	– 9.8	– 5.7	– 8.5	**– 9.3**	0.9	– 6.8	– 4.9	– 6.2	**– 6.0**	1.0
2010	– 5.8	– 6.0	– 5.3	– 6.1	**– 5.8**	1.2	– 5.6	– 5.1	– 6.3	**– 5.7**	0.5
2011	– 0.4	– 3.4	– 0.1	– 2.9	**– 1.7**	1.9	– 3.5	– 4.8	– 6.7	**– 5.0**	1.4
	Development in the period 2009-2011 (percentage points)										
2009/ 2011	**12.7**	**6.4**	**5.6**	**5.5**	**7.6**	**1.0**	**3.3**	**0.1**	**– 0.5**	**1.0**	**0.4**

1) Financing balance less interest payments and adjusted for components of the business cycle.– 2) Unweighted.

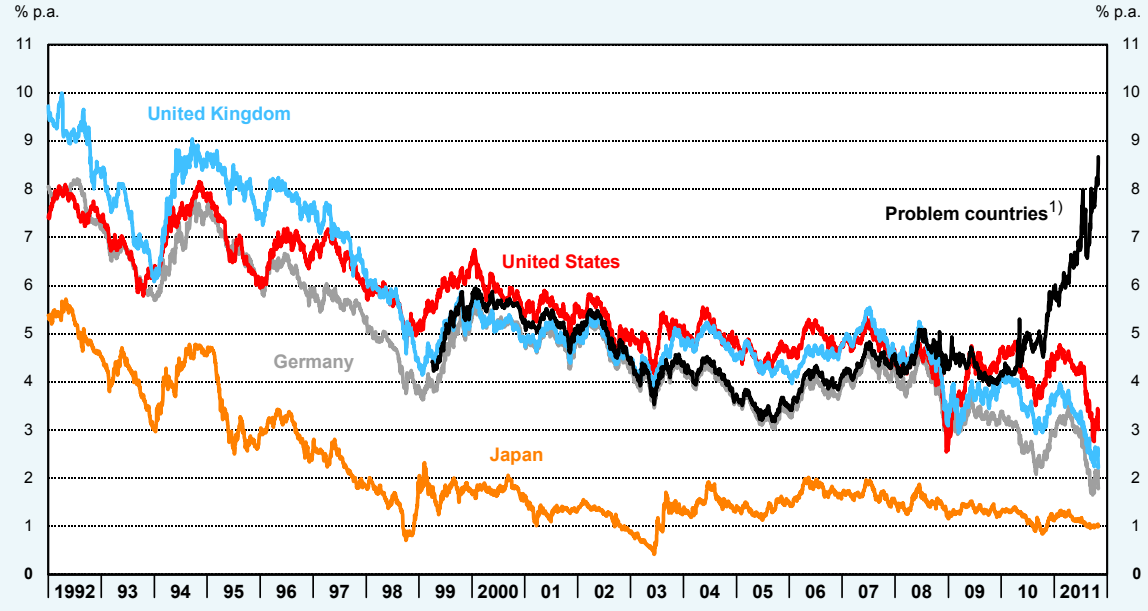
Source for basic figures: IMF

139. As shown by the risk premiums for bonds in the European problem countries, which have continued to rise, the successes made in budget consolidation have not enhanced the way the market sees these countries. The only exception is the decrease in the Irish risk premium, which can be explained not only by the first successes with the austerity package introduced but also by the fact that at the crisis summit on 21 July 2011 Ireland's interest payments on its loans from the EFSF were significantly scaled back.

140. The considerable efforts the GIPS countries are making to consolidate become clear if one compares them with trends in the **highly indebted G7 countries**. Japan and the United States have to date only introduced very restrained efforts to reduce their deficits. The United Kingdom's attempts at budget consolidation are likewise behind those of Greece, Ireland, Portugal and Spain. While the primary budget balance after adjusting for cyclical factors was reduced in the GIPS countries in the years 2009 to 2011 by 7.6 percentage points (unweighted average), the figure on average only dropped one per cent for the three G7 member states. In absolute terms the budget deficits there are on average higher than in the European problem countries. With a debt ratio of 213 per cent Japan heads the OECD countries. Yet Japan, the United Kingdom and the United States are able to finance themselves in the capital markets at interest rates that are similarly low to those paid by the Federal Republic of Germany (Chart 25).

Chart 25

10-year government bond yields for Euro area problem countries and selected G7 member states



1) Average yields of Greece, Ireland, Italy, Portugal and Spain; weighted with the respective country's share in the total debt of these countries in 2010.

Sources: EU, Thomson Financial Datastream

While the markets have evidently hitherto not really been impressed at all by the problem countries' austerity programmes and thus rendered their situation more difficult because of the rising risk premium, they "rewarded" the less disciplined fiscal policies of the highly in-

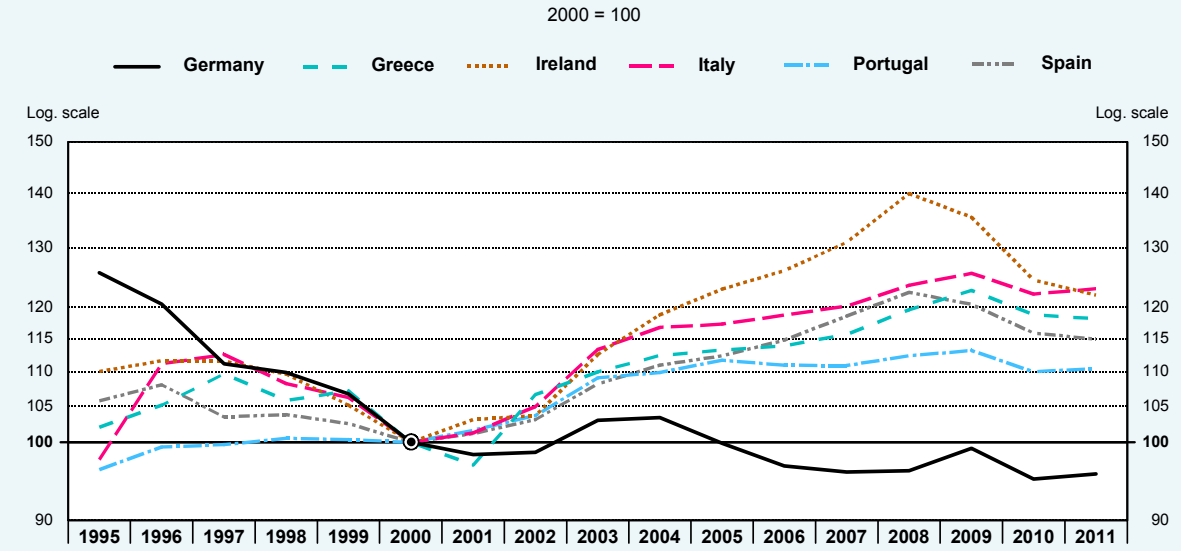
debted G7 member states in the form of historical low bond yields. The reason is no doubt the risk of insolvency that solely arises from participation in the EMU and therefore does not hold in the same way for other highly-developed countries.

141. If GIPS with their austerity programmes have not yet managed to convince the markets, then this no doubt is in not inconsiderable part related to the fact that their economies have for years been battling with **massive structural problems**. These were in part further compounded by the crisis and are a major obstacle to economic activity picking up swiftly, which would spell the easiest road to easing the debt situation.

– In general all five countries have seen wages rise faster than productivity for years, meaning that their **unit wage costs** (relative to their major rivals) in 2011 were some 20 per cent higher than in 2000 (Chart 26). Above all Ireland has since made noteworthy corrections, yet given the prior massive erroneous development the progress is by no means sufficient. Italy comes out very badly in this indicator. Since all countries are unable to make adjustments via a nominal devaluation, they have to take the painful path of wage cuts, which improves competitiveness but simply worsens the debt problems of private households.

Chart 26

Unit labour costs[1] in selected Euro area countries



1) Ratio of compensation per employee to real GDP per person employed; performance relative to the rest of 35 industrial countries: double export weights.

Source: EU

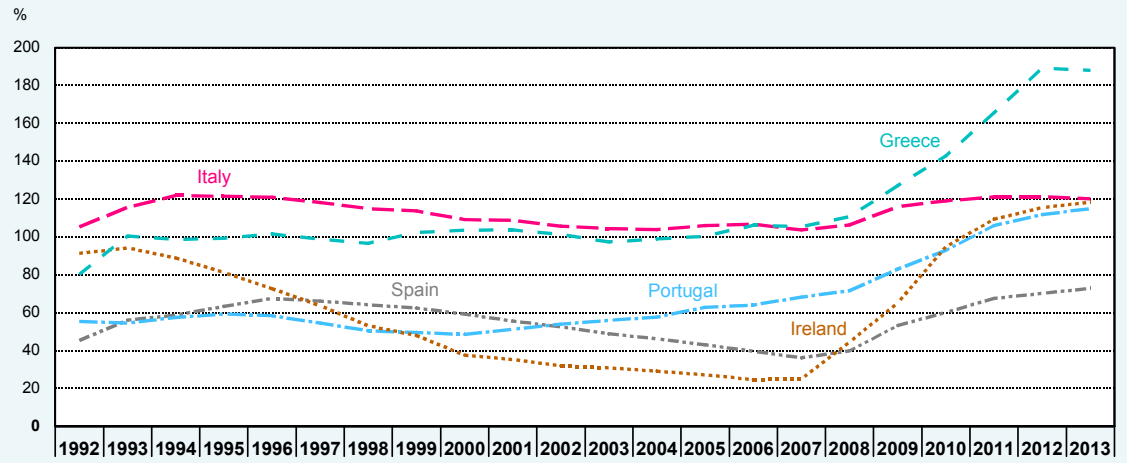
– We cannot expect a noteworthy reduction in **debt ratios** for Italy, Ireland and Portugal in the foreseeable future (Chart 27). Firstly, the new debt load will rise further in coming years, albeit with smaller sums; secondly, the nominal gross domestic product (GDP), which is the denominator of the debt ratio, will hardly perform dynamically. These countries will in the long run thus remain very prone to higher country-specific risk premiums. Greece will only get a handle on its debt with a clear debt 'hair cut'.

– In the case of **unemployment** it will also take long for the reforms to post first successes. Spain and Greece have been suffering for years from considerable underemployment, and even in the boom years they only managed in part to reduce the jobless level. Accordingly, the unemployment rates in July 2011 were very high, at 21.8 per cent and 17.6 per cent respectively; for young people, the job prospects are extremely unfavourable given a jobless rate among them of 47.3 per cent and 43.5 per cent respectively.

– In countries such as Portugal and Italy, which only posted **low growth rates for economic output** even in the years 2004-7, when the global economic conditions were favourable, it will hardly be possible without structural reforms to get on a growth track which will enable them to reduce the debt ratio again significantly.

Chart 27

Debt-to-GDP ratios for the Euro area problem countries[1)]



1) Country debt as a ratio of nominal GDP, from 2011 IMF estimate.

Source: IMF

142. Structural reforms are **long-term processes**, the impact of which often only becomes visible after many years have passed. Germany needed about a decade to regain its price competitiveness which it had forfeited during the 1990s after Unification and the revaluation of the deutschmark. In the IMF's experience, countries have often had to undergo multi-year or repeated programmes in order to conclude the necessary adjustments. We can expect to see a lengthier reform process for the euro area problem countries. By contrast, the markets are used to acting in far shorter periods of time and therefore respond allergically to any report that could be read as dwindling political will or a lacking ability to adjust. Negative market responses can then in turn impair the chances of reform programmes winning the day. For this reason, it would be apposite for those countries under closer scrutiny to sign up for multi-year adjustment programmes to be constantly monitored by as neutral a third party as possible. Given this fact, Italy and Spain should agree a precautionary stand-by programme with the IMF and thus send a clear political signal of their own commitment.

III. "Money you can't make yourself": The EMU's special institutional framework

143. The fact that interest rates in GIPS have been diametrically opposed to those in the highly-indebted G7 member states (Japan, United Kingdom, United States) reflects the fundamental particulars of membership in a monetary union. If for all the high indebtedness of the United States and the unclear prospects of whether there will be consolidation soon, the markets today still view US treasury bonds as a "**safe haven**" and are therefore willing to acquire these at historically low yields, then this is no doubt because it is as good as excluded that the country will default on payment.

To the extent that US policymakers do not cause a technical payment default by not raising the mandatory ceiling for the government debt in due time, then an investor can essentially be sure that US treasury bonds are absolutely safe. In an emergency, the **Federal Reserve** will buy all the maturing bonds. Thus, as part of its Quantitative Easing II it has over the last 12 months alone bought US treasury bonds worth US$ 860 billion. Investors likewise count on unlimited support from the **Bank of England** for English treasury bonds. As part of its Quantitative Easing, in 2009 the latter purchased treasury bonds totalling GBP 200 billion, amounting to 14 per cent of the then GDP. On 7 October 2011 the Bank of England resolved to expand this volume to GBP 275 billion. The **Bank of Japan** announced on 27 October 2011 that it was expanding its securities purchasing programme of Y 50 trillion (€ 467 billion) by Y 5 trillion.

144. None of these three countries in principle face a **liquidity problem** ipso facto, as they exclusively carry debt in their respective local currency and given the support from the respective central bank are able themselves to an unlimited extent to raise the money needed for repayments. And the situation can therefore not arise that a temporary liquidity problem can evolve into a solvency problem solely owing to rising interest.

By contrast, by joining the EMU the euro area member states have fundamentally changed the framework for their government financing. The debt is denominated in euro without them being able themselves to have their respective central banks put up the means to repay the debt. By adopting the euro, the member states have thus assumed the risk that they may have to default on payments, something otherwise only incurred in this form by emerging markets that have to **take up debt in foreign currency**, as they are not able to issue bonds in the capital market in their local currency. Commentators talk in this context of "**original sin**".

145. Renowned economists believed that a key advantage of the monetary union is that it forces countries to pay their debts in a currency that they cannot themselves make (Sievert, 1992). They associate this with the hope that price stability can be achieved by imposing it from outside, as it were, as the member states are no longer in a position to make use of the money illusion of their citizens as regards inflation and devaluation. They therefore have to guarantee the competitiveness of their firms and their economies by creating a suitable economic policy framework, not least by pursuing a sound fiscal policy. A key element of the Maastricht and Lisbon Treaties was therefore the **no bail-out clause**, intended to guarantee

national responsibility for fiscal policy. If the financial markets are able to identify a country's solvency problems in due time and prompt the policymakers to change course by the sanction of higher interest rates, then this disciplines national fiscal policy. The EMU's framework was thus considered as specifically spurring fiscal discipline.

146. The Maastricht criteria were supplemented and in 1997 the **Stability and Growth Pact** issued to prevent and correct erroneous developments in fiscal policy and support the no bail-out clause. The EMU's fathers knew that only a few years of practicing sound fiscal and economic policy would not be enough to spell solidity and certainly not a culture of stability. Yet they hoped that the stipulations for discipline in fiscal policy were better than nothing. Their hopes were misguided. Put differently: they were deceived, not least, but first and foremost by Germany and France.

147. By contrast, the authors of the **Delors Report**, in which the then central bank presidents of the EU and scholars in 1989 first outlined the blueprint for the European Monetary Union, pointed at an early date to the risk that the disciplining mechanisms of the market could be too slow and too weak, or too sudden and too abrupt.

Developments since the beginning of the euro area largely bear out the Delors Report's expectations, where the problem was addressed quite squarely of the fact that access to a large capital market could initially facilitate **financing economic imbalances**. Member states faced the great temptation to enjoy the immediate advantage of low interest rates and postpone the real economic adjustments required in the medium term to achieve competitiveness. Thus, within the EMU for almost nine years there were no noteworthy interest hikes compared with the yield on bunds. This applied even to Greece, although it constantly exceeded the 3 per cent ceiling set in the Maastricht Treaty, and its debt ratio even with a prime cycle consistently came close to 100 per cent and the data on indebtedness had to be retroactively revised upward year after year. The players in the financial market did indeed not differentiate sufficiently when examining EMU member state creditworthiness when times were calmer. This may relate to misinformation by the member states, for example in the case of Greece (which repeatedly supplied erroneous figures) or be the result of a lack of credibility of the no bail-out clause in the Treaty of Lisbon.

148. Just how much the Lehman bankruptcy of September 2008 highlights the clear **spread in interest premiums** is seen by investors as a clear solvency risk of an increasing number of countries. If one weights the risk premiums with the portion of bonds in the total bond holdings of the problem countries, then the risk premium has since then constantly risen, in part in real jumps (Chart 20, page 80). Moreover, the feared abrupt changes are now occurring. The financial markets are now responding with a differentiated assessment of the creditworthiness of the bonds of EMU member states, something that more resembles punishment of individual countries after the event. Exaggerations cannot be excluded here, even if the current interest rate differential should be an incentive to pursue a sound future fiscal policy.

149. When governments are disciplined by the financial markets, the fundamental problem arises that, as with a bank run, **self-reinforcing effects** can come into play such that a temporary liquidity problem can evolve into an enduring solvency problem. This can be attributed to the fact that a country's solvency depends firstly and substantially on the interest it has to pay for its debt and secondly on its expected GDP growth rate.

150. If a country wants to keep its debt ratio – the ratio of total nominal debt and nominal GDP – steady, it must post a **primary surplus** as a percentage of its nominal GDP (p) that corresponds to the product of the debt ratio (d) times the difference between nominal interest (i) and nominal economic growth (g):

$$p = d\,(i - g).$$

For example, assuming a debt ratio of 120 per cent, nominal interest of 6 % and nominal growth of 3.0 per cent the primary balance required to keep the debt level constant would be 3.6 per cent. If interest rates rise, a higher primary surplus has to be achieved. This makes it harder for a country to keep its debt level constant or reduce it. In such a situation, it is rational that investors, assuming larger interest mark-ups, reduce their exposure to that country, which in turn sends the interest premium higher. At the same time, the consolidation measures required to generate a higher primary surplus can in the short term at least impair economic growth, meaning that the second determinant of solvency may likewise be impacted negatively.

151. To judge the solvency of a country's economy one must focus not only on the interest rate and economic growth forecasts, but also assess the **debt-to-GDP ratio path** desirable in the medium term. This also involves considerable problems economists have not established a clear set of variables that would provide orientation. More recently, various studies have however offered empirical evidence that above a threshold of 90 per cent (Reinhart and Rogoff, 2010) or within a bandwidth of thresholds between 80 per cent and 100 per cent (Cecchetti et al., 2011), we can expect to see weaker economic growth. A study on Italy furnishes proof of a threshold of 100 per cent (Balassone et al., 2011).

152. Given the great uncertainty as to the variables relevant to the solvency of a country, investors may come to quite different assessments. If one considers that the speculative actors in the financial markets do not rely on their own assessment of an asset but that of the other actors, then the result can swiftly encourage herd behaviour, where we can expect multiple balances. The **rating agencies** additionally contribute to this self-reinforcing process. For example, Standard & Poor's justified its downgrading of Italy on 20 September 2011 by citing not only insufficient structural reforms but also the fact that it expected Italy would have to pay higher interest and that the austerity programme would weaken growth there. With an unfavourable rating, interest rates rise further. Another element of this self-reinforcing effect relates to **banks'** need to refinance their activities, not least in their function as issuers of covered bonds. A less favourable assessment of their assets makes refinancing harder, which can

lead to treasury bonds being sold as part of deleveraging, additionally impairing the price for the latter.

153. The EMU thus faces unusually **great challenges** compared to other large currency areas that on aggregate actually have posted less favourable fiscal policy data. Today, the situation definitely has parallels to the situation in autumn 2008 when the risk of a financial system meltdown was so great that governments worldwide finally declared themselves willing to issue unconditional guarantees for the banks. The steps now resolved by the EMU heads of state and government are likewise shaped by the wish to avoid a systemic crisis, but are a far cry from a comprehensive collateralization of all the treasury bonds of euro area member states.

IV. Exits from the monetary union are no solution

154. In light of these challenges, commentators have repeatedly called for Greece to exit the euro area. On occasion, some have even suggested reintroducing the deutschmark or splitting up the monetary union into a Northern euro and a Southern euro.

1. The disadvantages would definitely outweigh the advantages for Germany

155. If in Germany today people keep casting the meaningfulness of the euro into question, one can usually discern the feeling that our economy would have fared better over the last 12 years with the deutschmark. With its strong export focus, it is advantageous to the German economy that thanks to the euro two fifths of its exports are hedged against foreign exchange volatility, and that the unit wage cost benefits achieved through increased productivity or restraint in wage policies can no longer be destroyed by a revaluation of the local currency or indeed overcompensated for.

156. From the scholarly viewpoint, the great difficulty in this debate is to define the **contrafactual situation** for the hypothetical case that the deutschmark had been retained. We can therefore only resort to trends in Germany before it entered the EMU and the experiences of other export-aligned countries with a national currency in the phase post-1999.

- In the years from 1949 to 1973 the German currency was pegged to the US dollar via the **Bretton Woods system**. The exchange rate against the dollar remained stable for many years, securing German companies' competitiveness during the so-called 'Economic Miracle'. However, this repeatedly required strong intervention by the German Bundesbank to support the US dollar, which led to a rise in Germany's currency reserves. In 1967 the German Bundesbank explicitly waived its right under the Bretton Woods agreement to swap US dollar receivables for gold from the United States. When the fixed exchange rate system collapsed in March 1973, the German Bundesbank foreign currency reserves, primarily held in US treasury bonds, came to about 70 billion deutschmarks or 14 per cent of the then GDP. One could interpret the situation at the time as a **transfer union with the United States**, the volume of which would amount to € 360 billion today. In the context of this glance back at the post-War period it bears noting in passing that Germany profited substantially during that phase from the fact that the **London Debt Agreement** of 1953

cancelled a large part of its debts from before the War and immediately thereafter and also the repayment schedule for the remaining obligations was extended considerably. The last instalment was not repaid until 3 October 2010.

– The transition to floating exchange rates in March 1973 appreciably reduced German monetary and exchange rate policy dependency on the United States, but by the same token in 1979 the **European Monetary System** was founded. This system of fixed, but adjustable exchange rates, to which with the exception of the United Kingdom all the then European Community member states belonged, functioned very well, until it was subjected to fierce speculative attacks in 1992 and 1993. The related revaluation of the deutschmark reinforced the competitive difficulties diagnosed for Germany in the mid-1990s.

The experiences other **export-aligned countries** have had do not necessarily allow us to assume that life with a national currency is without its problems:

– The example of the revaluation of the **Swiss franc** in 2010 and 2011 shows the momentum speculation on revaluation can have and what severe distortions to the real economy this can entail. For this reason, the Swiss central bank resolved on 6 September 2011 to set a lower limit of SFr. 1.20 to the euro and thus ipso facto to peg the currency to the euro. Germany would have been in a far more unfavourable position than Switzerland, which at least had the chance of pegging its currency to that of its key trading partners.

– The **Japanese economy** has for many years suffered repeatedly from sharp revaluations of the yen, something that sent Japan to the brink of deflation in the 1990s. In the more recent past, despite a dwindling economic output, the tsunami, the earthquake and the reactor disaster at Fukushima the yen has gained further, clear ground against the US dollar; since early 2010 it has in fact risen 20 per cent. The fact that the Japan's nominal GDP is today not higher than 20 years ago has contributed not least to the country's debt-to-GDP ratio rising unusually sharply on an international comparison. Since the Bank of Japan has repeatedly tried to stop the yen's revaluation by intervening in the money market, the country's foreign currency reserves have swollen to US$ 1.1 trillion. As the lion's share is invested in US bonds, we could potentially also talk here of a transfer union with the United States.

– This state of affairs is even more pronounced in the case of **China**. Since the yuan's exchange rate is largely controlled by interventions in the foreign exchange market, in recent years China has accumulated foreign currency reserves totalling US$ 3.2 trillion. It is assumed that about two thirds are held in US bonds. China's relationship to the United States can therefore be regarded as by far the largest transfer union in the world.

157. In other words, if German commentators repeatedly say it would have been better to stick with the deutschmark, they fail to see how difficult it is for a national economy focused on exports and stability to assert itself given global financial markets that are as integrated as they are volatile. Anyone wishing to reap the benefits of open goods markets must be pre-

pared to face up to the instabilities and shocks of globally networked money and capital markets and make provisions in the one or other way to protect the domestic exporting economy from manifest damage. Historical experience shows that as a rule this does not come without a price.

2. Greece's exit is also no solution

158. From Greece's viewpoint it might seem beneficial at first glance to quit the euro and by **devaluing** the newly introduced currency improve the country's competitiveness at one fell swoop. This could avoid the far more arduous path of lowering wages, with the attendant deflationary effects.

159. If we ignore the fact that the European treaties only envisage an exit from the European Union, but not from the EMU, then such a strategy would involve risks that are hard to assess. Since it is technically as good as impossible to introduce the new currency overnight, in the run-up we would see massive **capital flight** that would paralyse the entire banking system. The government could only work to stop this by sharply constraining the free movement of goods and persons. It seems as good as impossible that Greece would manage to prevent its entire financial system collapsing.

160. It is also unclear whether a devaluation would on balance lead to improved competitiveness. Since after the introduction of the new currency the government could finance a deficit by printing money (seigniorage), we could expect to see appreciable **inflationary processes** that would counteract the effects of the devaluation. Above all, savers would thus lose a large part of their assets. Greek companies would also presumably face great problems if they held euro debts abroad. In principle, the Greek government could issue a currency law thus converting all debt contracts signed under Greek law from euro into the new national currency. What would be completely unclear is how an exit from the EMU would impact on contracts with non-nationals. Should the debt continue to be held in euro, the strain on Greek borrowers would rocket. At any rate, Greek companies would for a long time to come not be able to take up debt abroad.

161. From the perspective of the euro area as a whole, an exit by Greece would above all be problematic as it could trigger a **chain reaction** in the other problem countries, and there is no foreseeing where that would lead.

V. An act creating room for manoeuver?

162. Since the repeated rescue attempts have failed thus far, the politicians at the Euro Summit on 26 October 2011 made a renewed attempt to break out of the situation. It involves

- a debt 'hair cut' for Greece that goes well beyond the restructuring programme resolved on 21 July 2011,
- an increase in EU banks' equity capital to a ratio of 9 per cent

– and an expansion of the EFSF's scope for action with the goal of raising its lending capacity to over one trillion euro.

On principle, this approach is cogent as it lays the foundations for a 'hair cut' for Greece's debt without a need to fear a collapse of the European financial system. But it does pose the question whether in this way an enduring step can be taken toward restoring trust in treasury bonds and thus to steadying the euro area banks and insurance companies. To the extent that this is not the case there is the risk that in an emergency only the European Central Bank will be able to provide comprehensive coverage. This would blur the line dividing monetary and fiscal policy far more than hitherto and it would also not be guaranteed that help from the central bank would go hand in hand with the economic policy stipulations required.

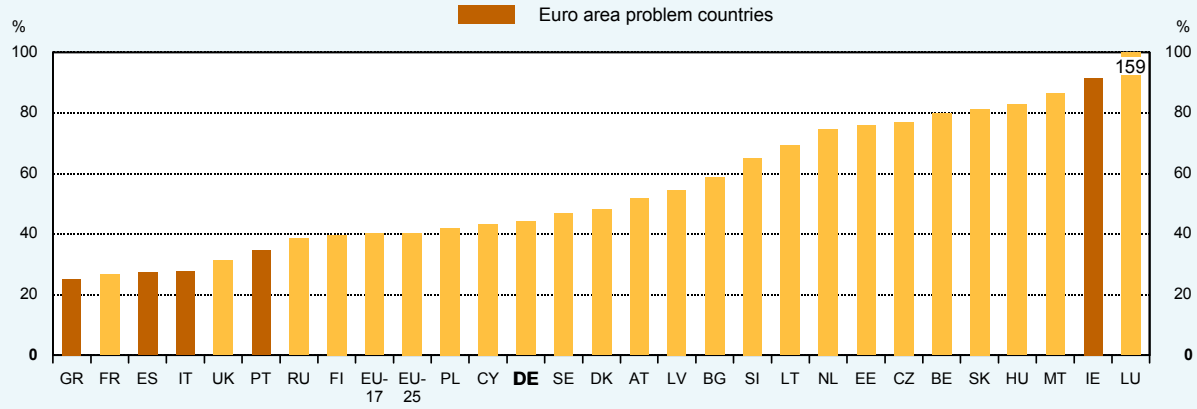
1. 'Hair cut' for Greek debt

163. The Greek economy is at present in a very difficult situation. Firstly, the country has become embroiled in a **dangerous economic downward spiral** that threatens both the reform programmes being accepted and the consolidation goals achieved. In the second quarter, economic output thus sagged by an annual rate of 7.3 per cent, for the year as a whole the forecast is a drop of 5 per cent, and the IMF predicts the decrease will be 2 per cent in 2012. The unexpectedly sharp weakening in Greek economic activity is a key reason why the targets set by the troika's programmes for the deficit and the financing requirement have repeatedly had to be corrected upwards. In fact, in April 2010 the IMF had still expected that Greek GDP would fall 1 per cent in 2011 and even edge up 0.2 per cent in 2012.

Compared to the other problem countries, in particular Ireland, the Greek economy faces the difficulty of a comparatively low degree of openness (defined as the average of exports and imports to GDP). The negative effects of consolidation on domestic demand can thus only be offset to a minor degree by stable or even rising export demand (Chart 28).

Chart 28

Degree of openness[1] of EU member states in 2010[2]



1) Average of exports and imports as a ratio of nominal GDP.– 2) GR: Greece; FR: France; ES: Spain; IT: Italy; UK: United Kingdom; PT: Portugal; RU: Romania; FI: Finland; PL: Poland; CY: Cyprus; DE: Germany; SE: Sweden; DK: Denmark; AT: Austria; LV: Latvia; BG: Bulgaria; SL: Slovenia; LT: Lithuania; NL: Netherlands; EE: Estonia; CZ: Czech Republic; BE: Belgium; SK: Slovakia; HU: Hungary; MT: Malta; IE: Ireland; LU: Luxembourg.

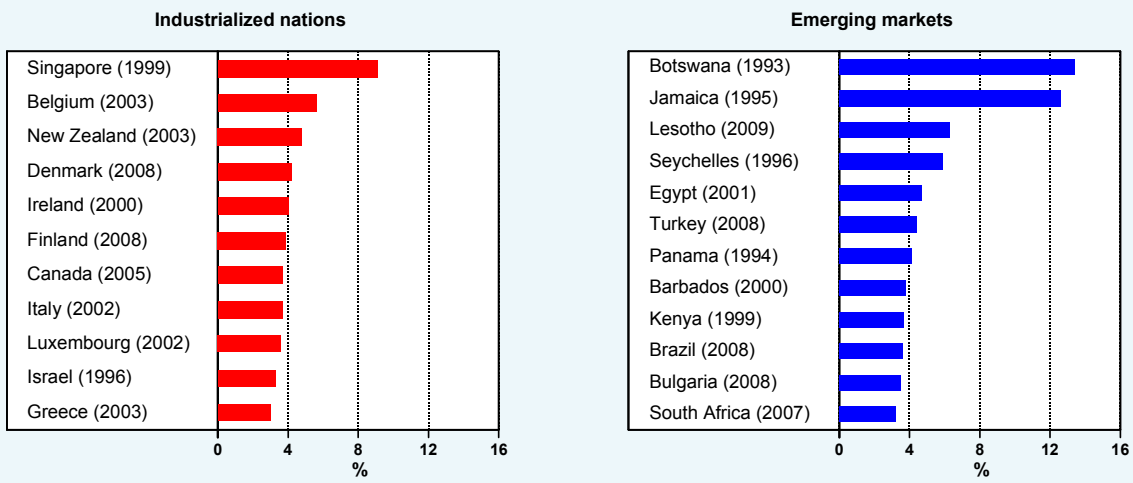
Source: EU

164. Secondly, **government indebtedness** has continued to increase apace despite the marked successes in reducing new debt. This is true in particular of the indicator of debt-to-GDP ratio, the denominator of which is nominal GDP, which dropped 6.0 per cent in the last two years: For 2011 we can expect a debt-to-GDP ratio of 166 per cent, which the IMF forecasts would, in the absence of a 'hair cut', have risen next year to about 189 per cent.

If we assume a medium-term nominal growth rate for the Greek economy of 3 per cent and nominal interest of 6 per cent, then a primary surplus of 5.0 per cent would have been necessary solely to stabilize the debt-to-GDP ratio at 166 per cent. The annual primary surplus would have had to be 11.5 per cent if the goal had been to lower Greek indebtedness to below 100 per cent by the end of the decade, conditions being equal. Historical experience (Chart 29) shows that to date no country has scored any major success in generating surpluses over a longer period. All in all, Greece evidences a **clear solvency problem**.

Chart 29

Primary balances of selected countries[1)]



1) In relation to nominal GDP. Highest average primary balance over a ten-year period. Years in brackets are the last year of the respective period.

Source: IMF

165. For this reason, the **German Council of Economic Experts** advocated as early as July 2011 that Greece be granted a **'hair cut' of 50 per cent of its debt** (German Council of Economic Experts 2011). The idea was to apply it by swapping Greek bonds for EFSF bonds, as this would guarantee that after the transaction the banks still held high-quality assets. The solution envisaged granting the ECB the option of trading in the bonds it had bought at the purchasing price at the EFSF for EFSF bonds. Since Greek banks hold relatively high volumes of Greek treasury bonds, namely over € 40 billion, it would also have been necessary to recapitalize the Greek banking system, again something that the EFSF would have handled.

166. The debt rescheduling for Greece agreed at the **Special Summit of 21 July 2011** fell far short of this proposal. Primarily, it foresees the outstanding bonds being exchanged at the full nominal value for new bonds with more or less the same interest, albeit with the maturity period being extended from 15 to 30 years. The loss in cash value investors would sustain, so

the Institute for International Finance calculates for this debt rescheduling model, would be 21 per cent, as a relatively high discount rate of 9 per cent is assumed for the interest payments Greece would have to make. Greece would then have enjoyed only very limited relief.

167. Given the further deterioration in the country's debt situation, the governments finally agreed at the **26 October 2011 summit** to opt for a greater 'hair cut' of 50 per cent on the nominal value of the outstanding securities. This is intended to help enable Greece to lower its debt-to-GDP ratio to 120 per cent by the year 2020. However, this will only be possible if the country manages between 2014 and 2020 to post a primary surplus of on average 4¼ per cent, a very ambitious target but not impossible if one considers the experiences of other countries. What is more problematic is the assumption underlying this scenario that real economic growth in 2013 and 2014 will return with an average rate of 1¼ per cent and will then on average reach 2⅔ per cent a year from 2015 to 2020. Moreover, the calculations assume that it will be possible by 2020 to book revenue from privatization of € 46 billion.

168. The bitter pill of the conversion of the outstanding **private-sector debts** totalling some € 200 billion into new long-term bonds with a nominal value of € 100 billion is to be sweetened by collateralizing them with a sum of € 30 billion through zero-coupon bonds guaranteed by the EFSF. Since these bear interest, whereby Greece will have to service the interest, when they mature a sum totalling € 100 billion will be available covering the repayment of the bond creditors. Whether this will suffice to ensure strong bank participation in the purportedly "voluntary" debt swap remains to be seen. For investors who purchased Greek bonds in recent months at prices of 50 per cent or more, the offer is certainly attractive, as they will at any rate lock into the collateral of 30 per cent.

169. Since with their bond holdings of some € 40 billion it is Greek banks that will suffer the greatest losses from the 'hair cut', so they will have to be recapitalized. Together with a figure of around € 80 billion that is required to finance the current deficit through 2014, and the financing needed to collateralize the bonds, the new package for Greece financed by the IMF and the euro area member states will need to be € 130 billion.

2. Expansion of the EFSF's lending capacity

170. Given the risk of a self-reinforcing spiral of rising interest rates and an unfavourable assessment of the solvency of the member states as well as the fact that to date only the ECB has been able to counteract such a trend, we welcome that the governments have resolved to substantially expand the EFSF's capacity to grant loans. Given the commitments the facility has already made (Table 9, page 86) of € 190 billion and the fact that a certain sum is needed to recapitalize euro area banks, the EFSF probably at present only has freely disposable means of € 250 billion. This is a comparatively meagre sum compared to the Italian and Spanish refinancing requirement, which will be about € 1.1 trillion in the years 2012 and 2013. It would therefore seem obvious to seek technical financial solutions to "**maximize the EFSF's actual lending capacity"**. At the Euro Summit, two fundamental options were resolved designed to expand the EFSF's capacity by a factor of 4-5. Assuming full use thereof, time could be

gained at least until 2012 in order to focus on more extensive solutions that could possibly necessitate changing the treaty.

- Additional collateral for **newly issued bonds** is to be provided for the primary market in order to lower in this way a country's financing costs (see box). To avoid a two-class system of outstanding and newly-issued bonds, it will be possible to trade the collateral independent of the bond, meaning the insurance protection only exists in connection with a bond that has already been issued.

- Moreover, the EFSF will create **special-purpose vehicles** that can pool public and private means and thus leverage EFSF funding for purchases of bonds in the primary and secondary market, and in order to grant loans and recapitalize the banks.

Table 12

Refinancing requirement of selected Euro area countries in 2012 and 2013

Country	Nominal GDP 2012	Refinancing requirement			
		2012		2013	
	Euro bln	%[1]	Euro bln[2]	%[1]	Euro bln[2]
France	2,047	*20.8*	426	*20.2*	414
Italy	1,621	*23.5*	380	*18.9*	306
Germany	2,627	*10.5*	275	*8.1*	214
Spain	1,116	*20.6*	229	*19.4*	216
Belgium	389	*22.2*	87	*21.8*	85
Portugal	170	*22.3*	38	*21.0*	36
Greece	217	*16.5*	36	*14.9*	32
Ireland	161	*13.9*	22	*14.9*	24
Reporting: Problem countries[3]	3,285	*X*	706	*X*	615

1) As a percentage of GDP.– 2) Own calculations.– 3) Greece, Ireland, Italy, Portugal and Spain.

Source: IWF

171. However appealing leverage may seem at first sight, in particular if it were to be possible to thus create an effective alternative to bond purchases by the ECB, this option involves not inconsiderable problems.

- By assuming the EFSF **covers newly issued bonds** the politicians initially send a not unproblematic signal to the markets indicating that the bonds of the country in question are no longer regarded as unconditionally secure.

- Since only partial coverage is involved, the **vicious circle** of rising interest and a less favourable assessment of a country's solvency will not be fundamentally altered. An unfavourable economic performance by Italy can thus continue to lead to investors eschewing Italian bonds, meaning interest rates then rise further.

- Moreover, this solution can impair **the guaranteeing countries' creditworthiness**. Should the economic situation in Italy, for example, mean the markets view its creditworthiness

more unfavourably in general, making intervention by the EFSF probable, this could have a far more pronounced negative impact on the rating of France and Germany than in the case of an "unleveraged" EFSF guarantee. The credibility of the entire rescue plan would be undermined were the rating of the guarantor countries to deteriorate.

In principle, these problems will also arise with the second option. Here, the EFSF's capacity will be expanded via special-purpose vehicles with structured portfolios. Since the EFSF would again be the primary guarantor, negative trends in countries for whom liability has been assumed would again impact unfavourably on the credit rating of the euro area member states acting as guarantors.

Box 8

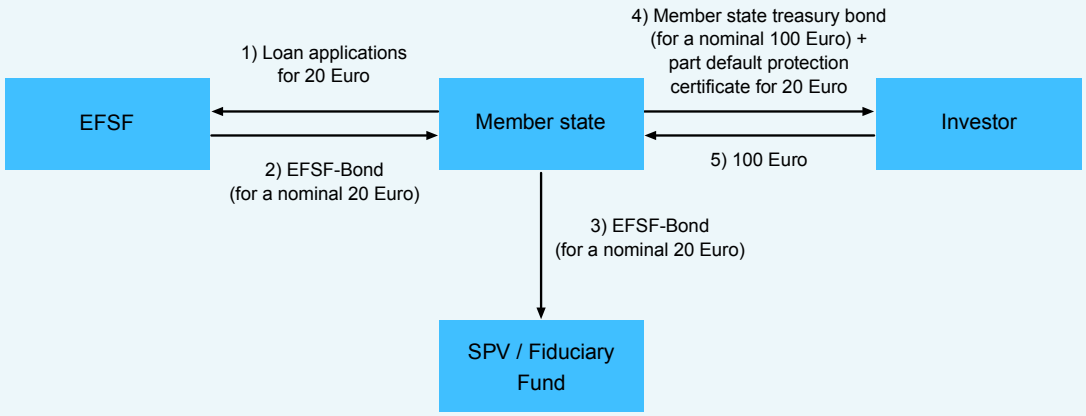
Maximizing the existing lending capacity of the European Financial Stability Facility (EFSF)

On 26 October 2011 the euro area heads of state and government agreed on two variants to leverage the EFSF. The first option entails partial coverage of nationally issued treasury bonds, the second the foundation of an investment SPV to leverage the EFSF's financing volume using private money. The first options functions as follows.

It is based on the essential idea that the credit rating of a member state's bonds can be improved by means of an associated certificate protecting against part default.

Chart 30

Leveraging the EFSF by part covering treasury to be issued by the national governments[1)]



1) Assumption: The Member state wishes to float treasury bonds for 100 Euro and 20 Euro is to be used to cover them.

The way the insurance solution functions depends on the EFSF being able to only grant loans to a member state. An example shows how this will work: A member state wants to issue a new bond for € 100. To cover it, it applies to the EFSF for a loan of € 20, and in return the latter (put simply) issues an EFSF bond with a nominal value of € 20 (steps 1 and 2). The bond is held by a

SPV or a trustee fund (step 3) and is meant to cover a certificate providing protection against part default that the member state assigns together with a nationally issued bond with a nominal value of € 100 to an investor in return for payment of € 100 (steps 4 and 5). In the event of a default on the bond, the SPV would transfer (on a pro rata basis) the EFSF bond to the investor.

The issue of liability is decisive for the insurance. Unlike with the ESM, which is meant always only to assume subordinate liability, in this version the EFSF assumes primary liability.

3. Problematic proposals for the short term

172. The upside and downside of the measures now resolved emerge if compared with proposals mooted in debates in recent months to stabilize the euro area:

- the unlimited flotation of bonds with common liability (Eurobonds),
- bond purchases by the European Central Bank,
- an expansion of the EFSF's loans capacity by granting it an ECB refinancing line.

Eurobonds

173. The constitutive risk of insolvency of an individual member state of the currency union could be directly eliminated by the member states assuming **common (joint and several) liability** for all new bond issuance. Since in this way the risk of individual insolvency would be eliminated, the problem countries would be able at all times to secure refinancing at low interest rates. Over time, a very large and highly liquid market segment would arise. For large investors not willing to acquire Eurobonds the relevant alternative would primarily be the market for US treasury bonds. Since the fiscal situation in the United States is appreciably less favourable than that of the euro area on aggregate, one can hardly expect that Eurobonds would be rated far worse than US bonds.

174. Estimates according to which the **interest rate for Eurobonds** would be derived as a median from the current yield on member state bonds overlook the fact that the high interest premiums for the problem countries cover the risk of individual insolvency that would no longer exist with Eurobonds. We can assume the problem countries would enjoy an interest rate benefit even for those types of Eurobonds for which partial joint and several liability is agreed.

175. Compared to leveraging the EFSF, the introduction of Eurobonds would have the advantage that it would be possible for an individual country to essentially erase the risk of a self-reinforcing spiral of rising interest and deteriorating solvency. At the same time, this would considerably steady the European financial system. The advantages of Eurobonds go hand in hand with the problems of the instrument. Since it completely overrides **market discipline** within the euro area, its introduction could only be justified if it were possible at the

same time to strengthen the political disciplining of national fiscal policies such as to guarantee unlimited responsible budgets in all the countries participating. Since this can hardly be done without changes to the treaties, Eurobonds are not suitable as a short-term solution.

176. This solution must also square up to the **restrictions under constitutional law** that the German Constitutional Court set, most recently in its ruling of 7 September 2011. Accordingly, every act of assistance undertaken by the Federal Government out of solidarity on a larger scale internationally or within the EMU and impacting on expenses must be individually approved by German Parliament (BVerfG, 2 BvR 987/10 of 7 Sept. 2011, section no. 124 ff.). Moreover, it must be limited factually and not just formally. The limitation can be in time or in substance. In particular, the limitation must be sufficiently clearly visible in terms of scale such that the German legislative does not tie itself down so strongly that it cannot factually exercise budget duties itself (BVerfG, 2 BvR 987/10 of 7 Sept. 2011, section no. 124 ff.).

Bond purchases by the European Central Bank

177. The experiences of the last two years show that in the event of growing uncertainty in the markets the European Central Bank is willing to ease things by intervening directly. Thus, in August 2011 it resolved in response to rising interest on Spanish and Italian bonds to purchase government paper on a large scale in the secondary market. In total, the purchasing volume in the second phase of the **Securities Markets Programme** has to date reached € 100 billion. In principle, the ECB is authorized to do this as according to article 123 TFEU it is only prohibited from the "direct purchase of debt instruments".

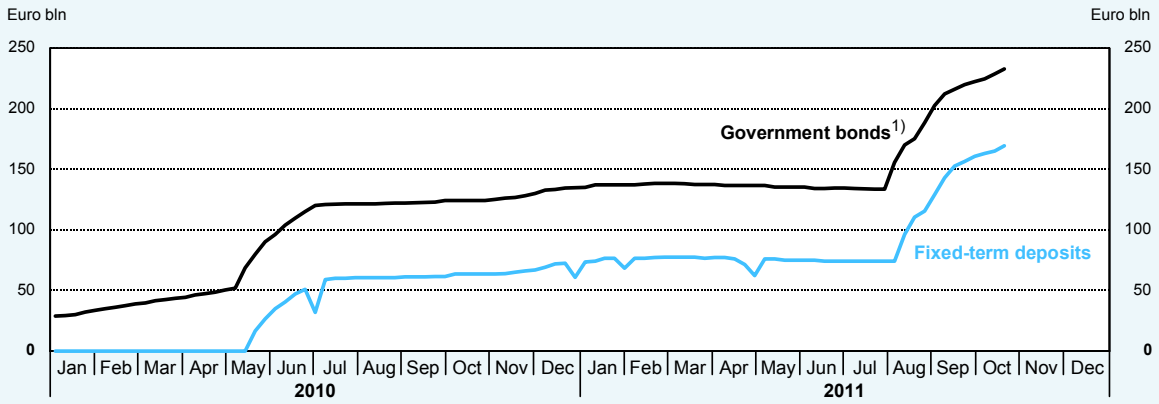
178. From the viewpoint of the ECB's **liquidity management**, such measures are comparatively unproblematic as monetary policy can at any point offset the expansion in the monetary base caused by bond purchases (sterilization). This can take the form of an asset swap, with the central bank reducing the regular refinancing loans for banks (main refinancing operations, longer-term refinancing) by acquiring treasury bonds. However, the ECB does not have this option as owing to the full allotment for refinancing transactions since October 2008 it can not longer control the loans volume.

179. Alongside asset swaps, a central bank can also sterilize a rise in the money base by extending the balance sheet, i.e., **expanding the liabilities side** of its balance sheet. In its Securities Market Programme launched in May 2010, the ECB used term deposits to skim off liquidity created by securities purchases (Chart 31). What is crucial for all types of sterilization is that a central bank is at all times able to assess the level of interest in the money market that it desires in terms of monetary policy. For a liabilities-side sterilization the ECB must therefore ensure that with its instruments it sets a lower limit for short money-market interest. It can do so by raising the interest rate for the deposit facility such that this becomes the key lending rate (policy rate) for its monetary policy. Alternatively, it can allow banks to acquire short term bonds the interest rate of which can again function as the key lending rate.

Chart 31

ECB's liquidity management

Weekly vallues (stocks)



1) Purchases through CBPP (Covered Bonds Purchase Programme) and SMP (Securities Markets Programme).

Source: ECB

180. Seen in this light, in terms of liquidity policy there is essentially no limit to a central bank's purchases of treasury bonds. From an operating angle, this policy leads in the event of an asset swap by a central bank to relatively low-interest refinancing loans being replaced by treasury bonds bearing higher interest. When extending the balance sheet, the central bank acquires treasury bonds that it refinances via bank deposits with relatively low interest or by issuing short term bonds that also bear low interest. These transactions increase the central bank's interest revenue. At the same time, the ECB assumes the potential default risk.

181. If in the short term there is no danger that by purchasing bonds the ECB loses control over the liquidity supply, the function of lender of last resort is for the member states anything but straightforward **in terms of stability policy**. Unlike IMF support measures or the rescue packages for the EMU problem member states to date, the ECB is institutionally not in a position, or at least only informally, to couple its support programmes with the call for macroeconomic adjustment programmes. As with Eurobonds, the bond purchases thus annul market discipline without establishing effective political disciplining in its place. The limits between monetary and fiscal policy are blurred in a very troubling manner. The ECB thus risks its credibility because it is then suspected of monetizing state indebtedness.

182. Compared to the expansion of the EFSF now resolved, for the ECB the state of play is similar with bond financing as it is with Eurobonds. In both cases, instruments are involved that have an essentially unlimited impact and are thus far better able than a "leveraged EFSF" to restore orderly conditions in the financial markets. On the other hand, they offer the member states almost unlimited scope for financing which would, without more effective political disciplining mechanisms, truly invite the wrong fiscal behaviour.

Bank license for the EFSF

183. Assuming the ECB's willingness, the EFSF's impact could be additionally boosted by transforming it into a public bank, enabling it to refinance itself via the central bank. In this

way, the EFSF's lending capacity could be increased to an almost unlimited extent. In real terms, the facility would, however, then become an **ECB special purpose vehicle**.

Compared to direct central bank financing this solution would then have the advantage that the decision on EFSF support programmes would be taken by the member states, and Germany would then have a veto given the principle of unanimity. Moreover, the EFSF could conditionalize its loans approvals, which the ECB can only do to a limited extent. However, a German veto would not prevent the ECB from potentially making direct bond purchases.

All in all, this solution only differs by degree from the ECB buying bonds in the secondary market, as it again blurs the line dividing monetary from fiscal policy.

VI. European redemption pact

184. With their resolutions of 26 October 2011 the governments of the member states made a renewed **strong effort to steady the monetary union**. At the same time, the Italian government has undertaken to implement additional structural reforms over and above the consolidation measures already decided, in particular as regards labour law and pension insurance.

185. The package now resolved is no definitive solution to the euro area's problems. But it offers politics a **window of opportunity in time** that it must use consistently in order to create an overall policy framework for the euro area characterized not only by sound government financing but also by a stable financial system. This is not to advocate overly hasty measures. The key contribution to stabilizing the markets must come from the problem countries themselves by coherently implementing the austerity packages announced. Together with the increased clout of the EFSF it should then be possible to steady market confidence in euro area government finances. This should initially be prioritized.

186. However, in particular under more unfavourable economic conditions and given the increasingly uncertain political situation in Greece there is no excluding that investor uncertainty will nevertheless persist and make what is not an easy task of consolidation all the more difficult. In the event of such an unfavourable scenario, the strategy pursued since last year of gradually expanding the EFSF would come up against its limits. There would then be the threat either of the uncontrolled break-up of the EMU or of the ECB's unlimited purchase of securities, which would be very dubious.

187. In the event that the now resolved strengthening of the EFSF proves to be insufficient despite on-going efforts by the member states to consolidate and reform, a model should be tested that on the one hand hinges on more extensive support than the EFSF and on the other includes far more stringent mechanisms to reduce government debt. The model for a "European redemption pact" outlined below is a conscious departure from the practice hitherto of covering debts by ever greater debts by setting out a binding repayment plan that (alongside the binding introduction of national debt caps) will be secured by the currency reserves of the member states and taxes specifically foreseen for repayment.

188. Under the European redemption pact, debt amounts above the Maastricht reference value of 60 per cent of GDP would be transferred to a common redemption fund subject to joint liability. A consolidation path would concurrently be laid down for each country under which it would be obligated to autonomously redeem the transferred debt over a period of 20 to 25 years. This is roughly equivalent to the debt reduction rule contained in the Stability and Growth Pact (SGP), which stipulates that excess debt above the 60 per cent ceiling must be reduced at an annual rate of 1/20.

The debts that remain exclusively with the participating countries would be additionally limited by the introduction of national debt brakes. To stabilize the European financial markets, the redemption pact offers euro-area member countries the possibility of covering their current funding needs (for the redemption of outstanding bonds and new borrowing) via the **redemption fund** until the credit facility is fully utilized. As existing debts are thus not transferred to the fund all at once but instead successively over a **roll-in-phase** of around five years, this would provide strong incentives for fiscal discipline. Thereafter a country's outstanding debt level would comprise

- debts for which it is individually liable amounting to 60 per cent of its GDP, and

- debts that, at the time of the transfer, exceed the reference value of 60 per cent of GDP and are transferred to the redemption fund. These debts are likewise redeemed by the individual country. The transferring country bears the primary liability and the redemption fund a secondary liability.

In this way, in the years that follow (**roll-in-phase**) the redemption fund would accrue bond holdings of about € 2.3 trillion. Germany would account for 25 per cent of the portfolio, placing second behind Italy with 41 per cent. Other important borrowers of the redemption fund would be France, Belgium and Spain (Chart 32, page 108).

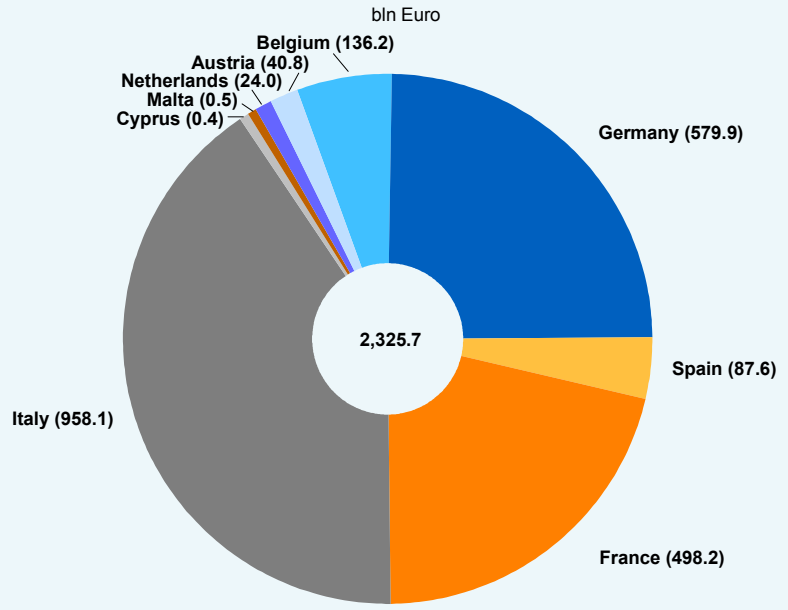
189. Key features of the concept are that there would be an upward cap on the amount of the debt in the redemption fund after the roll-in-phase and that, in addition, each country is obliged to redeem its own debt over a period of between 20 and 25 years. The joint liability during the repayment phase means that **safe bonds** would be created by means of which the European financial system could be stabilized until the national bond markets regain sufficient functionality. The transfers to the redemption fund would have to be structured in a way that ensures that the transferred debt is indeed paid down over a period of approximately 20 to 25 years. At the same time it must be ensured that

- the establishment of the redemption fund is and remains an exceptional episode of limited duration, and

- the debts for which the member countries are solely liable do not again exceed the ceiling of 60 per cent of GDP stipulated in the Maastricht Treaty.

Chart 32

European Redemption Pact: "Redemption Fund" in Eurozone (2011)[1)]



1) Government debt that exceeds the debt-to-GDP ratio of 60%. The countries Greece, Ireland and Portugal are not factored in, because they are in the process of an adjustment programme.

Source: EU

190. The redemption fund, which draws on the historical example of a comparable fund in the United States in 1790 (Box 9), can only be justified in this form if joint liability is coupled with **strict fiscal discipline**. This must rest on five pillars:

- By way of institutional framework the redemption fund requires implementation of a **national debt brakes** in the national constitutions of the participating nations as only then can credibility in the long-term commitment to consolidation be guaranteed. The debt caps should take their cue from the goals of the reformed Stability and Growth Pact. In particular, it should be ensured that after a transitional phase the structural budget deficit does not exceed the threshold of 0.5 per cent of GDP. The binding nature of the national debt caps should also be intensified by having them monitored by an independent European agency such as the European Court of Auditors. If a country violates the stipulations of its debt cap, an immediate fine would have to be paid to the redemption fund to which the countries would commit before taking part in the redemption pact (analogous to the "debt solidarity surcharge", JG 2009, item 128). Since the proposal is limited to the euro area, it would be simplest in the event of each violation of a debt brake ascertained to automatically assign the country in question's share of the central bank profits to the redemption fund by way of accelerated repayment.

- A second central fiscal hedge for the redemption fund: a jointly defined **medium-term consolidation and growth strategy** for all participating countries. It should be designed such that over a period of 20-25 years it is possible to cut the debt-to-GDP ratio to 60 per cent. A key role should be accorded medium-term paths for the public expenditure which politicians control. Moreover, the strategy should contain a catalogue of actual measures

for structural reforms. As an important hedging mechanism there should be the option to **terminate** the joint **liability for new debt** if a country does not meet the commitments innate in the consolidation and growth strategy. The "roll-in" would then be immediately discontinued and the country in question would be fully exposed once again to the international financial market.

- To ensure debt repayment to the fund, a participating country must, thirdly, undertake to charge a **mark-up on a national tax** (VAT and/or income tax), whereby the revenue does not accrue to the national budget but is injected straight into the redemption fund. Following the example of most US federal states it is conceivable that the payments to the redemption fund could be granted precedence in the national constitutions over other expenditure (Cooley und Marimon, 2011).

- To limit the liability risks and also factor in a national contribution, fourthly, all countries participating would have to pledge part of their **national currency reserves** (foreign currency or gold reserves) to cover their liabilities. The central banks' gold reserves have for decades now become functionless in terms of monetary and currency policy and could therefore be used as a pledge without this impairing national economic policy. For the individual euro area member states the foreign exchange reserves have also ceased to have a function as the ECB is now responsible for intervention in the foreign exchange market. All in all, a sum of 20 per cent of the loans provided by the fund would need to be guaranteed in this way.

- To cover the eventuality that an individual participating country is called on to pay up under its joint and serveral liability, its risk would have to be limited by agreeing a burden-sharing scheme among the remaining solvent participating countries.

Box 9

Alexander Hamilton and restructuring US government debt in 1790

As a consequence of the War of Independence (1775-1783), the federal government in the United States and the federal states had accumulated massive debt. Given the situation, the then Secretary of the Treasury Alexander Hamilton resolved the federal government would assume liability for all bonds. Hamilton wanted in this way to avoid the nation's reputation being tarnished by a debt cut, and at the same time help create a secure investment vehicle for investors. Hamilton's plan was put into practice in July 1790: all outstanding bonds were converted into "bonds in perpetuity", i.e., interest of 4 per cent was paid for an unlimited period without repayment being foreseen ("Consols"). In 1792, Hamilton then established a repayment fund ("sinking fund"). Into it flowed predefined revenue from customs tariffs and excise taxes, with which the outstanding bonds could then be bought back and the debt paid off. The Hamilton programme tends to be considered as having been successful; Bordo and Vegh (2002) refer to it as "one of the most successful financial programs in history". It contributed to shoring up the United States' creditworthiness, to creating a large US bond market, and to enabling the states to refinance themselves at low interest.

191. The redemption pact would no doubt stand up to scrutiny by the **German Supreme Court**. According to its ruling of 7 September 2011, German Parliament may not transfer its responsibility for the budget to other actors by indeterminate budget policy authorizations. What is decisive here is first the option the German legislative then has on a case by case basis to decide on support payments to its European partners that impact on expenditure. Second, the potential encumbrance of the German federal budget must be constrained in time, scale and in substance.

The upper and lower houses can decide to establish a special fund as part of the redemption pact. This sets the maximum financial volume for which Germany would be liable. The special fund created in the above-mentioned manner would be refinanced by issuing own bonds that would, owing to the structure involved, come under joint liability. Once the last debt in the special fund is redeemed, there would cease to be any need to issue such bonds. Over time, the joint bonds would therefore automatically abolish themselves. While the legislative would not be able to decide over every individual bond issued by the redemption fund, it would be able to set the maximum volume of the fund in the context of which it issues bonds. Decisions by the other member states would not raise this sum, meaning that the legislative would duly participate in the fund's decisions such as impact on national expenditure.

Just like the other member states, Germany would have to cover its own repayment obligations under the debt transferred to the special fund. No new encumbrance would arise owing to these redemption payments. Presumably, higher interest would then have to be made than at present, especially as Germany can in this regard be considered the beneficiary of the debt crisis. While there would be joint liability for the redemption fund of a maximum of € 2.3 trillion, for which Germany would have to stand tall if all other European borrowers default and cannot service their debt, such a case of liability is highly improbable. There is a somewhat greater probability that a single country cannot cover its interest payments. The resulting burden is limited, however. The liability risk that Germany would face each year would therefore not tie the hands of the German legislative particularly tightly and prevent it from exercising its effective right to set the budget.

The guarantee mechanism related to the redemption pact also serves to limit the liability risk to which the financially strong countries, in particular Germany, are exposed. Since the foreign exchange reserves have to be deposited in full at the beginning of the "roll-in", precautions would have been made even for the unfavourable event that one country should not be able to enshrine a debt brake in its constitution, meaning that its membership of the redemption pact would have to be terminated. It should therefore be possible to ensure the limitation in scale of the obligations under fiscal policy that Germany would have to shoulder in the redemption pact.

192. More critical is the **limitation in time** of the special fund. For the reduction of the debt transferred to the redemption fund some 20-25 years would be needed. In this relatively long period, there will presumably repeatedly be temptations to the players in European policy and to the member states to turn the redemption fund into a permanent institution. This would turn

the indebtedness in the euro area into a community property in the long run. Establishing a redemption fund can therefore only be seriously undertaken if the contractual terms exclude the special fund becoming a permanent agency to refinance the euro countries. However, the completely credible creation of the fund as a temporary institution in the European treaties will not be possible. The analysis of centralizing processes in federal states shows impressively that institutions at a supra-ordinated state level, once created, can hardly ever be transposed back into the jurisdiction of subordinate local corporate entities. The German legislative would therefore from the outset have to pre-empt any perpetuation of the redemption fund with article 146 of the German Basic Law.

193. Of crucial importance to the redemption pact is the structure of the **interest and redemption payments** to be made by the participating countries. They should be defined and set as a firm portion of GDP as if the liabilities would be repaid completely in 20-25 years. Since the payments then depend on the economic cycle, an automatic stabilizer to hedge against asymmetric shocks would be established that would however be comparably weak in nature.

In order to give a country the chance to accumulate the primary surplus needed for the payments to be made in the medium term, the payments could in the first five years gradually be adjusted to the level needed in the medium term. This adjustment path could be structured such that each country initially repays one per cent of the debt transferred to the fund and additionally makes interest payments on its portion of the redemption fund. After five years, the payments as a proportion of GDP would be kept constant.

194. The joint liability for the redemption fund means that the highly indebted countries participating have an **interest advantage on the debt held in the fund** which can be used to redeem debt without placing additional strain on the national budgets. This creates strong incentives for participation that should make it easier for national parliaments to agree to the measures set in the consolidation and growth pact. For Germany, by contrast, there will probably be a slight additional burden, one that would be limited by the fact that given the volume of the redemption fund of € 2.3 trillion a highly liquid market would be created that we can expect to trigger effects lowering interest rates.

195. We will take the **example of Italy** and 2012 as a starting year to show how the financing mechanism functions (Table 13, page 112). With a debt to GDP ratio of 120,3% and nominal debt totalling 1 911 billion Euro, Italy would finally transfer 958 billion Euro to the redemption fund; this amounts to the 60.3 percentage points by which the debt-to-GDP ratio lies above the target level of 60 per cent in the first year. The debt will be transferred to the fund by allowing Italy to refinance its financial needs in the next years up to the agreed amount of 958 billion Euro (roll-in phase). Given the current maturity profile of Italy's outstanding debt, this would be the case in 2016. Because each country has to service and redeem its obligations already transferred to the fund, the final amount after completing the roll-in is 923 billion Euro (Table 13, row 2). The debt still coming under national liability would in-

crease to 1 073 billion Euro given that the debt ratio is fixed at 60% and the annual growth rate of nominal GDP is assumed to be 3% (Table 13, row 5).

Table 13

European Redemption Pact for Italy: payment commitments and debt-to-GDP ratios

	Unit	Roll-in-phase					2017	2018	2026	2031	2035
		2012	2013	2014	2015	2016					
Consolidation with redemption pact											
Refinancing via the fund[1]	bln Euro	321.0	243.0	121.0	175.0	97.7	-	-	-	-	-
Debt level in the fund	bln Euro	321.0	560.8	674.6	839.4	923.2	906.2	887.0	631.9	353.2	40.8
	%[4]	*20.2*	*34.3*	*40.0*	*48.3*	*51.6*	*49.2*	*46.8*	*26.3*	*12.7*	*1.3*
Payment to the fund	bln Euro	16.1	29.6	37.2	47.4	53.9	55.5	57.2	72.4	84.0	42.4
	%[4]	*1.0*	*1.8*	*2.2*	*2.7*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*1.4*
Of which:											
Interest	bln Euro	12.8	22.4	27.0	33.6	36.9	36.2	35.5	25.3	14.1	1.6
Redemption	bln Euro	3.2	7.2	10.2	13.9	17.0	19.3	21.7	47.2	69.8	40.8
Debt level outside the fund	bln Euro	1,590.0	1,375.6	1,284.1	1,139.4	1,073.0	1,105.2	1,138.3	1,442.0	1,671.7	1,881.5
	%[4]	*100.1*	*84.1*	*76.2*	*65.6*	*60.0*	*60.0*	*60.0*	*60.0*	*60.0*	*60.0*
Total debt level	bln Euro	1,911.0	1,936.5	1,958.9	1,979.1	1,996.6	2,011.8	2,025.7	2,074.4	2,025.5	1,923.0
	%[4]	*120.3*	*118.3*	*116.2*	*114.0*	*111.6*	*109.2*	*106.8*	*86.3*	*72.7*	*61.3*
Primary balance required[2]	%[4]	*4.2*	*4.2*	*4.2*	*4.2*	*4.2*	*4.2*	*4.2*	*4.2*	*4.2*	*2.6*
Consolidation without redemption pact											
Balanced budget[3] (vH)[4]											
Primary balance required at nominal interest of ...											
5 % p.a.		*6.0*	*5.8*	*5.7*	*5.5*	*5.3*	*5.2*	*5.0*	*4.0*	*3.4*	*3.0*
7 % p.a.		*8.4*	*8.2*	*7.9*	*7.7*	*7.5*	*7.3*	*7.1*	*5.6*	*4.8*	*4.3*
Debt-to-GDP ratio at nominal interest of ...											
5 % p.a.		*120.3*	*116.8*	*113.4*	*110.1*	*106.9*	*103.7*	*100.7*	*79.5*	*68.6*	*60.9*
7 % p.a.		*120.3*	*116.8*	*113.4*	*110.1*	*106.9*	*103.7*	*100.7*	*79.5*	*68.6*	*60.9*

1) In the first few years, refinancing covers a country's complete refinancing requirement that is ascertained by consulting the term structure of outstanding bonds. For short-term treasury notes that are due, we assume that these will be half repaid through the special fund. In the first year, a deficit to be financed of € 17 billion is also assumed. The sum of the years 2012 to 2016 is 958 billion €.– 2) The debt-to-GDP ratio excluding consideration of debt held in the special fund is held constant at 60% for the entire period.– 3) Assuming these projections, a balanced budget at all times leads to a debt-to-GDP ratio of 61% to reduce the European redemption fund.– 4) As a ratio of nominal GDP in %.

Assumptions: Debt-to-GDP ratio of 120%; nominal GDP € 1,589 billion; gross debt of € 1,911 billion (each at the beginning of the roll-in phase); nominal growth in GDP of 3.0%; interest at nominal 5%; refinancing of special funds: 4%.

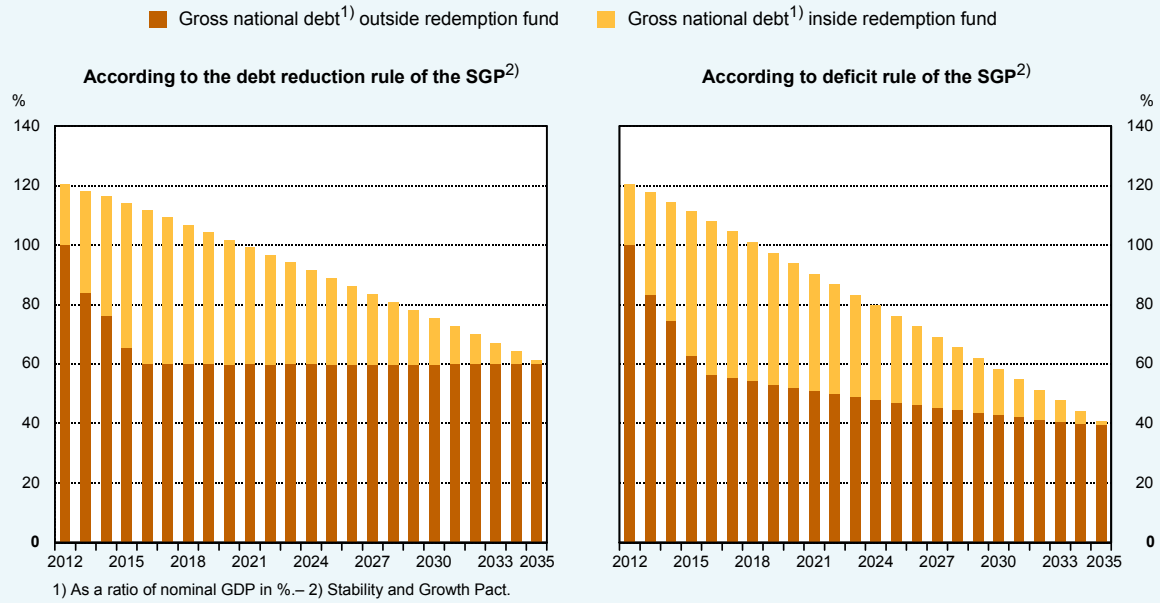
Calculation of the **annual payments** starts with the final status of the debt transferred to the fund of € 923 billion and with the goal of repaying this given an annual growth rate of nominal GDP of 3 per cent over a total of 25 years. If we assume that the fund could refinance itself at an interest rate of 4 per cent, then for Italy in the first year after the five-year roll-in phase payments of an annual 3 per cent of GDP would be incurred, which would be composed

of interest and redemption payment. The current payments would remain constant relative to economic output for the entire remaining term, with only the split between interest and redemption payments changing. After 24 years, Italy would have completely repaid its debts in the redemption fund. During the roll-in phase, allocations would initially be lower and would be geared to the proportion of debt already financed through the redemption fund. After 24 years when the redemption fund expires, Italy had its debt fully repaid.

In order to limit the debt level to 60 per cent of GDP through to the end of the redemption fund's lifetime, from the beginning a constant **primary surplus of 4.2 per cent** would be required (Table 13, Chart 33). This is an ambitious goal, but current budget planning envisages, so the IMF's forecast, a primary surplus of 2.6 per cent in 2012 and of 4 per cent (2013) and 4½ per cent (2014 to 2016) thereafter. It bears considering here that for Italy the financing through the fund spells a clear easing of current interest payments. If one assumes that Italy would, were it not to participate in the redemption fund, have to pay interest of 7 per cent for its debt, then after the roll-in phase a primary balance of 7.3 per cent would have to be booked in order to likewise reduce the debt level to 60 per cent (Table 13). The consolidation task would then be considerably harder to achieve.

Chart 33

Italy: Stylized development of gross government debt after making use of redemption fund



1) As a ratio of nominal GDP in %.– 2) Stability and Growth Pact.

Assumptions: Nominal GDP growth of 3.0%; nominal interest rate at 5%; refinancing conditions of special funds: 4%.

It needs to be noted, that the sample repayment path considered above, which is in accordance with the SGP's reformed debt rule, is less ambitious than the repayment path required by the deficit rule of the SGP under which the structural budget deficit must not exceed 0.5 per cent of GDP. The national debt brakes that participating countries would have to implement in their national constitutions would in principle have to be in accordance with this more ambitions goal for the structural deficit. Similar to the debt brake already implemented in Ger-

many, the national debt brakes would have to define a transition period, until they reach their maximal binding force. In the case of Italy, a debt brake with these features would create an additional consolidation requirement of 1 per cent of GDP in the medium term. This would cause gross national debt to decline to 40 per cent of GDP until the time the redemption fund expires (Chart 33).

196. For Germany, participation in the redemption fund would mean that the debt transferred would likewise be repaid in 2035. Since the payments to the redemption fund impact on the deficit, implementation of the redemption pact would actually lead in Germany to consolidation that goes beyond the stipulations of the debt brake already implanted in Germany. The required primary surplus would be about 0.5 per cent of GDP higher than if consolidation were to be undertaken solely by the debt cap, meaning that Germany could dip below the limit of 60 per cent of GDP for its entire sovereign debt as early as 2023. If it relied only on the debt cap, it would not reach the goal until three years later.

As regards the additional interest costs, assuming an interest differential of one percentage point between the refinancing costs of the redemption fund and those for Germany, and a debt of € 579 billion transferred to the fund, the additional annual interest payment would be about 0.3 per cent of GDP. It bears considering here that the current extremely low interest rate for German bonds is primarily the product of the crisis-stricken situation in the euro area and cannot therefore be viewed as a medium-term equilibrium level.

197. Should it not be possible in the time gained by the 26 October 2011 resolutions to turn the EU debt crisis around, and should the euro area member states not be able to agree on a solution in the sense of a redemption pact, then two possibilities would remain to avert an impending financial crisis. In its function as lender of last resort, the **European Central Bank** would in an unfavourable setting not be able to avoid having to again buy treasury bonds in the secondary market. This would be highly questionable. Another option would be to pursue a strategy of small-step changes and leverage the **European Stability Mechanism** by relying on the recent resolutions. The danger here would be that the financial volume to be applied could likewise reach dimensions such as are envisaged for the redemption fund, without it being possible to establish an appropriately structured consolidation programme to reduce the debt in the overly indebted member states. The ECB would then likewise not be clearly relieved of its function as lender of last resort.

VII. Prospects for the European Monetary Union

198. The current European Monetary Union crisis reflects a deep conceptual problem. While in the field of monetary policy very far-reaching integration has been achieved with the single currency and the common central bank system, in fiscal policy national jurisdiction continues to exist alongside common supervisory and crisis mechanisms, a situation that is as inefficient as it is prone to conflict. If the monetary union is to have a clearly more robust architecture in the future, then solutions must be found that will clearly strengthen fiscal discipline.

1. Reforms to date do not suffice

199. The **Maastricht Treaty** and the original Stability and Growth Pact based on it were intended to achieve fiscal discipline primarily leaving this within national jurisdiction, by a combination of binding rules, discretionary political decision-making processes and market discipline. With the 3 per cent limit for the deficit ratio and the 60 per cent limit for the debt-to-GDP ratio, two rules were set for national fiscal policymakers. However, transgressors are not automatically sanctioned, and instead in the framework of the complex mechanisms of the Stability and Growth Pact subject to a discretionary decision-making process by the Council of Economic and Finance Ministers. The no bail-out clause and the conscious absence of an explicit crisis mechanism are intended at the same time to ensure that the financial markets exert sufficient disciplining pressure.

200. In retrospect, there are evidently clear **weaknesses in that architecture**. The rules set out in the Maastricht Treaty proved to be inadequate as they firstly ignored the possibility of excessive private-sector indebtedness. Thus, Spain and Ireland as late as 2007 were able to post public-sector budget surpluses and their debt-to-GDP ratio was 36 per cent and 25 per cent respectively, well below the ceiling of 60 per cent. Secondly, the discretionary sanction mechanism failed, as Greece never faced the Pact's sanction process although it enduringly violated the two fiscal rules. Thirdly, market discipline has proved insufficient as for many years there was no anticipatory widening of risk premiums, although Greece's fiscal misbehaviour was not to be ignored. At present, market discipline is coming up against its limits if the financial system is not sufficiently cushioned for the event of a country going bankrupt.

201. The **reform of the Stability and Growth Pact** now resolved in the framework of the "Six Pack" is intended to strengthen the preventative elements in the **binding rules** in particular by including an expenditure rule that is pegged to the growth rate of a country's production potential (JG 2009, no. 126). The "corrective arm" implements a rules-based reduction in the debt-to-GDP ratio, according to which the volume of debt exceeding the 60 per cent limit has to be steadily reduced. The discretionary decision-making processes were, by contrast, only subjected to minor reform, as jurisdiction over the key steps of the process in the event of excessive debt is still held by the Council of Economic and Finance Ministers. The role of the Commission was only strengthened as regards imposing sanctions that can however first be resolved if the Council has determined that a country has acted incorrectly.

202. A contribution to creating stronger market discipline could have been achieved by using the **European Stability Mechanism** (ESM). Once this comes into force in July 2013 this for the first time explicitly foresees an inclusion of private creditors, although this is not tied to a firm rule but depends on a discretionary decision by the ESM. Inclusion of private investors shall henceforth always be required if the ESM ascertains as part of an sustainability analysis of whether a country can bear the weight of its debt, that it has not only a liquidity but also a solvency problem. To facilitate restructuring processes, as of July 2013 all newly issued euro area treasury bonds will come with debt rescheduling clauses (collective action clauses).

As with the Stability and Growth Pact, the ESM thus suffers from a credibility shortfall. In the ESM, the key issue whether a country is hit by a temporary liquidity problem or faces enduring solvency difficulties is decided politically, as the criteria are not defined according to which the decision should be taken. If potential sinners pass judgment on sinners, then the fear must be that unpleasant decisions will be postponed or never taken.

203. All in all, the reforms now resolved move in the right direction. But they fail to take the qualitative leap needed to guarantee stable future public-sector financing in the euro area.

2. Paths to more integration in fiscal policy

204. The increasing tension in the European Monetary Union have sparked a lively discussion on the further steps to be taken in the field of European integration. It has included proposals for a European finance minister, for a European fiscal union and for a commissioner for currency. What is decisive here is not only the institutional form to be taken but above all the issue of which fiscal competences should in future be located at the European level. Here, two different approaches are conceivable. Integration can be fostered firstly by increasing transfers of financial resources at the community level and secondly by transferring stringent control rights.

205. The first approach would involve transferring additional **financial means** to the community level in order to give it the option, like a federation, of discharging duties such as providing common unemployment insurance, or pursuing common education or social policy. In this way, as in the United States, there would be an automatic stabilizer at the community level which would ensure that shocks at the member-state level could be better coped with. In light of the very difficult fiscal situation in all the member states, something that will tend to worsen owing to the demographic, no political willingness can at present be discerned to transfer financial resources on a larger scale to the community level. Even if it is quite interesting to discuss what shape such a fiscal union could be given, such concepts are therefore hardly likely to assume a larger role in political debate in coming years.

206. Accordingly the second approach, on which most proposals tabled recently for a fiscal union are based, focuses primarily on how to establish **stronger controls** at the community level in order to bar aberrant fiscal behaviour more effectively than in the past and as early as possible.

207. As regards binding rules, a certain consensus has since emerged that a key precondition for fiscal stability is to anchor a debt brake in constitutional law. This can be additionally fortified by on-going community monitoring of the statistical data and computation methods.

208. As regards the unavoidable discretionary decision-making processes as part of the Stability and Growth Pact, as with monetary policy the focus must mainly be on strengthening the **independence of the decision makers**. The Council of Economic and Finance Ministers cannot be expected to coherently impose sanctions if, as at the moment, 14 of the 17 euro area member states are in the midst of excessive deficit proceedings. For this reason, the German

Council of Economic Experts has for some time now advocated strengthening the role of the Commission in the excessive deficit proceedings such that it becomes the decision maker in all the relevant procedural steps and the Council of Economic and Finance Ministers can only reject its rulings by qualified majority (JG 2009 item 127).

Even greater independence could be created by furnishing the **Commissioner for Currency** with the same powers as the Commissioner for Competition, whose decisions as regards competition law do not require approval from the Council of Ministers. If this solution is transposed onto the Stability and Growth Pact, the Commissioner for Currency would be placed in charge of the proceedings and the Council of Economic and Finance Ministers would lose any decision-making powers in excessive deficit proceedings. The Commissioner for Currency should be granted the right to initiate proceedings before the European Court against a member state for breach of the treaty. Care would need to be taken here to ensure that a decision maker with such wide powers cannot be exposed to political influence in another way.

209. Alongside the institutional position of the committee responsible for fiscal policy discipline, what will count is its **powers**. A fundamental problem of the Stability and Growth Pact is that the worst sanction it can impose, namely that a non-interest-bearing deposit be made by way of a clear monetary fine, does not really help as it simply worsens the fiscal situation in the respective country (JG 2009 item 128). It would seem more appropriate that, if the Commission discerns a need for action, the participants undertake to charge a predefined tax on a prorated basis ("Stability solidarity surcharge").

210. On this basis, one could then consider introducing the **model of European finance minister** as first mooted by Jean-Claude Trichet, then ECB president. In line with these ideas, this person would have the powers to set both the community's competition policy and its economic and monetary policy. This would also include responsibility for the institutions that are in charge of supervising and regulating the financial system in the European Union. Moreover, the finance minister would represent the EU at all international institutions. While such a solution has advantages in terms of efficiency, from the political viewpoint the problem arises that (as with all forms of strengthening the Commission) ever more functions can transferred to the community without sufficient parliamentary control being guaranteed.

3. How to improve market discipline?

211. The architects of the Maastricht Treaty had expected that fiscal discipline would be asserted not only given the contractually stipulated rules and the agreed political decision-making processes but also, and crucially, by market discipline. The experience of the last 12 years shows that this hope was misleading to the extent that the financial market stimuli did not trigger a **preventative response** that ensured the countries counteracted indiscipline in time. Instead, the market signals as evidenced by interest mark-up as a rule first became noticeable when a severe and chronic erroneous trend had set in. In such a situation, the market response makes what is not exactly a simple therapy in the first place even harder.

212. In the current situation with in part unusually high deficit and debt-to-GDP ratios, the scope for improving market discipline is somewhat circumscribed. For this reason, the **long-term structural framework for the euro area** as proposed in the fourth chapter and described in detail as a solution is intended to cover the medium term, i.e., a phase with far lower debt-to-GDP ratios such as could be reached by consistent implementation of the redemption pact.

The preventative element derives from the **three-stage approach**, which is geared to the debt-to-GDP ratios.

- Countries with a debt-to-GDP ratio below the 60 per cent ceiling and that have thus prequalified in this way as being stability-conscious, would in the event of liquidity problems have limited access to ESM loans.

- Given a debt-to-GDP ratio of between 60 and 90 per cent, ESM loans would depend on a country declaring itself willing to embark on a multi-year adjustment programme.

- Given a debt-to-GDP ratio of over 90 per cent in addition binding debt rescheduling with private-sector participation would be required.

Should, under these conditions, the debt-to-GDP ratio rise in a particular country, then the market players would see the gradual transformation of an initially almost safe bond into an instrument with the increasing risk of default. If such a regime is launched credibly, then this should be reflected in a divergence in risk premiums at an early date, which would enable a country to resort to fiscal adjustment measures before the "baby gets thrown out with the bathwater".

213. While a credible insolvency regime for states can make an important contribution to market discipline, it is hard to reconcile it with the new supervisory regime for banks and insurance companies, which in fact reinforce the already privileged status of treasury bonds as absolutely **safe assets**. Thus, the rules in Basel III set liquidity buffers for banks (Liquidity Coverage Ratio and Net Stable Funding Ratio) that are preferentially to be held in the form of treasury bonds. In the new regulatory framework for insurance companies (Solvency II) that is supposed to come into force in 2013, European treasury bonds will likewise be classified as unconditionally safe assets for which no equity capital reserve need be maintained. Depending on the insolvency regime, the supply of safe assets may be inadequate.

214. The demand for absolutely safe assets could at least in part be covered by founding special purpose vehicles that by **structuring a portfolio of treasury bonds** create safe and less safe tranches (Brunnermeier et al., 2011). Here, a new European debt agency would need to be set up and would buy member states' treasury bonds that are then covered in two different tranches.

- The default risks are primarily assumed by a **risk tranche**, which would primarily be acquired by non-risk-averse investors such as hedge funds.

– In this way, a **safe tranche** would be created with, in the ideal case, a negligible default risk (European Safe Bonds or ESBies).

Unlike in the case of the leveraging of the EFSF now being discussed, there is explicitly no joint and several liability for the SPV. At first sight the solution may appear attractive, but the fundamental problem arises (as with the collateralized debt obligations or CDOs that were so hard hit during the US subprime crisis) that the structuring only functions if the default risks seen in the past remain somewhat constant. If this is not the case, then even the seemingly safe tranche can be caught in the grip of massive default risks.

215. Alternatively, at the end of a successful consolidation strategy that leads to debt-to-GDP ratios of below or close to the 60 per cent ceiling, it would be worth considering whether that part of the national debt that is below the 60 per cent ceiling should be swapped for Eurobonds, for which joint and several liability is assumed. Each country would be individually responsible for the debt that exceeds that sum. A corresponding proposal has been put forward by Delpla and von Weizsäcker (2010), who distinguish between **blue bonds** (i.e., the Eurobonds issued bearing joint and several liability) and **red bonds** (i.e., the bonds issued for which a member state is individually responsible).

Compared to the ESBies, here a stock of European treasury bonds would be created that would be impervious to any default risk. This would place the euro area financial institutions back on a par with their US rivals, who can rely on US treasury bonds and thus an absolutely safe liquidity reserve that bears interest into the bargain. With this proposal, **market discipline** would be delivered by the interest that the member states have to pay on their portion of the debt that they have to issue at their own national responsibility. Since the default risk would then apply to comparably small sums and the risk of contagion would be excluded for the lion's share of the euro area government debt, the threat of insolvency would be far more credible than in the current structure. This would be the decisive precondition for the desired preventative function of market discipline.

4. No easy path

216. The crisis in the euro area has been increasingly worsening for months now and makes it abundantly clear that politics can only regain the initiative in action if it is prepared to opt for solutions that enable the comprehensive coverage of member countries' treasury bonds. An important step has been taken with the expansion and leveraging of the EFSF now resolved. Should it come up against its limits, not least given the now as good as opaque situation in Greece, Europe would face the alternative of the imponderable process of a self-reinforcing state and banking crisis or the unlimited purchase of treasury bonds by the European Central Bank. Before this scenario occurs, the politicians should assess whether it is not better to restore the stability of treasury bonds by assuming joint liability for them. Instead of Eurobonds unlimited in time and quantity, the model outlined in this chapter for a redemption fund presents a solution that combines short-term stabilization of the financial markets with a medium-term, credible consolidation of government finances covered by national guarantees.

217. The monetary union is worth making such efforts for. For all the problems, one should not overlook that in terms of debt levels and new indebtedness it is in a far better position than the United States, the United Kingdom or Japan. Nevertheless the EMU is assessed far more unfavourably by the financial markets. It would be fatal if a solution were not found that brings this unequal treatment to an end. The debt redemption fund outlined above can achieve this.

218. In the medium-term view, in the next few years every effort will need to be made to strengthen fiscal discipline by more intelligently tying it to rule and by more independent decision-making processes as part of the Stability and Growth Pact as well as by preventative market discipline. New institutions are not needed here, nor is an additional transfer of financial means at the European level.

Appendix

Table 14

Debt crisis in Europe – a chronology of European measures[1)]

Date	Body involved	
11 February 2010	European Council	Eurozone member states agree political support for Greece. If necessary, measures will be taken to secure the Euroarea's financial stability.
15 March 2010	Euro Group	Discussion on Greece's prospects.
25-26 March 2010	European Council	To secure financial stability and the common currency, financial assistance is required for Greece. Should insufficient financing in the capital markets be achieved, then, under strict conditions and without any subsidy involved, bilateral loans will be granted together with the IMF.
11 April 2010	Euro Group	Resolves cornerstones of an assistance package for Greece of € 110 billion.
23 April 2010	Greek government	Applies for financial support owing to pending insolvency.
2 May 2010	EU Commission, ECB	Agrees to international package of assistance for Greece.
7 May 2010	European Council	Heads of state and government resolve package of assistance for Greece.
7 May 2010	German parliament: upper and lower houses, German President	Resolves and announces the "Currency Union Financial Stability Act". Approves the package of assistance for Greece.
8 May 2010	German Supreme Court	Rejects an urgent application as regards the package of assistance for Greece.
9 May 2010	ECOFIN	Resolves a "European Rescue Package" with a volume of € 500 billion.
9 May 2010	ECB	Starts buying treasury bonds as part of its Securities Markets Programme (SMP).
21 May 2010	German parliament: Upper and lower houses	Germany is the first country to agree to the European Rescue Package.
7-8 June 2010	Euro Group	In Luxembourg, the "European Financial Stability Facility" (EFSF) is established, which covers € 440 billion of the European Rescue Package.
10 June 2010	German Supreme Court	Rejects an urgent application to prevent the European Rescue.
30 June 2010	EU Commission	Declaration of intent: Member state budget discipline is to be more strongly monitored.
29 September 2010	EU Commission	Proposals to strengthen the Euro Stability Pact (so called "Six Pack").
28-29 October 2010	EU Commission	Plans to introduce permanent crisis mechanism to protect the euro.
11 November 2010	Irish government	Files for financial support via the EFSF.
28 November 2010	Euro Group	Resolves details for the permanent crisis management mechanism, the "European Stability Mechanism" (ESM).
7 December 2010	ECOFIN	Resolves financial assistance for Ireland via the EFSF.
16 December 2010	European Council	Agrees to change the EU Treaty in order to be able to implement the ESM.
16 December 2010	ECB	Resolves to double the ECB's capital stock.
11 March 2011	Heads of state and government	Approve the pact for the euro with which competitiveness and employment are to be achieved.
15 March 2011	ECOFIN	Agrees to intensify the Stability and Growth Pact on the basis of the "Six Pack". Actual structure to be presented in summer 2011.

Even Table 14

Debt crisis in Europe – a chronology of European measures[1] (contd.)

Date	Body involved	
21 March 2011	Euro Group	Agrees to intensify the Stability and Growth Pact on the basis of the "Six Pack". Actual structure to be presented in summer 2011.
24-25 March 2011	European Council	Approves the ESM with a loans volume of € 500 billion.
7 April 2011	Portuguese government	Applies for financial assistance via the EFSF.
6-7 May 2011	Euro Group	Reaches no results on debate on Greece.
12 May 2011	German parliament: lower house	Pass a motion for a resolution: Package of assistance for Portugal is possible.
16 May 2011	Euro Group	Authorizes financial assistance for Portugal totalling € 78 billion and spread equally across the EFSM, EFSF and the IMF.
20 June 2011	Euro Group	Agrees to a change to the EFSF framework agreement.
11-12 July 2011	Euro Group	Signs off the ESM. Consultations on a second package of assistance for Greece.
21 July 2011	Euro Group heads of state and government	• Resolves the second package of assistance for Greece of € 109 billion. • Additional voluntary waiver by private investors on 21% of outstanding receivables. • Extends the term and reduces the interest for Greece, Ireland and Portugal. • Increases the EFSF guarantee framework to € 780 billion. • Expands tasks to include secondary market buying and assistance for governments in recapitalizing banks.
8 August 2011	ECB	Reactivates the SMP and buys Italian and Spanish treasury bonds.
7 September 2011	German Supreme Court	Declares Germany's participation in the first package of assistance for Greece and the Euro Rescue Plan to comply with the constitution.
16 September 2011	ECOFIN	Reaches final agreement on intensifying the Stability and Growth Pact by means of the "Six Pack".
28 September 2011	EU-Parlament	Approves the "Six Pack".
29-30 September 2011	German parliament: Upper and lower houses	Approves the increase to the EFSF.
6 October 2011	ECB	Covered Bond Purchase Programme recommences Mortgage bonds totalling € 40 billion to be bought.
9 October 2011	German and French governments	Announce a comprehensive package to solve the European debt crisis through end of October 2011.
10 October 2011	European Council	Meeting of the European Council on 17-18 of October postponed.
22-23 October 2011	European Council	Consults on expanding assistance for Greece, greater participation of the private sector, and solution of the Euroarea debt crisis via the EFSF.
26 October 2011	European Council	• Private investors waive 50% of the outstanding receivables from Greek treasury bonds. • EFSF is leveraged in order to boost total loans volume to € 1 trillion. • Banks are recapitalized
26 October 2011	Germany parliament	Motion for resolution put: "Leverage" of the EFSF is possible.
28 October 2011	German Supreme Court	Temporary injunction: no transfer of German parliament's rights of participation to the so-called "9 Special Committee".
31 October 2011	Greece prime minister	Announcement of a referendum in Greece.

1) European Council: EU Heads of state and government; ECOFIN: EU economics and finance ministers; Euro Group: Euroarea economics and finance ministers

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