

PUBLIC CHOICE ASPECTS OF EUROPEAN MONETARY UNIFICATION

Michele Fratianni and Juergen von Hagen

Since the 1960s, the European Community (EC) has spent considerable energy and political capital on the issue of monetary union.¹ In early 1989, the Delors Committee, consisting of EC central bank representatives and chaired by Commission President Jacques Delors, took a further step on the long road to a European monetary union (MU). Its report (Commission 1989) was formally approved as a blueprint for the creation of an MU by the Council of Ministers at the June 1989 summit in Madrid. We will assess some of the main issues involved in designing a strategy for MU and discuss the features of the Delors Report as a proposal for achieving this goal. There will be no discussion of whether or not the EC represents an optimal currency area, nor will we discuss the benefits and costs of a monetary union.² Our primary focus will be on the public choice aspects of monetary union.

The Delors Report: A Strategy for Monetary Union

The Delors Report consists of three main components: one dealing with economic union (EU), another dealing with the construction of an MU, and a third dealing with fiscal policy in an MU. We focus on three critical aspects of the report: the principle of parallelism, the choice of the European Monetary System (EMS) as the basis for an MU, and the recommendation for binding fiscal restraints on national governments.

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Michele Fratianni is Professor and Juergen von Hagen is Associate Professor of Business Economics and Public Policy at Indiana University. The authors thank Paul de Grauwe and Roland Vaubel for comments on an earlier draft of the paper.

¹For a historical review, see Fratianni and von Hagen (forthcoming).

²On this topic, see Christie and Fratianni (1978) and Canzoneri and Rogers (1990).

The Principle of Parallelism

An important claim in the report is that monetary unification and economic integration cannot fruitfully proceed independently of each other,³ an axiom the report calls the principle of "parallelism" (Para. 42): The reason for parallelism, however, remains vague. On the one hand, the report argues that "achieving monetary union is only conceivable if a high degree of economic convergence is attained" (Para. 21), a proposition that no economist would deny. On the other hand, the report fails to establish why MU would be a necessary condition for EU:

The creation of a single currency area would add to the potential benefits of an enlarged economic area because it would remove intra-Community exchange rate uncertainties and reduce transactions cost. . . . At the same time, however, exchange rate adjustments would no longer be available as an instrument to correct economic imbalances within the Community. . . .

With parities irrevocably fixed, foreign exchange markets would cease to be a source of pressure for national policy corrections when national economic disequilibria developed and persisted. . . . Measures to strengthen the mobility of factors of production and the flexibility of prices would help to deal with such imbalances [Para. 26].

The role of MU for EU is thus ambivalent: MU may add or subtract from the benefits due to EU. As Goodhart (1989) observed, the loss of a degree of freedom in adjustment would actually suggest maintaining exchange rate flexibility during the creation of EU. Insisting on parallelism instead, the report contends that "Community policies in the regional and structural field would be necessary in order to promote an optimum allocation of resources and to spread welfare gains throughout the Community" (Para. 29).

The additional constraint of imposing MU in the transition period raises the need for market intervention at the Community level and thus works against the spirit of deregulation imbedded in the "Europe 1992" program. Parallelism, as the guiding principle to construct MU, creates a predisposition for bureaucratic intervention and centralized Community decisionmaking. The only justification for this choice can be found in Jenkin's (1978) speech—or, as stated in the Delors Report, to avoid "loss of political support for developing the Community further into economic and monetary union" (Para. 42).

³"Economic union and monetary union form *two integral parts of a single whole* and would therefore have to be implemented in parallel" (Para. 21).

The EMS as the Basis for Monetary Union

The strategy of the Delors Report is to use the present EMS as the basis for constructing a European monetary union. The report defines a monetary union as a

currency area in which policies are managed jointly. . . . The single most important condition for a monetary union would, however, be fulfilled only when the decisive step was taken to lock exchange rates irrevocably [Para. 22].

The adoption of a *single currency* . . . might be seen . . . as a natural and desirable further development of the monetary union. . . . The replacement of national currencies by a single currency should therefore take place as soon as possible after the locking of parities [Para. 23].

A new monetary institution would be needed because a single monetary policy cannot result from independent decisions and actions by different central banks. . . . [This institution] should be organized in a federal form, in what might be called a *European System of Central Banks* (ESCB). . . . The System would be committed to the objective of price stability . . . [and] should be independent of instructions from national governments and Community authorities [Para. 32].

The achievement of MU would occur in three stages:

Stage one represents the *initiation of the process* of creating an economic and monetary union [Para. 50] . . . [that] would center on the completion of the internal market . . . [and] would strengthen economic and fiscal policy coordination [Para. 51].

[The MU] would include all Community currencies in the EMS . . . [but] realignments of exchange rates would still be possible [Para. 52].

The *second stage* could begin only when the new Treaty had come into force [Para. 55]. . . . While the ultimate responsibility for monetary policy decisions would remain with national authorities, . . . a certain amount of exchange reserves would be pooled . . . [and] regulatory functions would be exercised by the ESCB in the monetary and banking field in order to achieve a minimum harmonization of provisions (such as reserve requirements or payment arrangements) necessary for the future conduct of a common monetary policy [Para. 57].

The *final stage* would commence with the move to irrevocably locked exchange rates [Para. 58] . . . [and] with the ESCB assuming all its responsibilities as foreseen in the Treaty [Para. 60].

The Council of Ministers . . . would have the authority . . . to impose constraints on national budgets . . . to make discretionary changes in Community resources . . . and to apply . . . structural policies . . . [Para. 59].

Alternative Strategies to Achieve Economic and Monetary Union

For a better understanding of the dynamic processes of economic and monetary union (EMU), we have compared the Delors strategy (scenario C in Table 1) with two hypothetical alternatives (scenarios A and B). The three scenarios share the same ultimate objective, economic and monetary union, and the same starting point, full integration of the markets for goods and services; but they differ in the way the process leads to the ultimate goal. Scenarios A and B complete EU first. At this stage, the EC would consist of fully integrated financial and goods markets, the notion of "Europe 1992." National

TABLE 1
ALTERNATIVE SCENARIOS FOR EU AND MU

EU			MU			COMMENTS
Goods and Services	Capital		EMS	ESCB	FR	
Y						Integrated goods markets
A1	Y	Y				Integrated goods and financial markets (Europe 1992)
A2	Y	Y		Y		Centralized policy coordination with flexible exchange rates
A3	Y	Y		Y	Y	EMU
B1	Y	Y				Europe 1992
B2	Y	Y			Y	Decentralized but coordinated policies (e.g., gold standard)
B3	Y	Y		Y	Y	EMU
C1	Y		Y			Delors Stage 1
C2	Y		Y	Y		Stage 2
C3	Y	Y		Y	Y	Stage 3

NOTE: EU = economic union, including financial integration; MU = monetary union; EMS = enlarged European Monetary System; ESCB = European System of Central Banks; FR = irrevocably fixed exchange rates.

monetary policies are autonomous and exchange rates are flexible, resulting in a consistent institutional environment. A and B take different routes from there. Step A2 adds a European System of Central Banks (ESCB), which would coordinate monetary policies in member countries. This coordination would occur with flexible exchange rates, giving the member economies an additional degree of freedom to adjust to regional shocks and to converge to a common monetary policy. The flexibility of exchange rates does not imply that coordination is necessarily "loose." Coordination can consist of common policy rules, such as monetary targeting. Finally, step A3 fixes all EC exchange rates, clearing the way for MU.

Scenario B rests on a system of decentralized policy coordination with fixed exchange rates, yet independent national monetary authorities (compare with B2). This is similar to the gold standard, although no metallic or commodity money is necessary to implement this step. Policymaking is decentralized, but each monetary authority must ensure the fixity of the exchange rate. Step B3 then adds the ESCB as the central policy authority, which again ushers in MU. Compared to scenario A, scenario B has the advantage that decentralized coordination is both easier to implement and easier to monitor.⁴ On the other hand, B imposes a tighter constraint on the conformity of monetary policies at an earlier stage than A does.

In the Delors scenario C, the road to monetary union starts from an enlarged EMS, including all EC members in the exchange rate mechanism (ERM). The latter is only a weak form of policy coordination, because it explicitly allows for discrete realignments of exchange rates. As long as realignments are possible and practiced, the EMS is exposed to speculative attacks when markets perceive strong and lasting inconsistencies between the existing parities and national monetary policies. The system survives by accepting periodic realignments and by imposing capital and exchange controls to safeguard parities. Indeed, despite the common perception that capital and exchange controls are being fully dismantled in the EC, the relevant directives allow for the reimposition of controls if short-run capital movements cause significant strain in foreign exchange markets and disturb the execution of monetary policy in a member country (Bofinger 1989, p. 433; Key 1989, p. 20). The return to restrictions, therefore, remains an explicit possibility in the EMS, so that C1 does not complete EU (as shown in Table 1). Instead, EU and MU are both reached only in the final stage of the Delors strategy.

⁴For a discussion of the monitoring problem in international coordination, see Fratianni and von Hagen (1990a).

Making the EMS the basis of MU thus leads one to accept the strategic principle of parallelism; scenarios A and B demonstrate that EU may well be achieved before MU. It seems odd that the Delors Report regards economic and monetary integration as two aspects of the same process and repeatedly argues that the construction of MU requires a high degree of economic integration already achieved, yet its preferred strategy actually prevents the early completion of EU. In this respect, the report is inconsistent.

The nonvanishing probability that countries can resort to exchange and capital controls means that real interest rates under the Delors strategy will embed a compensation for this risk, driving a wedge between relative marginal productivities of capital and relative real rates of return. The EMS as a road to monetary union, therefore, creates an inefficiency that is resolved only in the final step. This inefficiency generates an additional by-product that is not shared by the other alternatives. By forcing MU and EU at the final stage, the Delors strategy increases the cost of and therefore discourages valuable learning about the way markets and institutions behave in the new environment.

The ESCB is added to the EMS in stage 2 (C2 of Table 1), but its functions and role remain vague. Monetary policymaking still rests with the national authorities at this stage. The Delors strategy provides for a coexistence of central and decentralized decisionmaking, which is bound to create conflicts between the institutions. Because there are no rules or institutions to resolve such conflict, there will be more room for political discretion in the conduct of monetary policy. The result is not only additional uncertainty about monetary policy, but also a predisposition for decisionmaking processes and outcomes that reflect political opportunism rather than economic rationale. In contrast, institutional conflict does not arise in the alternative scenarios, because the Community authority replaces national monetary authorities rather than coexisting with them.

The report views the ESCB in stage 2 as a "training process leading to collective policymaking" (Para. 55). Bofinger (1989) argues that such training is unlikely to be successful, because the ESCB will find it difficult to attract qualified people who are willing to invest in an institution of little importance and reputation. The Council of Economic Advisors to the German Ministry of Economics (1989a) warns that a weak institution like the ESCB of stage 2 would specialize in activities like coalition building, logrolling, and infighting that would prevent the creation of a politically independent Community monetary authority.

Finally, scenarios A and B are evolutionary paths to monetary union. Only one additional feature at a time is added to the institutional architecture of the EC. In contrast, the transition from step C2 to C3 implies the simultaneous abolition of capital controls, the elimination of the EMS, the imposition of irrevocably fixed exchange rates, and the hardening of the ESCB. It leaves no room for the authorities to gain experience with the environment of a fully integrated financial market and with the process of truly coordinating monetary policies. The disruptiveness of the Delors strategy unnecessarily adds to the uncertainty involved in the process of building MU.

The obvious question is whether there is a nondisruptive way to achieve MU by starting from the EMS? There are two feasible alternatives. The first is to harden the ERM and later to create an ESCB; that is the path described by stages C1, B2, and B3 of Table 1. Elsewhere, we have argued that such a strategy would improve the credibility of monetary policy and lock in the gains achieved so far against inflation in the EC (von Hagen and Fratianni 1990). The other possibility is to soften the ERM but to rely on a centralized institution like the ESCB for coordinating national monetary policies; that is the path described by C1, A2, and A3. As we have noted, path C1, B2, and B3 might have an advantage over path C1, A2, and A3 in that it is easier to monitor and to implement.

Fiscal Policy Implications

The Delors Committee has spent considerable time discussing the fiscal policy implications and requirements of EU and MU. The report notes that national differences in fiscal policies can have undesirable allocative effects in an EU. Completion of EU requires "a high degree of compatibility of economic policies" (Para. 16) and avoids "imbalances in the real and financial sectors of the Community" as a result of "divergent and uncoordinated national budgetary policies" (Para. 30).⁵ However, according to the report (Para. 30):

The fact that the centrally managed Community budget is likely to remain a very small part of total public-sector spending and that much of this budget will not be available for cyclical adjustments will mean that the task of setting a Community-wide fiscal policy stance will have to be performed through the coordination of national budgetary policies.

⁵For a theoretical discussion of the need to harmonize fiscal policies in an economic and monetary union, see Tanzi and Ter-Minassian (1987), Vegh and Guidotti (1989), and Casella and Feinstein (1989).

The report holds that a centralized fiscal policy with budgetary power similar to those in existing federal states, such as the United States, Canada, or West Germany, is politically unrealistic. As Lamfalussy (1989, p. 95) observes, the EC budget is likely to remain small and provide an inadequate "*masse de manoeuvre* for an effective macro-fiscal policy." As a substitute for centralization, the report calls repeatedly for coordination of national macroeconomic policies in order to achieve the necessary degree of consistency.

The more controversial aspect of this discussion is the report's strong and repeated call for binding rules on the size of national government budget deficits in the future MU. The report speaks of "effective upper limits on budget deficits of individual member countries" and "the definition of the overall stance of fiscal policy over the medium term including the size and financing of the aggregate budgetary balance" (Para. 33). Such rules are regarded as one of the "basic elements" of an "EU in conjunction with a monetary union" (Para. 25).

The Role of Fiscal Restraints in Monetary Union

Despite the emphasis on binding fiscal restraints, the Delors Report does not make a convincing case for such restraints. Goodhart (1989) remarks that the Committee probably saw this need as so self-evident that it did not deem it worthwhile to give a firm justification. The Committee's reasoning focuses on a moral hazard problem in a monetary and economic union that reduces the fiscal discipline of its members. Individual members may be tempted to raise government debt beyond levels considered sustainable outside the union because they expect the common monetary authority to come to their rescue in a financial crisis. Such rescue operations would tax citizens of other member countries either explicitly or through a higher inflation rate in the monetary union (Lamfalussy 1989). Fiscal restraints, such as balanced budget provisions or ceilings on deficits, are required to guarantee the soundness of fiscal policies in the union.

There is a basic flaw in this argument. The moral hazard problem is a consequence not of the exchange rate regime but of closer international coordination and integration. Recent experience with the debt of LDC and Eastern European countries is clear evidence of this point. Industrial countries have agreed to reschedule and forgive debt, irrespective of the exchange rate arrangement linking debtor and creditor nations. Solidarity, not fixed exchange rates, is the source of bailouts. Certainly, economic integration and monetary union will raise the degree of solidarity among the members, but it is misleading to attribute the moral hazard problem to the monetary union.

Furthermore, there are forces at work in a monetary union that enhance fiscal discipline and work against the negative incentive effect. Considerations of reputation suggest that excessive debt is incurred by governments that have direct access to the monetary printing press. Joining an MU with an independent monetary authority eliminates such access and allows deficits and debt levels to decline (Goodhart 1989). The ensured independence of the common monetary authority can be regarded as an institutional substitute for fiscal restraints. There is no need for fiscal restraints in an MU, if monetizing individual member countries' debt by the common central bank is firmly excluded. From that perspective, the Committee's call for fiscal restraints suggests that it regards the full political independence of the future European central bank as a lost cause.

Yet, even if we assume that solidarity and reputational effects together work toward raising public deficits and debt, an additional condition must be satisfied before binding rules can be justified; namely, capital markets in the Community do not price individual country risk differentials adequately enough to offset the incentive for higher deficits by larger risk premia. The Delors Report (Para. 30) takes this position:

To some extent market forces can exert a disciplinary influence. . . [but] market perceptions do not necessarily provide strong and compelling signals and that access to a large capital market may for some time even facilitate the financing of economic imbalances. . . . The constraints imposed by market forces might either be too slow and weak or too sudden and disruptive.

Therefore, governments must rectify a market failure with an administrative rule. Again, the market failure argument does not pertain to monetary integration. A monetary union—in which international interest rate differentials are not clouded by exchange rate expectations—would raise the visibility of risk premia embedded in interest rate differentials and, thus, would enhance the efficiency of market forces (Council of Economic Advisors to the German Ministry of Economics 1989b).

There is no reason to assume a priori, however, that fiscal restraints imposed by the Community would be more effective than market forces. Public choice considerations suggest that national policymakers would find ways to circumvent such rules, if doing so serves their own political interests. At the same time, the rules and enforcement mechanisms designed by the Community would emerge from a political process at the Community level that would not necessarily reflect the best economic rationale. Historically, the Community's

performance in enforcing common rules has been rather weak (Mortensen 1990, p. 54).

Fiscal Restraints in the United States

Formal fiscal restraints exist in the United States in the form of statutory or constitutional balanced budget requirements and limitations to state debt. Forty-nine states have some form of balanced budget requirements (BBRs), ranging from the simple provision that the governor must submit a balanced budget (12 states) to the explicit ban on carrying over a deficit into the next fiscal year (29 states). Thirty-two states have state debt limits in the form of nominal limits, percentage limits relating to state funds, tax revenues, taxable or state property, or total appropriations; 38 states have debt limits of this kind or special legislative restrictions, such as a referendum requirement to create debt.

A recent study by the Advisory Commission on Intergovernmental Relations (ACIR 1987b) provides an index of the stringency of the legal constraints implied by the BBRs. The index ranges from 0 (no requirement) to 10, with a distribution that is heavily skewed toward the higher values: 36 of the 50 states have a ranking of 9 and 10. The index has a weak negative correlation with state debt per capita levels and debt income ratios but no apparent correlation with debt growth. Higher fiscal stringency seems to give incentives to states to change their debt mix in toward more nonguaranteed debt, a way to circumvent fiscal restraints.⁶

For a more formal assessment, we have divided the states into groups of low (index value 0 to 4), medium (5 to 8), and high (9 and 10) degrees of fiscal stringency. Table 2 shows the average of the four indicators of fiscal performance for these groups. States with high stringency have a significantly lower average state debt per capita than states with low stringency. The only other significant difference is how debt is allocated between fully guaranteed and nonguaranteed debt. Here the evidence is clear: Debt limits do make a statistical difference in the choice of debt mix.

The risk of a central bank bailing out an insolvent Treasury depends even more on the probability of particularly deviant fiscal behavior than on average fiscal performance. To see how fiscal restraints change this probability, we have isolated the three largest observations for each of the four indicators. The three states with

⁶By setting up special authorities to manage state projects and by creating nonguaranteed debt in their name instead of guaranteed, "full faith and credit" debt, states can avoid fiscal restraints.

TABLE 2
U.S. FISCAL RESTRAINTS AND FISCAL PERFORMANCE IN 1985

	Debt Limits I		Debt Limits II		BBR Stringency Index		
	Yes	No	Yes	No	Low	Medium	High
Debt per Capita							
Average	1203.5	1290.1	910.7	2267.7	1576.6**	1723.5	919.2
Std. Dev.	1904.0	775.0	654.8	2813.3	406.7	2714.8	752.8
Debt/Income Ratio (%)							
Average	9.4	9.3	7.5	15.1	11.1	11.9	7.7
Std. Dev.	11.5	5.8	5.2	16.6	4.4	16.0	5.7
Debt Growth (%)							
Average	4.5	2.9	4.2	2.9	4.1	2.7	4.5
Std. Dev.	4.2	3.0	4.2	2.1	4.1	2.1	4.4
Debt Mix (%)							
Average	3.5*	2.6	3.5**	2.5	1.9**	2.0**	4.0
Std. Dev.	2.3	1.5	1.9	0.8	0.2	1.2	2.6

NOTE: Debt Limits I are nominal debt limits and percentage limits relating to state funds, taxable property, tax revenues, or total appropriations. Debt Limits II add to Debt Limits I special legislative requirements. Std. Dev. denotes group standard deviation; * and ** denote statistical significance of a t-test for equal means at 5 percent and 1 percent, respectively.

SOURCE: von Hagen (1991).

the fastest debt growth and the largest ratios of nonguaranteed to guaranteed debt fall into the group with the highest stringency index and with formal debt limits. Two of the three states—those with the largest per capita debt and debt income ratios—also belong to the group with the highest fiscal stringency and formal debt limits.⁷

The lesson we draw from this simple empirical exercise is that fiscal restraints do little to change average fiscal performance and do not significantly lower the probability of extreme outcomes. This broad conclusion is in line with the more detailed evidence provided in other studies.⁸ Even though the United States differs structurally and institutionally from the EC, this evidence casts doubt on the promise that formal fiscal restraints can enhance fiscal discipline in a European monetary union and reduce the monetary authority's risk of acting as a lender of last resort. In conclusion, there are neither theoretical nor practical reasons to believe that binding rules can rectify alleged market failures in restraining the growth of government debt.

A Public Choice Interpretation of the Delors Report

We have pointed out that the Delors Committee's approach to MU has a number of strategic deficiencies. First, parallelism introduces a bias for centralized market regulation. Second, the choice of the EMS as the basis for MU increases the cost of learning and biases the process toward premature completion, while discouraging the formation of an independent monetary authority for the monetary union. Finally, the call for binding fiscal restraints is largely unjustified. In light of these conclusions, the question arises: What is the motivation underlying the Delors Committee's proposal. Public choice theory leads to a club interpretation, with central bankers pursuing their own interests.

We start by sketching how EU will change the environment for fiscal policymaking in the Community. Assume that the "Europe 1992" program is successful in the two important dimensions of goods market and financial integration. Stronger goods market integration will increase intra-EC trade and raise the share of exports and imports in each country's GNP. Financial market integration, independent of the type of exchange rate regime, will increase the international substitutability of financial assets within the region,

⁷For more details, see von Hagen (1991).

⁸See ACIR (1987b), von Hagen, Heins (1963), and Abrams and Dougan (1986). ACIR (1987b) presents a regression analysis of the impact of BBR stringency on state deficit spending and finds only a weak negative effect.

particularly at the shorter end of the markets. Thus, each economy in the region becomes more "open" and more closely integrated in the regional capital markets.

The important implication of these two trends for EU is that national fiscal policies are likely to lose much of their power to control national output and employment, even in the short run. First, as the literature on fiscal federalism remarks, greater openness reduces the traditional Keynesian spending multipliers as a larger percentage of the induced demand spills over to the rest of the Community. Second, standard open-economy macroeconomics, typified in the Mundell-Fleming model, predicts that with rigid prices, flexible exchange rates, and perfectly integrated capital markets, fiscal policy becomes ineffective in a small country. This happens because the momentarily higher domestic rate of interest following a fiscal expansion induces capital inflows, an appreciation of the domestic currency, and a complete crowding out of net exports. In contrast, fiscal policy remains effective under fixed exchange rates, because its domestic interest rate effect creates a pressure for appreciation of the home currency and forces the monetary authority to expand the money supply. Only if the country is large enough to affect permanently domestic and world interest rates will the bond-financed increase in government spending succeed in raising domestic output under flexible rates (see, for example, Frenkel and Razin 1987).

Progress toward EU, therefore, implies a power reduction of national fiscal policymakers. Public choice theory alerts us to expect fiscal policymakers to seek ways to restore their leverage. Given the completion of EU, there are two ways for them to do so. First, coordination of fiscal policies among EC members offers a way to overcome the relative size problem and to gain market power in international capital markets. Although each country would seem to be relatively small, the combined size of their financial markets can be expected to be large enough for a coordinated fiscal expansion to raise world interest rates. Second, by fixing exchange rates among the community countries, fiscal policymakers can exert power over the instrument that remains effective even with EU, namely, monetary policy. The process of goods market and financial integration, therefore, sets in motion two tendencies among finance ministries: a move toward coordination and a predisposition for fixed exchange rates. It is noteworthy that in the larger Community countries the legal power to choose exchange rate regimes rests with the ministries of Finance, not the central banks.

To the EC central bankers these tendencies must appear to be a serious threat to their own political power and independence. According to standard macroeconomic analysis, the imposition of truly fixed exchange rates will degrade national monetary policy and give it a minor role.⁹ Furthermore, fiscal policy coordination will reduce the relative power that monetary policy has over fiscal policy. Our interpretation rests on the assumption that central bankers take these developments of fiscal policy as given. In designing the future EC monetary regime, therefore, these central bankers have a strong incentive to select strategies that diminish the perceived danger of fiscal dominance.

To interpret the strategy proposed in the Delors Report as a rational response of EC central bankers to this threat requires us to show how the Delors strategy, if adopted, would reduce such a threat. We focus on two elements. The first is the report's insistence on building MU on the foundations of the EMS. The critical characteristic of the EMS for the development of the club theory is that monetary policymaking rests at the national level. Far from being a true fixed exchange rate arrangement, the exchange rate mechanism explicitly allows for realignments and requires only a small degree of policy coordination. The report is very clear in this respect. During stage 1 it proposes to extend "the scope of central bank autonomy" (Para. 52)—that is, to strengthen the position of monetary policymakers vis-à-vis their governments—and to include all Community currencies in the ERM—that is, to enlarge the club. The primary common policy institution at this stage, the Committee of Central Bank Governors, would be charged only to formulate and express opinions and write an annual report (Para. 52). Similarly, during stage 2, the "ultimate responsibility for policy decisions would remain . . . with the national authorities" (Para. 55). The final transfer of policy authority to the ESCB would occur in the final stage. In essence, the creation of the ESCB within the existing EMS raises the probability that the national monetary authorities will see their interests represented in the ESCB while lowering the probability of building a truly supranational and independent ESCB.

The weak coordination implied by the EMS need not exclude closer coordination taking place for a prolonged period of time, should this serve the interests of the central bankers. The experience

⁹We emphasize that our interpretation is built on the assumption that central bankers predominantly reason along the lines of the Mundell-Fleming framework of analysis. The fact that the latter represents the intellectual core of most empirical models studying questions of national policy and international policy coordination gives empirical concreteness to our assumption.

since the 1987 realignment has made this quite clear. Such coordination, however, is less evidence of a “new EMS” (Giavazzi and Spaventa 1990) than of the simple fact that the adoption of similar policies may occur even without much formal coordination. We conclude that the Delors strategy, while suggesting that the way to MU is best achieved through a gradual strengthening of the EMS, serves to minimize the loss of policy authority for the central banks during this process.

The second critical element for the development of the club theory concerns the call for binding fiscal rules in an MU. These rules are designed to guarantee independence to the ESCB in the final stage of MU through “exclusion of access to direct central bank credit and other forms of monetary financing” and to limit the scope of independence of national fiscal policy (Para. 33). The former has an obvious justification in a monetary union committed to price stability (Para. 32), but there is no evidence that quantitative limits on national budget deficits can ensure fiscal discipline.

Club theory can shed some light on this issue. Referring to the authority of regional and national policymakers in macroeconomic management, the report states (Para. 19) that

given their potential impact on the overall domestic and external situation of the Community and their implications for the conduct of a common monetary policy, such decisions would have to be placed within an agreed macroeconomic framework and be subject to binding procedures and rules.

To put it more plainly, the mere fact that fiscal policies interfere with monetary policymaking is sufficient to justify restricting the scope of governments’ independent decisionmaking. Obviously, the Delors Committee understands the enhanced power of fiscal policy on aggregate demand when monetary policy is forced to hold exchange rates constant. The Committee does not favor fiscal coordination over uncoordinated fiscal policies but takes as “given” the tendency for coordinated policies on which it wants to place restraints to safeguard the leverage of monetary policy. Binding rules are called for to limit the discretionary actions of the fiscal authorities. As a result, the balance of decisionmaking power in the future MU would shift toward central bankers.

In sum, we interpret the Delors Report as a rational response of the EMS central bank club to curb the threat of fiscal dominance. From this perspective, it is easy to make sense of the peculiarities of the report’s strategy for MU. The inefficiencies and biases of the strategy are the price to be paid for maintaining monetary policymaking at the national level as long as possible. The result is likely to be

an ESCB consisting of a collection of national interests instead of a true Community institution standing above special interests.

Central Bank Club Inflation Performance

Having argued that the Delors Report reflects the preoccupations and the interests of the central bank club, we can derive some general propositions concerning the “output”—that is, the base money creation—of this club. The main question is: Will the club have an inflation or deflation bias?

Recent literature on optimal taxation views inflation as part of a nation's tax system. Contrary to the conventional view of inflation as an inefficient source of government revenue, this literature argues that, in a world with transaction and distortionary costs of collecting taxes, inflation becomes part of a second-best tax structure (Klein 1978, p. 81). Its optimal rate is obtained at the point where the marginal social costs of raising revenues through inflation and through other distortionary taxes are equal to each other (Mankiw 1987, Gros 1990). To illustrate, let t_y be the distortionary tax rate on income, m_y the ratio of base money to income, b_y the ratio of debt to income, π the inflation rate, and z and v the weights of the tax and inflation distortions in the authorities' welfare function. The optimal inflation tax obeys (see Gros 1990)¹⁰

$$zt_y(m_y + b_y) = v\pi. \quad (1)$$

Taking the ratio of government expenditures to income g^* as given for the financing decision, the optimal steady-state inflation rate is

$$\pi = (g^* + \rho b_y)(m_y + \frac{v}{z(m_y + b_y)})^{-1}, \quad (2)$$

where ρ is the real interest rate. The larger the collection cost ratio z/v , the lower the money base velocity; and the higher the debt ratio, the larger is a country's optimal inflation tax. In a monetary union, this implies that the ESCB members, representing different national interests and different tax systems, will have different target inflation rates.

¹⁰The optimal inflation and tax rates here are the results of minimizing the preference function $L = \int U(z t_{ys}^2 + v \pi_s^2) \exp(-\rho s) ds$ subject to the steady-state government budget constraint $g + \rho b_y = t_y + \pi m_y$, where ρ is the real interest rate and g is the ratio of government expenditure to income.

EUROPEAN MONETARY UNIFICATION

Table 3 shows the 1988 values of t_y , m_y , and b_y for the majority of EC countries. Assuming that the values of z/v are equal for all members, we can infer from the computed value of $t_y(m_y + b_y)$ that Belgium, Greece, and Italy would have higher incentives to inflate than France, Germany, and the United Kingdom.¹¹ The table

TABLE 3
TAXES, MONETARY BASE, DEBT, AND INFLATION RATES

Country	Tax Rate (t_y)	Monetary Base ^a (m_y)	Net Debt ^a (b_y)	$t_y(m_y + b_y)$
Belgium	.460	.077	1.233	.603
Denmark	.605	.041	.246	.174
France	.489	.066	.243	.151
Germany	.443	.100	.235	.148
Greece	.362	.200 ^b	.644	.305
Italy	.401	.150 ^b	.879	.413
The Netherlands	.543	.087	.554	.348
Spain	.381	.220	.299	.197
United Kingdom	.391	.033	.387	.164

	Relative Inflation Target	H_E	H_y
Belgium	4.07	-6.7	-0.24
Denmark	1.18	-0.20	-0.15
France	1.02	-0.04	-0.09
Germany	1.00	-0.12	0.22
Greece	2.06	0.23	0.19
Italy	2.79	0.77	0.48
The Netherlands	2.35	-4.33	0.35
Spain	1.33	—	0.54
United Kingdom	1.11	-0.04	-0.15

^aExpressed as a proportion of GDP, 1988 values.

^b1987 values.

SOURCES: OECD, *Economic Outlook*, n. 45 data diskettes, for net debt; IMF, *International Financial Statistics*, for the monetary base; and European Commission, *European Economy*, Supplement A, n. 2 (July 1989), for average tax rates.

¹¹An important implication of this analysis is that fiscally strong and weak countries should refrain from joining a monetary union before achieving convergence of their tax systems, a further argument against the Delors Report's principle of parallelism. See Tanzi and Ter-Minassian (1987), Dornbusch (1988), Council of Economic Advisors to the German Ministry of Economics (1989a), and Giavazzi (1989).

indicates that these countries would have very different preferred inflation rates for the monetary union, all being larger than the German inflation rate. Unless the Bundesbank were to set the MU inflation rate unilaterally, which is politically unlikely, the MU inflation rate is bound to be higher than the lowest inflation rate currently achieved.

But there is no reason to believe that MU members would want the same target inflation rate for the union as they would for themselves when they conduct independent monetary policies. The reason for this is a familiar free-rider problem. If countries share the revenues generated by seignorage in the MU, then any single country can effectively tax citizens of other countries through a higher MU inflation rate. The preferred union inflation rate for each country now becomes

$$\pi_E = (g^* + b_y \rho)(\theta m_E + \frac{v}{z(\theta m_E + b_y)})^{-1}, \quad (3)$$

where m_E is the base-money-to-income ratio for the entire union and θ is the ratio of a country's share of MU seignorage to the country's share of MU income. A country's preferred union inflation rate is higher than the country's preferred steady-state inflation rate with independent policies if

$$H = (m_y - \theta m_E)(v/z - (m_y + b_y)(\theta m_E + b_y)) < 0. \quad (4)$$

The term $(m_y - \theta m_E)$ represents the change that occurs in a country's tax base from the inflation tax when joining the union. The change is negative when the country obtains more seignorage for a given inflation rate inside the union, that is, when free riding occurs. Given the data in Table 3, the term $(v/z - (m_y + b_y)(\theta m_E + b_y))$ is likely to be positive.¹² Consequently, a country prefers a higher union inflation rate than its own, independent one, if it can increase its inflation tax base in the union.

Table 3 displays the values of H under two alternative distribution schemes for union seignorage. H_R distributes seignorage according to countries' weights in the ECU based on January 1987 par values. Given 1988 tax and inflation rates, condition (4) is satisfied for almost all countries. Only Italy and Greece, the two relatively high inflation countries would desire a lower union inflation rate than their preferred independent rate. More significantly, the lowest-inflation countries—Germany, Belgium, and the Netherlands—would have

¹²This can be readily verified by solving expression (1) for v/z and the values indicated in Table 3.

the strongest preference to raise the union's inflation rate above their own. In comparison, H_y assumes that seignorage is distributed according to each country's share in regional real income. Here we find that the outcome is more favorable to a lower union inflation; in particular, low-inflation countries of Germany and the Netherlands would prefer lower union inflation rates together with Italy and Greece.

The important conclusion from this exercise is that the long-run inflation rate in an MU run by a central bankers' club depends critically on the way seignorage is distributed among the members. An "inadequate" distribution scheme would provide incentives for an inflation-biased union. By implication, we derive the normative prescription that, in developing the institutional structure of the ESCB, the seignorage scheme should be engineered to bias the outcome toward a lower rather than a higher union inflation rate.

To settle on a particular target inflation rate, the rules of the EMU must specify a voting mechanism that allocates voting power to each member. Our analysis indicates that the optimal design of the voting mechanism should be considered together with the design of a seignorage distribution scheme. For example, with $\theta = m_y/m_E$, a simple majority—plus a one-state-one-vote rule—among the countries listed in Table 3 would result in an EMU inflation of at least one-third above Germany's preferred inflation rate. With Spain as the pivotal voter, the same rule would result in a lower inflation rate if combined with the distribution scheme of H_y . More generally, our results suggest that a low EMU inflation rate can be achieved by allocating the majority of the votes to the fiscally strong countries, while compensating the fiscally weak countries with the largest shares in seignorage revenue. In this way, seignorage considerations would not be permitted to distort the fiscally strong countries' incentives toward more inflation, while the fiscally weak countries' interest in higher inflation would not carry enough weight in the common decisionmaking process to raise the union's inflation rate.

Exchange Rate Union versus Currency Union

The final act of the Delors Report envisions that exchange rates be irrevocably locked and that the ESCB take full responsibility for monetary policy in the Community. The report also favors the adoption of a single currency and *hopes* that national currencies will be replaced by a single currency after the implementation of stage 3 (Commission 1989, p. 19). But the Committee does not outline the mechanism that would make possible the withering away of national

currencies. Our judgment is that the Delors Report embraces the notion of an exchange rate union rather than a currency union. Exchange rate unions have the distinct advantage of preserving existing currencies and the "brand name" they have earned in the marketplace, of softening the objections of the groups that are threatened by the introduction of a common currency, and of leaving the possibility of undoing the union at some future date. This possibility, remote as it might be, is an inherent source of instability (Artis 1989). In particular, national interest rates cannot fully converge. Countries that are perceived to be prone to secede from the exchange rate union will suffer a risk premium, making their interest rates higher than the rest of the union. But the choice of maintaining national currencies preserves the power of national monetary authorities. In this respect, we find the exchange rate union option to be fully consistent with the main message of our central bank club interpretation.

If the exchange rate union is meant to be permanent, then there can be only advantages from adopting a common currency. In addition to eliminating exchange rate uncertainty, a common currency eliminates the transaction costs connected with the sale and purchase of several monies.¹³ Unfortunately, by ruling out the support of a parallel currency with features that are superior to those of existing national currencies, the Delors Report strategy can arrive at a currency union only through a currency reform, not through a market-determined outcome.

The All Saints' Day Manifesto (1975) proposed the introduction of an inflation-proof money as an alternative to existing national monies. With a guarantee of a zero real rate of return, governments cannot penalize money holders and, therefore, cannot profit from generating unanticipated rates of inflation. With such a parallel currency, the Manifesto argued that the cost of adjusting to a common inflation rate would not be as sudden as it would be if exchange rates were to be set rigidly at a given date.

The Delors Report "considered the possibility of adopting a *parallel currency strategy*" (Para. 47) but ruled it out because it could jeopardize price stability and complicate the coordination of different national monetary policies. Our interpretation is that a European currency issued either with money back guarantees or supplied in a way that outperformed other European currencies would have met the objections of national authorities who would have feared the disappearance of their monies and the attendant seignorage. Com-

¹³There is no solid evidence on what these savings could be. Artis (1989) speculates that they could amount to 1 percent of EC GDP.

mittee members must have evaluated the political feasibility of posing a direct challenge to national authorities, and they preferred centralized institution building and a vague hope that national currencies would eventually wither away. Even in this aspect the Committee preferred an administrative solution—future currency reform—to a market-determined process.

Conclusion

This paper assessed the critical issues involved in designing a strategy for European monetary unification as well as the specific strategy proposed by the Delors Report. The report has a bias for centralized market intervention and regulation. In particular, the report does not believe that market forces can discipline national fiscal authorities. We interpreted the Delors Report as a rational response of central bankers fending off the threat of fiscal dominance in a future economic and monetary union. To that end, the central bankers are willing to support the inefficiency built into the EMS to arrive at a monetary union. We also showed that the long-run inflation rate of a monetary union depends critically on the rules of voting and seignorage revenue sharing.

Finally, the Delors Report embraces the notion of an exchange rate union rather than a common currency union, even though it expresses the hope that national currencies can be replaced by a common currency after the final stage. The preservation of national currencies implies the preservation of national monetary authorities, an outcome that is consistent with a club interpretation of central banks.

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AN ALTERNATIVE PUBLIC CHOICE INTERPRETATION OF EUROPEAN MONETARY INTEGRATION

Georg Rich

Although Fratianni and von Hagen address an important issue, I did not find their analysis convincing. The purpose of their study is to develop a public choice interpretation of the European Monetary System and the Delors strategy. They regard the EMS as a club of central bankers pursuing their own political interest. In their view, the central bankers' club attempts to ensure that monetary policy will not be dominated in the planned European monetary union by the fiscal policies of the various national treasuries. Because I found it difficult to follow and understand Fratianni and von Hagen's line of reasoning, I will first appraise critically their fiscal dominance view of the EMS and then turn to alternative public choice interpretations of European monetary unification. I will conclude with a discussion of the Swiss National Bank's attitude toward European monetary integration.

The Fiscal Dominance View

As European economic unification progresses, Fratianni and von Hagen maintain, the effectiveness of national fiscal policies in influencing domestic output and employment will gradually be weakened. To counteract the erosion of their fiscal powers, national treasuries strive to restore their leverage by fixing exchange rates within the economic union. As suggested by the Mundell-Fleming model, under conditions of perfect capital mobility, fixed exchange rates enhance the potency of fiscal policy. In addition, national treasuries have an incentive to coordinate fiscal policies. But Fratianni and von

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The author is a Director of the Swiss National Bank and Head of the Economics Section.