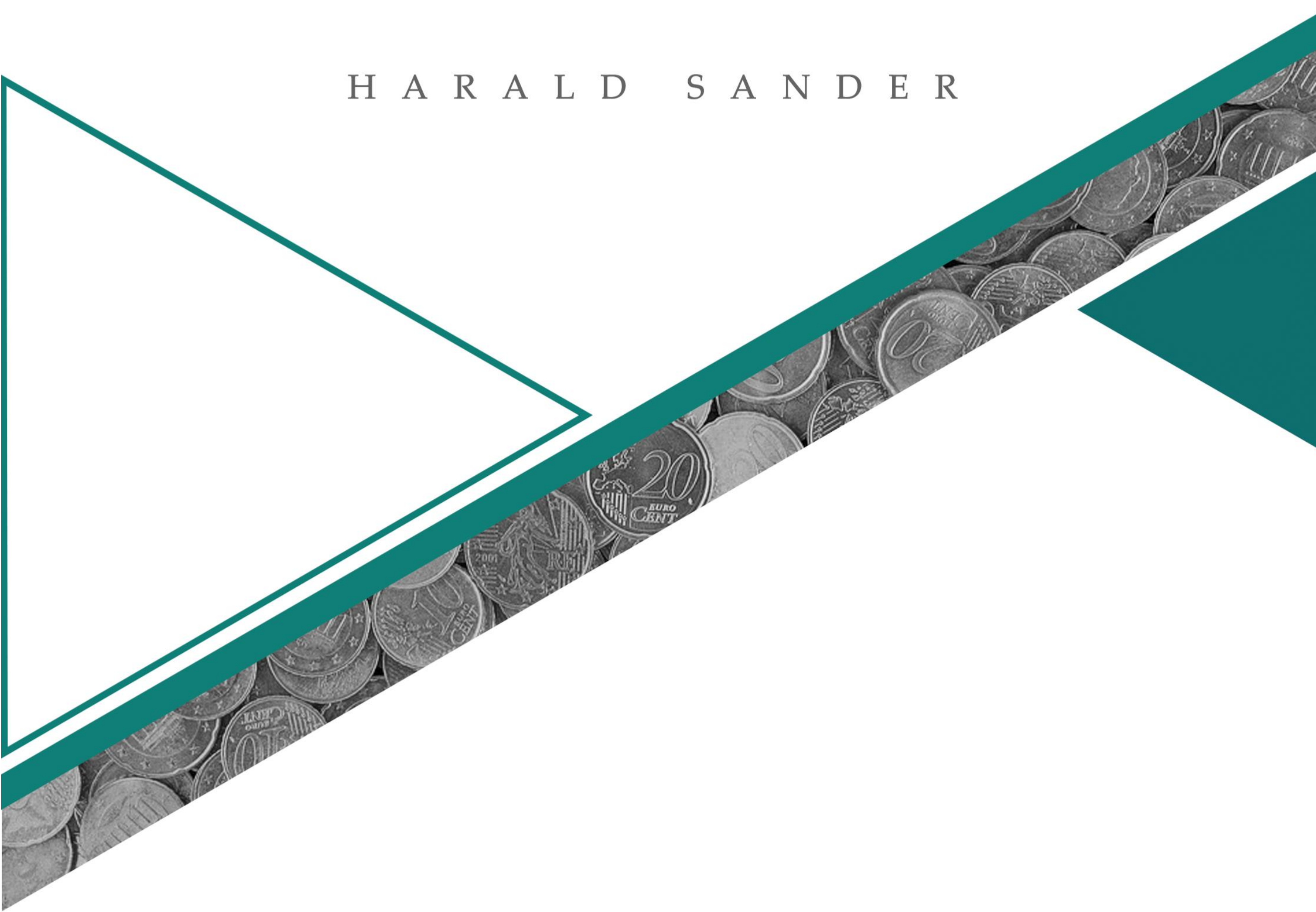
An Executive('s) Guide to

CURRENCY UNIONS, THE EURO AND THE EURO CRISIS

HARALD SANDER



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Foreword

With the introduction of the Euro in 1999, the European Union has embarked on a formidable social and economic experiment. Binding together 19 countries with a completely new currency and abandoning 19 national currencies is unparalleled in history, at least, if these countries remain sovereign states and are not pulled together in a single empire, like the Roman Empire, or into united states, like the USA.

This courageous attempt looked like a great success after the 10 years. But then things went sour. In the aftermath of the financial crisis of 2008/09, the Euro crisis developed fast and deeply, putting the common currency area at the verge of a devastating break-up. Moreover, as the German Chancellor Angela Merkel has warned early on, if the Euro fails, Europe will be threatened too. Today the Euro area and the European Union are facing the biggest challenges ever. The Euro crisis is not over yet as the Euro area economy is still ailing. Political support for Europe is rapidly decreasing, thus leading to more populist demands for leaving the EU in several member states, especially after the British Brexit vote. Why did the Europeans embark on this unique experiment? Was it a really a good idea? How did the crisis come about? Will the Euro survive and if yes, under which conditions? This short guide aims at addressing these issues.

This guide is written for participants of a short Summer school course on European economic affairs. It does not require prior economic studies but assumes some basic capabilities in reading graphs. Although there are basically no prerequisites for reading this guide it still aims at leading the reader to the state-of-the-art on the debate. In this sense it also provides links to recent analyses and commentaries of leading scientists. As the European- and Euro-experiments are developing, this guide is continuous work-in-progress. Its usefulness and progress therefore depends on continuous feedback from the readers.

I am looking forward to receive many comments, critique and suggestions.

January 2017
Harald Sander

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1. Towards the Euro: A Brief History of European Monetary Arrangements

Well-functioning international monetary arrangements are key to promote and sustain international trade. Many (continental) European countries do exhibit a strong preference for stable exchange rates amongst them as they expect this stability to promote intra-European trade and integration. Historically, two global monetary regimes have provided exchange rate stability in the past, the gold standard and the Bretton Woods system (BWS) after World War 2. When the latter was abandoned in the early 1970s, the European had to create their own regional monetary regimes to establish exchange rate stability.

The First Global Monetary Regime: The Gold Standard

In times before paper money existed – roughly until the end of the 19th century – all money was metallic, mainly gold or silver. Consequently, there was only one "money" in which all transactions were made. In a way, gold is an international money whose value is determined by its global supply. Hence, no exchange rates existed[1].

With the emergence of the nation states in the 19th century, paper money was introduced. But this money was fully backed by the gold reserves of nation states. It came with the promise of full convertibility of the banknotes at a fixed rate into gold. As each country fixed the value of their paper money to gold, the exchange rates between their paper monies was automatically fixed, too. A system of fixed exchange rates – known as the gold standard – was established. To make sure that the value of all monies were equal everywhere, complete freedom of trade and capital movements was established. In the core period of the gold standard between 1880 and 1914 the world economy was undergoing unprecedented growth and internationalization.

[1] *To be more precise, it was a world of two monies, gold and silver, with a certain role for a gold-to-silver exchange rate. Here we will, however, for reasons to be brief, ignore these issues, which is nevertheless of interest to economic historians and can deliver some insights for today.*

Unfortunately, the gold standard had a feature that can undermine its stability in times of large imbalances. If a country has a competitiveness problem and runs a large trade deficit, the gold payments to its trading partners will ultimately require a reduction of paper money in circulation. While this should lead to lower prices and hence a restoration of price competitiveness, this effect needs time. Especially in the 20th century with the emergence of labor movements and modern, often oligopolistic, industries, wages and prices had become downward rigid. The adjustment mechanism failed to work quickly enough. High unemployment emerged in many countries, especially after the great depression of 1929, and undermined the legitimacy of the political system of the young democracies. Surplus countries, on the other hand, saw an immense inflow of gold and hence drastic increases in money circulation and finally inflation.

The gold standard worked well at times of fair weather, i.e. when trade imbalances were small and a bit of wage-price flexibility was sufficient to make the necessary adjustments. However, the system turned out to be too rigid to deal with heavy storms as it asks for enormous adjustment needs within nation states. It has been argued that the gold standard finally cracked because of overburdening the political limits in young democracies. And not surprisingly, when the gold standard collapsed in the 1930s, so did global trade. The world economy disintegrated, nation states became inward looking, protectionist and increasingly nationalistic. Ultimately this disintegration culminated in World War II.

Towards a More Flexible Global Regime? The Bretton Woods System

Already in July 1944 the allied nations met in Bretton Woods, New Hampshire, to design the post-war international monetary order. The basic idea was to restore exchange rate stability to promote trade but to build in provisions to avoid the rigidities of the gold standard. The major security valve was the possibility of exchange rate adjustments. In case a country is experiencing trade deficits and balance-of-payment

problems, it was now possible to devalue the currency to regain competitiveness. This possibility allowed avoiding the painful process of "internal devaluation" by reducing wages and prices. Moreover, the International Monetary Fund (IMF) was created to support the adjustment with balance-of-payments credits. However, two more things should be noted. First, devaluations were considered as exemptions and had to be agreed upon by the IMF. Second, for most of the time the BWS existed, capital movements have been somewhat restricted by nation states. The latter is important as it allows to keep currencies stable in times of crises, as we will see soon.

From the European perspective, the BWS offered the region en passant the exchange rate stability they wanted. However, the BWS was de facto abandoned in 1971. The major reason for this was that the system excessively relied on the US-Dollar. The dollar was the currency to which all other currencies were to be fixed. All countries but the USA had to take care that their currencies keep their value fixed to the dollar. Especially during the Vietnam War boom in the late 1960s the USA experienced high inflation and trade deficits without any need to adjust. Hence, dollars flooded the rest of the world and created inflation there. Especially European countries not willing to "import inflation", abandoned the link to the dollar and let the value of their currencies go up. As a consequence, the BWS system of fixed exchange rates was replaced by a system of floating rates.

Going Regional: The European Exchange Rate System

The end of the BWS, which has finally been abandoned in 1973 mostly in favor of flexible exchange rates, has left a vacuum for European countries that they wanted to fill. The immediate response was the so-called "snake": the Europeans limited the variation of their bilateral exchange rates to 4.5%. Like a snake all European currencies followed the same trend against the US-Dollar, usually led by the German Mark. This informal arrangement finally led to a formal one: the adoption of the European system of fixed exchange rates in 1979, the European Monetary System (EMS). The system is essentially a regional variant of BWS, though without the

dominant position of one currency. Instead, an artificial currency, the ECU, has been created as the reserve currency. But like in the BWS, re-adjustments of parities are possible upon joint agreement to avoid competitive devaluations.

While the EMS worked in principle, it often required re-alignments of currencies to restore competitiveness. In particular southern member countries often had substantially higher inflation rates than the northern member countries, notably Germany.

The EMS Crisis of 1992/93

In 1992-93 the EMS was hit by a major crisis. What happened? Over time, the EU has liberalized capital markets, finally culminating into the Single Market project of the European Union (EU), for short known as "Europe 1992", which aims at a free flow of goods, services, labor and capital. However, when capital is fully mobile, investors can gain from speculating on currency devaluations.

The mechanics of a currency speculation are fairly simple: if you expect your currency to lose value tomorrow, you can sell it today at the still high and (still) fixed exchange rate. When the currency is devalued tomorrow you can exchange it back with a profit. For example, assume the fixed exchange rate is 2 French Francs (FF) per Deutschmark (DM) and you expect it to be 3FF per DM tomorrow. You can then exchange 1000 FF for 500 DM today. If your expectations finally materialize, you can exchange the 500 DM back into 1500 FF.

It is easy to see then that under full capital mobility speculations on a currency devaluation can become massive if many investors are betting on a devaluation of a currency.

Such situations occurred in 1992/93 and almost blew the EMS. Already before unification in 1990, Germany was not only the largest, but also and in particular because of its culture of price stability, the dominant economy in the EMS. With capital now flowing freely within the EU,

Germany had de facto the power to set the interest rates for all EMS countries. This power increased further after unification, not least because Germany increased the rates close to to 10% to cool down its own unification boom as Germany feared increasing inflation. European capital was flowing massively into Germany, putting the DM under upward pressure.

Such high interest rates were not in the interest of all EMS countries. Rather, many of them were struggling with recessions and high unemployment rates. Especially in the UK, the imported high interest rates were holding back a badly needed recovery for the economy. This economic self-interest met the general British dislike for the EMS. Important investors, such as George Soros, the owner of a large London-based hedge fund, started to make a bet that when under pressure, the British government would rather exit the EMS or at least devalue the pound than continuing defending the fixed exchange rate to the DM. In other words, he bet on a devaluation of the pound. Like in our previous example, he exchanged large amounts of British pounds into DM. This was felt as pressure on the pound on the exchange markets. Other investors followed his example until the Bank of England was literally unable to keep the pound at the fixed level, because they were running out of DM. The pound was devalued and Britain finally left the EMS.

The lesson from this experience was learned quickly: under perfect capital mobility any fixed exchange rate can in principle be attacked. And naturally this is the easier, the more vulnerable the potential victims are. Hence, the currencies of those southern EMS countries with high unemployment and competitiveness problems due to high inflation rates became the main targets of speculative attacks in 1993.

The crisis was resolved by temporary suspensions from EMS and a later return into the system with lower exchange rates. But most of all, it taught the Europeans that fixed exchange rates in the presence of open capital markets can create instability very sudden and at any time. An alternative would be to resort to flexible exchange rates as the UK did. But this was not acceptable

to Europeans. Restricting capital movement was neither an option as the single market has just been created and border controls in many countries been removed by the Schengen agreement.

However, there was another "corner solution": irrevocably fixed exchange rates. If one only makes clear that exchange rates will never be changed again, any speculative attack will fail.

Hence the Europeans started to take seriously what they have already agreed upon in December 1990 in Maastricht: to create a single currency. Once joined the European Monetary Union (EMU), which all EU countries must do according to the Maastricht Treaty when fulfilling of a few criteria, there is no pre-defined way out. Attacks on individual countries will therefore never happen again - or so goes the saying.

2. Is a Common Currency a Good Idea? Insights from the Theory of the Optimum Currency Area

Why and When Adopting a Common Currency?

Economists like Robert Mundell, Ronald McKinnon, Peter Kenen and others have developed the "theory of optimum currency areas" already in the 1960s. The theory argues that the benefits of forming a joint currency area should exceed the costs to form a sustainable and mutually beneficial monetary union.

The benefits of a common currency are easily visible and can be now enjoyed in the Euro area by the 19 countries, which have adopted the Euro. The main argument holds that the more a group of countries trades with each other, the more beneficial it is to use the same currency. Figure 1 illustrates that we expect more benefits when trade integration is higher. The reasons behind it are that a joint currency allows to

- reduce transaction costs
- eliminate exchange rate risks
- promote trade and thus to realize economies of scale
- compare prices across borders more easily and thus to promote competition and lower prices.

Unfortunately, currency unions can also create costs. When countries are using the same currency, they cannot use their own monetary policy and loose "monetary autonomy". In a monetary union there is only one currency and hence only a one-size-fits-all monetary policy. This is no problem when all members are sharing similar economic developments, i.e. when they are exposed to "symmetric shocks" - a situation where all members are hit similarly by the same event. A good example is the financial crisis of 2008/9, which affected all countries of the Euro area. Instead of each country trying to deal with this situation individually (for example by devaluing their currency at the expense of the others – a harmful "beggar-thy-neighbor" policy), a co-ordinated response by the European Central Bank helped all countries.

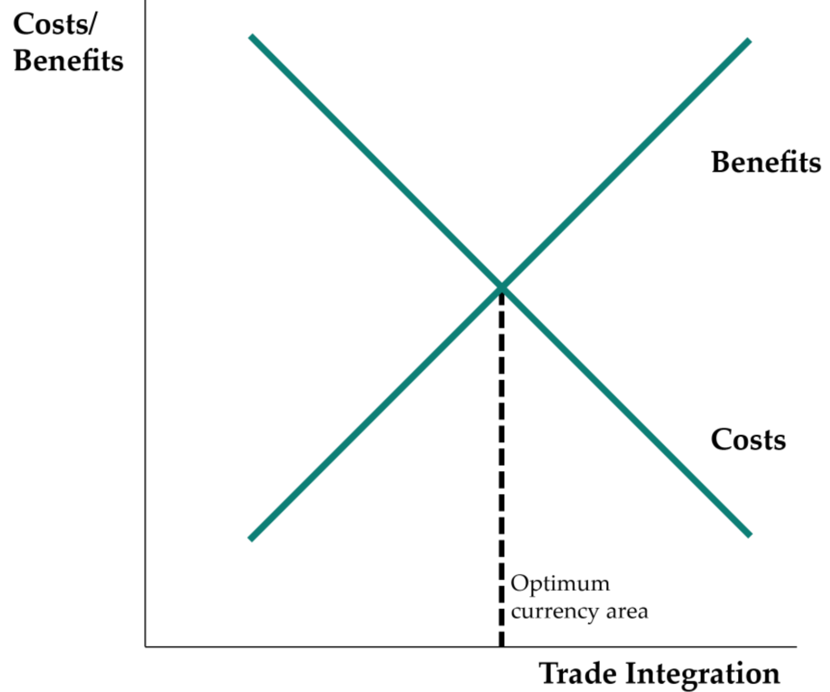
However, if countries are exposed to "asymmetric shocks", if some are in a recession and need lower interest rates and others are in a boom and need higher interest rates, a single monetary policy does not fit all needs. It is reasonable to assume that the business cycle of economies that are more integrated are also more synchronized. Hence the more integrated the member countries the lower the costs from not having an own monetary policy.

Given this reasoning it is clear that an "optimum currency area" (OCA) is one where the benefits of a single currency outweighs the costs, mainly those resulting from exposures to asymmetric shocks. This is shown in Figure 1.

Figure 1: The Costs and Benefits of a Monetary Union

An **optimum currency area (OCA)** is one where the benefits of a single currency outweighs the costs, mainly those resulting from exposures to asymmetric shocks.

High(er) trade integration makes the existence of an OCA more likely.



We can see from here that when the member countries are exposed to different, so-called asymmetric shocks, forming a currency union may lead to economic hardship. If, for example, Spain and Germany form a monetary union and Spain is booming while Germany is in a recession, the central bank will act on the base of the average condition in both countries. By remaining passive, the central bank will allow high unemployment in Germany and a potentially inflationary boom in Spain (for the macroeconomic underpinnings of this see Box 1 in the Annex). Without sufficient symmetry within a currency union, unemployment can last long and impose severe costs on a society.

But is the EMU an OCA? Not surprisingly, opinions differ. They are illustrated in Figure 2.

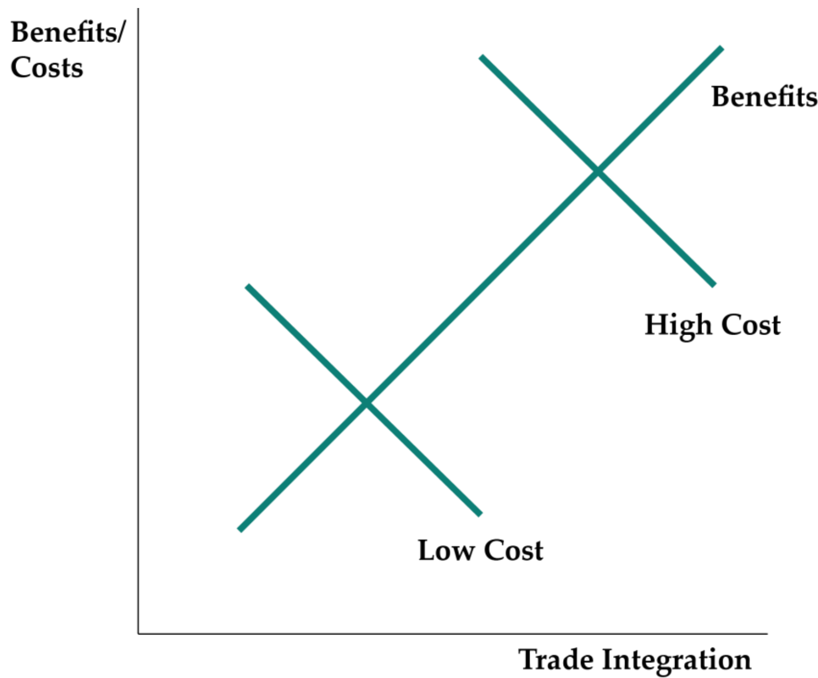


Figure 2: Is the EMU an OCA?

Pessimists highlight high costs caused by labor and product market rigidities in many EMU countries, which are not easily to remove – at least not without severe political resistance.

Optimists argue that a common currency will promote integration and thus symmetry over time. Labor and goods market are either flexible enough or should be reformed to become more flexible.

Pragmatists argue that some countries are in the low cost position and should join ("core Europe") while others are the high cost position and should remain outside.

Pessimist see high costs as they point especially to labor and product market rigidities in many EMU countries which are not easily to remove – at least not without severe political resistance. Optimists argue labor and goods market are either flexible enough and/or that a common currency will promote integration and thus symmetry over time. Hence they see low costs and strong arguments in favor of a currency union. The middle ground is covered by pragmatists who argue that some countries are in the low cost position and should join ("core Europe") while others are the high cost position and should remain outside.

The Cost of Premature Membership in Currency Unions

Obviously in the Euro area not all members have been fully ready for it at the time they have joined EMU. In this way it is an incomplete currency union. In quiet times, with only mild asymmetric shocks or even symmetric shocks, this will not be felt – and in fact the first ten years of the Euro were quiet ones. The litmus test for a currency union that does not clearly meet the OCA criteria comes when severe asymmetric shock hit the member countries. In such a case some countries might continue to develop reasonably (or even experiencing an economic boom), while others are suffering from recessions and eventually

high unemployment. If the country would still have its own money it could use monetary policy to cut interest rates and/or lower the value of its currency to stimulate their economy. Without monetary autonomy, it will have to resort to wage and price cuts.

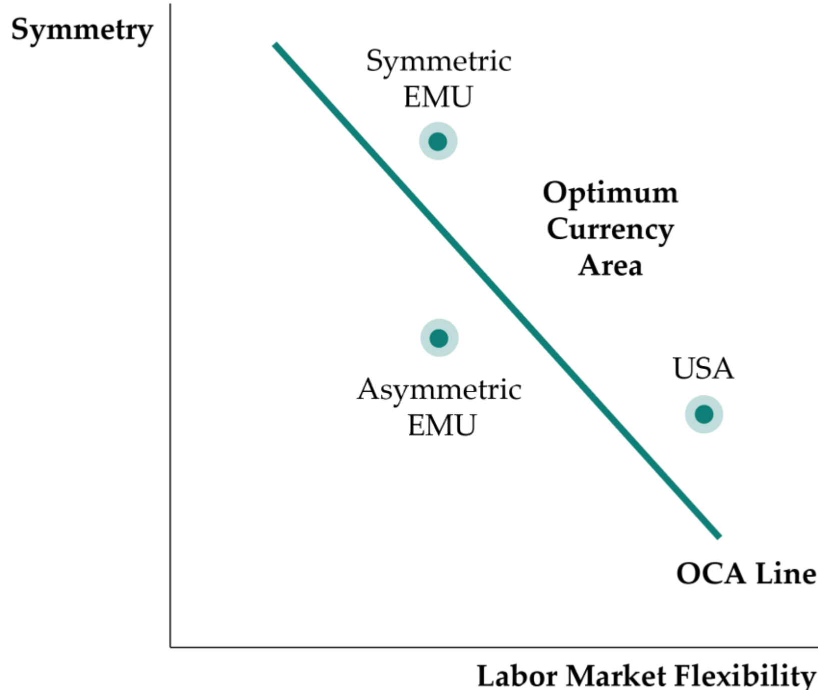
Hence, there is obviously a trade-off. For attaining an OCA, a lack of symmetry must be compensated by more labor market and product market flexibility. Additionally, labor mobility across the Eurozone country would also be needed. Only if a minimum combination of symmetry and labor market flexibility is achieved, one can expect a currency area to be beneficial and form an OCA, as shown in Figure 3.

Figure 3: The Trade-Off Between Symmetry and Labor Market Flexibility in a Currency Union

A lack of symmetry requires more labor market flexibility to cushion unemployment.

The USA is widely believed to have labor market flexible enough to compensate for the large differences in economic structures across states.

In the EMU labor markets are much less flexible. While optimists believe that (at least some) countries show sufficient degree of symmetry, skeptics hold that severe asymmetries prevent the EMU from being an OCA.



However, many EMU countries are lacking the degree of labor market flexibility, which is ascribed to the USA. However, at least some of them show more symmetry than US states (just think of the differences between Silicon Valley and Detroit). Whether this is sufficient to form an OCA was hotly debated when the plans for an EMU have been announced in Maastricht in 1992. While some economist have been optimistic that the EMU is sufficiently symmetric – or at least would reach this level soon once the common currency is introduced, other economists, like Milton Friedman, a strong and opinionated advocate of flexible exchange rates, have

warned that an asymmetric monetary union would cause a political disunion by risking long-term unemployment in some countries.

In the latter case, (structural) labor market reforms should to increase the flexibility as shown schematically in Figure 6. Alternatively, more symmetry may be encouraged by deeper trade integration, though this is not sure, as the example of the USA shows. If trade integration is not sufficient to increase symmetry, other mechanisms are needed to deal with asymmetric shocks. Labor mobility is one such mechanism. However, while labor mobility is relatively high in the USA, it is still – even under the conditions of the already long-lasting crisis in the Eurozone periphery – very low in Europe.

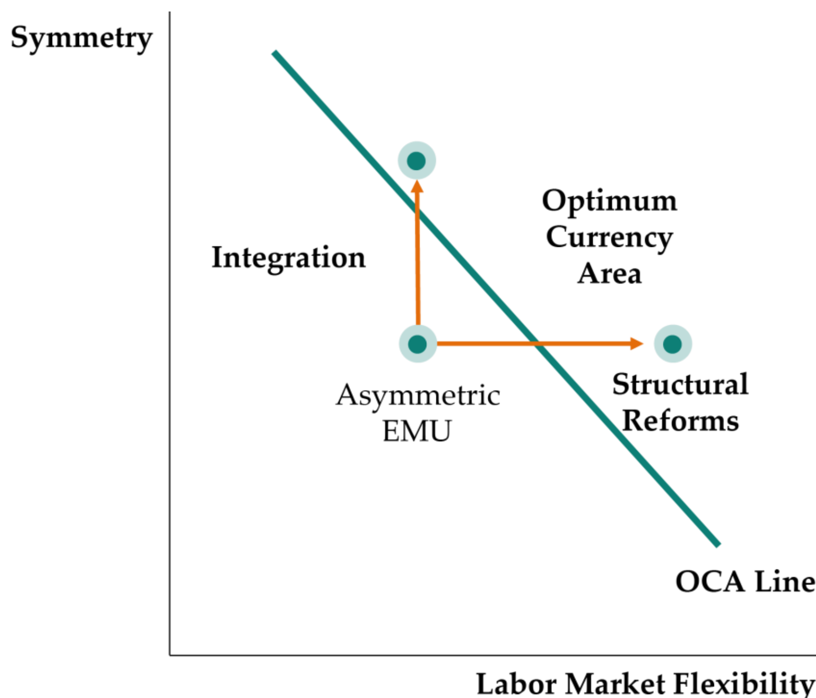


Figure 4: How to turn an asymmetric EMU into an OCA?

A lack of symmetry can – at least in theory – be compensated by more labor market flexibility. Hence, the focus on "structural reform" in EMU.

One could also try to increase the symmetry.

This could in principle be done by more trade integration, but the example of the USA shows, that it is not sure that this will really lead to more symmetry.

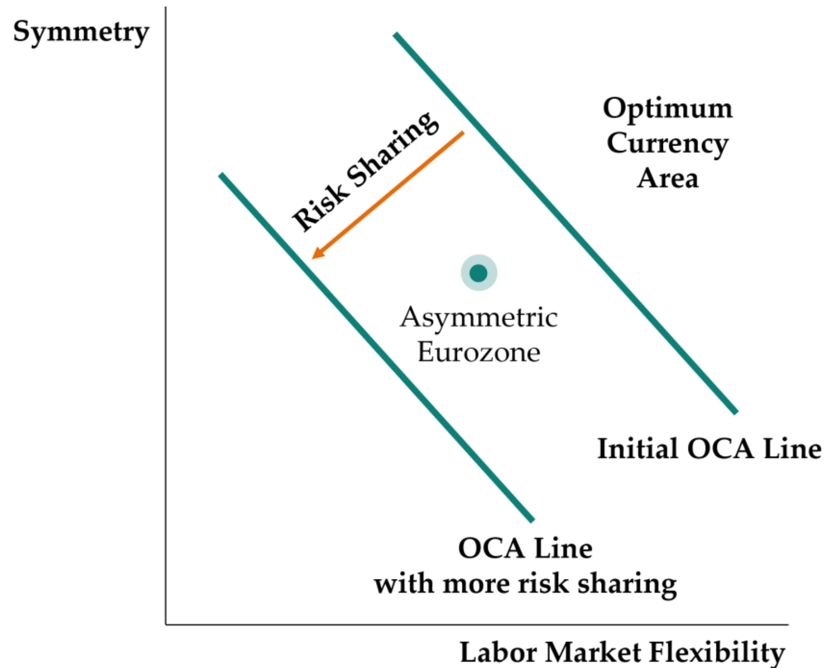
If all this is not available to a sufficient degree, a joint public insurance system may be needed. This typically involves fiscal transfers from the booming to the ailing states. In other words, some kind of a fiscal union would be needed. This could involve fiscal transfers through a joint fiscal budget or e.g. by means of a joint unemployment insurance system. Again, the USA has a federal unemployment insurance system and can accommodate large fiscal transfers to ailing states. All this is not in place in the Euro area, and the appetite for a full fiscal union has already been very low when the

Maastricht treaty was signed in 1992, and seems to be even lower today, especially in those countries that are doing well and would – for the time being – have to foot the bill.

Figure 5: Risk sharing can turn an asymmetric EMU into an OCA!

If neither more integration nor labor market liberalization attempts are sufficient to create an OCA, public and private risk sharing is needed, e.g. by means of

- a fiscal union
- a joint unemployment inurance
- more financial integration and a banking union.



Finally, private insurance schemes could substitute for this by means of integrating financial markets. This would allow some burden sharing (though one concern is that this helps mainly the holders of assets rather than ordinary people). Banking market integration would in particular be helpful as the better conditions for banks in countries, which are doing well would allow them to provide the economy in ailing countries with finance. However this will only work without risking financial instability when there is joint bank supervision, resolution and a joint deposit insurance. In other words, a banking union is needed to supplement a monetary union.

EMU as an Incomplete Currency Union by Design

When the Euro was envisioned in the Maastricht treaty of 1992, it was clear that the appetite for joint burden sharing or even a full-fledged fiscal union was very low, if not nil. The Maastricht criteria, the conditions for joining the Euro area, were thus very minimal and geared towards avoiding burden sharing.

The famous fiscal criteria that limit government budget deficits to 3% of GDP and government debts to 60% of GDP were meant to ensure to never come into the position to take joint responsibility for individual countries' debts. Moreover, the criteria were the counterpart of the non-bail out rule that should prohibit the European Central Bank (ECB) to finance member states' deficits and debts by printing money and ultimately causing inflation. The main concern of the founding fathers of the currency union was therefore to establish a stable currency in terms of price stability. They did not assign an active role to the ECB in influencing the business cycle. Unlike the Federal Reserve Bank in the USA, which has to respond to both inflation and unemployment, the ECB has only one task: aiming at an inflation rate not higher than 2% over the longer term.

In principle, the task of dealing with asymmetric shocks in individual member countries could be left to fiscal policy, i.e. adjusting taxes and government expenditure in a counter-cyclical way. However, as many countries joined EMU with deficits and debts close to the limits (and sometimes even above those limits), the fiscal criteria often precluded such a use of an expansionary fiscal policy. However, most economists at that time – and with them the founding fathers of EMU – did not see the handcuffing of fiscal policy as a problem. In fact, the "conventional wisdom" in the 1990s was that fiscal policy was at best useless, if not making things even worse.

Given the limited willingness for joint burden sharing in EMU countries, the success of the EMU project relies heavily on (i) creating a true single market, which eventually turns an incomplete EMU into an OCA, and (ii) promoting labor market flexibility, which in many countries has been lacking. In fact, to some extent EMU has also been seen as an instrument to promote labor market reforms, which otherwise would meet too much political resistance.

In the first ten years, the currency union was functioning more or less well and was largely considered as a success. The size of asymmetric shocks was limited. When the financial crisis of 2008/09 came, it first came as a

symmetric shock to all. Hence, the unified response of the ECB by cutting interest rates helped all and – even more important – not some at the expense of others, as a non-coordinated nation response would eventually have done it.

However, soon after the common financial crisis shock to all, it became clear that individual countries were differently prepared to deal with the aftershocks of that crisis. Not surprisingly, when some countries were hit by such asymmetric shocks, this increased the demand for structural reforms of labor market and even outright demands for often drastic wage cut. Unfortunately, this is increasingly causing political resistance in affected member states. It became visible, that without joint burden sharing by means of joint Euro area institutions the Euro area is fragile.

3. A Consensus Narrative of the Euro Crisis

How the Euro Crisis Started

2010 was the year when the Euro crisis hit with full force. It started in Greece when it was revealed that the Greek government debts were exceeding the limits set by the Maastricht criteria by far. Soon after this other countries with high or increasing debts, in particular Ireland, Portugal, Spain and – to a lesser extend – Italy, came into the focus of financial markets, which became increasingly unwilling to finance the government debts of these countries. Interest rates for re-financing public debt and deficits skyrocketed and pushed these countries close to bankruptcy, i.e. into a situation where they would be unable to re-finance their debt, and thus to declare default.

Sovereign debt default within the Euro area was a no-go area for European policy makers at that time. However, honoring public debts was not only an ethical issue. Serious linkages within the European banking system had to be considered, too. Many European banks, which had

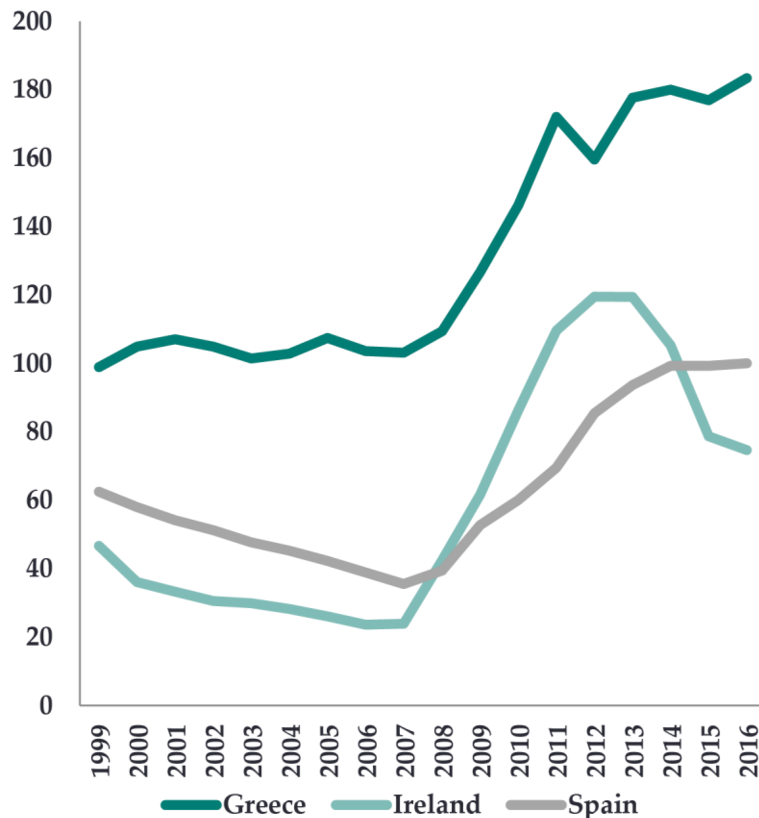
just hardly survived the financial crisis of 2008/09, often with the help of their own government, were exposed to these countries. Many banks were holding large amounts of Greek government bonds or claims in banks in other affected countries. A Greek default would have clearly triggered a second and even more devastating banking crisis. Given the already difficult state of the banks, it could have meant widespread bankruptcies of European banks with little chance of rescueing them again. Rescue programs for countries were arranged, which essentially rescued the European banking system – at least for the time being.

All this steered up a considerable debate whether Europe is merely witnessing sovereign debt crises of some members of the Euro area or whether it is facing a crisis of the Euro. Essentially two narratives of the crisis became dominating the debate.

The Profligate Countries Narrative

The first narrative stresses profligacy of the affected problem countries, mostly in southern Europe. Excessive government spending was readily identified as a major cause for the disruption. This diagnosis was clearly true for Greece, which had hidden a large part of the accumulated government debt of the past in the statistics (with the help of Goldman-Sachs). When this was revealed in 2010 it marked indeed the start of the crisis. If this is the correct story, than strict austerity policy is the straightforward answer to the crisis. However, with respect to most other countries, this narrative is not convincing. Spain and Ireland, for example, have been very successful to reduce their government debt relative to GDP, before the outbreak of the financial crisis. In fact, in these cases, increasing government debt was a consequence rather than the cause of the crisis, as revealed by Figure 7. This happened partly because these countries rescued banks with government money (especially Ireland), and partly because the end of the credit boom ended their economic booms and pushed them into deep recessions (Spain).

Figure 6: Gross Government Debt in % of GDP in Selected Euro Area Countries



Data Source: International Monetary Fund, World Economic Outlook Database, October 2016. 2016 data are IMF estimates.

The Consensus Narrative

This is where the second narrative comes in, which unfortunately is a bit more complex: in fact, as complex as the different realities in these different economies are. This view has recently been formulated as a consensus view by leading economists. According to this narrative, divergences of economic developments in the northern member states, particularly Germany and southern member states emerged.

Up to the mid 2000, Germany was suffering from low growth, caused by the aftermath of the unification process and Germany's entering into EMU with a too high exchange rate. At the other end, many southern countries were enjoying a boom, based on historically low interest rate for them. In other words, for Germany the monetary policy was too tight and for many southerners it was too loose. However, northern banks were more than happy to

finance booms in the southern countries. This all happened despite the fact that these countries had lost price competitiveness over time due to relatively high inflation in the boom period. Moreover, In the mid-2000s Germany had introduced some labor market reforms, known as Agenda 2010, which effectively limited the wage increase below the productivity increase, thus making the German economy hyper-competitive relative to the southern EMU countries. Germany and other northern countries financed the enormous external (current account) deficits of these countries.

This situation changed drastically, when in 2010 the risks of lending to governments and the private sector in the south suddenly became visible. Investors and banks stopped financing the south abruptly. This so-called "sudden stop" has triggered at least two vicious circles that deepened the problem of the affected countries rapidly. One circle affected the governments that suddenly had to pay much higher interest rates. This increased their deficits and financing needs at a time when financing was only available at prices which increased the deficits further. A second circle was the "doom loop": governments rescued banks, which increased their debts and debt financing problems, at the same time banks were holding debts of their own governments, which were increasingly loosing value, thus intensifying the banks' problems. Both vicious circles interacted, thus pushing the affected economy deeper and deeper into problems.

Speculations on exits from the Euro area emerged, thus increasing the interest rates countries had to pay on the debt further, which in turn makes an exit more likely. As it is well known from the EMS crisis of 1992/93 it is very difficult to stop such speculation unless a strong lender of last resort will make clear, that it will do "whatever it takes" to preserve the Euro. After ECB president Mario Draghi announced this famously in 2012, the markets have calmed down and interest rates fell rapidly.

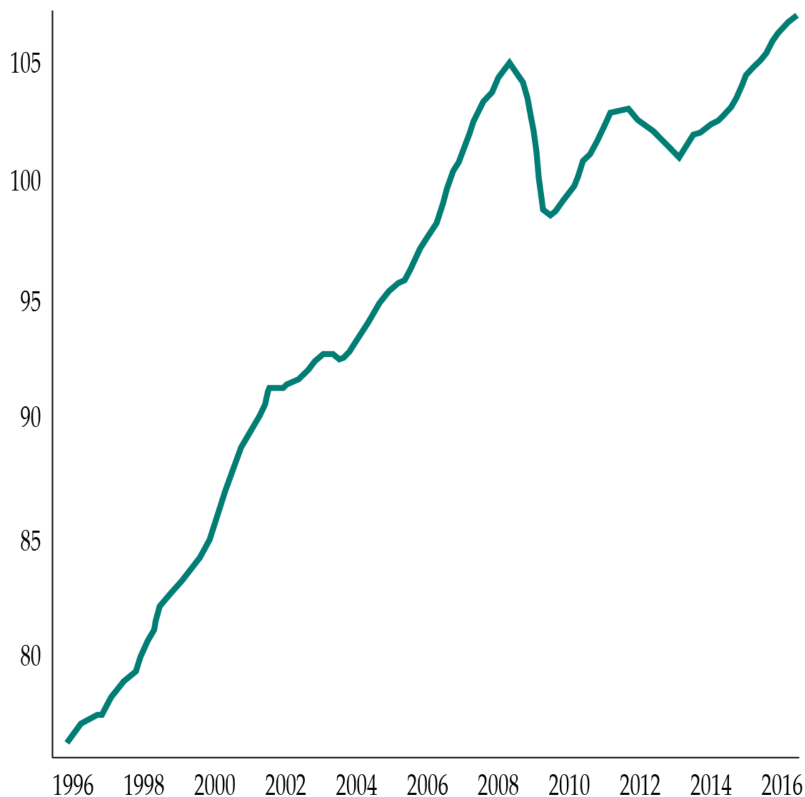
4. Conditions for the Survival of the Euro

The ECB has effectively stabilized the Euro are and provided breathing space to build the structures necessary to create a stable and sustainable Euro area. In the meantime, the European policy makers of the so-called Euro group have largely focused on three key elements in their rescue strategy, which is largely based on the "profligate country" narrative:

- strict austerity measures to limit government deficits and debts
- structural reforms, especially in labor market
- financial support/rescue packages in exchange for austerity and reforms.

In terms of our OCA analysis, the official strategy focuses on as much "reform" as possible and as little "joint burden sharing" as necessary. So far, this has been sufficient to contain the crisis. However, in terms of economic losses, hardship and unemployment the crisis is still not resolved. It was just in mid-2016 that the Euro area reached again the pre-crisis level of GDP (see Figure 8). Economic hardship and the demands for labor market reforms have are increasingly threatening to turn the economic crisis into a political crisis of the Euro area and the EU.

Figure 7: Real GDP of the Euro Area 19 (Fixed Composition) 1995-2016



Source: European Central Bank, Statistical Data Warehouse, December 28, 2016

The legitimacy of the European institutions is thus increasingly questioned from both sides: from within the countries that are asked to adjust and tighten belts and from within countries, that believe to have to "foot the bill" at a time, when their economic prospects are not rosy either. Not unsurprisingly for scholars studying currency unions, political tensions arise when deep asymmetric shocks occur. The Euro crisis has made clear that an imperfect OCA is not sustainable. What to do?

- The first option would be to dissolve EMU. However, this is easier said than done. The main reasons are procedural ones. It is hard to see how a country can return to its old currency that does not exist anymore. It may at best be re-introduced at a much lower value. A country that has borrowed extensively in Euro before, will see it debts ballooning – and creditors will eventually face huge losses. Therefore there is an overwhelming case that individual country exits from EMU would cause "the mother of all financial

crisis". This is the more so as one exit can easily trigger the speculation on the next exit. The ERM crisis of 1992/93 is the role model for this.

- The second option are structural reforms. However, enough to solve the problems by themselves alone:
  - Wage and price adjustment are still too small and too slow to bring by themselves fast improvements in competitiveness structural reforms have proven not been efficient.
  - Structural reforms cause political resistance, which ultimately can bring a currency union to its political limits.
  - To be more effective and receive political acceptance, structural reforms need a favorable underlying economic environment that provides jobs and perspectives.
- The third option is to implement more joint risk sharing in the currency union.
  - With the European Stability Mechanism (ESM), which provides conditioned emergency finance to crisis-affected countries, the Euro group has already created a first mechanism. Other mechanisms, like a banking union are on the way. All share the feature that they would be sufficient to deal with isolated problem in some smaller countries, but may eventually not be sufficient to weather a new major storm.
  - Alternatively a full-fledged fiscal union would be sufficient to withstand larger crisis economically, but would not be acceptable politically.

In sum, all instruments are either beset with economic limits in the sense that they would eventually not

withstand another major crisis, or if we make them waterproof, they would not be politically acceptable in the current EMU and Europe. Barry Eichengreen and Charles Wyplosz have recently formulated minimal conditions for the survival of the euro, which aim at rebalancing economic stability needs with the political limits towards handing over sovereignty to European institutions.

For the common currency, two centralized structures are crucial for providing financial and economic stability: **first**, a central bank that can effectively backstop financial crises, and **second**, a banking union that complements the single currency with its core elements: single supervision, single resolution mechanism and single deposit insurance.

In both areas, the Eurozone is already on the way, though the banking union is still incomplete. This is largely because of resistance against the single deposit insurance, which especially in Germany is seen as a form of debt mutualization. Such issues can, however, be overcome by a good design, for example by addressing moral hazard concerns.

However, where divergences in national preferences are strong and/or local expertise is superior for solving problems, decisions are best taken at the national level. A renationalization of fiscal policy is therefore a **third** condition and should be at the core of a sustainable European reform process. Why? First, because decisions about taxation and how to spend taxes are the heart of national sovereignty. This is exactly what people vote about in elections. Second, because countries can and should use fiscal policy to protect their economies against idiosyncratic shocks (though better incentives to really do it are needed). Third, the rule-based control of fiscal deficits by the stability and growth pact and its various follow-ups has clearly failed and damaged the reputation of Europe in general and the EU Commission in particular. However, for returning the responsibility for fiscal discipline to the national level requires adhering to a strict no-bailout rule. In other words, those who decide will also need to face the consequences.

Yet, the devil is in the details. For most countries sovereign debts are still at record-high levels. To regain control of fiscal policy a substantial debt consolidation is necessary and this is the fourth condition. Clearly, this is the most difficult point to agree upon. “Moral concerns” are voiced in some countries to oppose smart schemes, which show feasible ways for debt restructuring without debt mutualization or realizing losses.

5. Conclusion

The Euro has been through rough waters. Yet, it is still alive. Many have compared the Euro to the gold standard in terms of its reliance on wage and price flexibility, which is often neither achievable nor desirable to the degree needed. Will political limits ultimately put an end to the Euro as they finally terminated the gold standard and as it has been predicted by Milton Friedman?

The answer is no! Unlike under the gold standard, European policy makers can still make a difference. Working on the minimal conditions sketched above is one thing. Making the Euro area more waterproof by strengthening the European financial safety nets is another thing. And promoting more integration by promoting the single market project further can also not only contribute to more symmetry of the Euro area but also the recently threatened sense for solidarity in Europe and the Euro area.

And finally, it will ultimately be important to demonstrate that a united Europe can provide European citizens with “light at the end of the tunnel” and with a better future than the national way.

Specifically, a renationalization of fiscal policies does not impede joint actions, e.g. to engage in European-wide stimulus programs, if need be. A similar argument can be made for joint European infrastructure projects as already envisaged in the Juncker Plan. The current environment of zero interest rates and low growth makes an

overwhelming case for public investment and a revival of Europe and the Euro area.

In sum, the creation of the Euro turned out to be one of the most ambitious social experiments ever. Our analysis shows that this experiment can easily fail – with potentially disastrous consequences. Hence, once embarked on this experiment the Europeans will have to go forward and find ways to make the Euro sustainable. This, however, will require a minimum of solidarity within Europe and the Euro area. But the good news is: unlike a resort to nationalism, solidarity will ultimately pay off.

Annex

A 1: The Simple Macroeconomics of Monetary Unions

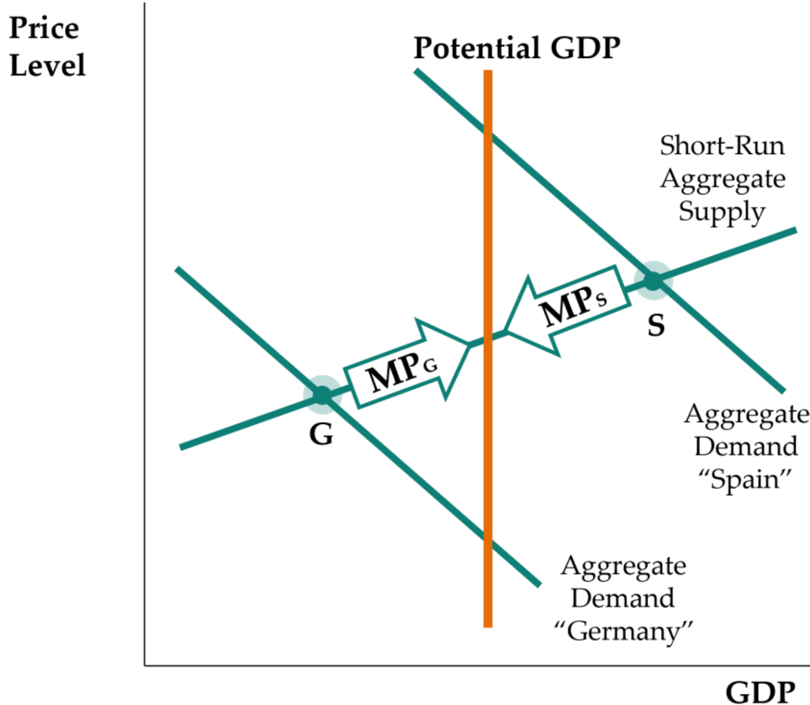
Those who are familiar with the standard macroeconomic textbook model can see from graph A1 that Spain enjoys here a high aggregate demand, e.g. from a real estate bubble, and it may go into a boom (S) with inflationary dangers as GDP exceeds its potential. Spain needs a restrictive monetary policy, pushing the demand back to the level of potential GDP (MP_S). If Germany is instead facing a low aggregate demand it will operate below its potential (G) and needs an expansionary monetary policy to increase the demand to meet the potential (MP_G). Hence, in the case of asymmetric shocks a one-size-fits all monetary policy would be paralyzed.

Figure A1: Asymmetric Shocks in the Standard Macroeconomic Model

If Spain enjoys high demand, e.g. from a real estate bubble, it may go into a boom (S) with inflationary dangers as GDP exceeds its potential. Spain needs a restrictive monetary policy, pushing the demand back to the level of potential GDP (MPS).

If Germany is instead facing a low aggregate demand it will operate below its potential (G) and needs an expansionary monetary policy to increase the demand to meet the potential (MPG).

Hence, in the case of asymmetric shocks a one-size-fits all monetary policy would be paralyzed.



With no own monetary policy, the major way to deal with an asymmetric shock in Germany is then to reduce wages and prices over time to overcome the recession and return to the potential GDP. This goes the faster, the more flexible labor and product markets are as the arrow "Wage $Flex_G$" indicates. Conversely, Spain may adjust by increasing wages and prices (Wage $Flex_S$).

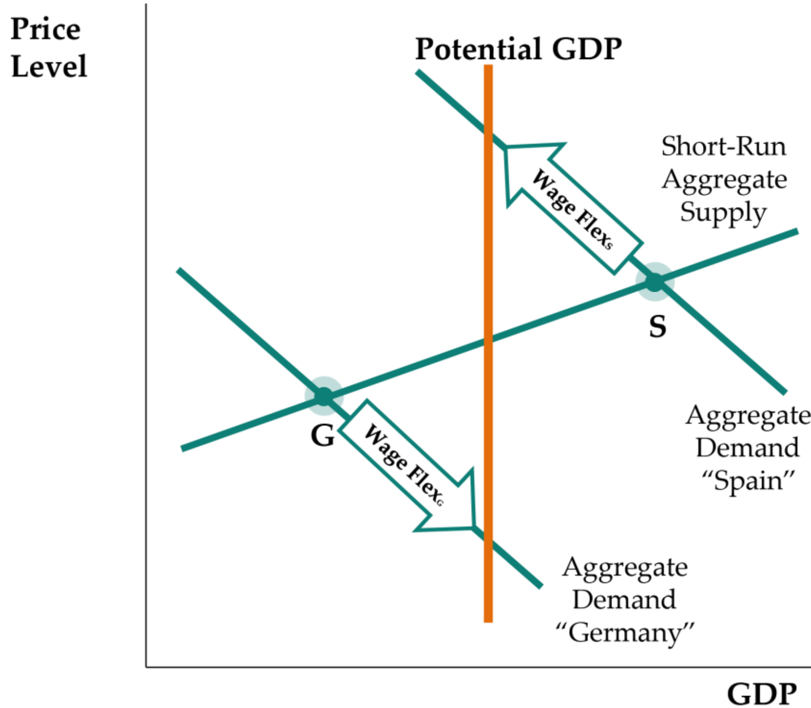


Figure A2: In a Currency Union Wage and Price Flexibility Is Needed to Deal with Asymmetric Shocks

With no own monetary policy, the major way to deal with an asymmetric shock in Germany is to reduce wages and prices over time to overcome the recession and return to the potential GDP. This goes the faster, the more flexible labor and product markets are.

Conversely, Spain may adjust by increasing wages and prices.

The situation in the early 2000s was pretty much like the one sketched. Germany has entered the EMU in 1999 with a too high exchange rate and lacked price competitiveness, especially in East Germany after the German unification. It would have needed a more expansionary monetary policy. By contrast, Spain and many other southern EMU member countries were booming as they enjoyed from them historically low interest rates. In Spain this led to a real estate boom and a booming economy. As the ECB has to set the monetary conditions on the average economic conditions in all member countries, the interest rates were too high for Germany and too low for Spain. As Germany was struggling to meet the EMU fiscal criteria an expansionary fiscal policy could not been used without violating the criteria even further. Spain, however, was reluctant to terminate the boom by fiscal restrictions in times when the government budget was already in surplus and the debt ratio falling rapidly. As a result and just as predicted by the model, wages and prices in Spain increased much faster than in Germany. In Germany far-reaching labor market reforms have been introduced by means of the so-called Agenda 2010. With wages increasing falling behind productivity increases in the mid 2000s, Germany had a huge advantage in price

competitiveness over Spain and other crisis countries when the financial crisis of 2008 hit the world and EMU.