

FLEXIBLE EXCHANGE RATES AND MONETARY POLICY:  
A DISCUSSION OF THE FRENKEL AND HELLER PAPERS

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If a conference such as this one, dealing with United States' macro-stabilization policy, had been organized ten years ago it is unlikely that anyone would have suggested devoting an entire session to the operation of the international monetary system. If the suggestion had been made, it would certainly have been greeted with a loud "why?" The very fact that this session is included in this conference epitomizes the most important lesson of all that we have learned about domestic stabilization policy in the last decade--namely that it cannot sensibly be discussed without explicit reference to the international environment within which it is being implemented.

By this I do not simply mean that United States domestic policies have implications for the rest of the world that policymakers should be interested in, or that there are interesting debates about the organization of the international monetary system, the outcome of which will influence the ease with which American business can operate in international markets and which ought therefore to concern American policymakers, though both of these observations are surely true. Rather I mean that the way in which monetary policy impinges upon traditional

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domestic targets, employment, prices and the like, is intimately linked to the operation of the international monetary system.

Since neither of the papers that I am discussing has much to say explicitly about these domestic matters, and that is not to criticize either of them, because one can only say so much in one paper, I believe that it will be useful for me to use these discussant's comments to explore this area in the light of the arguments presented by Frenkel and Heller, rather than to provide a detailed critique of those arguments.

Both of the papers before us deal with the operation of a system of flexible exchange rates. That is only right and proper, given that this is the system (more or less) under which the world is currently operating. However, I believe that it would be wrong for anyone to conclude that the new importance of international factors for United States domestic policy stems from the adoption of a system of flexible exchange rates per se.

In the 1950s and 1960s, United States policymakers were able to operate "as if" the economy they were dealing with was closed, not because the Bretton Woods system was a fixed rate system, but because it was a dollar standard system. As we now know, with the benefit of hindsight, and as some--notably, for example, Robert Triffin (1961)--argued at the time, this did not mean that the United States could indefinitely operate its domestic policies while completely ignoring what in other countries used to be called "the balance of payments constraint." However it did mean that the "constraint" operated sufficiently slowly that, relative to the time horizon for which domestic

stabilization policies are conceived, it seemed unimportant. It would only be if the world were to return to a dollar standard that this happy, for United States policymakers, state of affairs would be restored. However though I understand Robert Heller's nostalgia for such a system, I am much less sanguine than is he about the possibility of the restoration of a dollar standard.

The breakdown of the Bretton Woods system has forcefully reminded us that the amount of seignorage which a banker can extract from his clients depends upon their willingness to pay up. If he tries to extract too much, they will, not without difficulty to be sure, take their business elsewhere. At the risk of oversimplifying, under Bretton Woods, the banker, namely the United States, tried to extract too much seignorage. The current chaotic international monetary system is the result of the customers trying, as best they can, to find somewhere else to do their banking business. A dollar standard is not going to be restored unless it is clear to the rest of the world that the United States has mended its ways, and is not going to repeat its previous policies--either willfully or inadvertently. The only evidence that the past decade has produced to support this view is the recent announcement of monetary policy changes by Mr. Volcker. If that announcement is followed up with action, and past evidence suggests that this cannot be taken for granted, and if the new policies are adhered to long enough to erase the memories of fifteen years of instability, then the possibility of restoring a dollar standard might arise. However, I believe that we would be ill advised to hold our breath in anticipation of the event.

Now this is not to say that the world will inevitably remain on the present flexible exchange rate system into the indefinite future. The problems of operating under such a regime as Heller describes are real ones, although how much they are the result of the flexible exchange rate regime per se, and how much of the underlying monetary instability that forced the adoption of that regime in the first place, is a point that one might want to argue about. There is undoubtedly a demand for a stable monetary unit to serve as a means of exchange, unit of account, and store of value in international transactions, and markets have a way of evolving in order to meet such demands in a manner that verges on the inherently unpredictable. After all, the Bretton Woods system was not designed to put the world on the dollar standard, nor did or indeed could the United States in any way force this outcome; it arose as a result of the voluntary choices of a host of institutions and individuals and the evolution in question only appears inevitable with the benefit of hindsight.

In the current state of knowledge, economic theory enables us to say that, so long as domestic monetary policies remain uncoordinated and unstable, then the international monetary system will also be unstable, whatever its formal institutional framework, and that as such policies become stable and harmonized, then so will the international monetary system become stable and perhaps adopt a new reserve currency, or indeed currencies. It does not enable us to say anything positive about the form that such an evolution is likely to take. Nevertheless, given the array of inflation rates, monetary expansion rates and such at present ruling in various parts of the world, one is tempted to conclude that even the first step towards reestablishing some sort of

unified world monetary system has yet to be taken. The European Monetary System is regarded by some as being the first stage in establishing an important regional base from which such a system might evolve; whether it is or not depends upon whether its members succeed in developing the means to coordinate their domestic policies so as to make them compatible with the maintenance of the System, and they show no signs of doing this.

Be that as it may, as a practical matter any discussion of United States' stabilization policies that is to be of current relevance should take a flexible exchange rate system as its background. Thus the theoretical and empirical material in Frenkel's paper, though it will look rather unfamiliar to many specialists in the analysis of domestic monetary policy, is of considerable relevance to their concerns. I will now turn to some of the issues involved.

It should go without saying that if one is going to discuss the way in which macro-stabilization policies are likely to work against the background of a flexible exchange rate regime, one ought to know something about the way in which the foreign exchange market itself operates. Frenkel deals with this matter from the point of view of what may be referred to as the "Asset Market Approach" to exchange rate theory, an approach which beyond doubt provides a simple and powerful method of analyzing the problem area. Nevertheless, anyone reading Heller's paper immediately after Frenkel's must wonder where many of the concerns he raises, particularly about the large amount of dollar-denominated assets held abroad, fit into Frenkel's analysis. I believe that the answer here is that, although the theoretical framework which

underlies Frenkel's work can deal with these issues, the particular "monetary" version of the asset market approach which he explicitly sets out does so only implicitly, and in a way that his empirical evidence suggests is inadequate.

The basic monetary model of the exchange rate is simplicity itself. With national price levels tied to each other by purchasing power parity and a stable demand for real balances function in each country, domestic price levels, inflation, nominal interest rates and the exchange rate are simultaneously determined by the behavior of the "real" arguments in the demand functions in question, and by that of the supplies of nominal money in the two countries. What does this analysis tell us about the role in influencing the exchange rate of U.S. dollar-denominated assets left over from the period when the dollar was the reserve currency, and currently held abroad? This is a problem which many commentators, including Heller, believe to be of key importance. The monetary model tells us, I believe, that these assets have no special significance. They are interest-bearing assets, and, according to the monetary version of the more general asset market approach, the rate of return on them adjusts to compensate their holders for any anticipated change in their purchasing power over goods and over assets denominated in other currencies. Variations in that rate of return are taken account of in the model because the nominal interest rate they bear is an argument in the U.S. demand for money function.

The above reasoning hinges upon purchasing power parity always holding, but Frenkel's empirical evidence shows that at the very best it does so only on average over rather long time periods, and in a

rough and ready fashion at that. This means that variations in the rate of interest on dollar-denominated assets cannot simultaneously compensate for variations in their purchasing power over goods priced in U.S. dollars and goods priced in foreign currencies. This in turn means that, although some U.S. dollar-denominated assets may be perfect substitutes for those denominated in foreign currencies, others are not. That being the case, the currency in which they are denominated must be a relevant property of at least some classes of securities, and fluctuations in the supply and demand for such securities are likely to impinge upon the behavior of the exchange rate. The behavior of the dollar-deutsche mark exchange rate gives Frenkel more trouble than any other, and surely that is not an accident, given that mark-denominated assets have so often been the destination of funds realized by selling dollar-denominated securities.

There is another characteristic of the U.S. dollar's place in the international monetary system worth noting: it is the unit of account for many international transactions, not the least of which are those involving oil. That means that many international prices are going to be particularly sensitive to the conduct of U.S. domestic monetary policy, and that that policy still has a considerable power, for good or ill depending upon how it is used, over the international economy, a power which it would not have were prices in that economy to be set in other currencies. The frequent references in U.S. debates to oil price increases as being exogenous to domestic policy shows that it is not yet appreciated that oil prices in the world economy respond to U.S. domestic policy and that attempts to cushion their effect by domestic monetary expansion are not just useless but actively harmful.

To put all this in another way, if goods markets cleared as fast as asset markets, if we were always in long-run equilibrium where the concepts of the relative prices of national moneys and of national outputs were interchangeable, the above problems would not arise. However, asset markets do clear faster, and in the short run do dominate the behavior of the exchange rate, so that the distinctions upon which the asset market approach focuses are important. That surely is one implication of the evidence that Frenkel presents. This very fact however seems to me to imply that the asset market approach to exchange rate determination must be carried beyond a simple monetary formulation, as it is, for example, by Boyer (1978), to incorporate explicitly other aspects of portfolio behavior, and to incorporate other aspects of using a particular currency as a unit of account, before it can claim to provide us with a complete toolkit for dealing with foreign exchange rate problems, not least those which Heller raises. Nevertheless, if our toolkit is incomplete, it is still the best one that we have. As Frenkel's paper shows, the asset market approach to analyzing exchange rates is extremely useful, and its use does enable us to come to a clearer understanding of how to conduct domestic policy against a background of exchange rate flexibility.

One of the best established pieces of conventional wisdom in international monetary economics is that high interest rates are associated with a strong currency and low interest rates with a weak one, but one of the best established facts of the last few years is that the high interest rates in fact are associated with weak currencies, and vice versa. As Frenkel shows, the latter prediction is what follows

from the asset market approach, and, as he also shows, that theory's predictions in this respect are confirmed by evidence, generated moreover by an experiment whose validity does not, as far as I can see, in any way hinge upon assuming that purchasing power parity holds. Though I can find nothing to disagree with in anything that Frenkel explicitly says about this matter, there are a few things that he didn't say that do seem to me to be of particular relevance to the theme of this conference.

The conventional wisdom about the relationship between interest rates and the strength or otherwise of a currency has its historical roots in the operation of the gold standard, and in particular in the role played by the central bank rediscount rate in the conduct of monetary policy under such a system, a role summarized in that well-known, but now sadly outdated, aphorism "Seven per cent will draw gold from the moon" (which I have been unable to track down to its original source). Under such a system the long-run time paths of money and prices in the international economy were given by the rate of change of the stock of gold. Though this rate of change was not always smooth and steady, because important new gold discoveries were from time to time made, on average it was. Given that, and given an unquestioned commitment of central banks to maintain the convertibility of domestic money into gold, the anticipated inflation rate was, by comparison with recent experience, not far short of being an exogenous constant. Moreover the principal aim of monetary policy was not to control income and employment but simply to maintain convertibility. In such a world, any increase in a central bank's discount rate represented an increase in the real cost of borrowing from the banking system, and hence led to a

contraction (or at least a slowdown in the rate of expansion) of domestic credit. The monetary consequences of that in turn led to a balance of payments surplus and hence a "strong" currency.

The world of the last ten years has been very different than that which I have just described. With nothing to replace the gold standard's guarantee of long-run price predictability, inflationary expectations have become endogenous and volatile, and their movements dominate fluctuations in nominal interest rates. It is these factors which have led to the association of high interest rates and weak currencies. Both are the consequence of an adverse response of inflation expectations to undisciplined and expansionary monetary policies, as Frenkel has argued.

I believe that the forgoing considerations have two important implications for the conduct of domestic monetary policy in the United States, both now and in the future. First, though at long last an emphasis on controlling monetary aggregates is replacing an emphasis on interest rate targets in the conduct of policy, it would be foolish to believe that the battle here has been finally won. Rather it is still being fought. The advocates of controlling monetary aggregates have always based much of their case upon the difficulty of drawing inferences from a particular value of the interest rate about whether policy is "tight" or "easy," and will continue to do so. The forgoing analysis surely helps to bolster their case, for it shows that there is an important international dimension to the problems to which they have been pointing, a dimension that adds weight to the argument against using interest rates as a policy indicator.

The second implication worth pointing out is not of such immediate concern, but is surely just as important. The forgoing argument amounts to presenting a special case of the following general proposition: the way in which monetary policy impinges upon the domestic economy, and the way in which domestic monetary variables should be interpreted by the authorities depend critically upon the state of the international monetary system and the nature of the country's exchange rate regime. I believe that many of the United States' current policy difficulties have arisen from a failure of the authorities to appreciate the fact that these international factors are of prime rather than secondary importance in the design of policy. To put the matter in its simplest terms, it is not just the way in which United States policy affects the rest of the world that varies with the exchange rate regime and the conduct of policy in other countries; the way in which it affects the United States is also profoundly influenced by these matters. I will now turn to a more specific discussion of this point as it impinges upon the conduct of policy under the present regime.

There is no doubt about the nature of the current macro policy problem facing the United States: it is how to reduce the inflation rate without at the same time causing more of a real contraction than is absolutely necessary (however much that might be). It is also true that there is a wide consensus that getting the monetary expansion rate "under control" must play a key role in tackling this problem. Debates arise when it comes to the question of how to implement such a policy, of specifying what getting monetary expansion "under control" means in practice. At one extreme are those who follow the lead that (I am glad

to learn from Neil Wallace) Sargent and Wallace (1975) never meant to give. They argue for a rapid, pre-announced, monetary slowdown which will, by way of a by now well-known "rational expectations" mechanism, impinge mainly upon prices and will affect output and employment only to the extent that the pre-announcement is not believed.

At the other extreme are those like Modigliani (1977) who believe that a monetary contraction can be fine tuned, while in the middle stand those who would support a gradualist contractionary policy of the type advocated at this conference by Allan Meltzer. To a foreign observer, the striking characteristic of this United States policy debate is the way in which the openness of the United States economy and the nature of the exchange rate regime are virtually ignored by all participants. Nevertheless, the theoretical and empirical results presented by Frenkel at this conference, not to mention a good deal of work on stabilization problems in open economies that has been carried on mainly outside the United States, is extremely relevant to these issues.

Two key questions underlie current debates about stabilization policy. The first concerns the speed with which the private sector of the economy can absorb information about policy and translate that information into price changes, and the second, analyzed by Lucas (1976), concerns the stability over time of the mechanisms whereby information is absorbed and acted upon and the independence or otherwise between those mechanisms and policy actions themselves. If one believes that information is absorbed and acted upon quickly, then rapid monetary contraction is an appropriate anti-inflation policy. If one believes that reactions here are slow, but that their time path in the future can be inferred reliably from past behavior then one will advocate fine

tuning. A slow but unstable, and hence hard to predict, mechanism underpins the case for gradualism. (May I note here in passing that I believe Meltzer's analysis of the case for gradualism, which I largely accept, would be enhanced if he would lay more stress upon the unpredictability of the lag structure of his model in any particular instance, and less upon its drawn out and backward looking nature per se.)

Frenkel's empirical work shows that the foreign exchange market is efficient, in the sense that all available information, including information about policy, is translated quickly into movements of the exchange rate. The exchange rate is, therefore, a price that, other things equal (the qualification is important and I will return to it in a moment) adjusts rapidly to policy changes. A number of recent papers have analyzed versions of the aggregate demand-expectations augmented Phillips curve model, which underlies so much United States policy debate, extended explicitly to incorporate a foreign sector. Though such work is most highly developed for fixed exchange rate regimes--see, e.g., Laidler (1975), Jonson (1976), Jonson, Moses and Wymer (1976), Bilson (1978), Burton (1979)--some results are now available for a flexible rate regime. Thus Laidler (1977) shows, albeit in an extremely primitive model with zero capital mobility, that even where systematic errors are made about the domestic price level, perfect foresight about the exchange rate is sufficient to guarantee that domestic monetary policy impinges solely upon domestic prices and not at all on output. Burton (1979 and forthcoming), in a much more elaborate model that does incorporate capital mobility, a variety of stochastic shocks, and rational expectations, finds that the behavior of the exchange rate is a key source of information for agents and that

the more rapidly information about it is available to them, the more direct is the linkage between domestic monetary policy and domestic prices.

One must be careful not to read too much in the way of policy implications from analytic exercises such as these. Nevertheless, the work that I have referred to does point to the conclusion that a flexible exchange rate, determined in an efficient market, imparts to an economy an extra degree of price flexibility that it does not have under a fixed rate. This in turn suggests that estimates of the output that might be lost in the United States while bringing inflation under control that have been generated from data on the fixed exchange rate period are likely to be exaggerated, even if there is nothing else wrong with the techniques used to derive them.

However, there is a very important qualification to be added to all this. The theoretical results to which I have alluded are premised on the price level, and implicitly the money market, in the rest of the world remaining undisturbed during the theoretical experiment from which they are derived. To put the matter in terms of Frenkel's framework, they apply to situations in which nothing happening abroad disturbs equilibrium in the market for foreign money, or foreign assets in general, so that all disturbances to the exchange rate originate in the behavior of the domestic money supply. Why this is an important qualification is easily seen by considering Frenkel's analysis and his empirical results. If a foreign monetary contraction begins at the same time as a domestic one, the analysis in question tells us that, given for the sake of simplicity that the relative sizes of these contractions are appropriate, nothing will happen to the exchange rate. In

that case domestic money markets must be cleared by domestic output and price level fluctuations without help from a quickly adjusting foreign exchange market. Frenkel's results on purchasing power parity lend weight to the view that domestic prices adjust slowly to monetary disturbances. Thus there is every reason to suppose that in this case, and in the short run, which may nevertheless persist for a long time, much of the effect will be on output.

The implications of looking at Frenkel's empirical results on the efficiency of the foreign exchange market in the light of the macro-models I have cited in the preceding section may be summarized as follows: a single economy seeking to tackle an inflation problem against the background of an otherwise tranquil world economy will find that the existence of an efficient market for foreign exchange under a flexible rate enhances the flexibility of domestic prices. Such an economy will enjoy an easier transition to a lower inflation rate than one would expect from studying closed economy models. However, if that same economy is one among a number faced with a similar problem, then, even with a flexible exchange rate, the pressures of domestic deflation will, if other countries are simultaneously deflating, be concentrated on domestic output. In general, the extent to which this happens in any one country will vary with the conduct of policy abroad.

In the current state of knowledge, I do not believe we can say any more than this, but I would claim that even this much is important to know. Our consideration of the open economy aspect of stabilization policy has, after all, led us to argue that the lags with which information will become available, and hence a basis for action, will vary

with the way in which policy is conducted not only at home but also abroad. The length and variability of such lags are, therefore, in any particular instance, going to be next to impossible for policymakers to predict. However such unpredictability is the very essence of the case for gradualism. The analysis we have been considering does, therefore, make an important contribution to the current U.S. policy debate.

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