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Alternative Paradigms for Monetary Union

I. Introduction

A convenient starting point for any discussion about Monetary Union is the definition given by the Werner Plan : A system of irrevocably fixed exchange rates (without margins of fluctuation) with free capital mobility. The purpose of this note is to discuss the implication of the exact meaning of the term "Monetary Union" by analyzing the factors that determine the degree of integration of different national financial markets and payment systems. Some of these factors are, for example, the bid-ask spreads and other foreign exchange commissions practiced by commercial banks, the legal tender status of national currencies and the use of different national currencies as a unit of account.

A closer inspection of the potential importance of these factors shows that the term "Monetary Union" contains potentially more than the standard definition of fixed exchange rates plus capital mobility. Indeed, Monetary Union (MU) might be viewed as a dynamic process in which two driving forces interact. These forces are official action and market development. Official action sets the broad framework by fixing exchange rates, by removing barriers to financial market integration and by declaring certain instruments legal tender; market developments then determine the economic content of this framework. This view of "Monetary Union" suggests the following four, interrelated, issues for discussion :

1. Economic theory and experience imply that all regions of a MU à la Werner Plan would have an average similar inflation and interest rates, however, if differences between national financial markets and payment systems continue to exist national monies would not be perfect substitutes and therefore such a MU would not constitute an area which operates as if there was only money.

2. An incomplete integration of national financial markets and payment systems and differences in the instruments of monetary control would also imply that some scope for autonomous national monetary policy remains within the limits set by interest rate arbitrage in international capital markets. In this sense a MU à la Werner Plan might not operate exactly as an area in which there is only one way to implement the monetary policy.

3. If national monies do not become close substitutes in a MU à la Werner Plan, because of incomplete interaction of financial markets and payment systems, such a MU could function without a central monetary authority if the monetary policy of one country serves as the anchor for the entire system. However, in a full MU, that is when all monies become very close substitutes, the price level of the union could no longer be controlled via the monetary policy of the centre country alone.

4. A MU à la Werner Plan would imply that the participating countries would loose the exchange rate as an adjustment mechanism which is regarded as the most important cost of a MU. However, if the integration of financial markets and payment systems remains incomplete and national monies remain imperfect substitutes such a MU might not yield the benefits in terms of reduced transaction costs and increased transparency of prices associated with a full MU which operates as if there existed only one money.

The main theme of this paper, namely the "small print" that distinguishes a full MU from a system of fixed exchange rates, is analysed in some detail in Section II. In Section III the results from this analysis are used to discuss what types of MU yield certain costs and benefits commonly associated with a full MU. In Section IV the analysis of Section II is used to briefly discuss the appropriate institutional framework for different types of MU. Section V contains some concluding remarks.

II. Degrees of Monetary Integration

The term "Monetary Union" (MU) is often only considered from a macroeconomic point of view. In this optic it is often asserted that MU is equivalent to fixed exchange rates plus full capital mobility because they imply that interest rates are equalized. However, closer inspection of actual examples of countries that maintain fixed exchange rates and free capital markets reveals that some differences in interest rates remain even in this environment.

These differences in interest rates may be the result of differences in the organization of national payments systems and securities markets and other legal and customary rules that affect the return on securities[1]. From a macroeconomic point of view these interest rate differentials are usually considered irrelevant because only differences between the theoretical construct of "the" interest rate are taken as important.

The potential for interest rate differentials that remains even in an environment of fixed exchange rates and free capital mobility can be illustrated by analysing the interest differential between the Dutch Guilder and the Deutsch Mark markets. Over the last five years (10/83 to 9/88) the Dutch Guilder has depreciated only by 0.5% against the D. Mark and the Guilder-D. Mark exchange rate has never moved outside a corridor that is less than 1% wide. The Dutch Guilder has therefore behaved as if the allowed band of fluctuation had been less than ± 0.5%, this might be considered as a good approximation of a MU between these two countries. However, despite the absence of capital controls, short term (3 months) Euro Dutch Guilder interest rates have been on average almost 1% higher than the corresponding D. Mark rates. Fixed exchange rates and capital mobility therefore leave some room for interest rate differentials. Without further information it is not possible to say whether these interest rate differentials are due to doubts in the market about the exchange rate commitment of the Dutch

(1) Implicit in this argument is that the securities issued in each national system are denominated in the national currency.

authorities or differences between the national financial systems that are not eliminated by arbitrage in the Euro-markets.[1])

The term "Monetary Union" is also sometimes taken to mean that national monies become perfect substitutes so that the economy of the union would behave as if there existed only one money. From this more microeconomic point of view it is clear that a "full" MU involves more than fixing exchange rates because the freedom to transfer funds at a fixed exchange rate from one national financial system (that is based on a national currency) to another, different, financial system (that is based on another national currency) is not sufficient to render two moneys perfect substitutes.

From the microeconomic point of view a MU implies that one money fulfills the three classic functions of money (unit of account, store of value, means of payment) for all economic agents in the Union a MU would imply much more than fixed exchange rates and free capital movements. From this point of view a MU would exist if different national monies (assuming that they continue to exist) become as substitutable as bills of different denominations of one national money. While this second definition of MU might appear extreme, it indicates that there exist different "degrees" of MU that might have different implications for the way a MU should be organized.

Some of the elements of the "small print" that distinguishes a full monetary union from the broad definition of fixed exchange rates plus full capital mobility are :

- The difference between ex-ante and ex-post exchange rate stability; that is the credibility of the exchange rate commitment matters. Can any of the effects of a MU be achieved if private agents do not expect exchange rates to remain fixed? One could argue that the G-NL case does not provide a good approximation of a MU since

(1) The first explanation seems difficult to reconcile with the fact that over the same period the difference between long term interest rates (on government bonds) was on average about one half of the difference in short term interest rates. If doubts about the long run commitment of the Dutch authorities had been the root for the short term interest differential the long term differential should have been larger.

exchange rates just turned out to be ex-post more stable than markets had anticipated ex-ante. This raises the question of what institutional or other features of the MU would lead private markets to expect that the union will be stable.

- The remaining margins of fluctuation in exchange rates; what bands of fluctuation are compatible with "fixed" exchange rates, ± 2.25% as normally in the EMS, ±1%(?) as under Bretton Woods or zero? Is zero operationally possible?

- The bid-ask spreads and other foreign exchange commissions practiced by commercial banks (1). Even after the complete elimination of margins of fluctuation in the official parities commercial banks might still have to use bid-ask spreads and/or foreign exchange commissions to cover the costs they incur by holding bank notes in different currencies and by having to set up several accounting systems. At present, the magnitude of the bid-ask spreads varies with the size of the transaction, they go from 2 - 5 % on exchange rates for bank notes to 0.05-0.1 % on the inter-bank market. The large costs of exchanging cash would seem to deter individuals from using more than one currency contemporaneously for everyday retail transaction. The Dutch case is again a useful example in this case since even with the very low exchange rate variability and the large degree of commercial and financial integration between the Netherlands and Germany there is no indication that a significant process of currency substitutiion has taken place in the Netherlands so far. For large corporation transaction costs are much lower (bid-ask spreads are almost one

(1) The margins of fluctuation in the official parities can be considered as the bid-ask spread of the central bank.

hundred times lower on interbank transactions than on cash) so that large corporations might be more inclined to hold balances in several currencies and might also be ready to make large shifts in their currency holdings in response to small interest.

- The legal tender status of different national currencies. In the absence of a common currency would it be possible to give different national currencies legal tender status in the entire Union? How could this be organized if exchange rates are not completely fixed and bid-ask spreads have not been completely eliminated? If exchange rates are fixed for legal tender purposes but market rates are not Gresham's law would operate and therefore would "bad" money drive out "good" money?

- Price quotes; are prices quoted in different currencies? Consumers used to think and compare prices in one national currency might find it inconvenient to translate prices quoted in one currency into another one at any exchange rate that is different from one.

- The MU might encompass only some sectors of the economy of the Union as different currencies might be used in different sectors of the economy. For example, the wholesale financial sector, which has lower transaction costs, might use an international currency alongside the national currencies whereas the retail sector, which has higher transaction costs, might use only the domestic currency.

For the remainder of the paper it will therefore be useful to adopt the following terminology (where full capital mobility is taken for granted):

- A quasi macro MU represents a system of fixed exchange rates with "escape clauses" in which, ex-post, exchange rates are never adjusted and where national monies are not good substitutes. This might correspond to the maximum degree of monetary integration that could be achieved by the EMS in its present institutional framework.

- A macro MU represents a system of irrevocably fixed exchange rates (Werner Plan definition) where national monies are still imperfect substitutes because of the various transaction costs listed above (1).

- A full micro MU represents an area which behaves as if there was only one money because national monies are perfect substitutes. This might correspond to the BLEU.

At this point it does not seem possible to predict to what extent the 1992 programme will lead to the elimination of the "small print" that would limit the degree of currency substitution. The main thrust of the removal of barriers to the integration of European financial markets seem to be to allow for a more efficient allocation of savings across national frontiers. This aspect would have little impact on the transaction costs aspects analyzed here. The 1992 programme for financial markets might thus reduce the scope for interest rate differentials in a fixed exchange rate system but it might have little impact on the substitutability of different national monies. Moreover, since the monetary policy control instruments have so far been exempted from the home country control principle some differences, due to different methods of monetary control, among national financial markets might remain even after 1992.

(1) Since it is difficult to decide to what degree the markets believe in the irreversibility of the Dutch exchange rate commitment it is difficult to decide whether the Dutch case represents a macro MU à la Werner Plan or only a quasi MU.

III. Costs and Benefits of Different Degrees of MU

Discussions about the costs and benefits of a MU have usually not taken into account the idea of different degrees of MU. It might therefore be useful to analyse what costs and benefits can be obtained from different degrees of MU. The different costs and benefits are only sketched out because the purpose of this section is not to discuss in depth the costs of benefits of a MU but only to analyze to what extent a less than full MU can yield the costs and benefits that are widely expected to come from the creation of a MU.

The costs and benefits of a MU that are most often discussed are:

From a macroeconomic point of view:

1) (Cost) A MU would eliminate an instrument or mechanism of adjustment that might be needed to offset the effects of shocks to demand and supply of the products of regions of the MU. Such shocks would require some adjustment in real exchange rates or relative wages inside the Union. To the extent that nominal wages are not flexible and labour is not mobile the nominal exchange rate might be an important instrument of adjustment.

2) (Benefit) A MU would also eliminate the possibility for the monetary authorities of the regions of the MU to use (unanticipated) monetary policy to affect employment or the real interest rate paid on public debt. If it can be assumed that the

market correctly anticipates these policies and that such policies are not effective in the long run they would tend to lead to excessive inflation rates. A MU would therefore make it easier to achieve low inflation rates if the institution that determines the overall stance of monetary policy for the MU has a higher degree of credibility with the markets than the individual national authorities.

From a microeconomic point of view :

3) (Benefit) The elimination of exchange rate variability should lead to an increase in trade since it reduces a source of uncertainty.

4) (Benefit) A common currency (or an equivalent degree of monetary integration) would increase the transparency of prices and in general eliminate transaction costs on inter-regional trade.

From a political point of view:

5) (Benefit) The creation of a MU would give Europe a "monetary identity" and would increase the weight of Europe in the rest of the world.

6) (Benefit) The creation of a MU is a necessary condition for the stability of the internal market to be achieved by 1992. According to this argument the inconsistency of a) fixed exchange rates, b) integrated capital markets, c) autonomy for national monetary policy and d) a high degree of trade integration risks to destroy the EMS once capital movements have been liberalized. This would then put the entire 1992 programme in jeopardy. The creation of a MU, or more precisely abandoning the desire to preserve autonomy for national monetary policy, would therefore be necessary to preserve the EMS and the entire 1992 programme.

7) (Benefit) The creation of a MU would diminish the exposure of the member economies to shocks coming from the outside.

Table 1

Costs and Benefits of MU

Type of Costs and Benefits : / Type of[1] MU:	QQuasi MU ex-post MU	Macro MU ex-ante MU	Full MU
Macroeconomic:			
1) Loss of degree of freedom for adjustment (Cost)	Yes	Yes	Yes
2) Elimination of temptation to use surprise inflation (Benefit)	Not fully, if not perceived by market	Yes	Yes
Microeconomic: (Benefits)			
3) Increase in trade due to reduction in exchange rate variability	Not fully, if not perceived by market	Yes	Yes
4) Gain in transparency, elimination of residual transaction costs	No, partially yes if market uses a common currency?	No, partially yes if market uses a common currency?	Yes
Political: (Benefits)			
5) Necessary condition for 1992	?	?	Yes?
6) Creation of European Monetary Identity	Yes if there is a common currency?	Yes if there is a common currency?	Yes
7) Less exposure to outside disturbances	?	Yes?	Yes

[1]) A Quasi MU is a system of fixed but potentially adjustable exchange rates that are in fact never adjusted. A Macro MU is a system of irrevocably fixed exchange rates (Werner Plan definition). A Full MU is an area that behaves as if there was only one money.

Table 1 provides an overview of these potential costs and benefits of MU and indicates schematically the extent to which they will be realised under different degrees of monetary integration. The inidividual entries do not need detailed comments, the nature of the different costs and benefits together with the discussion in the previous section about the different degrees of monetary integration leads in most cases to a clear answer.

The conceptually clearest case is that of a full MU since it is apparent that a full MU would imply all the costs and benefits listed above.

A macro MU (credibly fixed exchange rate with capital mobility but with separate national financial markets and payments systems) would not yield (4) - the gain in transparency of prices - and its not clear whether such a MU would contribute to (6) - the success of the 1992 programme. Such a monetary union would not in itself create a European monetary identity, item (5), except to the extent that it is accompanied by the emergence of a parallel currency.

A quasi MU (fixed but potentially adjustable exchange rates that are in fact not adjusted) would fully imply only the cost of losing the degree of freedom for adjustment. To the extent that the exchange rate commitment is not fully believed by the markets and the gain in terms of credibility might not be fully realised. The gains from the elimination of exchange rate variability might also not be fully realized since traders would still feel inter-regional trade could be subject to exchange rate variations.

IV. Alternative Models of Monetary Union

This section considers alternative models of MU in terms of the currency of the Union and in terms of the organization of the authority responsible for the overall monetary policy of the Union. These different models might be viewed as successive phases of an evolutionary process that deepens the MU, but conceptually each model could also be set up without going through any preliminary stages. The presentation will proceed from the macro MU model to the full MU with one common currency, however, this is not meant to suggest that this sequence is desirable or that the full MU is an inevitable last step.

a) <u>The Decentralized Model</u>

At one end of the spectrum is the decentralized model, in this model there would be no central authority nor a single common currency; national central banks and currencies would continue to exist. National monetary authorities would retain their full autonomy, subject only to the constraint that exchange rates would be fixed.

This model seems to be suited for a macro MU provided that an agreement can be reached about an anchor for the overall monetary policy of the system. It is not clear how in such a system the commitment of the national monetary authorities not to use the exchange rate could be made credible. The confidence of the market that exchange rates will never be adjusted might therefore be so low that the decentralized model might lead only to a quasi MU.

With a MU organized this way private agents would be free to use the currency that constituted the most efficient means of transaction, unit of account and store of value, in this sense there would be competition among the national currencies and potentially also with a supranational currency. This would not pose a problem for the decentralized model as long as this currency competition does not affect the stability of the demand functions for the national monetary aggregates.

b) <u>The Federal Model</u>

In the middle of the spectrum is the federal model. National monetary authorities wold retain some discrection in the way the overall monetary policy stance of the system is adapted to regional conditions because, for example, instruments of monetary control might differ.

This model seems to be suited for a range of degrees of monetary integration. The existence of a central institution would appear to offer the markets some guarantee that exchange rates will stay fixed, this model should therefore imply at least a macro MU. Within such a model considerable currency competition and currency substitution could take place. The central institution could be made responsible

for the management of a supranational currency if it existed. Given the flexibilty in the mix of centralized decision taking and national autonomy interest in such a system it might also be possible to organize a full MU this way.

c) The Centralized Model

At the other end of the spectrum is the centralized model, with the common currency and one central authority that replaces existing national currencies and central banks. This model is conceptually the clearest that would be suitable for a full MU. The form of the central monetary institution might be of the federated type, but with one common currency and integrated financial markets and payment systems the members of the system might only have a degree of autonomy left, that is similar to the one left for the members of the US Federal Reserve System.

V. Conclusions

The emphasis of this paper has been on the "small print" of the term "Monetary Union". It suggests that an area with irrevocably fixed exchange rates and free capital markets would not automatically behave as if there was only one money. To obtain the full benefits from a MU requires more than fixed exchange rates, requires that private operators can treat national monies as perfect substitutes because they can exchange them without incurring any costs.