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Two Cases for Sand in the Wheels of International Finance

Barry Eichengreen, James Tobin, and Charles Wyplosz

University of California, Yale University, INSEAD

December 1994

Department of Economics

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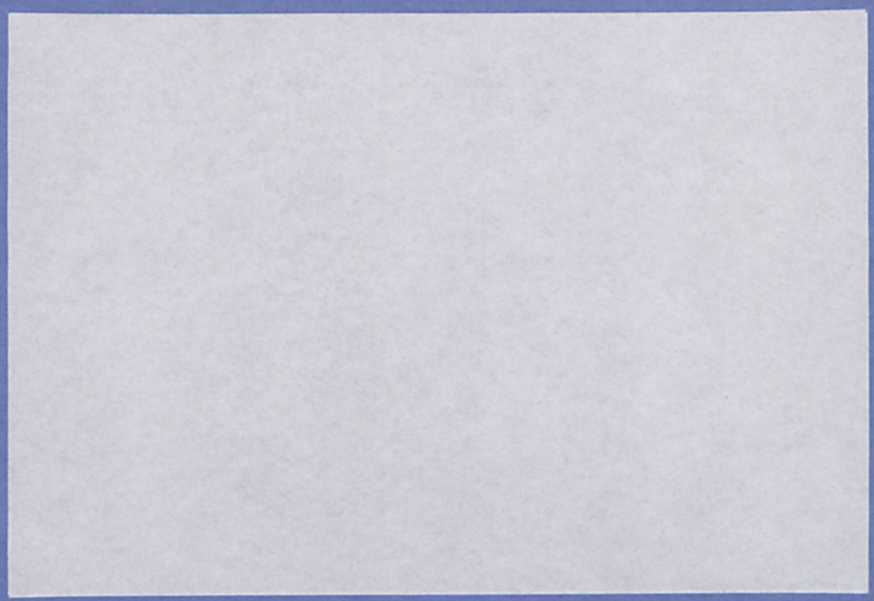

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Abstract

The incompatibility of pegged exchange rates, international capital mobility and national monetary autonomy is a basic postulate of open economy macroeconomies. In the present environment of high capital mobility and political uncertainty, even the possibility that governments may utilize their policy autonomy can defeat efforts to peg the exchange rate. This leaves two possibilities. One is to fix the exchange rate irrevocably through monetary unification. The other is to live with floating rates. Either way, a case can be made for "throwing sand in the wheels" of international finance. Where monetary unification is not an option, this is a way to make distinct national currencies tolerable and international money and capital markets compatible with modest national autonomy in monetary and macroeconomic policy. For EU countries striving to create a monetary union, it is the only politically and economically feasible way of completing the transition to Stage III of the Maastricht process.

Two Cases for Sand in the Wheels of International Finance[1]

Barry Eichengreen, James Tobin and Charles Wyplosz

July 24, 1994

The incompatibility of pegged exchange rates, international capital mobility and national monetary autonomy is a basic postulate of open economy macroeconomics. Prior to the breakdown of the Bretton Woods System, economic analyses commonly held that nations seeking to maintain exchange rate stability would have to compromise their monetary independence. Subsequent experience suggests that these conclusions, formed as they were in a period when many countries retained controls on capital movements, if anything understated the dilemma. In today's world of high capital mobility, even the minor exercise of policy autonomy can produce major exchange market pressures. Modest uncertainty about whether national monetary authorities are inclined to make use of their theoretical independence can lead to significant financial market volatility. If currencies are floating, they can fluctuate widely.[2] If the authorities attempt to peg them, the costs of doing so, measured by reserve losses or interest-rate increases, will be extremely high. Even a government otherwise prepared to maintain a pegged exchange rate may be unwilling or unable to do so when attacked by the markets and forced to raise interest rates to astronomical heights. Attempts to peg the exchange rate can be

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[1] Prepared for the Policy Forum of the Economic Journal.

[2] In the most influential formulation (Dornbusch 1976), this is due to the different speeds at which asset and commodity markets adjust. The volatility of exchange rates relative to fundamentals has been extensively documented (viz. Woo 1985, Rose 1994).

defeated, in other words, by rational and self-fulfilling attacks.[3]

This leaves two possibilities. One is to make exchange rates inflexible and unadjustable -- irrevocably fixed, as is true within the United States, Canada, and other federations. The only means of credibly doing so is monetary unification. By eliminating the exchange rate, monetary unification eliminates exchange rate fluctuations. This is the path that the European Union has opted to follow. But as the slow and rocky road from Maastricht has shown, there remains ample scope for exchange rate instability during the transition -- instability so severe that it threatens to prevent the EU from reaching its goal.

Another option is to live with floating exchange rates. In a sense this is inevitable: even if a core of EU countries forms an early monetary union, the day when monetary unification encompasses all of Europe, much less the Group of Seven, the emerging industrial economies of Asia and the rest of the world, is many times more distant. We will be stuck with national currencies for many years to come. We should find a way to live with them.

Either way, a case can be made for "throwing sand in the wheels" of international finance. Where monetary unification is not an option, this is a way to make distinct national currencies tolerable and international money and capital markets compatible with modest national autonomy in monetary and macroeconomic policy. For EU countries striving to create a monetary union, it is the only politically and economically feasible way of

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[3] See Flood and Garber (1984) and Obstfeld (1986). Obstfeld (1994) describes a variety of circumstances in which an optimizing government wishing to peg the exchange rate will be forced to abandon that commitment by a self-fulfilling attack.

completing the transition to Stage III of the Maastricht process.

1. A Global Transactions Tax[4]

Nostalgia for the pre-1971 Bretton Woods System reflects a "grass is greener" mentality rather than thoughtful analysis. Bretton Woods benefitted from circumstances that do not now obtain. The system was organized around a leading country, the United States, with the international financial clout to make its currency invulnerable. The existence of a dominant currency, the dollar, provided a focal point for other countries, easing the process of international policy coordination.

In addition, countries could and did protect their currencies by applying exchange regulations and capital controls. The effectiveness of controls was buttressed by restrictions on international banking legislated in response to the Great Depression, and by the fact that international bond markets had not yet recovered from the defaults of the 1930s. In this environment, controls could work. Together with quiescent markets, they limited international financial flows and provided governments room for maneuver. They softened the tradeoff between domestic objectives and defense of the exchange-rate peg. Though never impermeable and progressively less effective as time passed, they reduced the cost of defending a currency peg and provided breathing space for governments to consult prior to devaluations. Controls made pegged but adjustable exchange rates feasible.

Finally, voters were more tolerant of the economic consequences of misaligned exchange rates because postwar reconstruction and "catch-up"

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[4] This section elaborates an argument first advanced by Tobin (1978).

afforded singular scope for growth. With the industrial countries growing rapidly, their governments felt little need to engage in discretionary monetary and fiscal policies. In these circumstances, voters were little disturbed by the costs of misaligned currencies. The political insulation thus conferred on governments enhanced the credibility of their commitment to pegged rates.

Nowadays governments are held more responsible for macroeconomic outcomes. The politicization of macroeconomic policymaking has eroded the credibility of exchange rate commitments. The rise of international capital mobility has sharpened policy tradeoffs, reducing governments' room for maneuver. It has eliminated the breathing space required to consult and to arrange orderly realignments. For all these reasons and more, adjustable pegs are no longer viable.[5]

At the same time, experience since 1971 has not validated the more extreme claims of the advocates of floating rates. They thought that exchange rates could be left to private markets, that official neglect of them would be unambiguously benign, indeed optimal. Governments, it turned out, could not be indifferent to currency markets. Volatility in exchange rates and interest rates induced by speculation and capital flows could have real economic consequences devastating for particular sectors and whole economies. For example, the appreciation of the U.S. dollar against

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[5] Consequently, serious advocates of official parities have been moving towards market flexibility by widening substantially the bands of permissible deviations from parities, and by smoothing formulas for automatic adjustment of the central parities themselves towards market experience. See for example Henning and Williamson (1994). Even so, these parameters of the system, the central parities and the limits of the bands, remain vulnerable to speculative attack whenever it appears that the risks of official change in them are predominantly in one direction.

the Japanese yen in the early 1980s nearly destroyed the American automotive industry and jeopardized support for multilateral trade liberalization in the United States.

Advocates of floating rates had argued that they would free national monetary policies from constraints imposed by commitments to defend official parities. But the same interest arbitrage that limits the autonomy of a central bank in a fixed-exchange-rate regime restricts its powers under floating. If similar financial assets denominated in different currencies are perfect substitutes in private portfolios, they cannot bear different interest returns in their domestic currencies unless those differences are offset by expected exchange rate movements. Central banks and governments cannot always create exchange rate expectations consistent with the domestic interest rates they desire. It is true that exchange market volatility itself should make assets in different currencies imperfect substitutes and create a bit of room for independent monetary policies. But the swings in market sentiment that generate much of the volatility are not helpful.

The globalization of financial markets has been a much heralded achievement. Innovations in technologies of computation and communications, new markets and institutions, and tides of deregulation have released a flood of domestic and international financial transactions. Vast resources of human intelligence are engaged. Evidently gross foreign exchange transactions alone amount to a trillion dollars daily. Economies of scale are enormous. Transaction costs are small and virtually independent of the amount transacted. Arbitrage or speculative transactions in foreign exchange are so large that minuscule percentages of

price spell enormous gains or losses on the capital at stake. The outcomes of financial markets impinge on real economies, local, national, and international, where adjustments are sluggish, transactions are costly, transportation is slow and expensive, substitutions are imperfect and time-consuming, and expectations are fuzzy.

When some markets adjust imperfectly, welfare can be enhanced by intervening in the adjustment of others. Transactions taxes are one way to throw sand in the wheels of super-efficient financial vehicles. A half percent tax translates into an annual rate of four percent on a three months' round trip into a foreign money market, more for shorter round trips. It is this effect that creates room for differences in domestic interest rates, allowing national monetary policies to respond to domestic macroeconomic needs. The same tax would be a smaller deterrent to slower round trips. It would be a negligible consideration in long-term portfolio or direct investments in other economies. It would be too small, relative to ordinary commercial and transportation costs, to have much effect on commodity trade.

J.M. Keynes pointed out in 1936 that a transactions tax could strengthen the weight of long-range fundamentals in stock-market pricing, as against speculators' guesses of the short-range behavior of other speculators. Keynes's beauty contest also applies to the foreign exchange market (as he recognized by recommending the maintenance of exchange restrictions at Bretton Woods): speculators concentrate on how "the markets" will respond to news, not on basic economic meanings and portents.

The hope that transactions taxes will diminish excess volatility depends on the likelihood that Keynes's speculators have shorter horizons

and holding periods than market participants engaged in long-term foreign investment and otherwise oriented toward fundamentals. If so, it is speculators who are the more deterred by the tax. It is true that some stabilizing transactions might also be discouraged; fundamentalists alert to long-run opportunities created by speculative vagaries would have to pay the tax too. The judgement that those benign influences are not now dominant in short runs is based on a presumption that the markets would not be so volatile if they were.

The principal purpose of the tax is to expand the autonomy of national monetary policies. That does not depend on its success in reducing volatility.[6] The tax would not, of course, permit national macroeconomic authorities to ignore the international repercussions of their policies. In particular, it could not protect patent mis-valuations in exchange parities; speculators' gain from betting on inevitable near-term realignments would far exceed the tax costs. Nor would the tax make macroeconomic policy coordination among major governments unnecessary or undesirable. The G-7 ought to concern itself, more than it does now, with the world-wide average level and trend of interest rates, from which individual nations should deviate in accordance with their circumstances.

A transactions tax on purchases and sales of foreign exchange would have to be universal and uniform: it would have to apply to all jurisdictions, and the rate would have to be equalized across markets.[7] Were it imposed unilaterally by one country, that country's forex market

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[6] On this question, see Kupiec (1992).

[7] Certain exchanges might be exempted on application from the governments involved to the international administrator of the system.

would simply move offshore. If the tax was only applied by France, for example, French banks could ship francs to their foreign branches, where they would be sold for foreign currency free of tax. Enforcement of the universal tax would depend principally on major banks and on the jurisdictions that regulate them. The surveillance of national regulatory authorities could be the responsibility of a multilateral agency like the Bank for International Settlements or the International Monetary Fund. It might be authorized to set the size of the tax within limits. It would have to possess sanctions that could be levied on countries that fail to comply with the the measure.

Those inclined to dismiss such proposals as unrealistic deserve to be reminded that another multilateral organization, the GATT, has succeeded rather well at enforcing much more complex rules of international economic conduct. Moreover, there is good reason to think that the future of the BIS and the IMF lie precisely in the realm of international financial surveillance. As national banking and payments systems become more closely intertwined, systemic risks will grow. No one national lender of last resort will have an adequate incentive to support a global network of interlinked national payments systems, creating a dangerous free-rider problem and an obvious role for multilateral surveillance and intervention. If this is the direction in which the BIS and the IMF are headed anyway, then it is hardly a stretch to assume that one or both of these institutions could eventually be made responsible for administering a global foreign exchange transactions tax.

2. A Tax on Lending to Nonresidents for Stage II of the Mastricht Process[8]

Members of the European Union, for whom Maastricht's deadlines loom, cannot await a global solution. They must proceed before receiving assurances that other countries will follow. Hence we recommend that they apply a tax or deposit requirement to all domestic-currency lending to nonresidents to discourage all speculative sales of that currency equally, regardless of the market in which they are booked.

The Maastricht Treaty specifies the conditions under which a country will qualify for participation in Europe's monetary union. One of them is that its exchange rate has remained within the "normal" ERM fluctuation bands without devaluation for at least two years prior to entry. Consequently, a speculative attack which forces a country to devalue or to suspend its membership in the ERM during the last two years may effectively rule out its participation in EMU.

The official response is that countries need only adopt policies of convergence sufficient to insure that their exchange rates are held within the normal ERM bands for the requisite period. The problem is that when there exists scope for self-fulfilling speculative attacks, a commitment to policies of convergence and harmonization will not suffice. Consider for example a country willing to endure high interest rates and other forms of austerity now in return for qualifying for EMU later. Its past and current policies will be consistent with the maintenance of exchange rate stability. If a speculative attack occurs, however, it will be forced to raise interest rates to still higher levels in order to ward off

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[8] This paper draws on joint work with Andrew Rose (Eichengreen, Rose and Wyplosz 1994).

speculative sales. The costs of austerity now are increased relative to the benefits of EMU membership later, which may lead the government to conclude that the cost of qualifying for EMU has become too high. Once it forsakes the lure of EMU membership, it has no reason to resist shifting policy in a less austere direction; and the markets, aware of its incentives, have reason to attack.[9]

The implication is that the Treaty of Maastricht may fail even if countries adopt macroeconomic policies consistent with its letter and spirit.[10] And these dangers will surely intensify in the run-up to Stage III. The markets will have good reason to anticipate last-minute realignments motivated by attempts to boost competitiveness before parities are locked in (Froot and Rogoff 1991). Political brinkmanship will grow as the deadline nears, heightening doubts that exchange rates are really locked.[11]

Might it be possible to minimize the odds of this happening by throwing sand in the wheels of international finance? Currency traders

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[9] In theory, the central bank can fend off the attack if it is willing to raise interest rates. Given the large capital gains available in short order in the event of a realignment, it may be necessary, however, to allow interest rates to rise to stratospheric levels, as illustrated by the case of Sweden in October-November 1992 and by Greece in May 1994. This may be politically insupportable. The implication is that the interest-rate defense may fail because the markets know that it is costly. See Bensaid and Jeanne (1994) and Ozkal and Sutherland (1994) for theoretical treatments.

[10] For variations on this theme, see Eichengreen and Wyplosz (1993), Obstfeld (1994), Svensson (1994), and Rose and Svensson (1994).

[11] For example, the German Constitutional Court has ruled that the final decision to go ahead with monetary unification belongs to the Bundestag. It is easy to guess how the markets will react if there is even an off-chance that the Bundestag is headed toward a negative vote.

wishing to bet against the French franc, to take a concrete example, must obtain francs in order to sell them short. Except for francs made available by the liquidation of existing offshore asset positions, which are by definition limited in amount, these can be obtained only by borrowing from French financial institutions. Hence the idea of taxing or placing deposit requirements on loans in domestic currency to non-residents. In the latter case, the deposit could be proportional to the loan and would have to be maintained interest-free at the central bank. While the cost, in the first instance, is borne by the lending bank, it will be passed along to potential borrowers wholly or in part. The opportunity cost of the interest foregone would move with the interest rate and thereby rise automatically in periods of speculative pressure.

This proposal, unlike that of Section 1, is for a temporary measure to be applied exclusively by countries en route to EMU, since monetary union offers them a permanent solution to the problem posed by exchange rate fluctuations.[12] It is a strategy to which one is driven only if the other routes to monetary union are foreclosed. The best route, of course, is the most direct one. Suppose that financial market participants awoke one Monday morning to learn that a subset of EU countries had formed a monetary union over the weekend, that the European Monetary Institute had been transformed into the European Central Bank, and that the latter was henceforth the sole issuer of the participating countries' currencies, which it stood ready to exchange for one another at par. Transitional

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[12] Of course, the members of the monetary union would continue to experience exchange-rate fluctuations against other parts of the world. Kenen (1992) and Alogoskoufis and Portes (1992) discuss the implications for currency variability vis-a-vis the rest of the world.

problems would be ruled out by ruling out the transition. In practice, however, this outcome is most unlikely. The very reason Germany insisted on the three-stage transition of Maastricht Treaty and on the convergence criteria of its protocol on monetary union was to rule out abrupt action.

Another strategy is to hope that it will be possible to declare the wide bands of the post-July 1993 EMS the "normal bands" referred to in the protocol, and to move to monetary union after a subset of EU countries have held their currencies within bands of plus or minus 15 per cent for a period of two years. This assumes, of course, that holding exchange rates within 15 per cent bands is qualitatively different from holding them within 2 1/4 per cent bands. But there is good reason to think that an oil shock, a recession or an electoral surprise could cause even 15 per cent bands to be tested. Experience with floating exchange rates in the 1970s and 1980s showed that cumulative bilateral nominal exchange rate movements of 15 per cent over a period of two years are not uncommon.

Furthermore, German officials (who insisted on the convergence criteria to force their potential EMU partners to demonstrate their willingness to live with the consequences for macroeconomic policy of monetary union) are unlikely to regard 15 per cent bands as a sufficiently stringent test of policymakers' resolve.[13] One might raise the same objection to the imposition of non-interest-bearing deposit requirements on bank lending to nonresidents, of course: these measures are tantamount to an implicit widening of the band, in that as they relax the external

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[13] The German Constitutional Court has also ruled that the Maastricht Treaty's so-called convergence criteria must be interpreted narrowly, which throws into question the realism of this strategy.

constraint on domestic policy.[14] The difference is that non-interest-bearing deposit requirements bind only in periods of speculative attack. The rest of the time, governments will have ample opportunity to demonstrate their commitment to the policies mandated by the Maastricht Treaty.

An objection to this proposal is that it will weaken monetary discipline. Governments insulated from the discipline of international financial markets may embark on policies which further destabilize exchange rates. That there exists the potential of moral hazard is clear from the analogy between our proposal and the standard argument for insurance: deposit requirements could insure the EU against policy mistakes that would otherwise derail Stage II of the Maastricht process. If one thinks that the costs of failure are very high, then an investment in insurance is justified. But just as any sensible insurance company would monitor the behavior of its policy holders, the EU should monitor the behavior of governments receiving "deposit insurance." Fortunately, it already has the appropriate mechanisms in place: the European Monetary Institute and the Monetary Committee, which are authorized to surveil the policies of EU countries, to recommend corrective action, and to levy various penalties

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[14] Non-interest-bearing deposit requirements on bank lending to non-residents are equivalent to an implicit widening of the exchange rate band. Why then not simply widen the band and avoid interfering with the operation of capital markets? One answer is that non-interest-bearing deposit requirements, by altering the incentives for the authorities to defend the currency peg, increase the exchange rate stabilizing effect identified by models of exchange rate target zones (Krugman 1991). Because deposit requirements introduce a wedge between on- and offshore interest rates, they reduce the cost to the authorities of using the interest rate to defend the peg. The knowledge that the authorities are more likely to defend the edge of the band reduces the incentive for speculators to test it.

against governments which fail to comply.[15]

Could the measure be rendered ineffective by the diversion of domestic-currency loans to assets that are not covered by the deposit requirement? Recent Spanish experience illustrates the point. Between September and November 1992, the Bank of Spain imposed a measure similar to the one under consideration here. It applied a deposit requirement on new lending by banks to non-residents through swaps.[16] The measure succeeded for a few days but then lost its effectiveness. Within a week of the imposition of the deposit requirement, the differential between domestic and off-shore interest rates on swaps in pesetas fell to levels too low to deter speculation. Spanish banks had apparently sent pesetas to their London subsidiaries to circumvent the deposit requirement.[17] Thus, limiting the measure to lending to finance transactions in one financial instrument, even if the latter is the most widely used under normal circumstances, will not suffice, since currency traders will shift to other instruments in response to the policy. Accordingly, the policy must apply to all loans to all nonresidents.

Then there is the question of avoidance. Even if the measure applies to all bank lending to nonresidents, non-bank mechanisms for channeling domestic currency offshore may be developed in response to the imposition of a unilateral deposit requirement. A French bank instructed to make

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[15] A useful guide to the procedures is Kenen (1992).

[16] The reason for limiting the measure to swaps was that this is the normal vehicle for short-term speculative lending; exempting lending for other purposes was meant to shield non-speculative activity. See Linde (1993) and Linde and Alonso (1993).

[17] See Freitas de Oliveira (1994).

non-interest-bearing deposits when lending francs to nonresidents could lend francs to French corporations, which could in turn lend them to nonresidents (including their own nonresident operations or nonresident branches of the initiating French bank). This raises the danger that a scheme which started out as a deposit requirement on loans to nonresidents would have to be broadened into a deposit requirement on all loans extended through certain windows and, if lending was diverted to other windows, on all bank lending.

Clearly, no measure of the sort we describe here is ever 100 percent effective. But to slow down speculative activity and provide time for orderly realignments it is not necessary for it to be water-tight.[18] The extent of evasion is likely to depend on the length of time for which the deposit requirement remains in effect. Firms may be unwilling to incur even small costs of avoidance if the benefits are transitory; it is well-known that small fixed costs may have potentially large effects (Dixit 1991). Hence, non-interest-bearing deposit requirements are most likely to work if their imposition is limited to the last two years of the transition

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[18] Fieleke (1994) dismisses as ineffectual the capital controls applied by Ireland, Spain and Portugal in 1993 on the grounds that "all three countries were obliged to devalue within months after imposing or intensifying controls." Leaving aside the question of whether these countries' controls were well designed, this criticism misses the point that these three countries were all able to realign and stay in the ERM, whereas countries that did not apply controls, like Italy and the UK, were driven out of the system. For similar reasons we think Kenen (this issue) understates the importance of exchange restrictions in the pre-1987 EMS, where their role was not to support seriously misaligned currencies but only to provide the breathing space required to organize realignments (which, revealingly, no longer took place once the most important controls were removed). Indeed, one can argue (as in Eichengreen 1994) that the removal of controls and rise of capital mobility sets into motion a systematic tendency for adjustable-peg systems to first grow more rigid and then break down.

to EMU.

One might object that a policy which discriminates against loans to nonresidents runs counter to Article 73f of the Maastricht Treaty. Foreigners could protest an implicit tax not also levied on domestic borrowers. There is some ambiguity about the proper interpretation of Article 73f, however, since the treaty already allows temporary measures in case of emergency. Nevertheless, the best response would be to amend the treaty to authorize such a measure explicitly during the remainder of Stage II.[19]

The Maastricht Treaty provides for an Inter-Governmental Conference in 1996 to modify provisions which have proven undesirable. The IGC could provide the amendments required for the temporary establishment of deposit requirements when and where needed to protect the ERM and therefore insure that the goals of the treaty are achieved.

The strategy we describe here is most compelling if one believes that other feasible routes to EMU are foreclosed. Those who continue to believe in the feasibility of pegged-but-adjustable rates and narrow bands, despite the accumulation of evidence to the contrary -- most recently from the ERM crises of 1992 and 1993 -- will not be convinced. Others who continue to hope that the EU can move directly to Stage III from 15 per cent bands despite the German Constitutional Court's insistence on a strict interpretation of the provisions of the Maastricht Treaty will not see the urgency. We think they are whistling in the dark.

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[19] Absent an amendment, the question of Maastricht compatibility would have to be adjudicated in the European Court of Law, which would create an extended and undesirable period of uncertainty.

3. Conclusion

The other contributors to this symposium offer compelling reasons to hesitate before throwing sand in the wheels of international finance. We have considerable sympathy for their arguments. But the task of economics is to weigh alternatives. It is not enough to point to the administrative difficulties of intervening in the operation of markets or to risks of evasion. These costs must be weighed against those of alternative courses of action, including doing nothing. For Europe the alternative, namely failure to complete the transition to EMU, may be costly indeed, especially if the breakdown of the monetary-unification process jeopardizes completion of the Single Market. Economists should be realists: here realism requires admitting that alternative routes to EMU are foreclosed.

For the world as a whole, the costs of the status quo are high if macroeconomic policy is hamstrung and if it is diverted from more fundamental targets by exchange rate swings. The progress of European monetary unification creates grounds for hoping that this problem can eventually be addressed. The number of major monetary authorities whose support must be mobilized for an initiative to reform the international monetary system will be reduced if Europe ultimately speaks with a single monetary voice.

Such reform certainly will not take the form of a single currency for the G-7, much less the entire world. A clear lesson of Maastricht is that political solidarity and economic convergence are prerequisites for monetary unification. Europe has been embarked on this process for nearly half a century, as anyone familiar with the history of the EEC can attest. It is unrealistic to hope that the major industrial countries can make

comparable strides toward political unificiation in our lifetimes. And if pegged exchange rates between distinct national currencies are infeasible in today's world of high capital mobility, as we have argued, then exchange rate fluctuations are here to stay. Institutional innovation is then needed to reconcile the desire to reduce exchange rate instability and assure a modicum of national monetary autonomy. The theory of the second best reminds us that when other markets, in this case the markets for labor and commodities, adjust imperfectly to shocks, welfare can be improved by throwing sand in the wheels of international finance.

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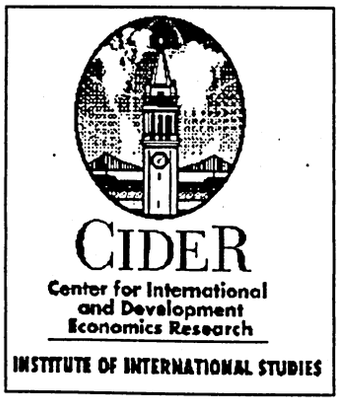

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