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Breaking up the eurozone: Blessing or disaster?

Summary

This paper deals with the question whether or not it is a good idea to break up the Economic and Monetary Union (EMU or eurozone). It will start with a short discussion of the various break-up scenarios. Next, it takes a closer look at the case in favor of breaking up the EMU, and the underlying assumptions of this case are identified. These assumptions are analyzed more deeply, after which the final part of the paper concludes.

The paper concludes that the danger of an acute bank run in a country preparing to leave the EMU will make any break up a very disorderly event. Strong negative wealth effects in the short run are expected to outweigh any long term benefits.

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Breaking up the euro: Blessing or disaster?

".....Should a euro-zone member ultimately find itself unable to consolidate its budgets or restore its competitiveness, this country should, as a last resort, exit the monetary union while being able to remain a member of the EU....."

Wolfgang Schäuble, May 2010

Introduction

In the early months of 2010 the euro came under heavy pressure. Greece's fiscal woes resulted in strong market reactions. Spreads between Greek and German government bond yields reached levels not seen during the euro's existence. These differences reflected worries that Greece might choose or be forced to leave the euro. Indeed, during the crisis, several politicians ventilated the idea that it might be a good idea to break up the eurozone, either by forcing the weaker countries out, or by leaving them behind after the departure of the "stronger" economies. European solidarity appeared to reach its limits during the crisis, until the EMU leaders in June 2010 decided to establish a huge guarantee scheme, called the European Financial Stability Facility (EFSF) amounting to € 440 bn that can be used for supporting countries experiencing problems rolling over their debt¹. In reaction, market nerves cooled initially, but soon after intra-euro bond spreads started widening again, in spite of ECB actively intervening in the bond market by purchasing public debt of the weaker countries. In the currency markets, the euro regained much of its lost terrain against the dollar, which also added to the markets' relief.

However, it is important to realize that, fundamentally, the situation is not much different than before. The current account and fiscal imbalances within the eurozone, which were important causes of the crisis, are far from gone. Equally, the flaws in the design of the euro, which make any national problem challenge the currency's viability, have not been solved. Moreover, the countries with large budget problems and/or large current account deficits, such as Greece, Portugal and Ireland, are heading for a long period of fiscal austerity and, as a result, low economic growth. Therefore, doubts about the long-term viability of the euro will be with us for many years to come, with some even arguing that a complete return to national currencies is the best option for all (Smallwood, 2010).

This paper will deal with the question whether or not it is a good idea to break up the Economic and Monetary Union (EMU or eurozone). It will start with a short discussion of the various break-up scenarios. Next, it takes a closer look at the case in favor of breaking up the EMU, and the underlying assumptions of this case are identified. These assumptions are analyzed more deeply, after which the final part of the paper concludes.

¹ The total of the rescue package amounted to a value of € 750 billion.

How to break up the EMU?

Various possible break-up scenarios have been put forward. These will not be discussed in detail here. There is a wide range of expected consequences. Smallwood expects, on balance, net positive results, although he fails to give exact estimates. Cliffe (2010), on the other hand, sees any potential long-term benefit being completely wiped out by the huge short term costs. He calculates the effect of the two extremes: a relatively mild one (only Greece leaving the EMU) and the extreme one (complete break-up of the EMU). In the first scenario, he estimates an extra decline of Greek real GDP by 7.5% compared to their baseline scenario, but also the GDP for the remaining members is expected to drop additionally, on average, by 1%.

In case of a complete break-up of EMU the results are, according to Cliffe, *"dramatic and traumatic"*. He expects real output falling for all former member states in the range of 5% to 9% in the first year after the collapse. The weaker countries will face a strong increase in inflation, while the core countries will experience a severe deflationary shock. This will, in the case of Germany, translate into two consecutive years of falling prices. Interest rates will strongly diverge, with bond yields falling to as low as 1% in Germany and as high as 10% in the "weaker" countries. His final conclusion: *"...the scale of the economic damage in the first two years would weigh heavily against any supposed long-run benefits. This is perhaps something that policymakers may care to reflect upon when they blithely talk of exit from the EMU as being a policy option"*

Given these totally different expected outcomes, it is time to have a closer look at the various considerations. We will do this by first discussing the case for breaking up the euro as presented by Smallwood and next analyze the underlying assumptions.

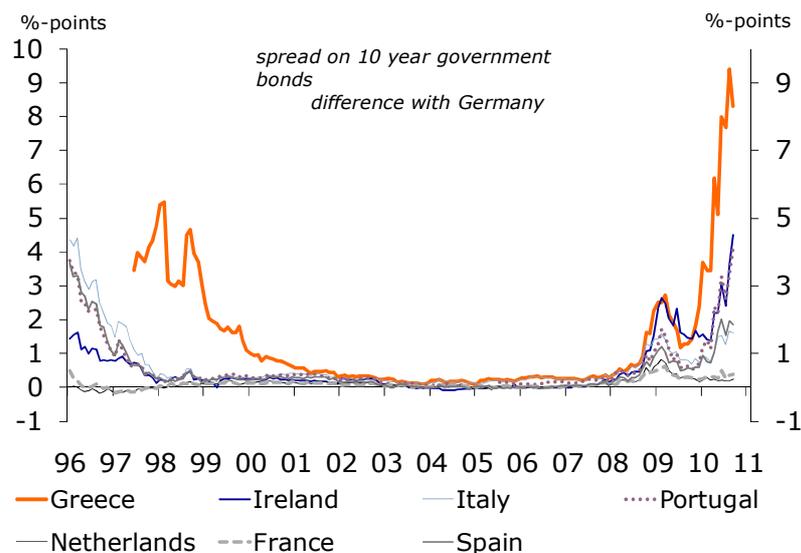
The case for breaking-up the euro

The arguments for breaking-up the euro are relatively straightforward. A number of countries, having run into serious economic problems, face a long period of painful adjustment. The underlying problem is that, when entering the eurozone, policymakers in these countries failed to understand what it means to enter a monetary union with some of the world's most competitive economies, most notably Germany. Participation in the euro had become a political prestige object which was, given the economic impact, rather foolish. More importantly, once they entered, they failed to implement the policies necessary to improve their competitiveness and fiscal positions. Initially, the countries that entered the eurozone experienced a strong stimulus following a decline in real interest rates, resulting from a strong nominal interest rate convergence across the eurozone (figure one).² Low inter-

² Note that the ECB policy rate (the short-end of the yield curve) was also too low in many of the faster growing countries. The common monetary policy of the ECB was clearly too loose for a number of countries. This is easily depicted by a simple Taylor rule for Ireland and Spain that shows monetary conditions were very accommodative in the boom years. To balance this monetary stimulus, the countries involved should have tightened their fiscal policies. Many of them clearly failed to do this.

est rates made it possible for governments to run large and easy to finance deficits. Also the private sector in many countries, such as Ireland, Spain and Portugal, were able to run huge deficits (i.e. could live beyond their means). Needless to say that the financial markets completely failed to discipline both policymakers and private debtors. Bond investors hardly differentiated, for example, between government debt of the various national member states, although a blind man could see that a German or Dutch public bond had a better credit quality than a Greek or Portuguese one. Other investors were also prepared to send a lot of money to the countries with huge national savings deficits (deficits on the current account of their balance of payments).

Figure 1: Spread with German Bunds



Source: EcoWin

Once a country enters the eurozone, it essentially gives up its ability to devalue its currency and to conduct an independent monetary policy tailor-made to its national economic conditions. None of this is new. It is the essence of a monetary union. It is also exactly for this reason that policymakers should have thought twice before introducing the euro as the new domestic currency in their country. Now that a number of countries have accumulated huge cross-border debts as a result of the long but unsustainable economic boom in the first years of EMU-membership, they face the problem that they have to pay the bill eventually. This means that the policies of financial prudence and strengthening of the economic structure have to be introduced as yet. But this time these policies will be pursued against a background of low or even negative economic growth. Moreover, given the fact that the surplus countries, especially Germany, are not prepared to stimulate their domestic demand through more fiscal stimulus, the EMU as a whole will have a strong deflationary bias. Therefore, the reform process will be long and painful. And the most important question is whether policy makers will be given the time they need to complete the process. The electorates may not be that patient. Given the size of the problem, the deflationary environment, which further worsens the situation, combined with the rather bleak growth prospects, might

create an incentive for some to leave the eurozone instead of pursuing the necessary austerity measures.

The proponents of breaking up the EMU argue that the improved competitiveness that goes hand in hand with a sharp depreciation of the new national currencies will help countries to find export-led growth, which will help them introduce the necessary reforms. For a strong country like Germany, on the other hand, leaving the EMU would lead to a strong deflationary effect, due to lower import prices and a significant loss of competitiveness. This will force the German government, according to this line of reasoning, to pursue a more expansionary fiscal policy. The unavoidable conclusion is that everybody will be better off by a complete break-up of the EMU (Smallwood, 2010). The problem with this argumentation is that it ignores many of the problems that will arise when one or more countries leave the EMU. Moreover, it is built on a number of assumptions, some of which are relatively acceptable.

These assumptions are:

- 1) Monetary unions can be broken up relatively easily. History is full of examples;
- 2) Although the potential problems resulting from wealth effects are recognized, they are ignored almost completely when adding up the costs and benefits of breaking-up the EMU. This is strange, as these effects may be huge for all countries (see below);
- 3) Countries can leave the EMU (or the EMU can be dismantled) in an orderly way. Whether this is true will be discussed below;
- 4) Although unilaterally leaving the EMU is a flagrant breach of European treaties, the exiting countries will remain on speaking terms with those they leave behind and, therefore, can still participate in the EU's Single Market;
- 5) Countries with current account surpluses should try to stimulate domestic demand by way of fiscal expansion, whatever the condition of their public finances.

The assumptions discussed

Ad 1) Can monetary unions be dissolved?

The EMU is meant to be irreversible. However, history is indeed full of examples of monetary unions falling apart. Smallwood (2010), for instance, gives a series of examples of countries 'successfully leaving monetary unions. The examples he mentioned are the 19th century Latin Monetary Union, the Austro-Hungarian Monetary Union, the Soviet Union and the British-Irish Monetary Union. He could have added the collapse of Yugoslavia. The problem is that none of these examples are comparable with the EMU.

A good example is what is known as the silver-based Latin Monetary Union, which commenced in 1865 and functioned well for some years, but fell apart several years later when most countries in Europe went over to the Gold Standard. Like the EMU, the Latin Monetary Union was a monetary union created between politically independent states that did not give up political and fiscal sovereignty to a central authority. The differences between the Latin Monetary Union (LMU) and the EMU, however, are striking. Unlike the latter, the LMU was no economic union. Moreover, there was no central bank with a single monetary policy and no single currency. National currencies could circulate LMU-wide, with their relative values determined by their silver content. The LMU never reached the degree of economic and monetary integration that the EMU has brought about. The other examples fail to convince as well. The USSR, Yugoslavia, and the Habsburg monetary union fell apart as the result of a complete political disintegration and a disastrous war respectively. And the British-Irish Monetary Union did not have a common currency. Its main characteristic was a circulation and acceptance of British money in Ireland on a one to one basis. And it was a remnant of the time that Ireland was British territory. But it was a very easy exercise to disentangle this union, which had in practice more of the characteristic of a currency peg.

Moreover, the LMU was dismantled when most of its members entered a larger monetary arrangement, the Gold Standard. The aftermath of the demise of the USSR and the end of WW-I were extremely difficult times. So history tells us that, yes, it is possible to break up monetary unions, but, no, it is not sure that the economic effects of such a break-up are beneficial. The conclusion is, that both the creation of the EMU – an economic and monetary union, voluntarily created by a relatively large number of political independent states – and its eventual demise are events with historical precedence. Given its complex structure, the disintegration of the EMU will be accompanied by difficulties that we have not seen before, albeit not in peacetime.³

Ad 2) Wealth effects: the 'continuity of contracts' issue

At the time it was created, the key element of the legal structure of the EMU was the 'continuity of contracts', aimed to foster easy adoption of the euro. It states that all monetary obligations, denominated in tributary national currencies, were automatically converted at the fixed parities into the equivalent euro amounts. This euro-conversion should also be respected if a country would decide to leave the EMU. In practice this means that the value of all existing public and private debts

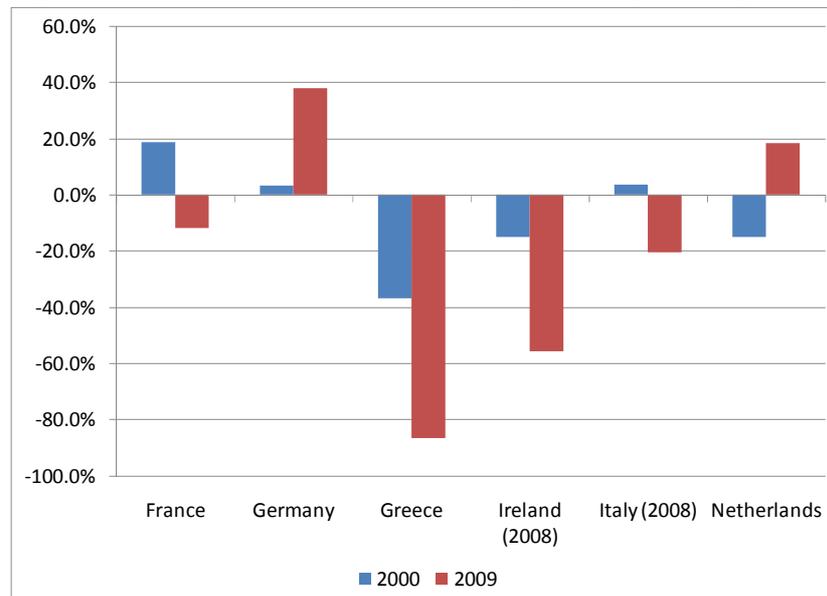
³ Of course there are many examples of successful devaluations. Studies show that the countries that set themselves loose from the gold standard after the Great Depression experienced quicker recoveries. The same could be said about the ERM crisis in the 1990s whereby the UK experienced a very fast recovery after it was forced out of the peg. Although these are not examples of monetary unions, many people that talk about the end of pegs and better times have these two events in mind. However, these are not examples of monetary unions. The countries involved had their own currency, so the danger of a massive bank run was not really present. Moreover, cross-border assets and liabilities were much smaller at the time, making the mentioned wealth effect hardly significant.

expressed in euro must be settled at their respective maturities at their equivalent euro amount.

This aspect means that leaving the eurozone can be a very expensive exercise indeed. If one of the weaker member states decides to leave the EMU, its new currency may be expected to drop substantially in value against the euro. Given the euro denomination of large parts of its external liabilities this means a large increase in its euro-denominated debt. This will hurt both the public and private sectors. On the other hand, if a strong country, such as Germany, decides to withdraw from the EMU, its currency will probably appreciate vis-a-vis the euro. Again, the effects will be negative as Germany, being a strong creditor towards other EMU-member states will see the value of its foreign assets strongly decline. The exit of a country from the eurozone will lead to substantial redistribution of cross-border wealth. The larger the number of countries leaving, the bigger the mess.

Of course, at the day of reckoning countries may try to interpret the reverse of the clause as converting all contracts in euro back into the re-introduced national currencies at the fixed parity used at the time of euro entrance. However, whether this is possibly in the case of cross-border contracts is the question. The jury is really out on this issue, although there are huge practical problems with the reverse application of this clause at the micro-level.

Figure 2: Net international net asset position (% GDP)



Source: IMF

To gauge first who stands to gain or lose from the application of this clause at the macro-level we need to look at the net international investment position of countries (figure 2), because that ultimately determines whether a country is a net international creditor or debtor in the currency it is considering to abandon. Let's reason our way through partial euro disintegration with alternatively Greece (representing the net debtors in the eurozone) and Germany (representing the net creditors in the eurozone) abandoning the euro unilaterally.

If **Greece** abandons the euro and respects all contracts in euro (as it officially has to do) it stands to lose a lot. It will inevitably see its currency weaken substantially, making its international debt burden expressed in euro all the heavier (Boonstra, 2010). It will also see its international assets gain in value as these remain denominated in euro as well. However, as Greece is a huge international net debtor, this second effect will be relatively small. However, if **Germany** were to abandon the euro unilaterally, it would also stand to lose. In principle, the same but opposite reasoning applies, but Germany will inevitably see its currency appreciate, not depreciate, suffering loss of value of its international assets that remain quoted in the weaker international currency. Germany will of course also see its international liabilities being reduced in value, but as the country is a large net international creditor, the net effect will be strongly dominated by the depreciation in the value of its international assets.

It is to be expected that countries abandoning the euro would like to convert their cross-border assets and liabilities in local currency instead of euro. However, it may be clear that the countries concerned have sharply contrasting interests. Continuing the Greek-German example, the Greeks might want to abandon the euro and convert all their euro-denominated debt to Germans into drachmas. The Germans obviously would not agree, while of course the Greek will not agree with the highly probable German position that the contracts should be served in the new German mark. In any case, if Greece would leave the euro without accepting that it has to service its existing foreign debt in euro, this would be practically identical to a restructuring of all of the country's international debt (both private and public). Only if the member states would decide to a full disintegration of the euro the continuity of contract clause could be helpful. In that case, countries can return to where they came from and translate euro-contracts on a one to one basis into ECU, the former currency basket. The pain will be shared, although every country will stand to lose substantially.

How much money is at stake? A very rough calculation can illustrate the amounts involved. Greece has a net foreign assets position of minus (net liabilities) 87% of GDP. Under the assumption that the composition of both its international assets and liabilities reflect more or less its trade weighted exchange rate index, a trade weighted depreciation of the new drachma in the magnitude of 30 to 40% would immediately result in a net wealth loss of 26 to 34% of GDP. This is difficult to overlook. Following a similar line of reasoning, the net loss for Germany in case of a 20% appreciation of the new German mark would translate in a net wealth loss of around 8% of GDP.

Box: Potential bank losses

Using data from the BIS, it is also possible to quantify the potential losses by foreign banks in various scenarios. Next table shows how much money is at stake. If, for example, the Greek government would default on its liabilities to foreign banks, the amount to be rescheduled or, in the worst case, written off by foreign banks is € 65 billion. If, however, the country would decide to leave the EMU not only public debt, but private debt will also enter the picture. This would raise the amount at stake immediately to € 142 billion. Note that the total damage will certainly be even larger, as Greek liabilities to other foreign investors, including pension funds and insurance companies, are not included.

liabilities to foreign banks				
€ billion				
	Total	of which by Greek:		
		banks	non-bank private	public sector
Greece	142	18	58	65
Ireland	439	119	299	22
Italy	744	126	312	305
Portugal	170	39	87	44
Spain	599	222	288	90
Total	2094	524	1047	524

Source: CPB (2010), table 5.1

As these figures illustrate, it is not an exaggeration that the exit of Greece is a so-called “Lehman style event”. In case of the exit of several countries the amount at stake will be much larger, adding up to several “Lehmans” at the same time.

To summarize, the creditor countries stand to lose from euro disintegration either way. The debtor countries would clearly lose if they abandoned the euro while retaining their international debt in euro. If, on the other hand, they would convert their cross-border liabilities into the new national currency, this will be a de facto default on all international liabilities. They would have to trade off the reputational cost of an implicit public and private debt restructuring with the direct benefit of seeing their (much smaller) international assets rise in value while keeping their international liabilities constant as they are expressed in the new national currency.

Given the above, it will be also clear that a EMU break-up, even in the most limited version (exit of Greece only) increases the possibility of a new round of banking rescues, which will add to the budgetary strains all over Europe. A Greek departure from the EMU will result in a huge financial mess in the countries that stay behind.

To conclude: wealth effect are serious and the distribution of the pain will lead to difficult political discussions. In any way, these effects cannot be ignored.

Ad 3) Is an orderly break-up possible?

Given the complexity of all issues that should be solved if a country decides to exit the EMU, it would be a good thing if everything could be prepared in a proper way in order to create as smooth an exit as possible. If you believe in fairy tales, so to say. Because the word "orderly" and "break-up" cannot be used in the same sentence.

The moment market participants have the faintest idea that a country is silently preparing for a withdrawal from the EMU, they will immediately start making their own preparations. They will, obviously, not wait until the final moment. If, for example, deposit holders expect that Greece could return to a new drachma, they might withdraw their deposits from Greek banks immediately. Either they shift their savings to banks abroad, or they will take their money out of the banking system and revert to cash (in euros).

Anyway, a systemic bank run will only be the first phase. Although some of the proponents of a eurozone break-up appear to recognize this problem, they do not seem to fully grasp its magnitude. Smallwood (2010) thinks that this behavior could be countered by higher Greek interest rates or, if this is not sufficient, banks can revert to the interbank market for their funding. However, a new drachma may be expected to depreciate sharply against the euro, instantly after its introduction. What kind of interest rates does Smallwood expect the banks to pay to Greek deposit holders to compensate for this huge and unavoidable currency loss? Fifty percent or so? And who is going to give wholesale funding to Greek banks to compensate for the bank run, in the full understanding that they will fail with 100% certainty on their obligations? Will other central banks be prepared to lend to the Greek central bank, knowing what is going on? This all does not make much sense. The moment that depositor and investors realize what is going on, the Greek banking system will unavoidably collapse. To expect anything different is rather naive.

Only if the authorities of a country succeed in organizing an overnight and complete big-bang return to a new domestic currency they may be able to surprise investors and depositors. Unfortunately, even in the event that the eurozone leaders agree that the benefits of euro disintegration outweigh its costs, the national currencies will not be re-introduced overnight. It will take at least a few months and more likely a year or more to produce the new banknotes and coins, solve all the legal issues, implement them and get all the systems ready to re-instate the national currencies. This is not the type of process that can be prepared in secret and hence there will be a substantial time lag between the announcement of euro disintegration and the actual currency conversion date.

To conclude: it does not make sense to expect that an orderly break-up of the euro is possible.

Ad 4) Leaving the EMU in harmony?

A country can only benefit from a cheaper currency if it retains access to its export markets. In the case of a country leaving the EMU, the relevant question is whether a country can remain a member of the Single Market after throwing overboard a series of international trea-

ties. A country leaving the EMU creates quite a mess, not only for itself, but also for the remaining member states. They have to accept huge losses on their exposure on the exiting country, support their banks, and live with the distrust of the international financial community that will demand higher risk premiums on their loans to the remaining EMU countries. After all this, they are kindly asked to give the exiting country access to their market, against a much more competitive exchange rate. The political climate will not be very receptive for this kinds of demands. It is more propabable that countries that leave the eurozone will also be forced to exit the Single Market.

Ad 5) Surplus countries should always stimulate demand

This last assumption deals with the question how far authorities should go in stimulating demand. In the Smallwood analysis much of the blame for the problems is put on the surplus countries. Especially German policy makers are more or less accused of clinging irrationally to fiscal prudence. The German side of the discussion is completely ignored. This country, already having a fiscal deficit of about 5% of GDP and a public debt ratio of almost 80%, is also approaching the limits of what it can do. It is seen as a safe haven by financial markets and it correctly likes to keep it that way. Which means that there is no room for further fiscal stimulus, although one can discuss the speed of fiscal tightening that lies ahead.

The fundamental question to be addressed is, of course, whether authorities should try to stimulate demand irrespective of the financial position, or that there might be a point in time where it becomes clear that demand has been pushed too far and that fiscal prudence is the right thing to obey. Even if this would mean that economic growth might be below the long term average for a prolonged period. What is the best thing to do, after a bubble has burst? Blowing new bubbles, like the US appears to be doing? Or preventing new bubbles to arise?

This issue of course goes far beyond the discussion about the long term survival of the eurozone. But counting a depression in Germany as a positive effect for the EMU-break up because it would force the German government to stimulate the economy whatever the state of its public finances misses the point. The better approach for surplus countries is to reform their economies (i.e. deregulate their services sector) in order to unleash more private sector driven demand and sustainable growth. However, these policies are difficult, time consuming and will certainly not bring the short term stimulus many people hope for.

The way forward

The creation of EMU is a very innovative and far-reaching process. If successful, a currency is created that potentially could have the same global reach as the US dollar. If it fails, the process of economic cooperation in Europe may be badly damaged. This could mean the end of the Single Market and all of the other guises of European cooperation.

It goes without saying that European cooperation has given at least Europe both unprecedented wealth and the longest period in history

without wars in the continent. However, the EMU has a number of serious flaws. The most dangerous one is that it still is possible to speculate against the euro's existence via the bond markets. As long as the European public bond market is fragmented along national lines, every serious problem arising in any country can immediately lead to a severe crisis and a life-threatening situation for the euro. This market fragmentation is the major problem in the design of the euro. There are in principle two solutions. One is of course the creation of a large federal pan-EMU budget. However, for the years or even the decades to come this will not be politically feasible. The alternative is the creation of an EMU-wide public bond market via the central funding of national public deficits. This will immediately eliminate the possibility of speculators to attack individual countries. This solution, which technically is relatively easy to implement, needs the support of an effective set of budgetary rules, with of course effective sanctions for countries that fail to put their public finances in order. The details of a number of approaches to this problem can be found in Boonstra (2009) and ELEC (2010). An additional advantage of the creation of a new central funding agency is that the ECB can stop purchasing public debt of weaker member states. Today, it already holds substantial amounts (around € 60 billion) of public debt of Greece, Ireland and Portugal. If it would have to take losses on this portfolio it might damage its reputation. Moreover, management of its portfolio of distressed bonds could result in a conflict with its monetary policy objective of price stability. The sooner the ECB is freed from the task of financing the budget deficit of weak member states, the better.

Once being sheltered from sudden swings in market sentiments, countries should, naturally, pursue the necessary policies. First of all, they should redress the public deficits in a transparent and gradual way, but this policy should be sustained by the necessary reform policies. Deregulation of markets, improvement of productivity and therefore competitive positions and reform of the old age provision systems all are necessary. Europe-wide barriers to cross-border labor flows should be eliminated where possible. This all will indeed need time. Therefore it is essential to redesign the EMU in such a way that any individual problem in an individual country does not automatically result in a Greek-style eurocrisis. In the extreme, it should even be possible for an EMU member-state to default on its public debt without endangering the existence of the euro.⁴

Conclusions

Only if one overlooks or ignores some very important economic problems, one can conclude that it is a good thing if countries step out of the euro. In addition to the huge economic damage, the political fallout might even be more serious. Not a good idea, therefore.

However, this conclusion does nothing to help the countries that are today in severe problems and that will need years, if not decades, to put their house in order. The better the party, the bigger the hangover. It also does not help to conclude that some countries had better stayed

⁴ Similar to the New York default of 1975, which was a serious affair but did not have a significant effect on the dollar.

out of the EMU, in spite of the truth of this conclusion. Now is the time to pursue the long-postponed reform policies that will consolidate Europe's position as one of the world's leading economies.

All countries should pursue reform policies to improve the functioning of their economies. And it cannot be excluded that in this process some countries may need to restructure their public debt to create some financial breathing space. Economic growth may be expected to be low for the years ahead. But breaking up the eurozone will make matters worse, not better.

Once we introduced the euro, we started a process that was meant to be irreversible. Whatever we do, we have to realize that we are in the same boat and that we will have a common European fate. Either as part of the largest and strongest economy in the world, or as a bunch of small and increasingly irrelevant countries in what is no longer the centre of the world. The choice is ours to make.

References

Boonstra, W.W. (2009), Make the euro stronger, Rabobank Special Paper 0903, Utrecht, March 2009.

Boonstra, W.W. (2010), Grieken hoofdrolspelers in Europees drama? (Greek Main Players in European Drama?, in Dutch), Rabobank Thema-bericht 2010/03, reprinted in KVS, Jaarboek 2009/2010, The Hague.

Cliffe, M. (2010), Break Up. Quantifying the Unthinkable, ING Global Economics, Amsterdam, July 7th.

Centraal Planbureau (CPB, 2010), Economische en Monetaire Unie in zwaar weer (EMU in bad weather, in Dutch), MEV 2011, Den Haag, September 2010.

ELEC (2010), The creation of a common EMU bond market, Cahier Comte Boël No. 14, Brussels, March 2010.

Smallwood, C. (2010), Why the euro-zone needs to break up, Capital Economics, European Economics Focus, July 7th, 2010

Colophon

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