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The Sovereign Debt Crisis: Causes and Consequences

The quasi-global sovereign debt crisis is currently the focus of the political debate and of media attention. The origins of the crisis have long been considered too narrowly, with often one-dimensional solutions being proposed. A somewhat more comprehensive approach was first adopted at the EU Council Meetings of October and December 2011, thereby providing a major step towards the resolution of the most pressing problems. Tighter fiscal policy and more ample resources for the stabilisation fund are important moves. Nevertheless, a lasting solution must take a broader perspective and address certain deficiencies in the setup of EMU that were brought to the fore by the uneven economic performance of its members. In the longer run, the introduction of cyclical as well as structural elements of a transfer union appears unavoidable. In addition, the countries of the southern periphery will have to become more competitive and their debt levels need to be cut; moreover, the problem of real interest rate differentials has to be solved that derives from the uniform nominal interest rate level along with the inevitably higher inflation rates in countries catching up towards the price and income levels of the more prosperous member countries.

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Government debt of most European countries virtually exploded in the 2000s, with debt service cost in some countries rising drastically despite the expansionary monetary stance. Public opinion and the media mostly hold the increase in government spending responsible for the debt increase, although this is too narrow a view. The "sovereign debt crisis" is a complex phenomenon, resulting from the coincidence of several factors and eventually triggering a confidence crisis on financial markets. For the larger part, the jump in government debt of the last few years is the consequence of the financial market crisis: on the one hand of tax revenue shortfalls and fiscal stimulus programmes to mitigate the crisis-induced recession, on the other hand of financial rescue operations for the banking sector. The confidence- and ergo debt crisis does by no means strike all countries of the euro area, nor is it directly related to the respective government debt ratio: in at least two of the most severely affected countries, this ratio was below the euro-area average at the onset of the crisis, while some highly-indebted countries have not (yet) been hit by a confidence crisis. Rather, the loss of confidence affected exclusively countries at the European periphery whose competitiveness and structural deficiencies were all but new, but had been largely neglected so far. These deficiencies partly resulted from wrong policies of the countries concerned and partly from flaws in the institutional framework of Monetary Union. The problems resulting from the financial crisis of these countries were amplified by hesitant or ill-designed euro area support programmes, such that the loss of confidence emanating from the financial market crisis intensified and persisted, with the danger of spreading to other countries.

The additional government expenditure and the implicit increase in the debt ratios were not so much the outcome of a lack of control over government spending, but rather the direct and indirect consequence of the financial market crisis. The latter, as is well-known, originated in the USA from an unexpected coincidence of several

**Financial market crisis
as major cause**

factors (Aiginger, 2009, Tichy, 2009A, Url, 2010). The starting points was an excess supply of funds in search of profitable investment, mainly from emerging markets, which together with an over-expansionary monetary policy stance led to exaggerated credit expansion (mortgages) and a real estate bubble. Deregulation and new models of risk assessment facilitated financial innovation, in particular the "bundling" of (mortgage) loans and their sale by tranches of differential risk (Hahn, 2010). Adding to this was a substantial under-estimation of risk, both generally against the background of the stable period of the Great Moderation and specifically due to a lack of appropriate models for the assessment of bundled risks (Colander *et al.*, 2009). This underestimation of risks was reinforced by a dramatic, to some extent driven by profit seeking, over-valuation of the credit bundles by the rating agencies. Benmelech – Dlugosz (2009) found from a data set of almost 4,000 tranches of collateralised loan obligations (CLOs) that four-fifths of them had received AAA ratings, although the average rating of the underlying credits of B+ was ten out of 20 steps below. No wonder that these AAA-rated papers lost 70 percent of their value in 2007 and 2008 (Pagano – Volpin, 2009).

When after first signs in September 2007 (withdrawal by customers of their assets at Northern Rock) the takeover of Bear Stearns in March 2008 and the bankruptcy of Lehman Brothers in September 2008 revealed the potential risks of the system, it came as a surprise shock for all participants. Admittedly, scientific research since 2000 had repeatedly pointed to elements of instability in international financial markets (for an overview see Tichy, 2010) and monetary authorities were well aware of the nature, but not the magnitude of these risks (Tichy, 2011); nobody, however, had expected the simultaneous incidence of many of these risk elements. It was the surprise factor that explains the extent of the crisis. As Caballero – Kurlat (2009) show, the surprise factor is not only typical for severe financial market crises, but also a root cause. The shock generated uncertainty and a loss of confidence, notably among banks, which led to a collapse of the money market (IMF, 2011A).

Due to the global integration of the financial system and in particular due to the widespread investment of US real estate assets in complex financial derivatives, the crisis quickly spilled over to Europe. The crisis took on a systemic dimension not only in the USA and the financial centre of the UK to which the US economy has close ties, but also in Ireland, Iceland, the Netherlands and Belgium, to a lesser extent also in Denmark, Germany and Austria (Laeven – Valencia, 2010)¹. Interestingly, the problem countries of Greece, Spain and Portugal were initially not affected by the financial market crisis as such. Nevertheless, in the confidence crisis that followed from the banking crisis, Greece, Belgium and Ireland, but also Austria required substantial liquidity support from the Central Bank (Laeven – Valencia, 2010, p. 14); total losses from bank insolvencies and government support until 2009 (included) rose to more than half of bank assets in Iceland, Belgium, Greece, France and Ireland (Laeven – Valencia, 2010, p. 18).

The major part of government debt expansion is, in any case, an indirect (cyclical stabilisation)² and direct (bank rescue operations) consequence of the financial market crisis. According to IMF estimates (IMF, 2011B), the government debt ratio of the industrialised countries will rise by 38 percentage points over the period from 2008 to 2015; almost half of the increase (18 percentage points) is explained by the fall in revenues (automatic stabilisers), one-sixth respectively by higher interest rates (7 percentage points), expenditure for cyclical stabilisation (6 percentage points) and support for the financial sector and depreciation of asset values (7 percentage points). Without prejudice to the strong impact of the financial market crisis on the recent debt dynamics it is nevertheless true that the level of government debt was relatively high at the outset, that major economies did not address structural and

¹ Laeven – Valencia (2010) define a systemic crisis as coincidence of at least three of the following criteria: liquidity support of at least 5 percent of foreign deposits and liabilities, cost of bank restructuring of at least 3 percent of GDP, sizeable nationalisation of banks, important bank guarantees, sizeable purchases of bank assets and stoppage of withdrawals or bank holidays.

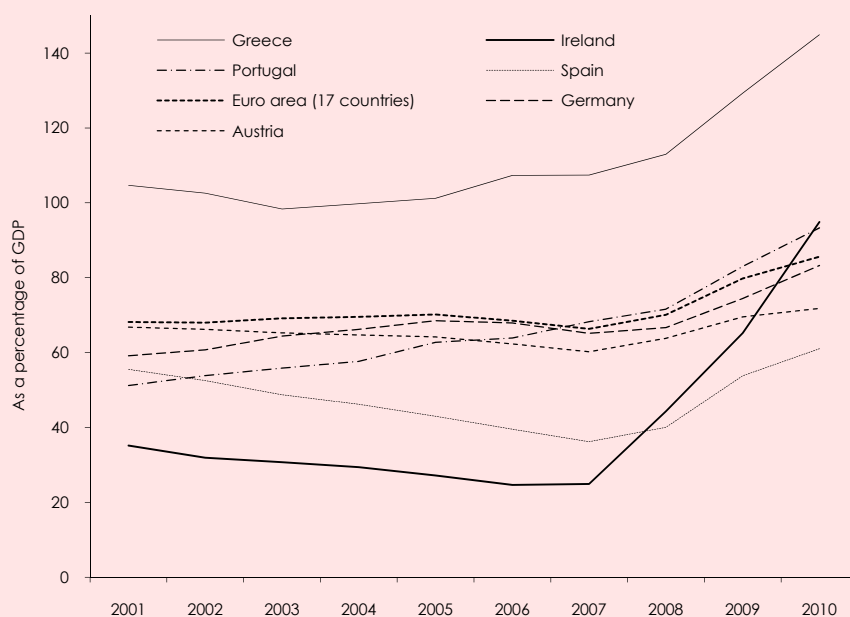
² See Breuss – Kaniowski – Schratzenstaller (2009).

often rising budget deficits even in cyclically "good times" and that policy action to fight the crisis was complicated by the high debt levels.

The four countries at the periphery of the euro area which have become the epitome of the sovereign debt crisis (Greece, Portugal, Spain, Ireland) were hit rather late by the financial market crisis. It was only during 2009 that financial markets claimed significant risk premia, and rating agencies started downgrading not before spring 2009, and even then only sporadically and tentatively. As recently as during 2010 and mainly in winter 2011, downgrades became massive and taking several notches (Tichy, 2011, Uri, 2011). The late and eventually massive reaction of markets as well as agencies is rather surprising, given that the problems of the countries concerned did not emerge all of a sudden. Economic conditions of the euro area periphery had weakened markedly already between 2002 and 2008: over that period, current account deficits widened swiftly from 6.5 percent of GDP to 14.8 percent in Greece, from 8.2 percent to 12.7 percent in Portugal, from 3.2 percent to 9.7 percent of GDP in Spain, and from 0.9 percent to 5.8 percent in Ireland. The strong upward drift of unit labour cost undermined competitiveness in Greece and Portugal. Private household indebtedness ratcheted up in all four countries. The budget deficit in Spain and Ireland remained nevertheless below the Maastricht ceiling until 2007, while exceeding it in Greece and Portugal; deficits began to rise strongly only as of 2008, from that time in all four countries. The government debt ratio (Figure 1) in 2007 exceeded the Maastricht ceiling only in Greece and Portugal, remaining markedly below the reference value in the two other countries.

European periphery as special problem case

Figure 1: Government debt ratios of selected countries



Q: European Commission (2011).

The problems of the European periphery were thus at most partly a sovereign debt crisis: the key element was a structural crisis characterised by a loss of competitiveness as a result of the swift rise in unit labour cost and insufficient adjustment of the supply structure to international demand patterns³. Low real interest rates gave rise

³ As Breuss (2011) shows, the deterioration of the unit labour cost position (vis-à-vis the other euro area countries) in Greece, Portugal and, to a lesser extent, Spain led to a markedly higher current account deficit than in other countries. The structural problems therefore exceed by far the wage and productivity aspects.

to excessive private credit growth, inflated demand particularly for import goods, and a speculative real estate boom. The problems accumulated over the years, were insofar foreseeable and were indeed recognised (Tichy, 2010, 2011), but neither policy nor markets nor rating agencies reacted in time.

Table 1: Indicators for Greece, Ireland, Portugal and Spain since 2002

	Greece			Ireland			Portugal			Spain		
	2002	2008	2010	2002	2008	2010	2002	2008	2010	2002	2008	2010
	As a percentage of GDP											
Current account balance	- 6.5	- 14.8	- 10.6	- 0.9	- 5.8	+ 0.5	- 8.2	- 12.7	- 9.9	- 3.2	- 9.7	- 4.6
General government balance	- 4.8	- 9.8	- 10.6	- 0.4	- 7.3	- 31.3	- 2.9	- 3.6	- 9.8	- 0.2	- 4.5	- 9.3
Public debt	103	113	145	32	44	95	54	72	93	53	40	61
Private household debt	20 ¹	55	65	.	117	125	75 ¹	102	106	55 ¹	89	92
Private household saving ratio		0 ²		2.4	0 ²			0.7 ²			3.6 ²	
	Percentage shares											
Over-indebted households ³			55			25			45			30
	Percentage points											
Interest rate spread ⁴	+ 0.2	+ 0.5	+ 5.5	+ 0.1	+ 0.2	+ 2.2	+ 0.1	+ 0.2	+ 1.8	+ 0.0	+ 0.1	+ 0.7
	Ratings											
Moody's	A2	A2	Ba1	Aaa	Aaa	Baa1	Aa2	Aa2	A1	Aaa	Aaa	Aa1
Standard & Poor's	A+	A+	BB+	AAA	AAA	A	AA	AA	A-	AAA	AAA	AA
Fitch	A	A	BBB-	AAA	AAA	BBB+	AA	AA	A+	AA+	AAA	AA+
		Ø 2001- 2007	Ø 2007- 2010		Ø 2001- 2007	Ø 2007- 2010		Ø 2001- 2007	Ø 2007- 2010		Ø 2001- 2007	Ø 2007- 2010
	Annual change, percent											
GDP, volume		+ 4.1	- 2.3		+ 5.1	- 3.5		+ 1.0	- 0.4		+ 3.4	- 1.0
Consumer price index		+ 3.4	+ 3.4		+ 3.1	- 0.1		+ 2.8	+ 1.0		+ 3.3	+ 2.0
Unit labour cost ⁵		+ 6.2	+ 4.7		- 1.1	- 8.4		+ 1.1	+ 2.5		+ 2.8	+ 1.6
		2002/ py ⁶	py ⁶ / 2010		2002/ py ⁶	py ⁶ / 2010		2002/ py ⁶	py ⁶ / 2010		2002/ py ⁶	py ⁶ / 2010
	Percentage changes from peak year											
Real estate prices		+ 35	- 8		+ 75	- 36		+100	- 8		+ 65	- 0
Peak year		2008			2006			2008			2009	

Q: Cecchetti – Mohanty – Zampolli (2011), European Commission (2011), OECD (2011A, 2011B), Tichy (2011), ZEW (2011), WIFO calculations. – ¹ 2000. – ² 2007. – ³ Share of private households facing financing problems, 2009. – ⁴ Difference vis-à-vis euro area interest rate for 10-year government bonds (euro area average 2002: 4.9 percent, 2008: 4.3 percent, 2010: 3.8 percent). – ⁵ Manufacturing. – ⁶ Peak year.

Ireland was warned by the OECD (2001C) already in the Economic Survey 2001 of the consequences of rising house prices, underlying which was not just higher demand for homes, but mainly speculation and shortcomings in the infrastructure. In 2003, the OECD pointed to the structural problems after the end of the IT boom ("the era of the Celtic tiger is over") and to the need for adjustment to permanently lower growth rates going forward (OECD, 2003B). In 2008, the OECD (2008B) addressed in a dedicated chapter "Banks in Prudence" the risks deriving from over-expansion of bank credit, from rising private household debt (to twice the aggregate income level) and from excessive bank refinancing via the money market. The doubling of the Irish government deficit between 2008 and 2010 is due to the restoration of bank viability that proved particularly expensive.

Greece, like Portugal, belongs to those countries which formally fulfilled the EMU entry criteria (even that is less clear for Greece), but by no means the criteria that academic research had identified as prerequisites for participation in a currency union (Mundell, 1961, McKinnon, 1963, Kenen, 1969). Adding to this were structural deficiencies and a problematic course of economic policy. Already in 2001, the OECD (2001B) referred to the growing upward pressure on expenditure and noticed one year later that Greece despite rapid economic growth was unable to avoid a government deficit of 4.8 percent of GDP (OECD, 2002); at the same time, it criticised

the low degree of wage flexibility and excessive wage increases in the public sector. In 2005, the OECD identified Greek GDP growth as mainly driven by permanent budget deficits, and one year later it underlined the steady loss of competitiveness and high inflation: "Relatively high inflation implies low real interest rates, which fuel domestic demand. However, losses in competitiveness may ultimately undermine growth performance" (OECD, 2006A). The lack of competitiveness is also caused by an insufficient industrial infrastructure and an inefficient public administration⁴.

Portugal had much less of a problem with budget deficits and government financing, but rather with declining competitiveness, low private household saving and substantial household debt (OECD, 2004), as a result – like in Greece – of inflation-induced low real interest rates. The largely credit-driven domestic demand could not ensure sustainable GDP growth. "Portugal's economic performance has deteriorated markedly since 2000, with the slowdown turning out to be more severe and prolonged than in most other OECD countries. This lack of resilience reveals structural weaknesses" (OECD, 2006B).

Likewise, Spain did not have a fiscal problem until 2008. As in Portugal, growth was largely supported by rising private household debt. Already at an early stage, the OECD (2001A, 2003A) pointed to modest productivity gains and called for reforms of real estate and labour markets, notably a streamlining of wage setting procedures. In 2007, it noted that "the very rapid rise in household debt and property market prices . . . could jeopardise macroeconomic stability" (OECD, 2007) and one year later "the long period of virtually uninterrupted strong growth since the early 1990s has ended. This is likely to bring about lasting and profound economic changes. Housing construction is slowing sharply from an unsustainable level, and private consumption is also adjusting to more restrictive conditions in financial markets at home and abroad. . . . The exposure of the unincorporated, private domestic savings banks – which hold about half of total banking-sector assets and are, as any other bank, under the supervision of the Bank of Spain – is higher than that of other commercial banks" (OECD, 2008A).

This short overview of four countries confirms the conclusions by Aiginger (2011) from a survey of 37 industrialised and emerging economies: widening current account deficits, credit expansion⁵ and earlier demand growth are usually harbingers of a crisis, not however an increase in fiscal imbalances. Among the countries at the euro area periphery investigated here, expansionary fiscal policy was admittedly a major cause of the problems in Greece, to a lesser extent also in Ireland, but not in Spain and Portugal. Lack of competitiveness, structural deficiencies, private credit expansion and real estate bubbles driven by low real interest rates were all mainly responsible for the mounting difficulties in these countries. However, neither the EU institutions nor the national authorities reacted to the steady deterioration of economic fundamentals⁶, as they obviously relied on the hoped-for economic growth and the self-regulating capacity of financial markets. Contrary to the hopes cherished by business, politics and parts of academia that markets would promptly sanction a policy of excessive budget deficits, interest spreads reacted much too late. Nor did the rating agencies react at an earlier stage (Tichy, 2011, Url, 2011).

Why markets and rating agencies responded only with a long delay, is all but clear. The hypothesis that they had hoped for a bail-out by the other euro area countries is corroborated by the overshooting downgrades as from late autumn 2010, when such a solution appeared increasingly uncertain. Nevertheless, this hypothesis can

⁴ Greece has the lowest manufacturing share of GDP of all EU countries and hardly receives foreign direct investment. It does not succeed in fighting tax evasion, nor in stopping the payment of retirement benefits to persons no longer alive. To that extent the Greek debt problem represents a special case that should not be generalised.

⁵ Scientific literature (Borio – Drehman, 2008) cites credit expansion itself, not only higher credit extended to government, as a major cause of all financial market crises – not just the present one; this insight is being ignored in the public debate.

⁶ One reason may be that at the time also large EU countries (unlike the medium-sized ones) violated the Maastricht criteria.

hardly explain the differential assessment of the four countries at the euro area periphery by the rating agencies during the period between their entry into Monetary Union and the beginning of 2009⁷. It is difficult to believe that investors thought that the EU members countries were more ready, in the event, to bail-out Spain than to do so for Greece. Moreover, they should have been aware that a bail-out is of little help if a country suffers from substantial structural problems, as were clearly revealed by unprofitable investment, a lack of real wage flexibility and the competitiveness problems of the countries concerned. In any case, the transactions that were based on a no-bail-out hypothesis contained a significant speculative element (namely the speculation of a bail-out contrary to the Treaty provisions). Rather more plausible is the hypothesis that the late reaction of markets and rating agencies is due to a relatively short planning horizon of market participants⁸ and to rating agencies being victim of the usual forecasting errors: pro-cyclicality, incorrect identification of turning points, under-estimation of amplitudes and neglect of political elements; not least it was impossible for them (as for anybody) to foresee shocks (Tichy, 2011). Beyond the forecast errors by policy, markets and agencies, hardly any of the stakeholders recognised the faults in the design of Monetary Union, and even less the constraints of action to which its participants are subject.

Not the financial market crisis as such therefore triggered the sovereign debt crisis of the countries at the euro area periphery, but the crisis-induced *loss of confidence*. Two components ought to be distinguished: first, confidence faded because policy of the member countries, the EU and the IMF proved too cumbersome as to address the problems in time and with the appropriate determination (see further down as well as Tichy, 2011). Second, confidence receded also because deficiencies that were so far accepted or at least ignored by market participants and rating agencies all of a sudden provoked sizeably negative expectations. Thus, persistent current account and budget deficits of the countries at the euro area periphery were for a long time not considered as problematic and therefore did not give rise to higher risk premia; investors trusted these countries and their growth potential despite the problems and deemed them creditworthy. That changed abruptly in 2010: budget deficits and the implicit rise in government debt became *the essential assessment criteria*; confidence in these countries disappeared, although on the fundamental problems nothing had changed. Most recently, expectations seem to turn once again since markets, as suggested by the downturn in share prices, appear to be more concerned about the danger of economic recession than about government deficits and debt (see further below).

Parliaments' and governments' eagerness to spend is generally held as the major cause of the current sovereign debt crisis. This is only partly true. On euro area average, the government debt/GDP ratio remained broadly stable around 68 percent between 2001 and 2006, and even edged down to 66 percent in 2007, before the outbreak of the financial market crisis; likewise, for the EU 27, it declined from 61 percent to 59 percent in 2007, heading up only thereafter. The problem countries Spain and Ireland even managed to cut their debt ratios substantially between 2001 and 2007, by 19 and 10 percentage points respectively. In Austria too, the debt ratio declined during that period by almost 7 percentage points. Only in the two leading EU economies Germany and France, as well as in the problem countries Portugal and Greece, the debt ratio increased: by 6 percentage points in Germany, 7 percentage points in France, 3 percentage points in Greece and 17 percentage points in Portugal⁹. Yet, this trend rise was more than offset by prudent policy in the other

Government deficit policy over-estimated

⁷ Ireland and Spain AAA, Portugal AA (i.e., two notches lower) and Greece A+ (again two notches down).

⁸ In the very periods of uncertainty, the planning horizon is short. Thus, a senior dealer of DME Securities at the New York Stock Exchange claims: "Such nervousness as now provoked by the European debt crisis I have rarely seen. Nowadays, there are only day traders around. Nobody buys shares anymore with the aim of holding them for two years. Too uncertain" (Valdes, 2011).

⁹ Also in the USA and Japan, the public debt/GDP ratio climbed markedly, by 8 and 23 percentage points, respectively.

euro area countries. Admittedly, the debt ratio by itself is but a partial indicator: future commitments may arise also from contingent liabilities like retirement benefit claims or public guarantees; moreover, the debt ratio as conventionally calculated (in gross terms) does not allow for the (marketable) public assets to be set against the public liabilities. While budget deficits and debt ratios were high already before the crisis and could have been taken down more markedly during "good times" of the business cycle, they still did not go up and were not at the root of the sovereign debt crisis. Excessive government expenditure and widening budget deficits indeed occurred in a few countries, but not in the EU or the euro area at large.

It was only in 2008 and even more so as from 2009 that debt ratios skyrocketed in the wake of the banking crisis, in all EU countries except Bulgaria: in the EU 27 from 63 percent in 2008 to 80 percent in 2010; in the euro area on average from 70 percent to 86 percent. Frontrunner was the UK whose debt ratio nearly doubled between 2007 and 2010, and the countries at the EU periphery. *Laeven – Valencia* (2010, p. 22) estimate the direct fiscal cost of the banking crisis at nearly 6 percent of the industrialised countries' GDP, with peak ratios of around 15 percent in Iceland and the Netherlands, and about 8 percent in the UK and Ireland. Three-fourths of the additional public spending in the euro area were accounted for by the recapitalisation of financial institutions. At the same time, fiscal measures of cyclical stabilisation proved inevitable given that output in the industrialised economies fell 8 percent below potential (*Laeven – Valencia*, 2010, p. 26).

The financing problems of the southern European countries resulting from structural problems reveal deficiencies in the design of European Monetary Union (EMU). Already when EMU was founded, two potential obstacles were discussed, although concerns were brushed aside for political reasons: to what extent a monetary union was at all viable without the superstructure of a political union, and whether the common currency should be introduced *after* the smooth functioning of economic union being assured (coronation theory) or, from a more dynamic perspective, already before, such that the common currency would promote the formation of economic union (monetarist approach)¹⁰. The President of the Commission at the time, Jacques Delors, favoured the monetarist approach in order to give impetus to the then hesitant progress of integration. In view of the structural differences between the potential EMU participants, differences he was well aware of, he envisaged a substantial increase in the structural and regional funds as well as an EU-wide cyclical stabilisation policy. His plan did not materialise. EMU may still have functioned smoothly if strict accession criteria had limited participation to economies of comparable structure and similar level of development¹¹. However, political considerations were opposed to this approach. The rules were not adjusted to the rather heterogeneous group of participants; the admission criteria of the Maastricht Treaty mirrored the concept of a narrow and static view of a well-functioning monetary union, and even these criteria were interpreted in an extensive way during the accession negotiations.

The EMU countries lost of necessity the possibility to conduct an independent monetary policy, which given their heterogeneity created at least three different sets of problems:

- First, the uniform nominal interest rate exacerbated the structural and even more the cyclical problems: for the countries at the EU periphery, the uniform nominal interest rate implied a too low real interest rate¹², giving rise to excessive household indebtedness and real estate bubbles. Conversely, for Germany it implied

Deficiencies in policy action at EU level

¹⁰ The term is misleading since it was the monetarists who advocated the coronation theory.

¹¹ In a simulation, *Breuss* (1997) showed that a small monetary union (Belgium, Netherlands, Austria, France, Germany) would hardly change the status quo, whereas a large monetary union would lead to polarisation (similarly *Breuss*, 1998).

¹² The inflation rate is higher in poorer and faster-growing economies ("Penn-Effect"), such that the real interest rate is lower (*Ravallion*, 2010).

an unduly high real interest rate that was generally held responsible for the problems on the labour market.

- Second, the members of a monetary union have to incur debt in a currency whose exchange rate they cannot control themselves. Thus, even rumours about sovereign problems may turn self-fulfilling: they lead to the withdrawal of funds and their re-investment in other countries of the euro area, thereby necessarily creating liquidity and current account problems. With currency devaluation being impossible, the country in difficulty has to resort to fiscal restriction: growth, employment and tax revenues will be dampened, the budget deficit rises and may require further restriction and eventually lead to a solvency crisis (Kopf, 2011).
- Third, the EMU participants lost the possibility to counter policy mistakes and external shocks by currency devaluation. While the earlier widespread practice of repeated devaluation was certainly not optimal, the renouncement to devaluation requires the availability of alternative tools, in particular real wage flexibility. Moreover, the formation of a monetary union with members of different economic performance would have required rules and provisions, notably for the coordination of economic policy and its effective implementation, transfer payments in case of cyclical divergence and rescue measures against financial market attacks. Finally, rules for coping with crises affecting one or several participants are indispensable; a no-bail-out clause, moreover vaguely specified, does not suffice in particular when markets at first do not react at all to aberrations and subsequently to an exaggerated extent.

In view of the flaws in the design of EMU and the diverging political concepts about the future of the EU, aid programmes were delayed and decided only half-heartedly when the countries at the EU periphery slipped into the debt crisis. The profile of the interest rate spreads and the behaviour of the rating agencies clearly demonstrates that their early modest reaction turned into nervous over-reaction when the limited action capacity of the Community became evident (Tichy, 2011). "After all, one cannot decide at a EU Summit in July on a plan in order to calm markets, and then elaborate the details only in autumn. . . . There are moments when you have to draw your cards quickly" (Delors, 2011). The lack of action by the EU institutions had to be compensated by the European Central Bank which, by way of generous interpretation of its statute, proceeded to massive bond purchases. The confidence of investors ("the markets") could be sustained only to some extent and temporarily by such emergency action. Only at a very late stage, at the end of October 2011, the EU member countries brought themselves to adopt elements of a more comprehensive solution.

The real estate market crisis in the USA thus triggered a global banking crisis and the latter led to a recession; the fight against that recession, together with the bank rescue operations were at the origin of the sovereign debt crisis that is largely a crisis of confidence by financial markets. The confidence crisis was triggered by the Bear-Stearns and Lehman Brothers shocks that revealed the risks stemming from deregulation and financial innovation. Suddenly, not only the risk appetite of investors collapsed that before had grown enormously (IMF, 2011A); also the assessment of risks and the driving factors changed. This is clearly illustrated by the three stages of country risk assessment by the rating agencies (Tichy, 2011): the ratings of the four countries at the euro area periphery, after their entry into EMU, were at first upgraded markedly; potential problems for these countries deriving from the renouncement to devaluation were ignored. This benign perception did not change when structural problems, budget and current account deficits mounted in the run-up to the major financial market crisis, nor in the first eighteen months of the financial market crisis itself. In the second stage, as from early 2009, while nothing changed with the problems of the southern European countries, the perception of these problems by financial markets and rating agencies changed nevertheless; risk premia increased moderately and ratings were lowered slightly. The third stage of massive in-

Loss of financial market confidence

creases in spreads and downgrading of Greece and Ireland to junk status was set off by the struggle for rescue measures¹³; Portugal was next to follow.

Confidence crises on financial markets typically exhibit a tendency of self-reinforcement, since exaggerated caution in financing decisions further exacerbates the problems of debtors. In the present instance this holds particularly true. The EU assistance programmes are as controversial as the Covered Bond Purchase Programmes (CBPP) by the ECB (the latter being motivated by the deficiencies of the former and necessarily limited in scope and duration). The fiscal restriction programmes face increasing political resistance in the countries concerned¹⁴, and even if budget deficit could be reduced swiftly it remains doubtful whether the level of debt is sustainable (even after a haircut for Greece). As explained above, liquidity crises are prone to degenerate into solvency crises if countries are forced to incur debt in a currency whose exchange rate they cannot control. At present, the aid programmes are ill-designed to address this situation. Meanwhile also, policymakers and market participants increasingly realise that the simultaneous attempt of all countries to consolidate their fiscal deficits will dampen business activity and tax revenues.

As the analysis of severe financial market crises by *Reinhart – Reinhart (2010)* shows, in the wake of such crises growth of GDP is reduced by 1 percentage point for as long as roughly one decade, the unemployment rate is pushed up by 5 percentage points, and the credit/GDP ratio declines markedly. Already now it becomes clear that the crisis at hand does not deviate in the positive sense from this traditional pattern. Furthermore there are three other growth-dampening elements that complicate a solution of the debt crisis and its repercussions: first, the current crisis hits not only one country, but several participants of a monetary union, rendering decision processes much more difficult. Second, the well-known demographic problems and third, the high debt levels of governments and private households are aggravating factors¹⁵. Policy should therefore be prepared for a protracted adjustment period¹⁶ and action will have to tackle several aspects simultaneously. The decisive factor for overcoming the sovereign debt crisis will be the return of financial investor confidence. For this to occur, not only a co-ordinated set of measures is required that ensures the financing of the countries concerned over the next two to three years and addresses the root causes of the financial market crisis; what is equally crucial is a reform of the euro area institutions enabling an effective strategy against malfunctions, as well as a structural policy approach at European level working to restore competitiveness of the southern European countries.

As the reaction by financial markets (*Tichy, 2011, Url, 2011*) shows, confidence collapsed when the hesitant and inadequate policy action of the euro area countries became evident. Early and credibly sufficient support measures are therefore essential, although in a federation of democratic countries extremely difficult to achieve: beyond reaching a consensus among governments, time-consuming feedback mechanisms with national parliaments need to be established. It will be all but easy to streamline policy decisions and action such that they do not lag too much behind developments on financial markets. The debate about exclusion or withdrawal of single countries from the euro area appears to lack a realistic political perspective; therefore, the countries at the southern European periphery of the euro area will hardly be able to avoid an extended period of deflation.

¹³ Thus, the EU aid for Greece in May 2010 was decided only two days before the maturity of a large bond, just as the tranche of October 2011.

¹⁴ As found by *Ponticelli – Voth (2011)* from data for 28 European (since 1919) and 11 Latin American (since 1937) countries, the probability of revolt rises whenever public expenditure is cut by more than 3 percent of GDP.

¹⁵ As shown by *Cecchetti – Mohanty – Zampolli (2011)*, a government debt ratio of over 85 percent of GDP, a corporate debt ratio above 90 percent and household debt over 85 percent of GDP are likely to weigh on GDP growth.

¹⁶ According to recent literature (see e.g., *Crucés – Trebesch, 2011*), further to the long duration of the crisis and the high debt level there is the adverse factor that a government regains full access to capital markets only three to six years after a haircut and for some time also has to accept higher risk premia.

Overcoming the sovereign debt crisis

For some time now, work has been going on to *tackle the root causes of the financial market crisis*; however, under the impact of the lobbies concerned (Igan – Misra, 2011), the envisaged tighter regulation covers by no means the entire sector and also provides for extended transition periods. This will hardly suffice for early confidence to be restored.

An approach currently discussed and deemed promising is the "Schuldenbremse" (debt brake), a constitutional ceiling for the annual net government borrowing. Since many countries violated the fiscal Maastricht criteria even in "good times" and excessive debt weigh on economic growth (Cecchetti – Mohanty – Zampolli, 2011), and given the current high debt levels as a result of crisis-induced additional government spending, this discussion is perfectly understandable. Nevertheless, focusing entirely on this aspect as the key solution appears too narrow. Four elements ought to be considered:

- While reining in budget deficits is necessary in many countries, it is not a sufficient condition for overcoming the sovereign debt crisis. Contrary to a widely held view, the origins of the debt crisis do not lie in *generally* excessive government deficits, as has been demonstrated above; it is certainly true for a number of countries, but not for the euro area or the EU as a whole. In Spain and Ireland, to some extent also in Portugal, it was not the fiscal imbalance that gave rise to the financing problems, whereas high budget deficits in large EU countries, notably France and the UK, but also Germany, did not trigger financing problems. Thus, a debt brake can be only one element of a much more comprehensive "package" of measures.
- Constraints to fiscal policy will further narrow governments' scope for cyclical stabilisation, after the loss of the monetary policy instrument with EMU.
- The scope and speed of deficit reduction should give due consideration to the implicit feedback on business activity as well as on political stability; an exaggerated austerity policy may via tax revenue shortfalls prove counter-productive, i.e., deficit-increasing. This has meanwhile been realised also by financial markets: while they were at first primarily concerned about budget deficits and debt levels, they are now apparently more afraid of a potential recession¹⁷.
- The current discussion on the debt brake targets an unsuitable instrument, namely the budget deficit. It overlooks that the deficit, due to its partly endogenous character, cannot be fully controlled by policy and is therefore not the right target. Any setback to economic growth leads to tax revenue shortfalls and widens *ceteris paribus* the fiscal deficit. The attempt to reduce it via fiscal restriction weakens demand and employment further, thereby lowering tax revenues and pushing the deficit up again¹⁸. If policy reacts by enacting additional savings, it may trigger a vicious circle of steadily rising deficits and add to a loss of confidence in the effectiveness of fiscal policy. Rather than focussing on the deficit, policy should set quantitative *expenditure targets* (in absolute terms or in relation to GDP) since expenditure, unlike deficits, is predominantly under the control of policy. The current solution has a clear pro-cyclical effect.

Most important and indispensable, but at the same time most difficult from an academic and political perspective, will be the *institutional reform of the euro area*. A currency union requires the more complex institutions, the larger the area that it covers and the wider the differences in the cyclical profile (exogenous shocks), the economic structure and the level of development. In the "currency union" of the USA, the lack of cyclical policy instruments at the disposal of the individual States is mitigated by automatic stabilisers (fiscal federalism): a local revenue shortfall is offset to one-third by progressive taxes and transfers (Sachs – Sala-i-Martin, 1992, Bayoumi – Masson, 1995). Furthermore, the constraints to the Federal States' scope of

¹⁷ See e.g., *Financial Times* (2011), *Wall Street Journal* (2011) and *FAZ.net* (2011).

¹⁸ An increase in employment by 1 percent lowers the primary deficit via the automatic stabilisers by around ½ percent of GDP (Andersen, 2011).

action in the USA "currency union" are relaxed by the fact that inter-State mobility of labour and of companies is much higher than in the EU, partly due to the common language and culture and partly due to a different mentality.

Unlike in the USA, the euro area is lacking *cyclical re-balancing mechanisms*. If a monetary union of heterogeneous membership is to last permanently and enjoy confidence, a substitute has to be found for the cyclical policy instruments that the members lost with their entry into monetary union. The single cyclical and monetary policy will always be too expansionary for some members and too restrictive for others. The conventional monetary tools are no longer at the disposal of member countries, the fiscal ones only to a limited extent. The problems are further exacerbated by the fact that the common nominal interest rate implies different real interest rates for countries of different level of economic development. The real estate price bubbles in countries at the euro area periphery, fuelled by low real interest rates, were among the key drivers of the sovereign debt crisis. The drawback of the real interest rate differentials could possibly be mitigated by the introduction of quantitative credit constraints. Yet, EMU will not be able to do without at least rudimentary elements of cross-country automatic stabilisers, most likely as rules-based transfer payments.

Beyond measures to smooth the differential incidence of cyclical variations, a monetary union has to cope with the differences in growth, economic structure and development of its participants. The rescue fund of the European Stability Mechanism (ESM 2012) is an indispensable anti-crisis device, mainly to fend off attacks by financial markets, but it has to be supplemented by measures that prevent such problems from even originating. The currently debated common economic governance may indeed exacerbate the problems deriving from structural differences that ought to be addressed via country- and case-specific measures. Admittedly, the EU cohesion funds could be such a device, but their scope is too small and their focus on specific countries as well as on problems is inadequate. In the very countries of the southern periphery, these resources were not geared towards encouraging productive domestic and foreign investment and for boosting productivity, but were partly used for construction and infrastructure projects that were of little help for the problems at hand. Under the catchword of a "transfer union", there is considerable political resistance against an increase in intra-EU monetary transfers. This overlooks the fact that since its foundation the EU has actually and deliberately been a transfer union: sizeable transfers conserve agricultural structures, and several cohesion funds transfer resources, mainly for infrastructure build-up. However, in the southern European countries a re-structuring of production would in many instances have been more important. While transfers to mitigate structural problems and differences in economic development would require a reinforcement and better targeting of largely existing instruments, transfers for the prevention and overcoming of crises in the EU hardly exist.

Finally, EMU is also in need of rules for orderly insolvency procedures for member countries and systemic banks, which are indispensable whenever all previous measures failed to prevent a crisis.

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The Sovereign Debt Crisis: Causes and Consequences – Summary

Public discussion and the media have put the global debt crisis right at the centre of attention. The discussion, however, is unduly focussed on public indebtedness as the dominating cause. As a consequence, the appropriate remedy is seen in restricting public expenditure. Yet this ignores important causes of the debt crisis: structural problems – high and rising current account deficits and unemployment – in those countries that are most affected, the impact of the global financial crisis, and deficiencies in the design of the monetary union. In most countries public debt ratios had, indeed, risen at a breakneck pace for decades, but not in the decade before the debt crisis, and not in two of the most affected countries. Debt ratios skyrocketed only after 2008, as a consequence of the global financial crisis, as a result of bank rescue packages and recession-caused tax deficits. Financial markets and rating agencies suddenly worried about structural problems and about debt ratios which they had ignored before in other countries.

The debt crisis revealed deficiencies in the design of a monetary union of heterogeneous members: the common nominal interest rate implied very low real rates in the countries at the European periphery, triggering asset bubbles and misdirected investment. Lack of fiscal federalism, indebtedness in a currency they cannot control and the slow and inadequate rescue packages by euro area members and the IMF led peripheral countries into a self-enhancing process of rising interest rates, rising debt and spiralling recession. The paper argues that the way out of the crisis requires more than a debt brake, but calls for remedying the deficiencies in the design of the monetary union.