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THE INTERNATIONAL MONETARY SYSTEM:
DEVELOPMENTS AND PROSPECTS

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ABSTRACT

This paper addresses several fundamental issues raised by recent developments in the world economy and considers their implications for the design and functioning of the international monetary system. We do not make any proposals.

The four issues examined in the paper are:

- (1) Can the exchange rate regime do much to discipline fiscal policy?;
- (2) What are the extent and costs of reduced monetary independence under greater fixity of exchange rates?;
- (3) How can the equilibrium exchange rate best be determined?;
and
- (4) Does a well functioning international monetary system require a clearly defined set of rules, an acknowledged leader, and an explicit anchor?

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I. Introduction */

1. This paper addresses several fundamental issues raised by recent developments in the world economy and considers their implications for the design and functioning of the international monetary system. We do not make any proposals. Our purpose instead is to identify factors that merit attention in any serious examination of the system.

2. First, some background. Over the past two-and-a-half years, the international economic landscape in the industrial world has been dominated by the following key developments.

To begin with, there have been unprecedented current account imbalances for the three largest economies. Last year, the United States recorded a current account deficit of \$160 billion, while Japan and the Federal Republic of Germany registered surpluses of \$85 billion and \$43 billion, respectively; see Table 1. A primary objective of policy has been to reduce these external imbalances while still maintaining satisfactory growth of the world economy. The contribution that fiscal policy should make to reducing absorption relative to output in the United States, and to increasing it in surplus countries, has become an integral--and often a contentious--element in the policy dialogue. Suffice to say that the adjustment of fiscal positions has proven to be a difficult process, with firm evidence of a narrowing of earlier divergencies apparent only within the last year or so; see Table 2.

Table 1. Major Industrial Countries: Balance of Payments on Current Account, 1980-87 1/

	1980	1981	1982	1983	1984	1985	1986	1987
Balance on current account								
	(In billions of U.S. dollars)							
United States	1.87	6.89	-8.68	-46.25	-107.01	-116.39	-141.35	-161.31
Japan	-10.75	4.77	6.85	20.80	35.00	49.27	85.85	86.69
Federal Republic of Germany	-15.69	-5.22	4.07	4.15	8.42	15.25	38.10	44.21
	(In percent of GNP)							
United States	0.07	0.23	-0.27	-1.76	-2.84	-2.90	-3.34	-3.60
Japan	-1.01	0.41	0.63	1.76	2.78	3.67	4.34	3.64
Federal Republic of Germany	-1.92	-0.76	0.62	0.63	1.35	2.41	4.23	3.92

1/ Including official transfers.

Table 2. Major Industrial Countries: General Government
Fiscal Balances and Impulses, 1980-87 1/

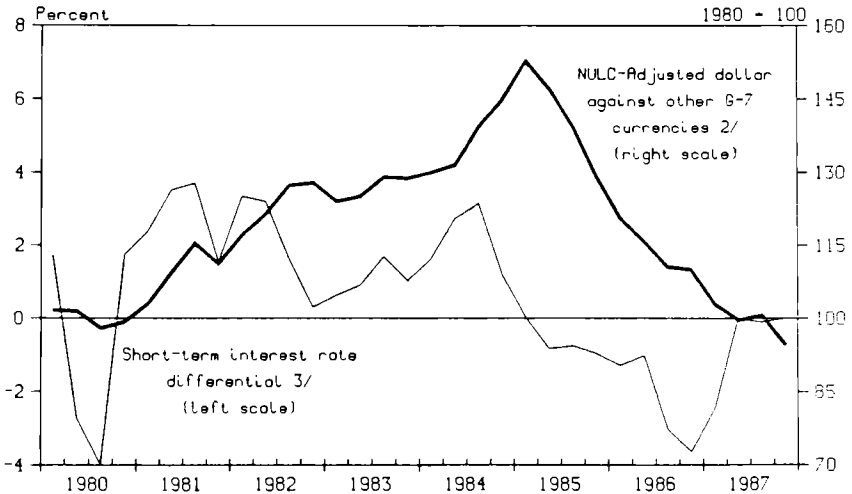
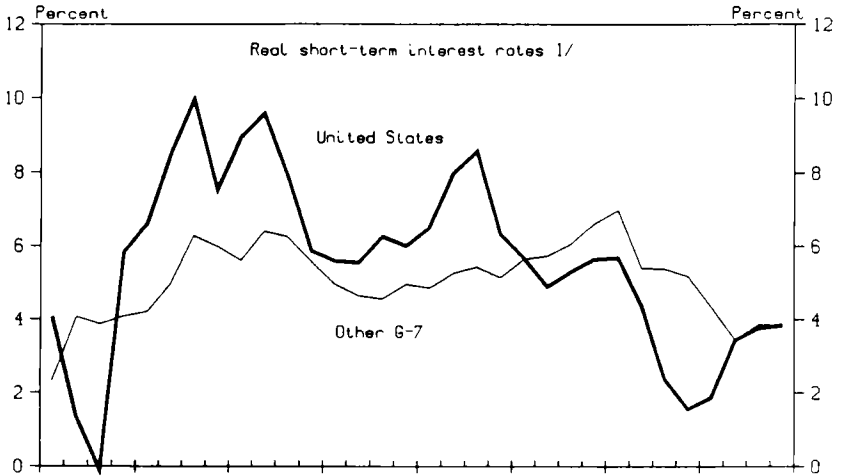
	1980	1981	1982	1983	1984	1985	1986	1987
Fiscal balance (+ surplus, - deficit)	(In billions of U.S. dollars)							
United States	-34.50	-29.60	-110.80	-128.60	-105.00	-133.60	-147.80	-107.30
Japan	-46.94	-44.86	-39.15	-43.23	-26.25	-13.77	-11.52	-19.38
Federal Republic of Germany	-23.68	-25.17	-21.65	-16.60	-11.87	-7.25	-10.87	-19.06
	(In percent of GNP)							
United States	-1.26	-0.97	-3.50	-3.78	-2.78	-3.33	-3.49	-2.39
Japan	-4.41	-3.84	-3.60	-3.66	-2.09	-1.03	-0.58	-0.81
Federal Republic of Germany	-2.89	-3.67	-3.29	-2.52	-1.90	-1.15	-1.21	-1.69
Fiscal impulse (+ expansionary, - contractionary)	(In percent of GNP)							
United States	0.65	-0.50	0.55	0.57	0.60	0.67	0.22	-1.00
Japan	-0.40	-0.78	-0.52	-0.19	-1.22	-0.71	-0.87	0.16
Federal Republic of Germany	-0.19	-0.51	-1.87	-0.42	0.55	-0.79	0.21	0.23

1/ Data are on a national income accounts basis.

Heavy official intervention in exchange markets (especially during 1987) and episodes of coordinated adjustments in interest rates--both undertaken in an effort to foster more stability in key-currency exchange rates--have been a second prominent feature of the landscape; see Chart 1. These, in combination with the monetary response to the global stock market crash of October 19, 1987 and plans for a liberalization of capital controls in the European Monetary System (EMS) by 1992--have once again put the spotlight on an old question: how successful can monetary policy be when it is asked to wear two hats, one for internal and the other for external balance?

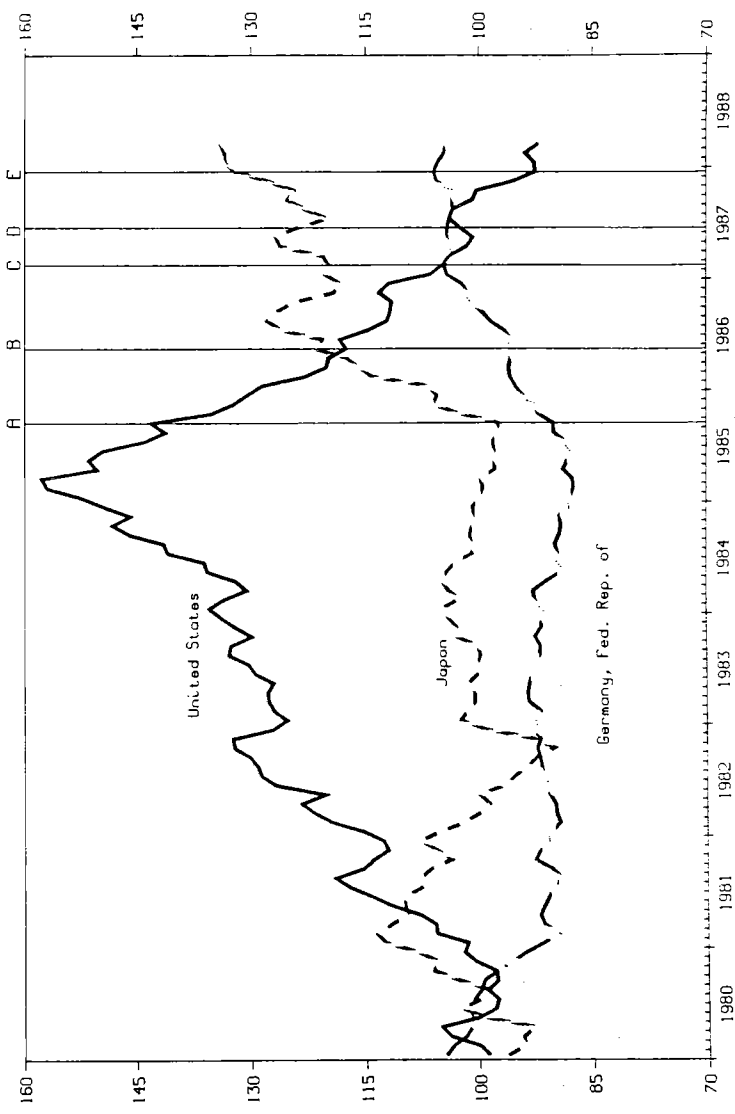
Another distinguishing characteristic of the last two-and-a-half years has been the sizable decline in both the nominal and real value of the U.S. dollar. By now, all of the 1980-85 real appreciation of the dollar (on an effective basis) has been reversed; see Chart 2. The central question has been: do you think the dollar decline has gone far enough? On a number of occasions (e.g., Louvre, February 22, 1987; the September 1987 meetings of the Interim Committee; and the G-7 statement of December 22, 1987), officials have supplied their own answer--by offering a concerted view on the consistency of the existing pattern of exchange rates with "fundamentals." Moreover, interest continues to be expressed in some reform proposals--including a system of target zones--that hinge on knowledge of equilibrium exchange rates.

Chart 1. The Dollar and Real Interest Rates
01 1980 - 04 1987



1/ Quarterly average short-term money market instruments of about 90 days maturity deflated by the private domestic demand deflator. Other G-7 interest rate is a weighted average of individual rates. Weights are defined in footnote 2.
2/ The NULC adjusted dollar is a weighted average index of the exchange value of the dollar against the currencies of the other G-7 countries, where nominal exchange rates are multiplied by the relative normalized unit labor costs in manufacturing. Weights are proportional to each country's share of world trade in manufacturing during 1980.
3/ U.S. real short-term interest rate minus other G-7 real short-term interest rate.

Chart 2. Major Industrial Countries: Real Effective Exchange Rates, 1980 - 88 1/
(1980 = 100)



A. Plaza Agreement, September 22, 1985.
B. Tokyo Economic Declaration, May 4-6, 1986.
C. Louvre Accord, February 22, 1987.
D. Venice Summit, June 8-10, 1987.
E. Group of Seven Statement, December 22, 1987.
1/ Real effective exchange rates based on normalized unit labor costs in manufacturing.

Last but not least, the period since the Plaza Agreement has witnessed a strengthening of international economic policy coordination among the major countries. Coordination agreements have featured both country-specific policy commitments and official pronouncements on the pattern of exchange rates, but have not specified rules, anchors, or a center-country for the exchange rate system. Debate continues on whether the present coordination process is merely an intermediate stage on the way to a more far-reaching rule-based reform of the system, or is instead a durable, workable compromise between what some regard as the excesses of decentralized floating and the straitjacket of fixed rates.

3. So much for the landscape. How does it relate to prospects for the international monetary system? We would say "quite a lot." Indeed, much of the controversy over reform of the system can be traced back to different views about the capabilities and limitations of more managed exchange rates regimes to deal with just the sort of policy problems outlined above. In our view, four central issues merit particular attention in the current climate:

First, can the exchange rate regime do much to help discipline fiscal policy;

Second, what are the extent and costs of reduced monetary independence under greater fixity of exchange rates;

Third, how can the equilibrium exchange rate best be determined; and

Fourth, does a well-functioning international monetary system explicit anchor?

We examine each of these issues in turn.

II. Fiscal Policy and the Exchange Rate Regime

1. The proposition that the commitment to defend the parity provides economic agents with increased discipline to avoid inflationary policies is one of the oldest and most durable arguments for fixed rates. Yet close scrutiny of the typical focus of the discipline hypothesis suggests that it could be akin to Hamlet without the Prince of Denmark. In what follows, we elaborate on this point.

2. The traditional province of the discipline hypothesis is monetary policy. Under the well-known Mundell-Fleming model, monetary policy is completely ineffective for a small country with fixed exchange rates in a world of high capital mobility. This is merely one application of the dictum that policymakers who seek to achieve simultaneously fixed rates, open capital markets, and an independent monetary policy will be frustrated. The best they can do is to achieve any two of the three objectives. Thus, once the choice is made for fixed rates and open capital markets, monetary policy is effectively disciplined. The exchange rate could be devalued to give monetary policy a longer leash, but this is ruled out by the assumption that devaluation would bring with it heavy political costs. 1/

More recently, the domain of the discipline argument has been extended to wage policy. The basic idea here is that if exchange rate adjustments don't completely offset inflation differentials, then the

resultant real appreciation for high inflation countries will deter exports, real output, and employment--thereby acting as a disincentive to excessive wage settlements. 2/ An interesting and unresolved question is how long it will take to convince workers of the downward slope of the labor-demand schedule, especially if wage developments are dominated by insiders with jobs rather than by outsiders without them.

3. Surprisingly enough, disciplinary effects on fiscal policy have been relatively neglected--and this despite the role often attributed to lax fiscal policy (particularly in the United States) in both the breakdown of Bretton Woods and the large--many would say "excessive"--real appreciation of the dollar during the 1980-85 period.

4. It is therefore worth asking if and how alternative exchange rate regimes might influence fiscal policy.

First, consider fixed rates. With high capital mobility, a fiscal expansion will yield an incipient positive interest rate differential, a capital inflow, and a balance of payments surplus--not a deficit. Hence, exchange rate fixity helps to finance--and by no means disciplines--irresponsible fiscal policy. As suggested in the recent literature on "speculative attacks," 3/ only if and when the markets expect fiscal deficits to be monetized will they force the authorities to choose between fiscal policy adjustment and devaluation. The better the reputation of the monetary authorities, the longer in coming will be the discipline of markets. In this connection, it is worth observing that whereas the EMS has produced significant convergence of monetary policy, convergence of fiscal policies has not taken place. 4/

Second, consider the outcome under target zones. Suppose the zones are to be defended by monetary policy. In that case, a fiscal expansion that puts appreciating pressure on the exchange rate will produce a loosening of monetary policy to keep the rate from leaving the zone. Again, the exchange rate regime will have exacerbated--not disciplined--the basic cause of the problem. Only if the threatened departure of the exchange rate from the zone initiates a review of the whole range of policies and if that (multilateral) review tilts the balance of power in the domestic debate toward fiscal responsibility, will target zones discipline fiscal policy. This missing link between exchange rate movements and fiscal policy under target zones is being increasingly recognized. Note that whereas first-generation target zone proposals spoke mainly of monetary policy, second-generation proposals have added a specific rule to rein in fiscal policy; contrast Williamson [1985] with Williamson and Miller [1987].

What about floating rates? With high capital mobility, one would again expect fiscal expansion to prompt appreciation of the real exchange rate. Pressures for reversal are then likely to come from the beleaguered traded goods sector, as it looks for ways to turn around its decline in competitiveness. The trouble here is that there is also the protectionist alternative to fiscal discipline, which, if adopted, would again follow one inappropriate policy with another. 5/ The recent U.S. experience is suggestive of the difficulties associated with forging a dominant constituency for fiscal reform, and of the perseverance necessary to combat measures for quick-fix protectionist alternatives.

Finally, consider the influences operating on fiscal policy in a regime of managed floating with international economic policy coordination. One immediate advantage is that the potential for a perverse monetary policy response is reduced since specific fiscal policy commitments can be specified directly as part of a negotiated policy package. That is, one avoids the intermediate link between the exchange rate signal and the policy response. But this regime too is not entirely without pitfalls. For one thing, the kind of specific, quantitative policy commitments that lend themselves to reliable monitoring may be perceived as intruding too much on national sovereignty. For another, there is no explicit mechanism for sharing the fiscal adjustment across participants. Also, there is the problem of implementation of fiscal policy agreements when the responsibility for implementation lies with different branches of government in different countries. 6/

5. The bottom line of all this is that if proposals for modification or reform of the exchange rate system are truly to lead to more disciplined macroeconomic policies, more attention has to be given to how the exchange rate regime will impact on fiscal policy behavior. To some observers, the answer is that fiscal reform must precede reform of the exchange rate system. To others, the answer may be that better fiscal discipline requires mechanisms outside of the exchange rate system, such as Gramm-Rudman legislation. And to still others, the answer may be that the multilateral give-and-take encouraged by policy coordination or a system of target zones is a necessary, if not

sufficient, tool for achieving greater fiscal responsibility. One thing is clear: it will be hard to know how to shape the evolution of the exchange rate system without knowing beforehand how to better discipline fiscal policy.

III. Monetary Policy Independence

1. As suggested earlier, a strong message from the theoretical literature is that a more fixed exchange rate regime requires keeping more of an "eye" on the exchange rate in the conduct of domestic monetary policy. What is much more controversial is what such a reduced independence of monetary policy would cost.

2. Concern about reduced monetary independence is often strongest in countries with either relatively low or relatively high inflation rates. In the former, there is a worry about repetition of the latter days of Bretton Woods when disequilibrium exchange rates, heavy exchange market intervention, and massive capital flows combined to wrestle control of the money supply away from the authorities. In their view, a similar occurrence would jeopardize both their price-stability objectives and their hard-won anti-inflationary reputations. For the high inflation countries, there is a concern that less monetary independence could handicap the battle against the cyclical component of high unemployment. In addition, high-inflation countries often suffer from weak fiscal systems with relatively heavy reliance on the inflation tax. 7/ In this regard, they worry that a lower inflation rate will reduce their revenue from seignorage, run up against tax

evasion in seeking to compensate for it by raising other taxes, and hence, complicate what are already difficult fiscal problems.

3. More generally, there is a concern that greater stability of exchange rates would be purchased at the cost of both greater instability of other prices in the economy--including interest rates and prices of nontraded goods, and of a diminished capacity to use monetary policy to pursue other objectives of policy. For example, a large hike in interest rates taken to protect a weak currency could disrupt stock market prices. Similarly, a firm commitment to defend a given exchange rate pattern might limit the freedom of maneuver of monetary authorities in combating a weakness of certain financial institutions.

4. Some would say that exchange market intervention offers a solution to the "two-hat" problem by introducing an additional policy instrument to handle the exchange rate. Note that this line of argument should refer exclusively to sterilized intervention since non-sterilized intervention is best regarded as monetary policy by another name. Yet the available empirical evidence on sterilized intervention is not very encouraging to those who favor highly managed rates. In brief, the Jurgensen Report [1983] concluded that sterilized intervention is not likely to have a powerful effect on the level of the exchange rate over the medium to long run. Thus, while intervention may be helpful in smoothing short-run volatility and in providing the market with a "signal" about the future course of policies, 8/ it is not by itself likely to deliver monetary policy from having to serve two masters.

5. Another possible way out of the box would be controls on international capital flows. This is indeed the route sometimes taken in the past by some members of the EMS, as evidenced by the widening of interest differentials (adjusted for differences in tax treatment) between onshore and offshore financial instruments (denominated in the same currency) during periods of exchange rate crisis. 9/ No one asserts that capital controls are costless. The argument instead is that such controls are less costly to the real side of the economy than alternative policy options. In fact, Tobin's [1980] "sand-in-the-wheels" proposal for an international round-tripping tax on all capital flows employs just this rationale.

In our view, the case for capital controls is a weak one, on at least five counts.

First, the benefits from liberalization of capital controls appear to be substantial, including higher real returns to savers, smaller spreads between borrowing and lending rates, a lower cost of capital to firms, better hedging possibilities against a variety of risks, and a more efficient allocation of investment. 10/

Second, capital controls themselves induce changes in financial structure and rent-seeking activities that make it difficult to subsequently reverse them; yet the longer they stay in place, the more serious the distortions associated with them.

Third, there is no effective way to separate a priori productive from nonproductive capital flows. Also, the costs of an inappropriate classification could be large. In this connection, if some speculators

are deterred from seeing through the "J-curve," exchange market stability could be adversely affected--a result directly opposite to the original rationale for controls.

Fourth, since controls are seldom negotiated on a multilateral basis, they can poison the atmosphere for advances in coordination and cooperation in other areas; in particular, controls on capital flows run counter to the development of an outward-looking policy strategy.

Fifth, round-tripping taxes are neither practical nor desirable. To work, such taxes need to be applied universally; yet an incentive always exists for some country not to impose the tax and thereby to capture much of other countries' business, i.e., their effectiveness will be diminished by "regulatory arbitrage." 11/ Also, they would require a country that wishes to attract a capital inflow to raise interest rates even more, to offset the effect of the tax, thereby possibly increasing the variability of interest rates.

6. Yet another tack would be to assign fiscal policy to internal balance so that monetary policy can concentrate more on the exchange rate. Such an argument, however, faces two immediate problems. One is that fiscal policy is considerably less flexible than monetary policy in almost all industrial countries; contrast, for example, the frequency in the United States of meetings of the FOMC with the frequency of budget submissions to Congress. The other problem is that fiscal policy is not oriented to short-run stabilization goals in most industrial countries; it is instead guided by other considerations (e.g., reducing the share of government in GDP, reducing the burden of

taxation, etc.) that often become objectives in themselves. For these reasons, it is hard to think of fiscal policy as a close substitute for monetary policy.

7. Thus far, we have outlined some of the costs and trade-offs that might be associated with less independent monetary policy. There is, however, another side of the issue that sees both the loss and consequences of monetary independence under greater exchange rate fixity as much less serious. Advocates of this position make the following points:

First, the independence of monetary policy disappears once the exchange rate is transformed from a policy instrument to a policy target. Experience suggests that few countries are able to treat the exchange rate with "benign neglect" once it moves by a large amount. 12/

Second, increased independence of monetary policy is not synonymous with increased effectiveness. The true constraint on the latter is not the exchange rate regime but instead the openness of national economies, particularly high international capital mobility. With floating rates, exchange rates respond rapidly to perceived changes in monetary policy; nominal wages and prices adjust rapidly to changes in exchange rates; and the invariance of real wages to exchange rate changes--guaranteed over the long run by the homogeneity postulate--limits the effects of monetary policy on real output and employment. 13/ In the end, the real choice is between accepting reasonable constraints beforehand or having them imposed at higher cost later by markets. 14/

Third, the inflexibility of fiscal policy is an asset--not a liability--in a world of inflation-prone authorities. Growth and price stability will be best served when fiscal policy is put on a steady, medium-term course. If there is an unusual situation that is widely recognized as calling for a shorter-term adjustment of fiscal policy, it can be accomplished (witness recent temporary departures from the medium-term path of fiscal consolidation in Japan and in the Federal Republic of Germany).

8. To sum up, the real issue is not whether monetary policy is capable of restoring more stability to exchange rates. Surely it can. It is instead what one has to give up in terms of other objectives to get it. To some observers, that shadow price is too high and they would therefore prefer to live with a "natural" degree of exchange rate stability--much in the way that one accepts a "natural" rate of unemployment. To others, the exchange rate regime cannot take away what is no longer there in any case, namely, the ability of monetary policy to influence real output and employment in the long run under conditions of high capital mobility. Again, the view that prevails in the end will have a lot to do with the structure of any modification or reform of the exchange rate system.

IV. Identifying Equilibrium Exchange Rates

1. As highlighted in our earlier snapshot of key developments in the world economy, the 1980s have been marked by large swings in major currency exchange rates. One popular position has been that these currency swings have been subject to large and persistent misalignments,

where by "misalignment" one means a departure of the actual (real) exchange rate from its equilibrium level. One implication of this view is that the exchange rate is too important a relative price to be left entirely to the market and therefore that officials should guide the market by supplying it with their own concerted view of the equilibrium rate. An opposing position is that the very concept of an equilibrium exchange rate different from the market rate is so riddled with conceptual and empirical problems as to render it operationally vacuous. 15/

2. The case that the equilibrium exchange rate may differ from the rate generated by the free operation of the marketplace rests on a number of arguments:

One is that the equilibrium rate should reflect the sustainability of policies. 16/ For example, if the market exchange rate reflects an unsustainable budget deficit, then this rate may not be considered as an equilibrium even though it clears demand and supply in the market.

A second rationale for rejecting the market rate as an equilibrium rate is that it may imply undesirable values for certain objectives of policy, such as unemployment, growth, or the degree of restriction in goods and capital markets. Nurkse [1945], for example, defined the equilibrium rate as the rate that would produce equilibrium in the balance of payments, without wholesale unemployment, undue restrictions on trade, or special incentives to incoming or outgoing capital.

The existence of market imperfections represents another possible reason for eschewing the market's verdict, this time on second-best considerations. Specifically, the existence of imperfect labor

mobility is sometimes put forward as a reason for concluding that the market rate is too "noisy," 17/ and that exchange rate stability shares certain "public good" attributes. 18/

The recent literature on "speculative bubbles" can also be seen as antagonistic to the market-rate-is-the-right-rate position by demonstrating that models of profitable destabilizing speculation can exist.

On the empirical side, there is likewise by now a large body of empirical work which suggests that there have been periods over the past 15 years when the market's evaluation of the equilibrium rate was considerably different from the sustainable rate (Krugman [1985]), or when it was difficult ex post to explain actual rate movements in terms of "fundamentals" (Buiters and Miller [1983]).

Finally, even if one did want to look to the market for the equilibrium rate, opponents of floating rates point out the market rate is distorted by a variety of official interventions that render it a far cry from a "clean float." Since there are many ways to skin a cat and since it is hard to envisage a prohibition on all such interventions, the market rate is, in their view, of limited use.

3. Still, it takes an estimate to beat an estimate. That is, if the market's view is rejected, then authorities need to supply their own estimate of the equilibrium rate. What then are the leading approaches? 19/

Perhaps the most long-lived is the purchasing-power-parity (PPP) approach. This can be expected to generate reasonable estimates if one

can identify an equilibrium base period and if all shocks between the base and current periods are monetary in origin. But when there are real shocks, one normally wants a departure from PPP. Trend inter-country differences in labor productivity (not just in tradables relative to nontradables a la Balassa [1964] but in tradables as well); 20/ permanent changes in the terms of trade; and shifts from net creditor to net debtor positions--are just some of the real factors that call for a change in real exchange rates. In this sense, it can be hazardous to assume that the equilibrium exchange rate is constant over time.

A second option is to resort to structural models of exchange rate determination to produce estimates of the exchange rate consistent with "fundamentals." The fly in the ointment here, aside from measurement problems for some of the right-hand side variables, is that these models--be they of the monetary or portfolio balance variety--have been shown to possess poor out-of-sample forecasting properties. 21/ But why then should markets trust them as reliable indicators of equilibrium rates?

Yet a third way to go is to use an econometric trade model to solve for the level of the exchange rate that--given anticipated real output and inflation paths over the next 18 months or so, and given any relative price effects still "in the pipe"--will produce a current account equal to "normal capital flows." This is often referred to as the underlying balance approach. The main sticking point with this approach, aside from the wide range of estimates of trade

elasticities, 22/ is the need to estimate "normal capital flows." Given the instability of perceived investment opportunities across countries and over time, it is hard to say if, for example, the United States should be regarded as a net capital exporter or a net capital importer, and if the latter, whether normal inflows are \$10 billion or \$100 billion.

4. All of this suggests--at least to us--that estimates of equilibrium exchange rates could be subject to rather substantial margins of error, and that official estimates of equilibrium rates should be allowed to change over time in response to changes in real economic conditions. Those who favor a modification or reform of the exchange rate system therefore need to ponder two questions: (i) are official estimates of the equilibrium exchange rate likely to be better on average than the market's estimate, and (ii) would a moving official estimate of the equilibrium exchange rate with a relatively wide band be helpful as an anchor for ~~medium-term~~ expectations about exchange rates? If both these questions can be answered in the affirmative, then the recent evolution of the system toward more "management" and more "fixity" of exchange rates is likely to continue. If not, then strong reliance on the market to determine the right exchange rate, like democracy, may be the worst system--except for all the others.

V. Leaders, Rules and Anchors

1. The strengthening of international economic policy coordination that began in earnest at the Plaza in September 1985 represents, as noted above, a move in the direction of more cooperative management of

the system. Yet some might describe present arrangements as a "non-system" because relative to, say, Bretton Woods or the EMS, there is a less formal structure, no acknowledged leader, and no explicit anchor. It is therefore of interest to consider whether such factors are likely to influence the effectiveness of an exchange rate system.

2. A convenient way of characterizing the Bretton Woods system is as an "implicit contract" between the leading country, or hegemon, and the satellite countries. 23/ The leader accepted the obligation to conduct its macroeconomic policies in a prudent, stable way--perhaps best summarized by a steady, low rate of inflation. This obligation was also reinforced by the leader's commitment to peg some nominal price--in this case, the price of gold. Since there were only N-1 separate exchange rates among N currencies, the leader was passive about his exchange rate. The satellite countries were committed to peg their exchange rates within agreed margins to the leader. As a reaction to the competitive depreciations of the 1930s, all exchange rate adjustments were placed under international supervision and were to be undertaken under conditions of "fundamental disequilibrium." As a consequence of their exchange rate obligations, the satellites gave up independence in their monetary policies but received the assurance that they had hitched their wagons to an engine that would stay on the tracks. Under this implicit contract, both sides can be said to be "disciplined" by their obligations and both share any efficiency gains associated with moving closer to an international money.

With the benefit of hindsight, it is apparent that such implicit contracts can come under strain from a number of directions (in addition to Triffin's [1960] well-known "confidence problem"). One such strain is a breakdown of discipline by the leader such that the satellites come to see it as exporting inflation rather than stability. The satellites are then likely to sever their links with the leader and to seek stability through other mechanisms, including money-supply targeting and regional exchange rate arrangements with a more stable leader. A second strain is a change in underlying conditions that calls for a change in the real exchange rate between the leader and some of the satellites to restore external balance. If that equilibrating change in the real exchange rate is blocked by too much rigidity of nominal exchange rates (in surplus satellite countries), then the leader is apt to abandon his commitment to be passive about the exchange rate.

3. The European Monetary System (EMS) like Bretton Woods, places exchange rate adjustments under common supervision. It also has clear rules about the intervention obligations of members. While there is no formal leader, many observers regard the Federal Republic of Germany (and its Bundesbank) as the de facto or acknowledged leader. 24/ In this sense, it might be regarded as a system with informal hegemony. The implicit contract is similar in many ways to that under Bretton Woods. Germany follows macroeconomic policies that "export" price stability and anti-inflationary credibility to the others. It is noteworthy that while there have been 11 realignments within the EMS,

none of them has resulted in a revaluation relative to the deutsche mark, thus leaving Germany's reputation as an exporter of stability intact. Other EMS members are often described as "tying their hands" on domestic monetary policy. Exchange rate realignments may not always provide full compensation for past inflation differentials. In this way, the resulting real appreciation for high inflation countries can act as a disincentive to inflation, while low inflation countries receive a gain in competitiveness that provides some compensation for their export of anti-inflationary credibility. Monetary policy in Germany is typically regarded as the anchor.

4. While there clearly have been periods when large countries have exerted a stabilizing influence on the system, it would, in our view, be erroneous to conclude that hegemony is a necessary characteristic of a well-functioning international monetary system. For one thing, Eichengreen's [1987] careful study of alleged hegemonic systems, including the gold standard, reveals that the amount of coordination needed for smooth functioning was substantial. A case in point is the coordinated action of last Fall in the EMS when Germany and the Netherlands lowered their interest rates, while France raised its rate. Second, the appearance of hegemony can sometimes result as much from common objectives as from asymmetries in economic size or reputation among countries. Again, the EMS serves as a fascinating laboratory. In the early 1980s, disinflation was the top priority in virtually all EMS countries. Since Germany had the best reputation for price stability, there was a commonality of interests in trying to converge

to the German inflation rate. Now, however, some observers (e.g., Dornbusch [1988]) argue that given both the progress already made on the inflation front and the high unemployment rates prevailing in some EMS (and potential EMS) countries, it is time to give greater weight to objectives other than inflation. To some, such a decision would inevitably result in a more symmetric EMS. Indeed, these observers (e.g., Holtham et al [1987]) view the proposals on the EMS put forward to the EC Monetary Committee last Fall by Minister Balladur of France as prefacing such a development of the EMS.

5. The system of floating rates that replaced Bretton Woods in 1973 could be said to have its own implicit contract. This contract suggested that each country should adopt sound and stable macroeconomic policies at the national level, with the expectation that stability of exchange markets would emerge as a useful by-product. In the event, some major countries did not adopt sound and stable policies at the national level, spillovers or externalities associated with these poor policies were significant (including protectionist pressures), and exchange rates displayed considerable volatility. In this decentralized system, there was no acknowledged leader. National macroeconomic policies served as anchors. The fact that intervention practices were sometimes different and uncoordinated led some (McKinnon [1984]) to argue that an upward rise was imparted to the world money supply.

6. The perceived inadequacies of the decentralized floating rate system were, not surprisingly, the impetus for the move to stronger

international economic policy coordination. The rationale behind the coordination process--and we think it can only be regarded as an evolving process--is that you need a mechanism to internalize the externalities of policy actions by the larger countries. 25/ Specifically, multilateral surveillance is employed to see that the international spillovers--both good and bad--of each country's policies--including the feedback of these spillovers to the country itself--are taken into account in the final, multilateral policy bargain. In some cases, countries may also be able to use "peer pressure" to help them take policy actions that are unpopular domestically but which are beneficial to them in the long run. 26/

Although successive coordination agreements share several common elements (policy commitments, a concerted view on exchange rate developments, and pledges for closer cooperation on exchange market intervention), there are no explicit rules that apply across agreements. This flexibility carries both advantages and disadvantages. On the one hand, the agreements can cover a broad range of policies (including structural as well as macroeconomic policies), they can be quite country-specific and quantitative, and they can be custom-tailored to the most pressing problems of the day. On the other hand, without rules there are higher negotiation and recontracting costs.

Countries' monetary and fiscal policies serve as anchors in this system. Recently, however, U.S. Treasury Secretary Baker and U.K. Chancellor Lawson suggested the possible use of a commodity-price basket indicator as an early warning signal of future aggregate price developments. This might provide some assurance that stabilization of

exchange markets does not come at the expense of either global inflation or deflation.

Another recent and noteworthy innovation in the coordination exercise is the consideration of aggregate indicators for the G-7 countries as a group. Their rationale is straightforward: even when members of the coordination group reach agreements that are viewed as mutually beneficial, care still needs to be taken to ensure that such policy packages have satisfactory implications for those not at the table. This is particularly relevant in the case of the G-7 countries since the spillover effects of their policies on the rest of the world are known to be large. Aggregate indicators, covering such variables as G-7 growth rates, G-7 interest rates, the G-7 current account, and the G-7 real exchange rate are simply an analytical vehicle for getting a better handle on these spillovers. In this connection, it is well to remember that there is a debt problem as well as a problem of improving the functioning of the international monetary system, and measures introduced to alleviate one will inevitably affect the other.

VI. Concluding Remarks

It follows from the preceding remarks that we do not view reform of the international monetary system as an instrument of crisis management. Instead, we see it as akin to a constitutional change that should be governed by a long-term perspective. In keeping with that orientation, there is much to be gained by subjecting all proposals for modification of the system to careful scrutiny and study so that their full implications--both positive and negative--can be fully understood.

*/ An earlier version of this paper was presented at the Cato Institute's Sixth Annual Monetary Conference on "Dollars, Deficits, and Trade: The Changing World Economy," held in Washington, D.C. on February 25-26, 1988.

1/ The issue of whether the consequences of a more expansionary monetary policy will be as visible under a fixed rate as under flexible rates is discussed in Frenkel and Goldstein [1986].

2/ See Giavazzi and Giovannini [1988].

3/ See Flood and Garber [1980] for a model of such speculative attacks.

4/ See Holtham et al. [1987].

5/ Obstfeld [1985].

6/ See Feldstein [1987].

7/ See Frenkel [1975] and Dornbusch [1988].

8/ See Mussa [1981].

9/ See Giavazzi and Giovannini [1988].

10/ See Folkerts-Landau and Mathieson [1988].

11/ See Levich [1987].

12/ See Goldstein [1980].

13/ For an elaboration of these considerations, see Frenkel and Mussa [1981] and Frenkel [1983].

14/ See Duisenberg [1988].

15/ See Haberler [1987].

16/ See Frenkel [1987].

17/ For an empirical attempt to judge whether actual exchange rates are too noisy in terms of departures from fundamentals generated by a monetary model of exchange rate determination, see West [1987].

18/ See Frenkel, Goldstein and Masson [1988].

19/ See Goldstein [1984] and Frenkel and Goldstein [1986] for more comprehensive discussions of alternative methods for estimating the equilibrium exchange rate.

20/ See Marston [1986] for an empirical analysis of trend differences in labor productivity in tradables as between the United States and Japan, and for evidence on the drawbacks of measures of competitiveness that rely on broad price indices such as the CPI. On the broader issues concerning the limitations of the PPP approach, see Frenkel and Mussa [1980] and Frenkel [1981].

21/ See Meese and Rogoff [1983].

22/ See Goldstein and Khan [1985] for a survey of trade elasticities.

23/ See Frenkel and Goldstein [1988].

24/ See Giavazzi and Giovannini [1986].

25/ See Frenkel, Goldstein, and Masson [1988].

26/ See Haberler [1987] for a different view on peer pressure.

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