European Monetary Union: the Dark Sides of a Major Success

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September 2005

Paper prepared for the Panel Meeting of Economic Policy, to be held in London on 21-22 October 2005.

1. Introduction

The adoption of a common currency by 12 European countries has been a fascinating live experiment. Unsurprisingly, it has drawn the attention of economists from all over the world, and continues to do so. Surprisingly, perhaps, economists have disagreed and quarrelled on every issue, big and small. Maybe as a consequence, policy makers have gone their own way. Six years after the launch of the euro and 15 years after the discussions that led to the Maastricht Treaty, this paper revisits and evaluates these debates.

It would be nice to use the benefit of hindsight to pass a final judgment on the various arguments that have been put forward in the many controversial debates. As it turns out, this is generally not possible. Consider, for example, the fact that the monetary union has been a spectacular success. This does not mean that the policymakers were right not to listen to academic economists. One can always argue that, had they listened better and earlier, things might have even gone better, but we do not know and will never know. With even more hindsight, economic historians too will undoubtedly quarrel when they review these exciting years.

This paper selects three issues that I believe are the core issues: the convergence criteria, the Stability and Growth Pact and the monetary policy strategy.[1] For each issue, the paper examines the controversies and tries to link them to the underlying theories. There is no attempt at exhaustivity, the literature is enormous, nor at impartiality, I have been involved in too many of these controversies to be well placed to pass judgment.

The story starts in January 1987 with the last major Exchange Rate Mechanism (ERM) realignment. By then, the *franc fort* policy – the decision to use the exchange rate anchor to bring and keep inflation down, and therefore to align monetary policy with that of the Bundesbank[2] – was taking root, not just in France. Having vowed to avoid further realignments, the monetary authorities started to view a monetary union as more than a ritual project for another day. Sensing an opportunity and glowing from the successful adoption of the Single Act, Commission President Jacques Delors masterminded the constitution of a Committee that would examine whether a monetary union was indeed feasible and, if so, how. The 1988 report of the Delors Committee provided the blueprint of the Maastricht Treaty; it was formally accepted in Madrid in 1989. In 1990, the Commission published *One Money, One Market*, the first articulated study of the costs and benefits of a common currency, which started to draw researchers into the issue. Several conferences started this effort – many early references quoted here have been presented at these conferences – and soon he research programme vigorously developed. But academic research is inherently slow. As the Delors Committee Report was promptly

[1] The other important issues that are not dealt with include the international role of the euro (see, e.g. Portes and Rey (1997), the exchange rate policy and the relationship between the Eurosystem and Euro area member governments.

[2] This strategy was analyzed by Giavazzi and Giovannini (1989).

transformed into the Maastricht Treaty, views from outside official circles failed to significantly affect decision making.

This left research with the task of assessing the treaty. Most, but not all, US-based researchers saw monetary union in Europe as yet another bizarre idea that would never materialize. Most European-based economists, and a few US-based colleagues, thought it would happen. Of course, they debated whether it was a good idea or not, but they mostly tried to anticipate how it would work. The Optimum Currency Area (OCA) theory, long an appendix to international macroeconomics curricula, made a spectacular comeback. It played no serious role in the drafting of the Maastricht Treaty but served as an important tool to assess the project, including the controversial convergence criteria. This is the theme of the next section.

The Maastricht Treaty included an Excessive Deficit Procedure that was largely ignored until Germany pressed for quick negotiations that led to the stealth adoption of the Stability and Growth Pact. Section 3 presents the controversies that followed, and continue to rage to this day. Many, but far from all, economists considered that the pact was flawed and could not work. They recognized that governments suffered from a deficit bias, and proceeded to analyse the reasons, drawing on the growing field devoted to politico-economic analysis of policy-making. They accepted that there should be a way of stopping the public debt build-up, but debated whether this was a matter for the EU or whether it should be left to individual countries. They mooted many proposals, some modest, some radical. At the very least, they were not caught off guard when the pact was put in abeyance in 2004. Hopes that a new and greatly improved pact would replace the failed one were dimmed when only limited changes were adopted in 2005. The debate, now, is whether these changes have strengthened or fatally undermined the pact.

By and large, the Eurosystem has delivered. Inflation has been stabilized at a low level, fulfilling the Maastricht mandate. Growth has been disappointing but there are enough reasons that account for this poor performance not to blame the Eurosystem. This does not mean that all is well in the area of monetary policy; it does mean, however, that the lively debates reported in Section 4 are of secondary order of magnitude. The Eurosystem has been criticized for its outdated monetary policy strategy and for its tendency to seek protection from criticism – mostly unfair or moderate – through opaqueness. Like the US Federal Reserve, the Eurosystem has decided not too adopt the fashionable inflation targeting strategy. Instead, it has chosen to follow the time-honoured monetary growth rule strategy championed, but not followed, by the Bundesbank. The resulting gap between actions and deeds is a thorn, with limited economic consequences but more serious implications regarding democratic accountability. The Eurosystem has responded to, but not fully satisfied its critics by publishing its inflation forecasts and redefining its two-pillar strategy.

2. OCA vs. Nominal Convergence

The OCA theory asks the basic question. Yet, it played at best a marginal role in the official deliberations, which developed an entirely different approach. While the OCA

theory can help in deciding whether a monetary union makes good economic sense, officials did not waste much time on this issue, which they treated as entirely political. They concentrated instead their efforts on mapping up the process that would lead to the adoption of the single currency and on designing the corresponding institutions. It took a long time for the OCA theory to be taken seriously by policymakers. This section examines how these two different logics developed and eventually interfered.

2.1. Why a Monetary Union? The Delors Committee Report's Logic

The Maastricht Treaty faithfully took up nearly all the proposals made in the Delors Committee Report. It is useful, therefore, to examine what reasons are provided in the report for adopting a single currency and how the OCA theory was dealt with.

The Delors Report goes at great length to present the monetary union as a natural, indeed unavoidable, consequence of the Single Act. One of its arguments is the impossible trinity principle. This principle notes that full capital mobility and exchange rate fixity remove the ability to conduct an independent monetary policy. Under the assumption that exchange rate stability is seen as a condition for the smooth working of the Common Market, it follows that all countries save one have lost *de facto* monetary policy independence. The monetary union proposal recognizes this fact and makes sure that no country will mistakenly challenge the impossible trinity principle.

While the impossible trinity principle is usually accepted, the report's argument rests on two assumptions. The view that exchange rate volatility is harmful to trade integration has been a mainstay of official thinking ever since the late 1940s, much in line with the Bretton Woods deliberations. The UK is the only country that has gradually moved away from this view after the end of the Bretton Woods arrangement.[3] Yet, for very long, research has not been able to detect trade-enhancing effects of exchange rate stability. By the time the Delors Report was produced, therefore, the assumption was unsubstantiated. With hindsight, the Delors Committee was right. The result by Rose (2000), that monetary unions raise trade by 300% has radically changed the debate.[4] Since then, the question has not been whether a common currency – not the same question as pegged exchange rates – encourages trade, but by how much. A whole literature has been devoted to the Rose effect, including Persson (2001) and Rose (2001), gradually bringing it down to a more realistic level. In his review of this literature, Baldwin (2005) suggests that an effect of 15% is plausible.

The second assumption of the Delors Report is that a tightly pegged exchange rate cannot impose sufficient discipline on monetary policy; the implication is that national currencies cannot and should not be preserved. This assumption was contradicted by the Dutch experience. Since the mid-1980s, the Netherlands had tightly linked its currency to the Deutschemark, in effect fully complying with the impossible trinity. There are many reasons why the Delors Committee decided that the ERM, even strengthened, would not be enough. These reasons are not explicited in the report, but they are easy to guess.

[3] Sweden also changed view in the mid 1990s as it adopted the inflation targeting strategy.

[4] Baldwin (1991) had identified a favourable effect on FDI.

First, the Committee must have harboured serious doubts that most European countries would be able to abide by the exacting requirements of a tight exchange anchor. Adopting the policy stance of the Bundesbank under each and every circumstance is a tall order requirement, especially for countries that did not have Germany's tradition of putting price stability at the lexicographic top of their policy agenda.[5] As it turns out, the ERM disintegrated in 1992-3 because member countries had blindly followed Germany's tight monetary policy as it embarked on its unification process. This event illustrated the fact, later confirmed by the collapse of the Argentinean currency board, that even very hard commitments are never fully credible. A very tight fixed exchange rate commitment is just not as robust as no exchange rate at all. It remains to be seen whether no exchange rate at all is sufficiently robust to deal with violent shocks.

Second, it must have crossed some Committee members' minds that adopting the DM, i.e. making the Bundesbank the *de facto* central bank for all of Europe, was not politically acceptable. It was hard to swallow for the other countries and it was bound to emerge sooner or later as a major divisive policy issue. In addition, if it were to assume this role, the Bundesbank would have had to adapt its policy to the situation in the whole of Europe. Its actions following unification in the early 1990s indicated that it was not prepared to act in this way, even if it meant putting the ERM under lethal stress.

Finally, the Commission was in a phase of ascendancy and, with the support of several countries that had long supported the idea of a common currency, probably spotted a golden opportunity to push for "an ever closer union". The Delors Report is indeed replete with statements to the effect that macroeconomic policy coordination is the natural counterpart to the Single Market: "The success of the internal market programme hinges to a decisive extent on a much closer coordination of national economic policies." (Delors Committee Report, p. 15). As far as monetary policy concerned, this means a monetary union.

2.2. Why a Monetary Union? The OCA Logic

The arguments presented by the Delors Report can be seen as defensive. The Single Act, especially the requirement that capital controls be definitely dismantled, put the ERM, and more generally exchange rate stability under threat. A common currency was seen as a defence against this threat. The report makes no reference to OCA reasoning except that it briefly recognizes the problem posed by asymmetric shocks: "Imbalances might also emanate from labour and other cost developments, external shocks with differing repercussions on individual economies, or divergent economic policies pursued at national level." (Delors Committee Report, p. 15). Nor does the Commission in its *One Market, One Money* major appraisal of monetary union show much interest in the theory: "The optimum currency area approach provides useful insights but cannot be considered a comprehensive framework in which the costs and benefits of EMU can be analysed.

[5] "Decision-making authorities are subject to many pressures and institutional constraints and even best efforts to take into account the international repercussions of their policies are likely to fail at certain times." Delors Committee Report, p.15.

Empirical applications of this approach are scarce and hardly conclusive." Commission (1990), p. 46.

It is true that the OCA theory had not been made operational by the time when the Delors Committee had been set up. In addition, its emphasis on the conditions under which a currency area is optimal attracted attention to the costs of less-than-optimal circumstances, a message that officials were not keen to broadcast.

Two problems stood in the way of making OCA theory the centrepiece of the Delors Report and the deliberations that followed its acceptance. First, the OCA theory had not been developed in a formal way. It was rich but complex. As a result, there were doubts about exactly what it meant. Formalizing the theory was not easy and took time. Bayoumi (1994) and Ricci (1997) each illustrated some aspects of the theory, as did later Alesina and Barro (2002). The second difficulty was to use the theory's insights to reach practical conclusions. Following Cohen and Wyplosz (1989), Eichengreen (1990) and de Grauwe and Vanhaverbeke (1993), Bayoumi and Eichengreen (1993) started to explore the size and nature of shocks affecting Europe to derive an OCA index that does a good job at explaining which countries have joined the Euro area (Bayoumi and Eichengreen, 1997).

The key message from OCA theory is that labour mobility, trade openness and product diversification make asymmetric shocks either unlikely or not destabilizing. Several studies started to explore these aspects one by one. Applying the methodology developed by Blanchard and Katz (1992) to study labour mobility in the US monetary union, Decressin and Fatas (1995) provided a sharp and depressing contrast of European labour market responses to asymmetric shocks. Krugman (1993) also poured cold water by asserting that product diversification would decline following the launch of the euro. This triggered a lively debate which culminated with the opposite suggestion by Frankel and Rose (1998) that Europe will increasingly fulfil the OCA criteria once it adopts a common currency.

Quite rapidly, emerged the conventional view that openness to trade is the only OCA criterion that is unquestionably fulfilled. The labour mobility criterion is not even remotely satisfied, a conclusion made worse by a high degree of price and wage rigidity. This message was not pleasing to officials, and dutifully ignored for many years.

Since Europe is not an optimum currency area, it has been impossible to draw sharp conclusions. Facing glass half full and half empty, commentators have either interpreted the project on the basis of their own prejudices or brought up other criteria. Reviewing this literature, Baldwin and Wyplosz (2004) identify three additional OCA criteria.

The first one is the existence of fiscal transfers to deal with asymmetric shocks. A country that undergoes an adverse asymmetric shock is bound to suffer, and could possibly come to regret the loss of the exchange rate. The other currency union members can mitigate these costs by temporarily providing resources to the ailing country. A small literature has pointed out that tax systems provide automatic transfers in existing currency

unions; given its tiny and rigid "federal budget", Europe does not do well on this dimension.

The second criterion is homogeneity of preferences regarding the use of monetary policy. The idea is that broad agreement over the aims of the common central bank should make its decisions more easily accepted in the presence of asymmetric shocks that differentially affect member countries.

The third criterion is political. If the currency union is seen as part of broader project, costs that arise because Europe is not an OCA will be tolerated. There is general agreement that broader political aims at the top have played a key role in the decision to launch the monetary union, much less on the necessary underlying support at the grass-root level.[6]

2.3. The Convergence Debate

The Delors Report includes detailed entry condition requirements. After considerable debates, recounted by Bini-Smaghi et al. (1993), the requirements were incorporated into the Maastricht Treaty and came to be known as the Maastricht convergence criteria. These "nominal" criteria bear no relationship with OCA principles. The declared intention was to restrict monetary union admission to countries that had demonstrated their commitment to a "culture of [price] stability", dutifully ignoring output and employment stability, which lies at the heart of the OCA theory.

The view that admission criteria are needed has been highly controversial from the start, both among policymakers and economists. For a bizarre reason that I am unaware of, the controversy has been described as pitching 'economists' against 'monetarists'. The economist camp was represented by Germany. They wanted a long convergence process, without any set date for launching the common currency, and a small initial group of (price) stability-oriented countries. The monetarist camp was associated with France. They argued that nominal convergence was not needed and they called for a tight and unconditional agenda.

The logic of the economist camp is articulated in European Commission (1991). The coronation theory, as it was sometimes referred to, holds that a common currency is the final step in a long process during which national monetary policies become increasingly aligned. When they have become identical and national currencies are no longer distinguishable, to the point where markets spontaneously equalize interest rates, monetary union can happen, merely ratifying policy actions. Why should earlier adoption of a common currency be resisted? Two arguments were advanced. First, inflation is presumed to be sticky. This means that, for a while, low-inflation countries will import inflation from non-converged countries. It also means that high inflation countries will see their nominal interest rates suddenly decline. The result will be very low – possibly negative – real rates that will boost demand and further fuel inflation. The second

[6] For a sample of this literature see Cohen (2000), Feldstein (1997), Frieden (1998), King (1998), Wyplosz (1997).

argument is political. Countries that have not adopted a (price) stability culture will not support a common monetary policy stance once they have a representative in the common central bank.

The monetarist camp – for an early statement, see Begg et al. (1991) – dismisses the previous arguments on the basis of the theory of policy regimes, backed by evidence provided e.g. in Sargent (1982). Under this view, once a new currency is established, past expectations become irrelevant and inflation is not sticky at all.

This view attracts attention to the credibility of the central bank, since it will shape expectations. A credible central bank should promptly deliver low inflation in all member countries, irrespective of their past performance.[7] The comments on Bini-Smaghi et al. (1993) by Schulmann (1993) indicate that, indeed, during the negotiations that led to the Maastricht Treaty, Germany (and the Netherlands) emphasized the importance of policies and convergence while other countries – France and Italy, it seems – were focusing instead on institution building. Rules vs. institutions is one prism that illustrates the debate on the convergence criteria; it also plays an important role in the debates about the Stability and Growth Pact, as explained in Section 3.

The implication of the monetarist view is that the focus should be on establishing strong institutions, not on demanding entry conditions and not on a lengthy convergence process. The argument is that pre-entry disinflation is slow and costly while it would be nearly immediate and essentially costless if achieved after entry into the monetary union.

In the end, the Maastricht Treaty went a long way towards the economists or German view. The most that the monetarist camp achieved was to obtain a final date by which the third stage – the irrevocable fixing of exchange rates – would start.[8]

2.4. Reality Check

It is impossible to use hindsight to pass judgment on most of these once heated debates. For instance, we cannot test the view that inflation would have promptly converged at no output cost had the third stage started before convergence. The best that can be done is to assemble circumstantial evidence that bears on the questions discussed above.

The defensive logic

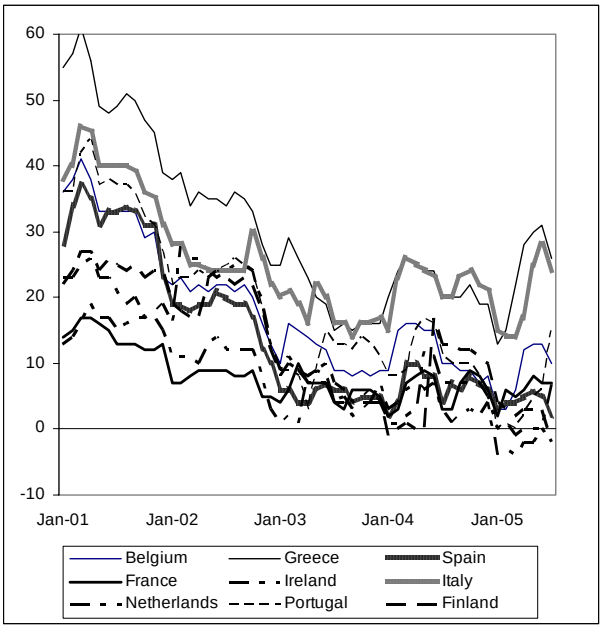
The central thesis of the Delors Report, and the economic reason behind the adoption of the Maastricht Treaty, is that the only way to preserve exchange rate stability in the presence of full capital mobility is to adopt a common currency; this is an implication of the impossible trinity principle. The ERM crisis provided a vivid confirmation of the relevance of this thesis, but is the solution working?

[7] Section 4 returns to the question of the constitution and mandate of the central bank.

[8] There exist many studies that describe the way Germany dominated the negotiations, after it reluctantly accepted to support the monetary union. A good and concise presentation is in Kenen (1995).

Ever since 1999, when the Eurosystem took over, there has been no monetary tension within the Euro area. A good example is the quasi-absence of spreads among long-term interest rates, as can be seen from Figure 1. These spreads capture the country risk, i.e. the probability of a default, and the exchange rate risk. Since all public debts are currently denominated in euros, the exchange rate is nil unless the country is expected to leave the Euro area, which is what we are interested in. (Even then, it matters what would happen to the denomination of the public debt. There is no exchange risk if a country leaves the euro but keeps its debt denominated in euro. If the country re-denominates its debt in its newly re-established currency, then there is a currency risk.) How can these risks be separated?

Figure 1. Ten-year government bonds: spreads relative to Germany (b.p.)



Source: ECB

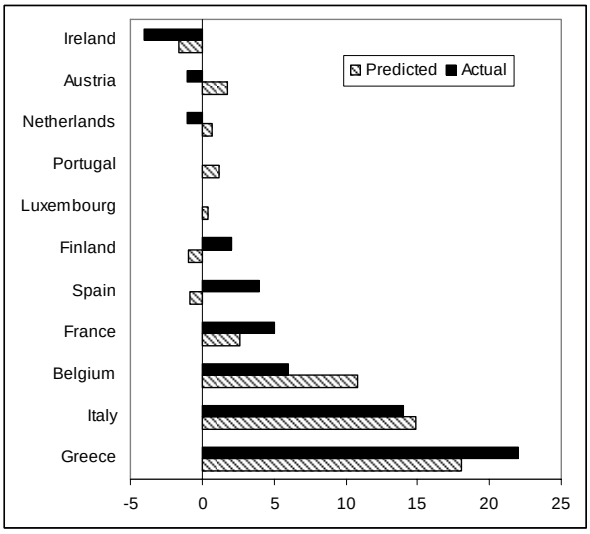
How can we evaluate the residual currency risk? One approach is to estimate the spread associated to the country – or debt default – risk and ascribe the remaining spread to the currency risk. A crude way of doing so is to estimate how debt levels affect the spread and interpret the measured effect as country risk.[9] Using spreads vis a vis Germany measured in March 2005, a simple regression across Euro area members yields:

$$\underset{(3.647)}{spread = 1.372} - \underset{(0.124)}{0.194}*debt + \underset{(0.001)}{0.003}*debt^2 \qquad \text{Adj.R2} = 0.79$$

[9] A more elaborate study by Cordogno et al. (2003) shows the role of worldwide risk factors operating via debt size.

where *debt* is the debt to GDP ratio (in percent) and standard errors are shown underneath. The non-linearity – the estimated coefficients imply that the spread is growing for positive debt levels – is important to the view that markets exercise a disciplinary influence on budgetary policies, as argued in Bayoumi et al. (1995). Figure 2 displays the actual spread and the spread predicted by the regression. The difference between the actual and predicted spreads is interpreted as the currency risk. It is negligible, never exceeding 5 basis points. This suggests that the markets do not currently expect any exit from the Euro area. [10] The monetary union is currently seen as rock-solid, which vindicates the defensive view of the Delors Report.

Figure 2. Actual and predicted spreads (b.p.)



Source: Author's calculations

The OCA logic

If Europe is not an OCA and yet decides to create a common currency, there will be economic costs. If these costs are high and the political criteria are not met, the undertaking will fail. Doomsday predictions are entertaining,[11] but is there any evidence six years on?

The economic criterion that is definitely not satisfied is the labour market ability to deal with asymmetric shocks. The implication is that unemployment should worsen as the result of the adoption of a common currency when asymmetric shocks occur. A simple way to check whether there is any evidence of such an effect is to estimate Okun's law

[10] European Commission (2004) and ECB (2005) indicate that output and inflation dispersion have declined within the Euro area, an indirect indication that asymmetric shocks have been subdued so far.

[11] For an early study, see Arrowsmith (1998). For an entertaining prediction of impending war in Europe, see Feldstein (2000),

and test for a monetary union effect. Okun's law is an empirical relationship that relates the unemployment rate to the GDP growth rate: *unemployment* = α**growth*, and α is predicted to be negative. Okun (1970) found that an increase of 3% in GDP growth is associated with a fall of 1 percentage point in the unemployment rate (i.e. α = -1/3).

In order to recognize that structural unemployment and trend growth rates change over time and across countries, Okun's law can be restated as:

$$u - \bar{u} = \alpha(y - \bar{y}) + \rho(u - \bar{u})_{lagged} .$$

In this expression, $\bar{u}$ represents the structural unemployment rate and $\bar{y}$ is trend real GDP, so the relationship now concerns the cyclical deviations of the unemployment rate u and of real GDP y from their respective trends ($u - \bar{u}$ is cyclical unemployment and $y - \bar{y}$ is the output gap). The added term recognizes that unemployment is slow to change.

In order to capture the asymmetric shock effect of interest here, the relationship is further modified to include the difference between output gaps in the Euro area and locally:

$$u - \bar{u} = \alpha(y - \bar{y}) + \beta\left[(y^{EU} - \bar{y}^{EU}) - (y - \bar{y})\right] + \rho(u - \bar{u})_{lagged}$$

This "asymmetric shock augmented" Okun's law formulation makes it possible to distinguish two sources of cyclical unemployment fluctuations: local conditions captured by coefficient α and asymmetric shocks captured by coefficient β, which is also expected to be negative. Table 1 shows estimates of this relationship, using quarterly data over the available sample.[12] Both gaps are lagged to limit the endogeneity problem.

For each Euro area country, two columns are displayed. The first one is the "asymmetric shock augmented" Okun's Law. Except for two countries (Austria and Finland) the law is verified since α is found to be significantly negative. The asymmetric shock term, on the other hand, is significantly negative only in Belgium, Spain and Italy, marginally in Germany.

The second column for each country is the one of interest: it asks whether the adoption of the euro has affected Okun's law. If, as predicted by the OCA theory, adverse asymmetric shocks worsen the unemployment situation, we should find that the coefficient β increases in absolute value, or becomes significantly negative when it was not beforehand.

[12] The trend unemployment rate and output (real GDP) are estimated using a highly smoothed Hodrick-Presscott filter (smoothing coefficient = 50,000) in order to capture slow changes in both trends. The regression is a first-difference version of the original formulation since level estimates result in a high degree of serial correlation in the error terms.

To that effect, the three right-hand side variables enter directly as in the first column and, additionally, they each are interacted with a monetary union dummy variable (labelled *MU* in Table 1) that is zero until 1998Q4 and one thereafter. The prediction from the OCA theory is that the interacted asymmetric shock term is significantly negative. This prediction is only verified for Austria. So far, at least, the monetary union has not been an autonomous source of unemployment fluctuations.

One possibility is that there has been no asymmetric shock. For instance, European Commission (2004) reports an increasing convergence of business cycles in the euro area. One way to test this hypothesis is to look more closely at the quarterly output gap series used in the regressions shown in Table 1. Specifically, for each country innovations in asymmetric shocks are defined as the residuals of AR1 estimates of the difference between the country's output gap and the Euro area output gap. The standard deviations of these innovations are displayed in the two first rows of Table 2 over the pre and post monetary union periods. The next four rows show a battery of tests that ask whether the variances of innovations are equal before and after the adoption of the euro. The tests do not reject the hypothesis that there has been no change in asymmetric shocks in the case of Austria, Spain and Finland. The hypothesis is rejected in the case of Germany, France, Italy and the Netherlands; in all four countries the intensity of asymmetric shocks has declined. The tests are ambiguous for Belgium and Portugal, where asymmetric shocks could have intensified.

With the possible exception of Belgium and Portugal, the results suggest that the Euro area has undergone less asymmetric shocks since the adoption of the euro. It may be, therefore, that the OCA theory has not yet been put to test. Another possibility is that the OCA theory predicts that asymmetric shocks are unlikely since the McKinnon and Kenen criteria are well satisfied, which is what seems to have happened. It is too early to tell.

Table 1. Okun's Law and the Monetary Union

	Austria		Belgium		Germany		Spain		Finland		France		Italy		Netherlands		Portugal	
Cyclical unemployment lagged	0.459	0.506	0.410	0.482	0.450	0.461	0.700	0.626	0.693	0.373	0.510	0.573	-0.002	0.022	0.054	-0.011	0.357	0.325
	3.345	2.183	3.974	3.263	3.669	2.798	5.810	4.222	7.208	2.695	4.420	3.670	-0.018	0.117	0.405	-0.051	2.763	1.795
Local output gap	-0.056	-0.022	-0.795	-0.680	-0.770	-0.823	-0.708	-1.089	-0.282	-1.480	-0.691	-0.504	-0.455	-0.537	-0.997	-1.426	-0.511	-0.543
	-0.370	-0.099	-4.607	-3.449	-3.877	-3.092	-1.741	-2.189	-0.840	-2.783	-3.914	-2.055	-2.294	-2.115	-4.211	-3.451	-2.351	-1.963
Output gap: Euro area less local	0.106	0.373	-0.568	-0.622	-0.485	-0.596	-0.638	-1.059	0.080	-0.557	-0.144	-0.126	-1.226	-1.323	-0.085	-0.089	-0.042	0.693
	0.542	1.568	-2.597	-2.141	-1.467	-1.367	-1.744	-2.049	0.225	-1.253	-0.642	-0.533	-3.843	-3.042	-0.335	-0.246	-0.130	1.125
MU*(Cyclical unemployment lagged)		-0.094		-0.237		-0.081		0.136		0.178		-0.214		-0.087		0.026		-0.180
		-0.330		-0.960		-0.270		0.459		0.404		-0.812		-0.290		0.094		-0.635
MU*(local output gap)		-0.320		-0.460		-0.031		1.234		1.416		-0.560		0.155		0.735		-0.130
		-0.972		-0.868		-0.065		1.056		1.847		-1.139		0.369		1.353		-0.230
MU*(output gap: Euro area less local)		-0.738		-0.294		1.225		0.682		0.572		-0.756		0.367		0.372		-0.977
		-1.848		-0.433		1.175		0.875		0.690		-0.570		0.479		0.417		-0.980
Adj. R2	0.318	0.343	0.749	0.742	0.631	0.622	0.807	0.805	0.781	0.810	0.757	0.778	0.323	0.291	0.353	0.347	0.464	0.472
Sample	1993Q3 2005Q1		1991Q3 2005Q1		1992Q3 2005Q1		1991Q3 2005Q1		1991Q3 2005Q1		1991Q3 2005Q1		1991Q3 2005Q1		1991Q3 2005Q1		1991Q3 2005Q1	
N. obs.	47		55		51		55		55		55		55		55		55	

Source: Unemployment rate: Labour Force Statistics, OEDD; Real GDP: International Financial Statistics, IMF.
Notes: Quarterly data: 1991Q1-2005Q1. t-statistics shown below the coefficients. Constant term not reported. All right-hand side variables lagged one quarter.

Table 2. Variances of asymmetric shocks

	Austria	Belgium	Germany	Spain	Finland	France	Italy	Netherlands	Portugal
1991Q1-1998Q4	0.149	0.106	0.089	0.084	0.266	0.086	0.079	0.094	0.081
1999Q1-2005Q1	0.181	0.172	0.021	0.085	0.260	0.030	0.039	0.036	0.125
Tests for equality of variance (p values)									
F-test	0.336	0.018	0.000	0.947	0.891	0.000	0.000	0.000	0.033
Bartlett	0.322	0.014	0.000	0.935	0.902	0.000	0.001	0.000	0.027
Levene	0.777	0.224	0.000	0.959	0.720	0.000	0.000	0.000	0.795
Brown-Forsythe	0.567	0.305	0.000	0.723	0.437	0.001	0.000	0.000	0.747

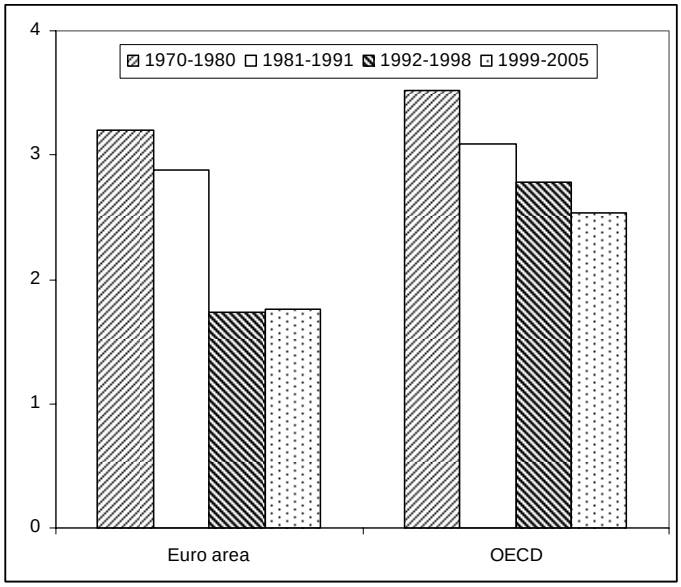
Note: Asymmetric shocks are estimated as the residuals from AR1 regressions of the difference between the Euro area output gap and each country output gap.

The convergence logic

All the countries that wanted to adopt the euro ended up meeting the Maastricht requirements, with a two-year delay for Greece. There have been reports of data doctoring, especially regarding the budgetary criteria, yet there is no doubts that a serious effort has been made. Has convergence been painful? Figure 3 shows that the convergence years 1992-98 have been accompanied by poor growth performance, generally worse than in the overall OECD area.

There is no way of observing what would have happened if the euro would have been launched without the Maastricht convergence conditions. There are many reasons other than disinflation and budgetary consolidation that may have cut growth rates across the Euro area. Yet, there seems to be general agreement that monetary policy has been tight and that fiscal policy has been restrictive.

Figure 3. Average Annual Growth Rates

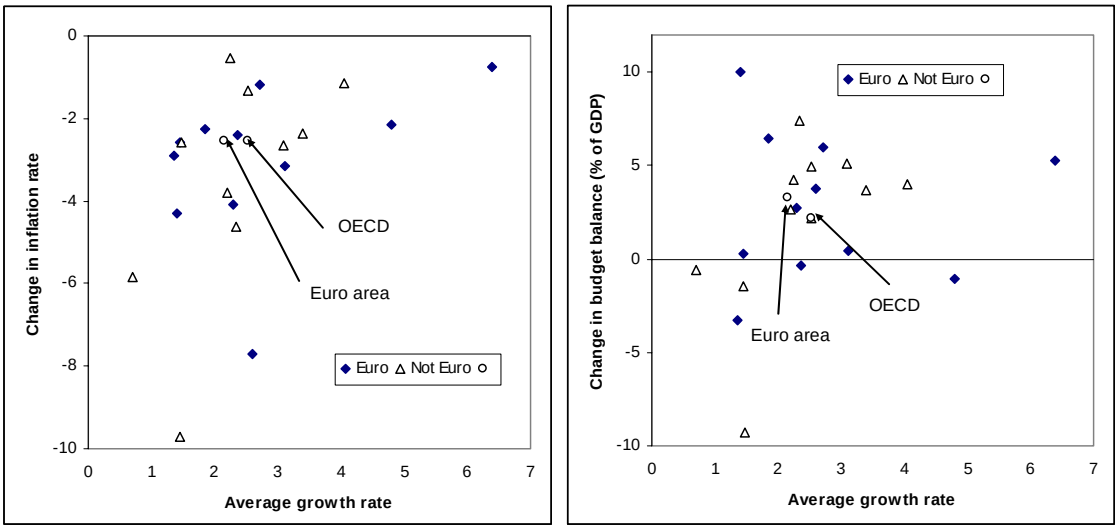


Source: Economic Outlook, OECD

Granted that convergence has slowed growth down, there remains the question of whether it has been imposed needlessly. After all, inflation was high in the early 1990s and public debts were not stabilized. Monetary union or not, these are issues that had to be addressed. In fact, most other OECD countries faced a similar challenge and dealt with it on their own free will. Figure 4 compares the outcomes in the non-emerging market and non-transition OECD countries. The left-hand chart relates the change in inflation to the average growth rate during the Maastricht years. It is pretty clear that the future Euro area member countries did not achieve a more efficient disinflation. Overall, disinflation

is the same in the Euro area as in the whole of the OECD zone and at a slightly larger – but not significantly so – output loss. The right-hand chart offers the same comparison for budgetary stabilization. It relates the change in the budget balance to average annual growth. The Euro area achieved a slightly larger budget improvement with more output loss, the differences being again not significant. There is just no evidence that forced convergence had any effect, neither on the outcome nor on the way it was achieved.

Figure 4. Disinflation and budgetary stabilization (1991 to 1998)



Source: Economic Outlook, OECD

The "monetarist" view held that disinflation, where required, would have occurred at not cost without the Maastricht criteria. The "economists" answer was that these costs were pedagogically useful to acquire a culture of (price) stability (see Stark, 2001). In their view, the costs are front-loaded and the benefits spread over decades to come. The "economists" are likely to point to the low-inflation performance of the Euro area since 1999 as an indication of success. Yet, as the exchange between Bini-Smaghi et al (1993) and Schulmann (1993) indicates, the "monetarists" see these benefits as deriving from the adoption of good institutions, not as the result of wisdom acquired through pain. The relapse of budgetary indiscipline after the launch of the euro shows that when institutions are poorly designed – the Stability and Growth Pact in this instance, see Section 3 – the gains from past sacrifices can be quickly dilapidated.

All in all, the verdict on convergence remains controversial. There little doubt that it has been costly and no evidence that it has been helpful, even in the limited sense of providing an incentive to "clean the house". The controversy continues now that the new EU members have to go through the same exercise, see Begg et al. (2003).

3. The Stability and Growth Pact

3.1. Why a Stability Pact?

It took just a few months to negotiate and agree upon the Stability and Growth Pact (SGP).[13] The contrast between the speedy adoption of the pact and the controversies that it has aroused is striking. Formally, the pact is just the implementation of the Excessive Deficit Procedure (EDP) adopted in the Maastricht Treaty and already introduced in the Delors Report. The EDP can be justified in many ways.

Valid principles

From an economic viewpoint, the underlying logic is rooted in strong evidence that large inflations are always the consequence of runaway deficits that lead to a public debt that cannot be financed anymore through normal market borrowing. Desperate governments then naturally impose monetary financing upon their central banks. Given the agreed upon emphasis on price stability, it was indeed necessary to guarantee that the central bank would never be drawn into an inflationary process.

From a political economy viewpoint, there is a clear free-riding risk. A country can well find it convenient to allow its debt rise to the point where default becomes unavoidable. It would be tempting then to blackmail the other Euro area members and the Eurosystem into providing support. The game had been played – unsuccessfully – by the City of New York in the late 1970s and the lesson had been learnt. In fact, many federal states impose some form or another of limits to sub-central government deficits, see von Hagen (1993). The EU is not a federal arrangement, but the Euro area is fundamentally a federal construct.

Taken together, the economic and political-economy arguments correspond to the issue of fiscal vs. monetary dominance as developed in Canzoneri et al. (2001). The question is who, the central bank or the fiscal authority, eventually constrains the other. The Delors Committee, dominated by central bankers, reversed the fiscal dominance situation that had long prevailed in most European countries – Germany being a notable exception – and sought to establish a regime of monetary dominance.

In addition, there was a logical implication of the Maastricht convergence criteria. Upon entry all countries had to satisfy the two conditions of a deficit of less than 3% of GDP and of a debt below 60% of GDP (or moving in that direction). It would make little sense to then allow Euro area member countries to relax their efforts, and possibly reverse track and indulge again in fiscal indiscipline once the constraint is not binding anymore. The EDP was clearly imagined as a continuation of the convergence criteria (the three others being automatically satisfied once in the monetary union).

These are all valid reasons to set up some arrangement, the last one being only justified if one concludes that the convergence criteria are needed. In fact, it is the last one that

[13] For an account of the negotiations, see Chapter 2 of Buti and Franco (2005).

seems to have dominated discussions among policymakers. Yet several other reasons figured prominently when the pact was being mooted; they are less valid.

Policy coordination

One view, already present in the Delors Report, starts with the obvious observation that policy coordination is desirable. Monetary policy is fully centralized, but that leaves the issue of coordination between monetary and fiscal policy, and among national fiscal policies. This general observation raises many questions. To start with, is coordination always welfare-improving? This is presumed to be the case in the absence of information asymmetries and strategic behaviour, two features that cannot be easily assumed away. In addition, external commitments that constrain the conduct of national fiscal policies challenge a key element of sovereignty. In every country, the relationship between the government and the parliaments is politically complex, unlikely to easily accommodate external influences.

These observations imply that fiscal policy coordination may or may not be desirable *per se*. It is bound to be economically and politically costly. Its presumed benefits must be weighted against its likely costs. The benefits are based on spillovers that are poorly known (a recent effort at quantification is in Beetsma et al., 2005), and the costs may be impossible to quantify, yet they are not negligible. Finally, coordination is one thing, binding fiscal rules quite another one. Beetsma et al. (2001) explore whether the SGP can be seen as a form of coordination; they give a guarded positive answer but we know from the old debate of rules vs. discretion – see below – that this cannot be generally true.

Another view, which also goes back to the Delors Report, is that misguided national fiscal policies may create hidden national balance of payment problems, possible spilling over the union's overall situation and affecting the common exchange rate. A first objection is that national balance of payment problems are self-correcting within a monetary union, along the lines of the old Hume's mechanism. A second objection is that the impact of national fiscal policies on the euro exchange rate is theoretically uncertain and, except for extreme cases, likely to be empirically negligible.

Deficit bias

The main reason for adopting the SGP is the evidence that governments have shown themselves to be subject to a deficit bias. Correcting this bias is unavoidable but what has this to do with the monetary union? Stark (2001) argues that the deficit bias is incompatible with the general stability culture that must lie at the basis of the monetary union. This view does not explicitly relate deficits and debts to inflation, it appeals more broadly to macroeconomic discipline as a necessary attribute of Euro area members.

The deficit bias is unquestionable; it is enough to observe the evolution of public debts over the last three decades. The observation that governments are not constrained enough to resist the deficit temptation is equally incontrovertible. The conclusion that the adoption of the euro offers a chance of dealing with the deficit bias through externally imposed rules is open to discussion, however. Using Euro area membership as a pretext to deal with a correctly diagnosed problem raises deep questions. The deficit bias is the

outcome of a democratic process that fails to impose discipline on current generations at the expense of foreign generations within the same country, see e.g. Alesina and Tabellini (1996). First best policy prescriptions ought to address the political process failure directly, i.e. they should aim at institute adequate *domestic* political institutions. Using Europe as an instrument to solve purely domestic issues directly pits electors against Europe. Benevolent dictators are not necessarily popular; externally imposed fiscal discipline puts the European integration process in jeopardy.

Assessment

In the end, the valid reasons to limit deficits are the link between unsustainable debts and inflation and the free-rider problem. The solutions must be to cut the link between debt financing and monetary policy and to ensure that no government will be able to successfully blackmail other governments and the central bank. Three provisions of the Maastricht Treaty directly address these requirements. The central bank is strictly forbidden to finance budget deficits, i.e. it is not allowed to operate on the primary debt market. It is made strongly independent from governments. Finally, a no bailout clause (art. 103) fully shields governments and all official institutions (including the Eurosystem and the Commission) from any one authority's liabilities. Why then the EDP, and therefore the SGP? Either policymakers have grave doubts about the enforceability of these essential provisions or they accept some of the other reasons that have been described in this section as invalid. Both interpretations are disquieting and explain why the pact has been controversial ever since it was adopted.

3.2. Debates on the Stability Pact

There is by now a very substantial literature on the SGP, far too large to be reviewed; Brunila et al. (2001) offers a collection of analyses and extensive references. This section focuses on a few key principles.

Theory and practice

Setting aside the reasons have led to the pact, let us take for granted that fiscal discipline is a legitimate concern. The question, then, is how to ensure that each Euro area member country's fiscal policies are disciplined. Answering this question requires defining discipline and giving it an operational content.

Economic theory does not deal directly with discipline, which requires establishing a standard that is inevitably arbitrary. Economic theory instead characterizes the budget constraint. As is well known, to meet its budget constraint, a government must ensure that the present value of its revenues be at least as large as its existing debt *plus* the present value of its expenditures. An equivalent definition is that the present value of the debt remains finite at all horizons. Most difficulties arise from the fact that this definition is not operational for several reasons. It involves the whole stream of future revenues and expenditures, which are not controllable. In addition, the definition assumes that current official debts faithfully reflect all public commitments. i.e. that all contingent liabilities are properly accounted for. Finally, since the definition involves present values, it requires the choice of a discount rate.

In response to these difficulties, a large literature has been devoted to the issue of debt sustainability.[14] Two main routes are being followed. One approach is to try to come to term with the fact that future spending and income are not controllable. The proposed solution is to set a limit on present and future primary budget balances. The other approach is to target the debt level. The EDP mentions both routes. The initial version of the SGP has focused on the first route; the new version adopted in March 2005 moves towards the second one.

Both approaches face the serious difficulty challenge of setting limits. There is no general theory of what are appropriate budget balances and public debt levels. The stability pact has taken over the 3% and 60% limits of the Maastricht convergence criteria, presumably compatible with each other. These criteria were arbitrary, and they remain so. They were controversial but, as a one-off guidepost, they were tolerable. In a permanent regime, they are clearly problematic, especially if they prevent the countercyclical use of fiscal policy, possibly imposing serious economic costs.

Rules vs. discretions

Indeed, having given up the monetary policy instruments, Euro area members are left to rely on fiscal policy as their only macroeconomic management instrument. This point was recognized early on and triggered a wide, ongoing debate along the lines of rules vs. discretion. A key question was whether the SGP was too constraining to allow adequate policy flexibility, as argued by Buiter et al. (1993), Eichengreen and Wyplosz (1997) and Canzoneri and Diba (2001).

The official view was that it was not, that once all deficits are brought to "close to balance", there will be enough room for the automatic stabilizers to fully operate. In addition, it was argued that discretionary policy was a thing of the past to be carefully eschewed: "Fiscal fine-tuning should be avoided and the reaction to shocks should generally be limited to the proper functioning of automatic stabilizers" (Public Finances in EMU – 2001, *European Economy* 3, 2001, p.62). A number of academic contributions backed this view. Beetsma (2001), Artis and Buti (2000) and others have produced estimates that, starting from a position close to balance in surplus, the automatic stabilizers were fully available and sufficient to deal with most plausible shocks.

Institutions vs. quantitative constraints

The rules vs. discretion debate has also prompted work on whether institutions can preserve both discipline and discretion. One approach, developed in von Hagen and Harden (1994) is to change the decision making process within governments, essentially by giving more power to the Finance Minister. Another approach, developed by Eichengreen et al. (1999), Calmfors (2003) and Wyplosz (2005a), is to follow the lead from monetary policy, where the need for both discretion and discipline is similar.

[14] Two classic references are Buiter (1985) and Blanchard et al. (1990). The IMF has produced many papers that focus on the implementation aspects. Arrow et a. (2004) offer a general treatment of the concept of sustainability.

Monetary policy-making has moved from rules to institutions, granting independence to central banks and entrusting decisions to committees of independent experts. Various applications of this idea have been mooted, from fully independent fiscal policy committees to advisory expert councils (Sapir et al., 2004) and to independent accounting and forecasting agencies (Jonung and Larch, 2004).

Replacing the SGP with institutions has been met with disbelief by both policymakers and most academics. The arguments are that fiscal policy is different from monetary policy and that the idea is not politically viable. Since the acknowledged source of fiscal indiscipline is a political failure, it is indeed unlikely that politicians will find a constraining institution appealing.

3.3. Reality Check

The attempted coup by the central bankers who dominated the Delors Committee and sought to substitute monetary to fiscal dominance, is not yet fully cemented. Central bank independence, backed by the Maastricht Treaty provisions of no-bailout and no monetary financing of deficits, effectively shields the Eurosystem from government pressure. Fiscal dominance is legally ruled out. On the other hand, the spectacular failure of the SGP in 2003, and the botched reform of 2005, leaves the Euro area without clear monetary dominance in the sense that fiscal dominance remains *de facto* a threat.

The reasons should be clear. The arrangements concerning monetary policy are grounded in well-established economic principles: policy independence, a well-designed institution, (implicit) inflation targeting and adequate choice of instruments. However, the fiscal policy arrangements rely on the flawed SGP and on murky attribution of competences since fiscal policy remains in the national sovereignty domain, yet it is subject to centralized interference. There is no easy solution to this quagmire. Obviously the current arrangement does not work.

One reassuring view is that, for all its failures, the SGP has influenced policymakers, even if they did not fully played by the rules. The argument is that, absent the pact, fiscal policies would have been even less disciplined than they have been. The impossibility of running a counterfactual experiment prevents a firm evaluation of this view. Indirect evaluation is possible, however.

Has discipline improved?

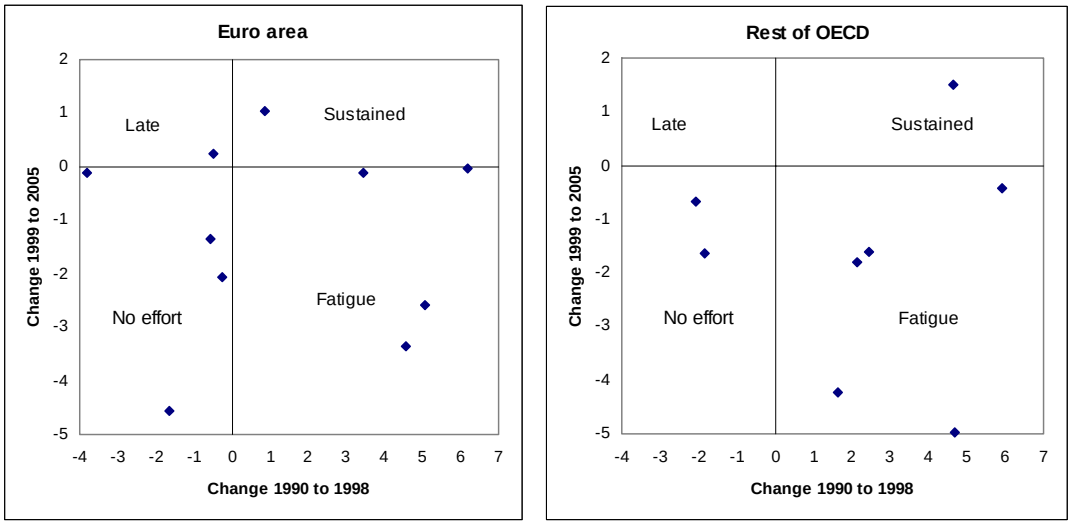
Is there any indication of heightened fiscal discipline? The main difficulty in dealing with this question is that of choosing a reference period. The pre-euro years were dominated by the Maastricht criteria during which all Euro area members dutifully responded to a very powerful incentive. The right-hand chart in Figure 4 warns us, however, that they did not do better than the other OECD countries. What happened afterwards, once the SGP took effect? Is there any evidence of “post-Maastricht fatigue”, a relaxation of the discipline efforts in the aftermath of euro adoption?

The right-hand side chart in Figure 5 relates the change in the budget balance (in percent of GDP) between 1990 and 1998, measured on the horizontal axis, to the change between

1999 and 2005, measured on the vertical axis. The chart determines four zones, as indicated. The South-East one corresponding to the fatigue assumption whereby the budget balance improved during the Maastricht convergence years and worsened after the launch of the euro. The figure provides some support to the fatigue assumption. However, since growth has been poor over 2001-2005, the worsening may simply reflect the working of the automatic stabilizers, as provided for by the SGP. One way to deal with this issue is to compare the Euro area to the other OECD countries, assuming that the slowdown was a widespread phenomenon.[15] Figure 5 shows that budgetary relaxation is not limited to the Euro area. If the Euro area did not do worse, it did not do better either, even though it is equipped with the Stability and Growth Pact.

This visual impression merely confirms the formal exploration of the discipline fatigue hypothesis presented in Fatás and Mihov (2002). Looking at the first three years of monetary union, they find that fiscal policy has indeed been relaxed. If anything, the process has deepened over the following three years. The evidence, therefore, is that the SGP has failed to deliver. This is why it went into a crisis in 2003.

Figure 5. Budgetary stabilization: before and after euro



Source: Economic Outlook, OECD

Has fiscal policy been forfeited?

The next question is whether the SGP has seriously curtailed the counter-cyclical use of fiscal policy, even though it is the remaining macroeconomic policy instrument. Examining the period that goes from the Maastricht Treaty to the second year of monetary union, Galí and Perotti (2003) find that fiscal policy has become more counter-cyclical. Fatás and Mihov (2002), however, find the opposite. Given that both rely on a very short horizon, these results are bound to be fragile and call for an updating.

[15] Another approach is to look at cyclically adjusted primary balances. The message is the same.

Galí and Perotti (2003) estimate a fiscal policy reaction function, following the logic of Taylor rules applied to monetary policy. A typical reaction function assumes the following behaviour:

$$balance = a*gap + b*debt + c*balance\ lagged + constant + error\ term$$

where *balance* is a measure of the primary budget balance, *debt* is the gross public debt, and *gap* is the output gap, all measured as percentage of GDP. The budget is counter-cyclical when $a > 0$ and the debt constraint is active when $b > 0$, although this condition does not guarantee debt sustainability (sustainability conditions are derived in Wyplosz, 2005b). The last term allows for budget smoothing when $c > 0$.

Galí and Perotti (2003) suggest to use two different measures of the primary budget balance: the cyclically-adjusted balance, which allows to examine whether discretionary fiscal policy is pro or counter-cyclical, and the cyclical component of the budget balance (the overall balance less the cyclically-adjusted balance), which evaluates the automatic stabilizers. Estimates of the cyclically-adjusted balance are reported in columns (1) to (4) in Table 3, while columns (5) to (8) display estimates of the cyclical component of the budget balance.

The question at hand is whether the Maastricht convergence criteria first, and then the SGP, have affected the conduct of fiscal policies in Europe. If this is the case, the coefficients *a*, *b* and *c*, as well as the constant, will not be stable; *a* and *b* should rise following the adoption of discipline enhancing measures while *c* should decline if fiscal policy is made less rigid. To test whether the convergence criteria and the SGP delivered these effects, three dummy variables are used: *D80-91* takes the value 1 for the period 1980-91, 0 afterwards; *D92-98* is 1 during the Maastricht convergence years and *D99-05* is 1 during the euro period. The estimated equation is therefore:

$$\begin{aligned} balance = {} & a_1*D80\text{-}91*gap + a_2*D92\text{-}98*gap + a_3*D92\text{-}05*gap \\ & + b_1*D80\text{-}91*debt + b_2*D92\text{-}98*debt + b_3*D92\text{-}05*debt \\ & + c_1*D80\text{-}91*balance\ lagged + c_2*D92\text{-}98*balance\ lagged + c_3*D92\text{-}05*balance\ lagged \\ & + d_1*D80\text{-}91 + d_2*D92\text{-}98 + d_3*D92\text{-}05 + error\ term \end{aligned}$$

The hypothesis that the convergence criteria and the SGP limited the discretionary use of fiscal policy implies that $a_1 > a_2$ and $a_1 > a_3$, respectively, in a regression where *balance* is the cyclically adjusted primary balance. If $b_1 < b_2$ and $b_1 < b_3$ we can conclude that discipline has been enhanced. When *balance* is the cyclical primary balance, $a_1 < a_2$ and $a_1 < a_3$ imply that the convergence process and the SGP, respectively, have enhanced the working of the automatic stabilizers.

Wyplosz (2002) and Galí and Perotti (2003) provide estimates for various countries and country groupings. Because of the limited number of available observations, country-level regressions are poorly estimated, Table 3 presents results for the EU as a whole in columns (1) and (5), and panel estimates that including the Euro area member countries

in columns (2), (3), (6) and (7).[16] The EU results rest on few observations, though, and are therefore fragile. Results for panels including the three non-Euro area members (EU3) are displayed in columns (4) and (8). Note that the lagged dependent variable is not used in panel estimation as it is a known source of inconsistency. The output gap is instrumented in all regressions to deal with the possibility of reverse causality from the budget to output; alternatively this allows interpreting the gap as its expected value based on information available during the previous year. The instruments are the current and lagged US output gap and the country's gap lagged.

Columns (1) to (3) confirm the results by Buti et al. (1997) that, in the Euro area countries, discretionary fiscal policy has been pro-cyclical during the pre-Maastricht years. It has become acyclical afterwards, with no significant difference between the Maastricht and the euro years. The budget has responded to debt in a stabilizing way, although not quite enough as the debt build-up that occurred during this period indicates. These results suggest that the convergence criteria and the SGP have improved the quality of discretionary fiscal policy in the Euro area in the sense of ending pro-cyclicality; in fact discretion has been abandoned.

Evidence on the automatic stabilizers, presented in Columns (5) to (7) is more surprising. It suggests that their responsiveness has increased during the Maastricht years, and declined afterwards, after the introduction of the euro. The stabilizers depend on structural factors, like the progressivity of taxes and the operations of the welfare system. It is difficult to understand what could explain these results, which must therefore be taken with a grain of salt.

Finally, it is worth asking whether the other EU countries that do not belong to the Euro area, and therefore did no have to meet the Maastricht convergence criteria and are weakly constrained by the SGP, followed the same pattern. Pre-Maastricht discretionary policies were counter-cyclical in the EU3 countries, they became more strongly so in the 1990s, while they seem to have become acyclical since 1999. There is no difference regarding the automatic stabilizers.

Caveat and assessment

The panel estimates presented in Table 3 assume that all Euro area member countries behave in the same manner. There is no reason that it be the case and there is some evidence that it is not, see Wyplosz (2002) and Gali and Perotti (2003). This assumption, required given the short horizon and therefore the limited number of observations, implies that the results should be considered with caution.

Taking them at face value, a number of conclusions emerge. Following the adoption of the fiscal rule, discipline has improved but, on this dimension, the Euro area does not stand apart from the other OECD countries. Fiscal policy has improved in the sense that it

[16] Greece is excluded because it joined one year later. Luxembourg is also excluded because data are only available from 1990 onwards.

is not procyclical anymore. The finding that it is acyclical indicates that the “last remaining tool” is not being used beyond letting the automatic stabilizers operate.

This assessment can be viewed as a success of the SGP, which wanted to restrict the use of fiscal policy to the stabilizers. The strategy assumes that the normal position of budgets would be “close to balance or in surplus”. This was not the case when many countries faced prolonged slow growth after 2001. As a result, allowing the multipliers to operate, as has been the case against the Commission admonestations, implied repeatedly violating the pact. The reforms, which are examined in the next section, can be seen as a direct response to this assessment.

Table 3. Tests of cyclicality of fiscal policy (1980-2005)

		Cyclically adjusted primary balance				Cyclical component of primary balance			
		EU	Panel Euro area	Panel Euro area	Panel EU3	EU	Panel Euro area	Panel Euro area	Panel EU3
		2SLS	W2SLS	3SLS	W2SLS	2SLS	W2SLS	3SLS	W2SLS
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
a1	Output gap*D80-91	-0.42	-0.31	-0.30	0.22	0.47	0.54	0.56	0.67
		-4.56	-4.32	-4.98	1.65	7.16	28.50	48.78	30.07
a2	Output gap*D92-98	-0.02	-0.02	0.02	1.00	0.47	0.72	0.69	0.77
		-0.10	-0.30	0.36	3.67	7.31	32.96	59.44	23.04
a3	Output gap*D99-05	-0.13	-0.04	0.04	-0.02	0.86	0.45	0.49	0.80
		-0.21	-0.37	0.55	-0.03	10.95	13.17	19.30	9.66
b1	Debt(-1)*D80-91	0.10	0.02	0.02	0.06	0.00	0.00	0.00	0.01
		3.20	2.47	2.86	1.82	-0.22	0.37	1.37	2.12
b2	Debt(-1)*D92-98	0.18	0.10	0.09	0.14	0.00	0.00	0.01	0.00
		1.92	10.83	14.56	4.46	0.09	2.45	5.36	-0.45
b3	Debt(-1)*D99-05	0.10	0.09	0.08	0.18	-0.06	0.01	0.01	0.00
		0.41	7.94	14.33	3.11	-1.36	2.28	3.06	-0.07
c1	Budget(-1)*D80-91	0.07				-0.02			
		0.33				-0.16			
c2	Budget(-1)*D92-98	-0.34				-0.01			
		-0.59				-0.05			
c3	Budget(-1)*D99-05	0.72				-0.44			
		0.47				-3.61			
Wald Tests (p values)									
	a1=a2	0.039	0.010	0.001	0.011	0.937	0.000	0.000	0.012
	a1=a3	0.638	0.023	0.001	0.765	0.003	0.022	0.007	0.108
	a2=a3	0.863	0.920	0.845	0.233	0.002	0.000	0.000	0.688
	a1=a2=a3	0.104	0.017	0.001	0.035	0.004	0.000	0.000	0.019
	b1=b2	0.508	0.000	0.000	0.039	0.830	0.007	0.000	0.078
	b1=b3	0.983	0.000	0.000	0.054	0.238	0.008	0.021	0.352
	b2=b3	0.760	0.404	0.310	0.588	0.201	0.542	0.148	0.864
	b1=b2=b3	0.795	0.000	0.000	0.056	0.418	0.005	0.000	0.204
	c1=c2	0.565				0.938			
	c1=c3	0.682				0.028			
	c2=c3	0.534				0.018			
	c1=c2=c3	0.761				0.039			

Source: *Economic Outlook*, OECD

Note: Sample period: 1980-2005. Data for 2005 are forecasts. D80-91= dummy variable for pre-Maastricht years; D92-98=dummy variable for Maastricht convergence years; D99-05=dummy variable for monetary union years. Country included in the Euro area panel: All Euro area members except Greece and Luxembourg. EU includes all 15 pre-enlargement EU countries. Instruments: lagged output gap, current and lagged US output gap. EU3 includes the three non-Euro area members: Denmark, Sweden and the UK.

3.4. Reform

When the pact was suspended in late 2003 – a move partly censured by the European Court of Justice – governments agreed that adjustments were needed but they decided to wait until 2005, for political convenience. This left ample time for proposals to flourish, and flourish they did. As usual, there was wide disagreement about the reasons for the pact's failure and about what changes were needed.

At one end of the spectrum, there were those that lamented the casual treatment of the pact by the large countries. Some, e.g. Gros et al. (2004), argued that reneging on a signed agreement was unacceptable, that it would seriously harm the whole monetary union's reputation and, eventually, its functioning. They therefore called for a tightening of the pact, with the view of reducing discretion in implementation, possibly even making the pact stricter. This view was seriously undermined by the fact that the financial markets did not react to the pact's demise.

Most, however, recognized that the pact was poorly designed and called for fixing the limitations that they had identified. Six main faults were singled out.

The first one concerns the use of the deficit as a measure of discipline. Since the budget balance is endogenously influenced by business cycles, it is beyond government control. In addition it tends to deteriorates precisely when worsening economic conditions call for an expansionary policy response. The obvious solution is to use instead the cyclically adjusted deficit (Buti et al., 2003). The problem is that there are many ways of computing the cyclical adjustment, none of which has a claim on precision.

A second critique concerns the focus on annual budget measures, cyclically adjusted or not. Discipline is a long-run concept. Unless they make room for some short-run discretion, rules are too rigid to be viable. This feature of the SGP has long been widely recognized, including in the media that have come to call it the "rigidity pact". The natural solution is to base the pact on a long run target, and the only one that makes sense is the public debt (Wyplosz, 2002; Coeuré and Pisani-Ferry, 2003).

Third, the pact is suspended when a country faces exceptional circumstances, defined as recession in excess of 2% of GDP, with a possible suspension when the GDP falls by just 0.75%. On the basis of passed experience, Eichengreen and Wyplosz (1997) have shown that this clause is truly extraordinary. In particular, a moderate but prolonged slowdown can drag the budget balance into a widening deficit, as indeed happened after 2001. Among the various proposed solutions, it has been suggested to allow a suspension of the pact in the event of a prolonged period of shallow growth.

The fourth line of thought notes that some public expenditures are good in the sense that they support growth. The implication is that productive public spending should be taken out of the budget balance. This idea has long been implemented in various circumstances. It is known in Germany as the golden rule. As sophisticated application to the SGP has

been advanced by Blanchard and Giavazzi (2004). The problem, of course, is that it is impossible to tell good from bad public spending.

Fifth, it has been noted that the pact had a built-in asymmetry. In slow-growth years, when the 3% limit is binding, governments are committed to tighten an already worsening budget, while in better years, when the budget endogenously improves, they are under no commitment to improve the situation. Indeed, most of the countries that have been declared in excessive deficit during the post-2001 slowdown had failed to bring the budget to "close to balance or in surplus" during the previous cyclical upswing. The result was not just failure to comply with the pact but, perhaps more troublesome, pro-cyclical fiscal policies: tight in downswings, expansionary in upswings. Many proposals were advanced to break this asymmetry, including giving a mandate to the Commission to recommend budget improvements in good years. An interesting alternative is to request that "rainy day funds" be set up during cyclical upswings (Sapir et al., 2004).

Finally, the rules vs. discretion debate had highlighted the advantage of institutions over rules. This led to a number of proposals in favour of delegating fiscal discipline to independent committees, either at the EU level (Fatás et al., 2003) or at the national level (Wyplosz, 2002).

A very different, but more fundamental, critique is of a politico-economic nature. It points out the conflict between the pact and national sovereignty in matter of fiscal policy. Put simply, how can a country be instructed to follow a policy recommended by "Brussels" if its elected representatives (government and parliament) disagree? How can it be fined when its democratic institutions choose another course of action? The answer, of course, is that the country has signed an agreement and must abide by its international commitment. Truth, however, is that the full implications of the Maastricht Treaty EDP, and of the subsequent SGP, were not fully recognized when they were adopted, as noted by a key German negotiator: "Evidently, the political authorities in many member states were unaware – or only vaguely aware – that the signing of the Maastricht Treaty with its requirement that excessive deficits be avoided has limited national sovereignty in the area of fiscal policy" (Stark, p. 104). Both logics are compelling but irremediably contradictory. One of them, therefore, has to go. Either sovereignty is eroded, or the pact has to be deeply amended. Renationalizing the SGP, within an agreed-upon framework, has been suggested by Wyplosz (2002, 2005).

In the end, following consultations with governments, the Commission produced in late 2004 a reform blueprint that aimed at smoothing the SGP's roughest edges without touching its essential components. In March 2005, the ECOFIN Council promptly accepted most of the Commission's recommendations. The 3% budget ceiling was retained as the centrepiece of the pact, but the decision to declare a country in excessive deficit can now rely on a wider set of parameters, including the behaviour of the cyclically adjusted budget, the level of the debt, the duration of a slow-growth period and the possibility that the deficit is associated to productivity-enhancing expenditures.

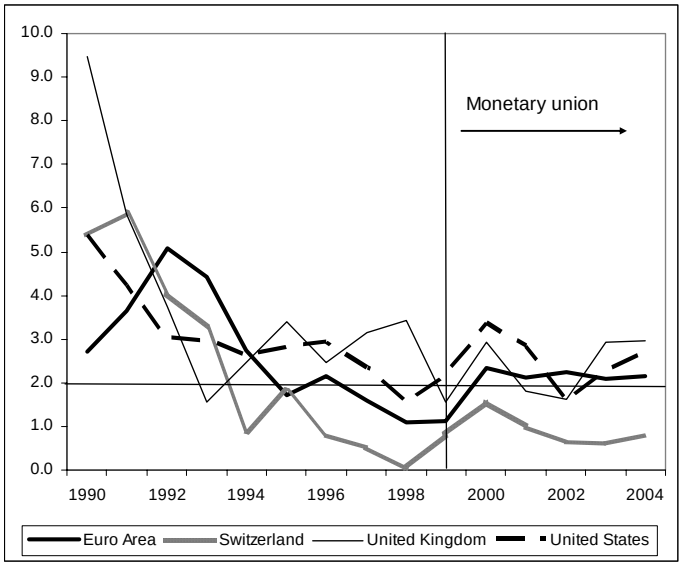
Thus most critiques have been listened to but none of the more profound proposals has been wholly adopted. The pact has been adapted to deal with the challenges of the early 2000s, but will it meet its next challenges? One view is that the pact has become adequately flexible while retaining its restraining influence. Another view is that, given the many informal clauses that have been introduced, it has ceased to exist for all practical purposes. Time will tell.

4. The Eurosystem

To all those who worried that the European monetary union was an untested and innovative arrangement, the conduct of monetary policy undoubtedly constitutes the best surprise so far. Since this is the heart of the experiment, the Eurosystem's success cannot be under-rated. Of course criticism is not lacking, much of which is justified, but it concerns issues of clearly secondary importance. The main challenge, delivering a stable currency underpinned by perceived price stability, has been met.

This success should not be seen as a miracle, though. The technology of central banking has made significant progress over the last two decades, relying on both theoretical and practical advances – with practice usually leading theory. The Eurosystem has pragmatically absorbed these advances and, like all other well-run central banks, delivered on its first and foremost challenge, as Figure 6 readily confirms. Much of the credit goes to the ECB's predecessor, the European Monetary Institute (EMI) that had been given the task of preparing the conduct of monetary policy. The EMI was closed down in June 1998, immediately replaced by the ECB. The rest of this section, which focuses on the debates, should not give the impression of any failure. It deals with important, yet second order of importance controversies.

Figure 6. CPI Inflation rates



Source: *International Financial Statistics*, IMF
Note: For 1990-95, the Euro area inflation rate is replaced by the German inflation rate.

4.1. Monetary Policy Strategy

Given the prime objective of price stability assigned by the Maastricht Treaty, the EMI adopted the German two-pillar strategy. The Eurosystem would use open market operations to steer the overnight interest rate guided by two pillars. The first pillar, the monetary pillar, defined as "a prominent role for money", was based on analysis of the evolution of monetary aggregates, chiefly M3. The second pillar would include all relevant indicators to deliver "a broadly-based assessment" of other forces affecting inflation. This description of the monetary policy strategy became instantly highly controversial (Gerlach, 2004, provides a detailed analysis of the controversies; Begg et al. 1988 is an early critique). The controversy is well illustrated by the debate between Buiter (1999) and Issing (1999). Two main lines of criticism are noteworthy.

To start with, when the strategy was being mooted in the mid-1990s, inflation targeting was becoming fashionable. Inflation targeting relies on just one pillar, the expected inflation rate. Beyond clarity, a key advantage of inflation targeting, it was felt, is transparency. As fears were ripe that the monetary union was a technocratic construct suffering from a democratic deficit, the choice of the reasonably vague two-pillar strategy made the new central bank look opaque.

Equally important was the fact that most central banks had jettisoned by then the use of monetary aggregates as a reliable guide. Money growth rules played an important role during the disinflation period of the 1980s, but lower inflation and the impact of the IT revolution on banking technology combined to make all monetary aggregates unstable and poor predictors of subsequent inflation, a point clearly brought up by De Grauwe and Polan (2005). This made the new central bank look outdated even before it started its operations.

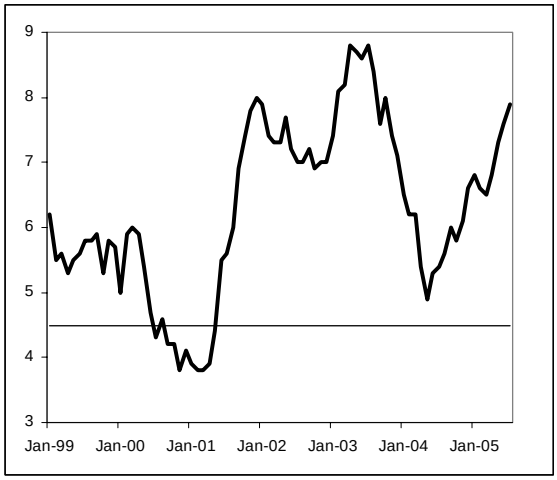
The Eurosystem's main defence of its strategy has been that a new, untested central bank lacks credibility. Credibility, in turn, is the most important asset of a central bank, as it allows its action to be effective. Technically, in an expectation-augmented Phillips curve, it is much more desirable to affect inflation through expectations rather than through output. How could the Eurosystem boost its credibility? The answer was to wear the mantle of the Bundesbank, one of the world's most credible central banks. Adopting the Bundesbank's money rule strategy was, so goes the argument, the obvious response to the need for early credibility.

The problem with this argument is that, already during the 1990s, the Bundesbank's own strategy had come under increasing criticism for sticking to its money rule. In fact, as described in Baltensperger (1999), the Bundesbank largely ignored its rule during the years preceding euro adoption. This fact meant that the two-pillar strategy of the Eurosystem was either unjustified or likely to be ignored in practice.

It quickly transpired that, indeed, the Eurosystem was only paying lip service to the first pillar, pursuing in fact a closet inflation targeting strategy, see Favero et al. (2000). The most obvious proof of the irrelevance of the monetary pillar has long been the fact that M3 growth has systematically and almost continually exceeded, by a large margin, its

assigned target of 4.5%, see Figure 7. This target – officially called a reference value as if to forewarn that the money rule is elastic – has been justified by an application of the quantity theory to "a trend potential growth in the range of 2–2½% per annum and a trend decline in M3 income velocity of ½–1% per annum in the euro area."[17]

Figure 7. Money (M3) growth rate in the Euro area

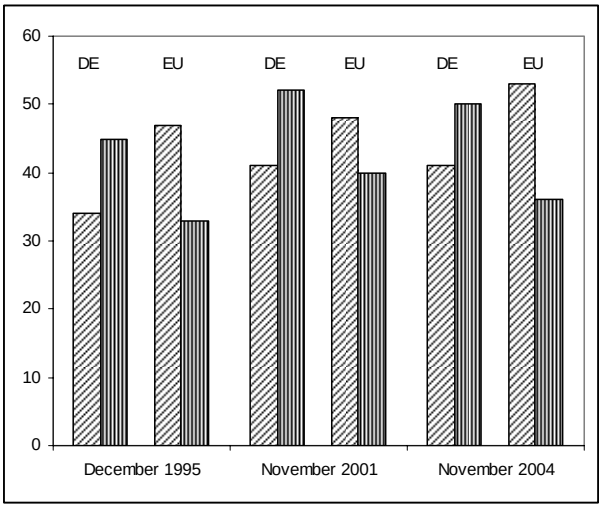


Source: *Monthly Bulletin*, ECB

Another argument, often mentioned at the ECB, is that the German public, already dismayed by the abandonment of their flagship currency, needs to be reassured that the euro will always been as good as the DM used to be. Having been told for years that the key to the Buba's success was its money growth rule, the argument goes, German citizens insist that the rule figure prominently at the heart of the Eurosystem's strategy. Meeting this demand is presented as an implicit contract agreed upon when Germany reluctantly accepted to support the monetary union project. Figure 8 confirms that German public opinion has been and remains opposed to the euro, even though inflation has rarely been as low and stable in Germany as has been the case since the adoption of the euro (Figure 6). It may seem strange that the solution to euro-hostility is to pretend acting in the same way as the Buba was pretending to act, and transparently so. Yet, most German monetary economists and economic commentators remain unswayed in their view that money growth rules should remain a prominent indicator. Carrying out with a lie seems therefore to be a way to avoid even stronger opposition to the euro in the area's largest country.

[17] These assumptions imply, according to the quantity theory an inflation rate between 1.5% and 2.5%, thus in excess of the stated objective of an inflation rate of less than 2%.

Figure 8. Public opinion: for and against the euro



Source: Eurobarometer
Note: The first column corresponds to "for, the second column to "against".

In 2003 the ECB has conducted a policy strategy review. This review, which was conducted entirely internally, led the Eurosystem to announce that "the Governing Council confirmed that its monetary policy decisions will continue to be based on a comprehensive analysis of the risks to price stability. Over time, analysis under both pillars of the monetary policy strategy has been deepened and extended. This practice will be continued. However, the Governing Council wishes to clarify communication on the cross-checking of information in coming to its unified overall judgement on the risks to price stability" (Press release, 8 May 2003).

The change involved renaming the two pillars and swapping their order. The new first pillar, dubbed economic analysis, aims at "the short to medium term" and encompasses everything else than monetary aggregates. The second pillar, called monetary analysis, aims at "the medium to longer term" and relies on the usual money aggregates, in particular M3. However, "to underscore the longer-term nature of the reference value for monetary growth as a benchmark for the assessment of monetary developments, the Governing Council also decided to no longer conduct a review of the reference value on an annual basis" (Press release, 8 May 2003). Thus monetary aggregates have been demoted from their initial "prominent role" to that of "cross checking" the conclusions of the economic analysis. Earlier, the ECB had yielded to critics, e.g. Svensson (2000), who complained that it should not hide its inflation forecasts. Twice a year, the forecasts are now published in the *Monthly Bulletin*, but great care is taken to warn that these are staff's projections, not forecasts, and that they do not necessarily represent the view of the Governing Council.

In contrast with its former chairman, the late Wim Duisenberg, who once famously observed that he hears but does not listen to criticism, the Eurosystem has responded to

its critics. Only partly, however. In practice, it has joined the Federal Reserve as a closet inflation targeter: Like the Fed, it is staunchly refusing to be boxed into what it describes as a simplistic description of its actions.

4.2. Price Stability and the Inflation Target

The Eurosystem claims that it does not have an inflation target; instead it has a mandate of price stability and a definition of price stability. The EMI defined price stability as "a year-on-year increase in the Harmonised Index of Consumer Prices (HICP) for the euro area of below 2%". By specifying only a ceiling and no floor, this definition raised some concern that deflation was not ruled out, a point that was quickly clarified.[18] This clarification suggests an implicit target range of 0-2%, but are all rates within this range equally desirable? Some statements have indicated that 1.5% would be a desirable most-likely position, which then leads to the critique that the targeting is asymmetric (Svensson, 2000). As always, lack of precision calls for clarifications that further muddle the situation.

Two related issues have remained controversial. Not having an inflation target, the Eurosystem feels that it does not have to specify an official inflation rate range that it is trying to achieve over a clearly stated horizon. From the start, this position has been seen as disingenuous (Favero et al., 2000; Svensson, 2000) and an unwelcome source of opaqueness. Critics observed that the definition makes it impossible to conclude that the Eurosystem has not delivered, which significantly impairs accountability.

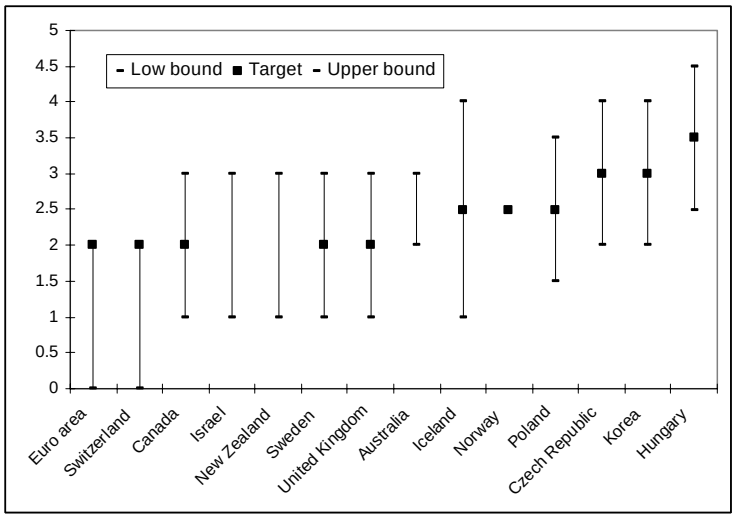
The other question is whether the chosen definition is appropriate. Some critics have argued that the implicit range of 0% to 2% makes it likely to enter into negative territory, raising the risk of deflation. Other critics have observed that very low rates of inflation may be inefficient. In response to various shocks, relative price and wage must adjust; when inflation is very low, this may require absolute declines in prices and wages. Holden (1994) has shown that nominal wage reductions are often legally ruled out. Ackerlof et al. (1996), Dickens (2001) and Wyplosz (2001) have empirically examined the presence of "sand" effects that hamper relative price and wage adjustments at low rates of inflation. In the Euro area, this issue is heightened by the fact that inflation rates unavoidably vary from one country to another; relative price and wage adjustments are all the more difficult in those countries where inflation is lower.

These are issues faced by any central bank. How do the others do it? Figure 9 shows the inflation targets of the OECD countries whose central banks, now all independent, have chosen to publish tem. Conspicuously absent are the US – the Federal Reserve resisted calls to adopt an inflation targeting strategy, not without internal debates – and the Bank of Japan, which has been fighting deflation for much of the last decade. The figure well illustrates the debates that have surrounded the Eurosystem. Its implicit target is asymmetric, a feature only shared by Switzerland, which has a long tradition of adopting

[18] "The use of the word "increase" in the definition clearly signals that deflation, i.e. prolonged declines in the level of the HICP index, would not be deemed consistent with price stability."

the same practice as Germany. Its desired zone is the lowest among OECD countries. Its declared upper bound corresponds to the most commonly adopted range midpoint.

Figure 9. Inflation targets in OECD countries



Source: websites of central banks
Note: Not all central banks specify a midpoint.

At any rate, the Eurosystem has missed the range implied by its own definition. As Figure 6 shows, since the euro was launched Euro area inflation has exceeded the declared ceiling for all but one year. Recognizing the problem, following the strategy review, it was announced that "the Governing Council agreed that in the pursuit of price stability it will aim to maintain inflation rates close to 2% over the medium term." (Press release, 8 May 2003). The implication is that 2% is no longer a binding ceiling, even though the same statement reiterates the previous definition of price stability as inflation of less than 2%. What the Eurosystem meant to be a "clarification" has deepened the mystery of what exactly the Eurosystem is trying to achieve.

4.3. Transparency and accountability

These controversies may look arcane, and they are. Price indices are imperfect measures anyway (another area of controversy) so the small overshoot of the implicit target is economically insignificant. The average citizen is unaware of, and probably uninterested in these fine points. Financial markets do not seem to attach a great deal of importance to these details either; they consider that the Eurosystem has established its credibility.

Why all the fuss, then? One reason is political and institutional. As an independent and powerful bureaucracy, the Eurosystem must be accountable. Formally, it reports to the European Parliament, but this is a weak from of accountability. The quarterly reporting sessions of the Chairman to the Parliament's Economic and Monetary Committee – in

principle the Chairman is only bound to appear once a year – are accurately called "Monetary Dialogue". They certainly do not resemble the tough questioning of the Fed Chairman by the relevant committees of the US Congress.[19] In addition, in contrast with the Congress's ability to reduce the Fed's independence, the European Parliament has no direct power on the Eurosystem whose statutes are established by the Maastricht Treaty. The "dialogue" falls well short of effective accountability.

These institutional limits could be of limited practical importance if the Eurosystem's performance could be evaluated by the Parliament or by the public at large. Given that the Maastricht Treaty vaguely defines its mandate as delivering price stability, the Eurosystem must be willing to submit itself to more precise criteria. Its refusal to adopt an inflation target range means that the Eurosystem has chosen not to be boxed into a situation where outsiders can unambiguously pass judgment on its actions.

There remains the question of whether the lack of accountability is associated with a lack of transparency and whether this matters for monetary policy. Blinder (1998) argues that monetary policy mostly operates through expectations. The implication is that central banking effectiveness crucially depends on the ability of outsiders to read and anticipate central bank actions. In that view, transparency is a condition for effectiveness, as illustrated by the statement of King (2000): "transparency should lead to policy being predictable. Hence a successful central bank should be boring."

This view is not universally held, though. Morris and Shin (2002) argue that too much transparency can hurt. As noted by Blinder et al. (2001) and Svensson (2004), their argument assumes that the central bank possesses superior information. Empirical testing of the effects of central bank transparency is in its early stages. Early evidence (e.g. Geraats, 2002; Gerlach-Kristen, 2005) indicates the transparency raises effectiveness.

Conclusions

To be written.

[19] The Committee on Banking and Financial Services of the House of Representatives and the Committee on Banking, Housing, and Urban Affairs of the Senate.

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