The Dynamics of Convergence towards European Monetary Union

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1. Introduction

The strategy enshrined in the Maastricht Treaty is based on two principles. First, the process towards monetary union shall be a slow one. This certainly contrasts with other historical experiences of monetary unification. The latest example was the German monetary union, which was organized in six months time. Second, the entry into a monetary union is made conditional on achieving sufficient convergence in a number of macro-economic variables, in particular inflation rates, interest rates and the exchange rate, and fiscal variables (budget deficits and government debt). Countries should satisfy these convergence criteria to be admitted to the Monetary Union scheduled to start in 1999. Again, most historical experiences with monetary union have *not* relied on such convergence requirements. The recent German monetary union was realized without any condition being imposed on East Germany.[1] This suggests that the convergence requirements spelled out in the Maastricht Treaty may not really be necessary to form a monetary union.

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[1] The German monetary unification may not be a good example for European monetary unification. After all, simultaneous with monetary union East German industry was abruptly opened up to foreign competition after decades of central planning. The resulting collapse of East German industry to a large degree explains why West Germany was forced to transfer massive amounts of money to the Eastern part of the country. This is unlikely to happen when, say, Italy joins EMU, as Italian industry has been competing successfully in world markets for many decades.

2. The dynamics of the Maastricht transition strategy

Today, in 1996, only one country satisfies the convergence criteria (Luxembourg). The risk exists that the number of countries satisfying all these convergence criteria will remain small and, in fact, that it will remain a minority of countries. The reason is that the Maastricht approach contains a dynamics that will prevent many countries from converging and that will also do great harm to their economies. Take the *inflation convergence requirement*, and apply it to Italy.

According to the Maastricht rules, Italy should reduce its inflation rate before entering the Union. However, Italy has a poor reputation for fighting inflation. As a result, economic agents are sceptical about the ability (determination) of the Italian authorities to actually reduce inflation. This also means that economic agents will be sceptical about the success of this policy, so that inflationary expectations in Italy will not decline easily. This forces the Italian authorities to drastically reduce aggregate demand. Unemployment increases. In other words, in order to show to the public that they are serious in their determination to reduce the rate of inflation, the Italian monetary authorities will have to engineer a recession that is strong enough to reduce inflation. Only then will economic agents start believing that the Italian authorities have really been converted to a low inflation policy. The costs in terms of unemployment are likely to be substantial.

What is more, the success of this strategy is not guaranteed. It is likely that the Italian authorities will fail to acquire the same low inflation reputation as the German authorities. As a result, Italy will probably never quite reach the same low inflation equilibrium as Germany. Since the Maastricht Treaty also requires Italy to peg its exchange rate, the lira may experience increasing real appreciation during the transition, leading to doubts that this disinflationary process can be sustained. Speculative crises are set in motion, forcing devaluations of the lira. These devaluations lead to renewed divergences in inflation. In order to qualify for entry, Italy will have to start a new process of disinflation. The cycle can start all over again.

The scenario just described has in fact already emerged in practice. Up to 1992, countries like Italy and Spain applied strenuous disinflationary policies using a strategy of pegging to the Deutsche

Mark (even before the Maastricht Treaty told them they should). This led to both a narrowing of inflation differentials with Germany and a strong real appreciation. The real appreciation of the lira and the peseta put enormous pressure on the competitive position of Italy and Spain, leading to losses of output and employment. The strategy became unsustainable. When speculators realised this, speculative crises became inevitable, leading to sharp depreciations of the two currencies.

Although initially these sharp depreciations did not affect inflation in these countries very much (mainly because of the recession), since 1994 inflation differentials with Germany have started to increase significantly. These divergences are likely to widen even further, given the size of the depreciations of the lira and the peseta. Figures 1 and 2 show the movements of the inflation differentials of Italy and Spain with Germany, together with the real exchange rates. We observe the cycle in inflation convergence and real appreciation followed by real depreciation and inflation divergence. In order for Italy and Spain to bring their inflation rates within the 1.5-point differential prescribed by the Maastricht Treaty, a new policy of painful disinflation will have to be embarked upon, leading to the same phenomena of real appreciation and increasing unemployment. The probability of success of this new disinflation will be equally low as the previous one. We conclude that the Maastricht inflation convergence (and fixed exchange rate) requirements not only are painful for countries with a high inflation reputation. They will also turn out to be very difficult to meet in the foreseeable future. The door to Monetary Union may be shut for a long time for these countries.

The paradox is that one does not really need inflation convergence as a precondition to move into a monetary union. To see this, suppose a monetary union between Italy and Germany is launched and that the European Central Bank (ECB) has been made a close copy of the Bundesbank (which in fact has happened in the Maastricht Treaty). In that case, inflation in Italy can be credibly reduced without strong increases in unemployment. This follows from the fact that the Monetary Union is a monetary reform which eliminates the lira and the Banca d'Italia together with the unfavourable reputation suffered by these institutions. Expectations concerning the loss of purchasing power of the new European currency will be unrelated to the past losses of purchasing power of the lira. As a result, when Italy

becomes a member of the Monetary Union, inflationary expectations in Italy will decline quickly, because economic agents will not watch the policies of the Italian monetary authorities (who have ceased to exist) but the policies of the European Central Bank in Frankfurt. The swift decline in inflationary expectations will also reduce actual inflation quickly. Thus the Monetary Union is a technique to bring about inflation convergence at minimal cost. In contrast, the Maastricht requirement of bringing about inflation convergence *before* the Union starts is a technique that maximises the cost of convergence (without guaranteeing success). Paradoxically, allowing countries into the Union is the easiest way to guarantee convergence of inflation rates (and also interest rates).

FIGURE 1

INFLATION DIFFERENTIAL BETWEEN ITALY AND GERMANY AND REAL LIRA/DM EXCHANGE RATE

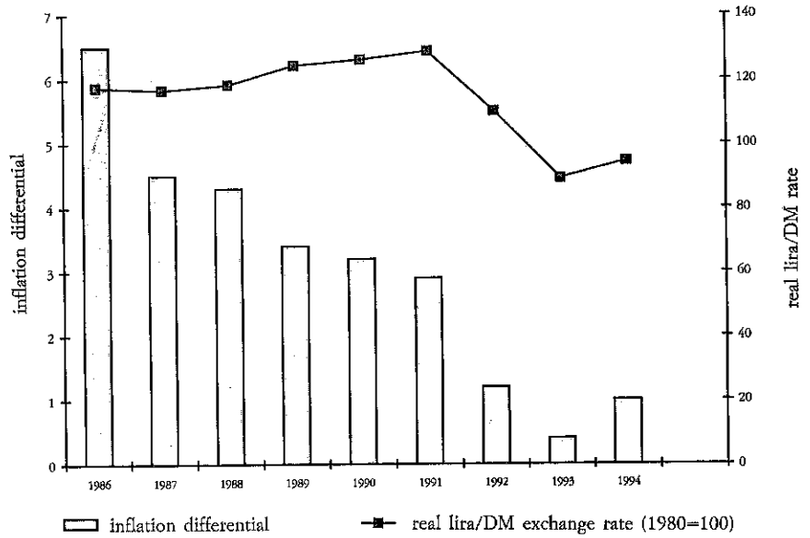
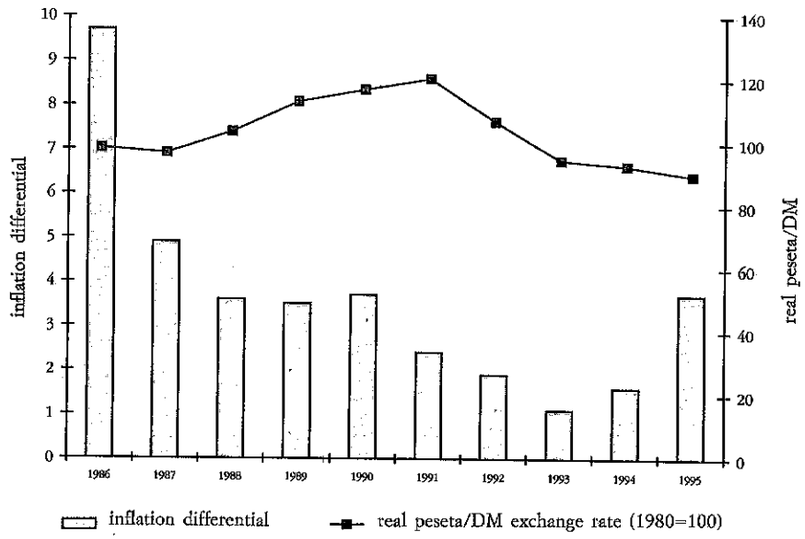


FIGURE 2

INFLATION DIFFERENTIAL BETWEEN SPAIN AND GERMANY AND REAL PESETA/DM EXCHANGE RATE



Sources: EC Commission, *European Economy*, and JP Morgan.

What about the *budgetary convergence requirements* (3% budget deficit rule and 60% government debt rule)? Can we also conclude that these too can be dispensed of? The problem is more complicated here. The issue is not whether deficit and debt levels are too high or too low. They are probably too high in most European countries and should be reduced. The issue is whether deficit and debt reduction should be erected as conditions for entry into the monetary union.

The standard argument for doing this can be formulated as follows: government debts are a threat to price stability. They put a good deal of pressure on the central bank to create surprise inflation so as to reduce the real burden of the debt. Thus when two countries, say, Germany and Italy, want to form a monetary union a problem arises. Even if the Italian authorities had the same preferences for low inflation as the German authorities, they would still have stronger incentives to create surprise inflation because the Italian government debt exceeds the German. This incentive does not simply vanish once Italy is in the union. As long as the country has a higher debt to GDP

ratio, the incentive to create surprise inflation will be present. This creates a problem for Germany. In the Union, the German authorities will be confronted with a partner who will push for more inflation, despite the fact that it has the same preferences with respect to inflation. As a result, Germany stands to lose and will insist that Italy's debt to GDP ratio be reduced prior to entry so as to guarantee low inflation in the union.

The foregoing argument for imposing reductions in the government debt prior to entering the Union does not take into account the fact that highly indebted countries tend to have short maturities of their government debt. Missale and Blanchard (1994) provide evidence for this. For example, in Italy the effective maturity of the government debt had declined to less than one year in 1990, following the large increases in the debt during the 1980s. In addition, Missale and Blanchard show that there are good theoretical reasons why highly indebted countries tend to lower the maturity of their government debt. The short maturities reduce the government's incentive to produce surprise inflation, which in turn increases the willingness of wealth-owners to buy the debt. In the end this lowers the borrowing cost for the government.

This phenomenon of highly indebted countries issuing debt with short maturities considerably reduces the risk that these countries, when admitted into the Monetary Union, would push for surprise inflation. The cost of such a policy would be especially high for these highly indebted countries. It can therefore be concluded that Germany does not have to worry that the highly indebted Italian government will push for surprise inflation.

From the foregoing we conclude that the argument for imposing budgetary convergence prior to entry into the Union in order to reduce the risk of inflation in the future Union is weak. All we have to do is to require that highly indebted countries should maintain a relatively large fraction of their debt in short maturities. In other words, one should not allow these countries to lengthen the maturity of their debt prior to entry.

There are of course other possible arguments for requiring prior reductions of government debt. The most prominent one is that this lowers the risk of default and thus also the risk that other member countries in the Union will have to bail out the defaulting government. This argument only makes sense if one can show that the pressure to organize a bail-out is higher when highly indebted countries default while they are members of the Union, than while they are not. This, however, is not obvious. Even if Italy is not allowed to join the Union, one can expect that a default will put considerable pressure on the other EU members to bail the Italian government out. This pressure comes from the fact that when Italy is outside the Monetary Union, a default would most likely lead to a collapse of the lira in the foreign exchange market, leading to great pressure from industrialists in the rest of the EU to support the lira. This exchange rate effect is absent if Italy defaults while it is a member of the monetary union.[2] We conclude that keeping Italy out does not necessarily reduce the risk for the EU-members of a future bail-out operation. In fact it may even increase it.

The most important objection to imposing government debt reductions as a condition for entering the monetary union is of the same nature as the one identified with respect to inflation. Such prior convergence criteria may in fact endanger convergence. Take again the case of Italy, or for that matter Belgium. Forcing countries like Belgium and Italy to reduce their government debts (a desirable goal in itself) while keeping them outside the Union makes life more difficult for them than doing this while they are in the Union. The main reason is that when these countries are kept outside (which now appears more and more likely) devaluation risks keep their real interest rates high, thus increasing the burden of debt and making the process of debt reduction more difficult to achieve. There is a real risk that these countries will fail to do so *because* they are kept outside. Thus, it can be argued that keeping these countries outside the Union may actually increase the risk of default, and therefore also the bail-out risk of the other members of the European Union. That is, in a sense it can be said that the Maastricht way is the hard way to organize entry into a monetary union. It also carries the risk that many countries will fail to pass the entry test for some considerable time to come.

[2] One could argue, of course, that when Italy is in the Union, it is likely that Italian government securities will be held more widely by residents of the Monetary Union than if Italy is kept outside the Union. Thus, the pressure for bail-out in case of default will be correspondingly greater. Thus, there are two forces at work. If Italy is in the Union, greater financial integration increases the pressure for bail-out. If Italy remains outside the Union, greater pressure stems from the exchange rate implications. Which of the two effects will dominate is difficult to say *a priori*.

If this is a correct characterization of the convergence dynamics for countries like Italy, then it also follows that allowing these countries into the Union without imposing prior convergence requirements would facilitate their convergence. In particular it would make it easier for them to reduce their budget deficits and to start a programme of debt reduction. In order to illustrate this, I have made a series of calculations for two highly indebted EU countries, Belgium and Italy. I computed the differential between the interest rate on domestic government bonds and the interest rate on bonds issued by the same governments in Deutsche Mark. This differential measures the pure devaluation risk (and not the default risk since the issuing government is the same). It is shown in the first column of Table 1. In a monetary union this differential will disappear. Its existence today adds an extra burden to the government budget of these countries. The burden of the debt is measured by the real interest rate, however. Therefore the relevant comparison is the real interest rate differential. This is shown in column 2. We observe that the real differential is higher than the nominal one in the case of Belgium. This has to do with the fact that the inflation rate is lower in Belgium than in Germany. The opposite occurs in the case of Italy. It can be expected that in a monetary union these inflation differentials will disappear. Thus, the observed real interest rate differentials measure the additional real burden of the debt in Belgium and Italy resulting from the absence of a monetary union. The final column then gives us an indication of the reduction of this debt burden (as a percentage of GDP) resulting from entry into the Union by these two countries. We obtain these measures by multiplying the real interest differential by the debt to GDP ratio. It can be seen that this relief in the debt burden is substantial, amounting to 2 to 4% of GDP. Allowing these countries into the Monetary Union would make it easier to reduce their budget deficits to a level close to the 3% Maastricht norm. Paradoxically, therefore, allowing these countries into the Union without requiring that they meet the 3% norm prior to entry would actually allow them to meet the norm more easily. In this sense it can be said that the imposition of the Maastricht convergence conditions is an impediment to effective convergence.

TABLE 1

INTEREST RATE DIFFERENTIAL BETWEEN DOMESTIC CURRENCY AND DM BONDS (10 YEAR) ISSUED BY BELGIAN AND ITALIAN GOVERNMENTS (1995) AND DEBT BURDEN

	Interest rate differential		Debt/GDP ratio (in %)	Reduction in debt burden (in % of GDP)
	Nominal	Real		
Belgium	0.70	1.5	140	2.1
Italy	5.85	2.8	123	3.5

Sources: JP Morgan, *Global Markets*, April 1995, and EC, *European Economy*.

3. The Maastricht strategy leads to a divided Europe

From the foregoing discussion one can conclude the following. The dynamics of the Maastricht convergence criteria creates a great risk of splitting the European Union apart, both economically and politically. *Economically*, because those who are left out may in fact be left out for a long time. A significant number of countries that today lack anti-inflationary credibility, may actually find it extremely difficult, if not impossible, to converge to the union members as long as they are left out. Such a situation will be very divisive for the European Union. This economic division of the European Union will create problems not only for the countries left out but also for those that are in the launch group. The exchange rates between the countries left out and the union members are likely to be volatile, creating distortions in trade flows and undermining the single market programme. Instead of promoting integration, a two-speed Europe is more likely to lead to a setback in the existing level of economic integration.

The Maastricht Treaty is also likely to divide the European Union *politically*. The Maastricht approach will maximize political conflict over membership in the Union: those countries that are left out (and they are likely to be the majority) will not readily give their agreement to a union from which they are excluded.

Thus we seem to have reached a paradox. On the one hand, letting highly indebted countries like Italy and Belgium into the Union may jeopardize price stability in the future Union (at least this

is perceived as such in low-inflation countries). This would lead to the insurmountable opposition of Germany. On the other hand allowing these countries to enter the Union will make it easier for them to reduce their government debt. At the same time letting them in would eliminate the risk of a deep division of the European Union. How can this paradox be solved? In the next section we discuss some suggestions for reform that make it possible to get out of this paradox.

4. An alternative strategy

The analysis so far implies a number of desirable reforms in the transition process towards Monetary Union. The general principle that should guide this reform can be formulated as follows. The transition to EMU should put less emphasis on convergence requirements and more on strengthening the future monetary institutions of the Union. In other words, more emphasis should be put on ensuring that the future European central bank deliver on its mandate to produce price stability.

This general principle could be achieved in several ways. One proposal is that countries who fail to satisfy the budgetary norms would not obtain voting power on the board of directors of the ECB. Thus, countries like Italy and Belgium, for example, would be accepted into the Union, but as long as their budgetary house is not in order, they would not be allowed to take part in the decision process of the ECB. As a result, there should be no fear that heavily indebted countries might push the ECB to pursue excessively expansionary monetary policies.[3] The paradox we have discussed in the previous section can be resolved. By allowing highly indebted countries into the Union, debt reduction targets become easier to achieve. At the same time the fear that these heavily indebted countries may induce an inflationary bias to the union is allayed. This fear has been one of the main stumbling blocks for low inflation countries to admitting countries following unorthodox fiscal policies to the Union.

[3] For a similar proposal see Gros (1995).

Another institutional strengthening consists in defining and enforcing a procedure for removal of the board of directors of the ECB should it fail to maintain price stability. Such a procedure would do much more to ensure price stability in the Union in, say, the year 2010 than the insistence that countries reduce their inflation rates and their budget deficits in the second half of the 1990s, before the Union starts. Such a reform would also go some way towards making the future European Central Bank more accountable. In this connection, one could also require the ECB to follow inflation targeting policies. This would make it possible to monitor the behaviour of European monetary authorities more closely than is foreseen in the Maastricht Treaty.

The proposed reform leaves one problem unresolved, however. There is now a considerable literature suggesting that the European Union of fifteen members may not be an optimum currency area.[4] The practical implication of this is the following. When countries experience asymmetric shocks (e.g. unsynchronized business cycles) they may push for different monetary policies in the Union. This could lead to conflicts within the ECB. As a result, European monetary policies may become erratic and unpredictable. This, of course, is a serious risk inherent in forming a monetary union with too many countries.

How can this problem be solved? We argued that the convergence criteria do not constitute the correct selection procedure for determining the optimal size of the union. Nor can scientific studies, even if reliable, be used to solve this selection problem. The only reasonable alternative is to ask each EU member country to determine for itself whether the benefits of the Union outweigh its costs. To minimize the risk that too large a union would make European monetary policies erratic and unpredictable, the institutional reforms suggested above are essential. It remains true that the risk of erratic monetary policies by the future European Central Bank cannot be completely eliminated. These risks, however, must be weighed against the risk for the European Union of keeping many countries against their wishes outside the Monetary Union, and thereby producing a political and economic division of the European Union.

[4] See Bayoumi and Eichengreen (1992), De Grauwe and Vanhaverbeke (1991), Eichengreen (1990), von Hagen and Neumann (1994). For a survey see Tavlas (1994).

A shift of focus, away from convergence requirements and towards the strengthening of Europe's future monetary institutions, would increase the likelihood that the European monetary union will be a zone of monetary stability. At the same time this shift of focus is necessary to reduce the risk of a great and permanent division of the European Union as such. Such a division would not be in the interest of those who are admitted to the Monetary Union, let alone of those who are left out.

5. Conclusion

In this paper it has been argued that the Maastricht strategy towards Monetary Union contains a dynamics not leading to convergence, but to divergence and division of the European Union.[5] We also argued that an alternative strategy exists which avoids the risk of splitting the Union apart.

At this moment it does not look very likely that such a reform process will be initiated. This has to do with the political economy of the monetary integration process in Europe. This process is now dominated by the reluctance of Germany to start a monetary union. There are two reasons for this. First, a monetary union implies that Germany relinquishes its dominant position in European monetary policy-making. It is no exaggeration to state that, today, European monetary policies are decided by the Bundesbank. A monetary union will change this. One should therefore not be surprised that the German monetary authorities do not give up their power gladly. Second, the perception in Germany that European Monetary Union will mean more inflation and monetary instability is strong. Monetary Union is perceived in Germany as a demand by the other EU members that Germany relinquish its strong Mark in exchange for a European currency whose strength and stability is untested.

These two factors explain the Maastricht convergence strategy. The convergence criteria have been introduced not because they are necessary conditions to form a monetary union. They have been put in place to take into account the German reluctance to form a monetary union. They will have the effect of keeping the Monetary Union small, thereby preventing German monetary dominance from being completely diluted. In addition, they make it very likely that Monetary Union will be postponed. The reason is that uncertainty about the membership question will unsettle the foreign exchange markets in Europe. As it will be uncertain up to the last moment who will and who will not be a member, speculators will induce large-scale movements of funds. As a result, as we approach 1998 (the year the decision about membership should be taken) turbulence in the foreign exchange market (and in financial markets) will increase. The speculative crises that will erupt will be uncontrollable. This may provide the excuse for the reluctant members to argue that the time is not ripe for Monetary Union and to postpone the whole project.

[5] A similar argument was developed by Alesina and Grilli (1993).

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