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Advantages and Disadvantages of a Reference Rate System

At least three advantages stem from the introduction of a reference rate system. First, it could help the authorities of an individual country that wished to manage its exchange rate to avoid large misalignments. Second, it could help the private sector form more dependable expectations of future exchange rates and thus manage their businesses more efficiently in a world of floating exchange rates. Third, it could help the IMF design and manage an effective system of multilateral surveillance, with the presumption that the world economy would function better as a result and that there would be less chance of the global imbalances ending suddenly in a way that leads to a world recession. These potential advantages will be discussed in turn.

Exchange Rate Management

Why should a reference rate system be expected to help exchange rate management by an individual country? Suppose that we are talking of a country that wishes to stabilize its exchange rate at a level that the IMF names as the reference rate. There seems to be wide agreement, extending even to some economists who are skeptical of the potency of intervention,[1] that concerted intervention by both parties to an exchange rate (e.g., the

1. The authors of the Jurgensen Report (1983) reached this conclusion. It was reinforced by the seminal work of Dominguez and Frankel (1993) and accepted by both Sarno and Taylor (2001) and Truman (2003).

Bank of Japan and the Fed in the case of the yen-dollar rate) is likely to be more effective than unilateral intervention by one party alone. This finding is believed to be true even if the sum placed in the exchange market is the same. The obvious explanation for this finding is that the views of the authorities involved influence the participants in the exchange market. If it is the views of the authorities that carry weight rather than the portfolio balance effects of the transactions, then presumably multilateral endorsement of a target for the exchange rate, such as would be provided by the naming of a reference rate, would be more effective than bilateral concertation, let alone any national announcement. If that is so, having a reference rate could be expected to make what Fratzscher (2004) has termed "oral intervention" (a.k.a. jawboning) a more effective policy instrument than it would otherwise be.

Some economists might still want to ask why a country with a floating rate should be concerned about the exchange rate. Presumably a country floats the exchange rate only after it has adopted some alternative nominal anchor (such as a target for the rate of inflation), so shouldn't it be indifferent to the value of its exchange rate? If one believes that the *only* purpose of an exchange rate commitment is to anchor the price level, then there is no point in targeting the exchange rate once another anchor is in place. But some recognize that the (real) exchange rate also has an important allocative role, in determining the size of the tradable goods sector and the competitiveness of exports and import substitutes. One of the potential disadvantages of floating is that capital inflow surges may lead to the exchange rate giving false signals that may undesirably curb the size of the tradable goods sector. The advantage of having the ability to influence the exchange rate lies in the power to limit such false signals. A reference rate system that enhanced the ability to influence the exchange rate by oral intervention would curb the danger of a floating rate generating misalignments that give false signals. (Obviously that assumes some minimal ability to choose a sensible reference rate on the part of the authorities.)

Private-Sector Expectations

A second potential advantage of a reference rate system is in providing the private sector with expectations of (real) exchange rates likely in the longer run. At present the private sector seems to have no reasonably firm long-term expectations at all. Forward rates track current spot rates, being separated merely by the interest differential. Even when rates go to seriously misaligned levels, the private sector appears to see no arbitrage opportunity created by the prospect of a rebound.

This lack of firm long-term beliefs arises because exchange markets are in large measure driven by herd behavior rather than fundamentalist

expectations. The best-documented case is that of the dollar bubble of the mid-1980s. Note that labeling this a bubble is not being wise after the event: Paul Krugman (1985) and Stephen Marris (1985) both used economic analysis to demonstrate decisively ex ante that the dollar was overvalued. Jeffrey Frankel and Kenneth Froot (1986, 1987) showed how the dollar bubble led portfolio managers to place overwhelming weight on "technical" (i.e., chartist) forecasts, with "fundamental" (i.e., economic) factors being essentially dismissed because of their repeated error over the preceding years in forecasting the reversal of the dollar's rise. This dismissal in turn supported the dollar's continuing levitation until the authorities realized that something had to be done to restore the dollar to a level consistent with the fundamentals. Some of us can still recall encountering rank disbelief on Wall Street before the Plaza Agreement when we explained that the dollar's overvaluation would have to be corrected sooner or later.

Subsequent events do not suggest that the dollar bubble was a one-off event or that the markets have now learned the error of their ways. The yen's great roller coaster was the principal event among the industrial-country currencies during the 1990s: Practically everyone knew that the yen was overvalued long before it reached 80 yen to the dollar, yet it continued to that mark. The overshooting of the East Asian currencies (including the yen) in the second half of 1987 was even greater: While one can understand the extreme weakness of the Indonesian rupiah as a result of capital flight driven by fears about the political succession, no similar explanation is available for the other currencies of the region. There was instead an obvious and extreme lack of the sort of stabilizing speculation that theory says one has to rely on to stabilize a floating exchange rate (McKinnon 1979). Any hopes that these experiences would not be repeated were laid to rest early in the present decade by the overvaluation of the US dollar and the weakness of the euro.

Empirical evidence on floating exchange rates confirms the suspicion that these anecdotes arouse about the behavior of the foreign exchange market. For a while this empirical evidence suggested that exchange rates show no tendency to revert to equilibrium but rather that they follow a random walk. It is still true that a random walk outperforms any of the structural models of exchange rate determination for time horizons of less than a year, but there is now pretty conclusive evidence that a floating exchange rate will tend to revert slowly toward relative purchasing power parity (PPP), with half the adjustment being completed in under five years (Rogoff 1996). However, evidence also exists to support the theoretical presumption that the equilibrium real exchange rate can change, rather than being a permanent constant as the PPP model assumes (see the papers in Williamson 1994). One can reconcile this with the empirical success of the long-run relative PPP model if random deviations from equilibrium tend to be large relative to changes in the equilibrium real exchange rate. Reflecting this near-random walk behavior of a floating exchange rate, a change in

the spot exchange rate is normally associated with an almost identical change in the forward rate (Svensson 1992, 132), signifying that there is a virtually complete lack of any market expectation that the exchange rate will revert toward an equilibrium level within any time horizon relevant to market participants.

Frankel and Andrew Rose (1994, 35) argue that matters may be even worse. They acknowledge the previous finding "that investors tended to react to current appreciations by expecting future depreciations, consistent with either regressive expectations, adaptive expectations, or distributed-lag expectations, at time horizons of one year, six months, or three months" (Frankel and Froot 1987). This suggested that expectations appeared to be stabilizing. However, Frankel and Rose (1994) go on to argue:

> Subsequent studies . . . indicated that investors at shorter horizons of one week to one month tend to extrapolate recent trends. . . . Expectations at these short horizons appear to be destabilizing. Since most trading in the foreign exchange market is known to consist of taking and unwinding positions at horizons measured in hours rather than months or years, these findings have potentially serious implications.

The stylized fact, however, is that a change in the spot rate is normally matched by an equal change in the forward rate under floating. This fact implies that the net impact of all expectations, long as well as short term, is typically neutral rather than destabilizing.

Many economists have been puzzled by the evidence that the market can disregard long-run fundamentals, for it raises the problem first posed by Milton Friedman (1953) of how profits can be made from speculation that tends to destabilize the market. The most intellectually satisfying answer to this question is that offered by Krugman and Marcus Miller (1993), who postulate that, in addition to traders who wish to settle their current account transactions, the market contains speculators who behave like chartists in following the market and stop-loss traders who invest abroad and choose to cover their foreign exchange exposure against abnormally large losses. The way they do this is to place stop-loss orders at a rate that limits the maximum loss they may make. This involves their selling the foreign currency in which they have invested when it is extremely weak and buying their home currency when it is strong, which thus creates the possibility for speculators who have collectively driven a currency down to an unrealistically low value to buy that currency back from the stop-loss traders at a particularly cheap rate. In effect, the stop-loss traders buy insurance, and the speculators provide the insurance and take the profits.

Matters may be different in the presence of an exchange rate band. While bands do not normally have full credibility, and while they sometimes lack any credibility at all, the evidence shows conclusively that when a rate moves within a band, the forward rate normally changes by less than

the spot rate, indicating that the market expects that the spot rate will tend to revert toward the center of the band (Svensson 1992, 132–33). In other words, except where the band has become clearly unrealistic, a band performs the function of crystallizing market expectations of where the equilibrium rate lies and thus makes expectations stabilizing at the time horizons relevant for influencing market behavior. This function of a band is the fundamental reason for preferring a band system rather than allowing the exchange rate to float.

It has sometimes been asserted that the claim that a band can crystallize market expectations was refuted in Maurice Obstfeld's well-known paper on international currency experience. Obstfeld (1995) said:

> One drawback of target zones is that they may not exert a stabilizing effect unless markets are confident that their edges will be defended successfully. The difficulties in defending rigidly fixed exchange rates, however, apply fully to the edges of target zones, as was illustrated in March 1995 by the Spanish peseta's crash out of a band much wider than most proponents of target zones advocate. If markets can figure out the fragility of the edges and perform the requisite backward induction, a target zone loses much of its stabilizing power. It may even become destabilizing.

Now it is not true that full credibility is necessary for a target zone to exert a stabilizing effect: It is well established that partial credibility means that the stabilizing impact of the target zone is attenuated but that it still exists (Krugman 1991; see also the discussion in Williamson 1996, 8–9). The fact cited above, that a movement of the spot rate within a band is normally accompanied by a smaller movement in the forward rate while there is no such tendency with a floating rate, is conclusive proof that a band typically works as it is meant to in stabilizing market expectations. To counter this well-documented fact, an anecdote is offered, about the Spanish peseta in March 1995. I have never understood why the Spanish authorities did not make more effort to defend the peseta at that time, any more than I can understand why the Indonesian authorities did not make an effort to defend the rupiah in August 1997 comparable to that the Brazilians made when they faced a similar attack three months later. But even if the Spanish authorities indeed had no alternative, in the way that Obstfeld implies, it is a sad reflection on the profession's standards of evidence if one anecdote is deemed to outweigh a well-documented finding such as that cited above.

To improve on the obviously unsatisfactory present situation, it would be necessary for the set of reference rates to be reasonably good estimates of equilibrium exchange rates, i.e., of where rates can be expected to gravitate to in the longer term. The art of estimating is doubtless very imperfect, but it is surely not so bad that it would be impossible to generate useful estimates if adequate effort were invested in the task. Even then one could not be sure that the private sector would trust the figures enough to use them, at

least in the first instance. Only as and to the extent that the estimating effort built a track record that commands respect could one expect the private sector to start using the estimates. If and when that happened, the results would be highly beneficial, especially in terms of investment and sourcing decisions. One would hope that insuring against the risk of exchange rate changes would cease to be a dominant motive for the location of investments, as it reputedly is now.

Multilateral Surveillance

A third potential advantage of a reference rate system is in providing the IMF with a meaningful basis for multilateral surveillance, with the object of improving global macroeconomic performance. The mere fact that a country would need to have a reference rate endorsed by the international community as a condition for intervening would introduce a degree of international influence on a country's policies that is currently absent. Most historical examples of policy coordination have used an exchange rate commitment as the fulcrum on which to persuade countries to change their policies in order to secure international consistency.

The surveillance process would examine a country's policies for consistency with achieving the reference rate. It would be straightforward to examine whether a country's reserves have increased or decreased and whether the exchange rate was stronger or weaker than the reference rate. Other ways of influencing exchange rates such as interest rates, trade restrictions, or capital flow regulations might also be covered, as described before.

Everyone knows that exchange rates are only half the story of what drives current account balances. Surveillance also requires an evaluation of whether demand-management policy is appropriate. At the moment, no clear criterion exists as to whether a country is pursuing excessively contractionary or expansionary policies; as long as policies are not resulting in recession or inflation in that particular country, the IMF has no basis to complain, even if the set of policies being pursued by all its member countries is collectively inconsistent with a satisfactory global outcome. Adoption of the reference rate proposal would replace this situation with a criterion that is in principle well defined and is consistent with an acceptable global outcome. A country would be judged guilty of excessively expansionary policies if its level of domestic demand exceeded the sum of potential output plus its equilibrium current account deficit, even if an appreciation of its exchange rate above the reference rate were masking the inflationary potential inherent in this situation. Conversely, a country would be judged to have deficient demand if its domestic demand were less than its productive potential by more than its equilibrium current account surplus, even if this shortfall were being masked by a depreciation

of its exchange rate below its reference rate and an enlarged current account surplus.[2]

Who would supervise these rules, and what would happen if they were violated? In the first instance, the IMF staff might draw up regular reports (monthly or quarterly) about which countries were intervening inappropriately or otherwise violating these rules. Their reports would go to the IMF Executive Board. The executive director of a country held to be violating the rules would presumably give reasons as to why the country's actions should be excused. The Board might declare itself impressed, in which case the country's actions would be excused. Otherwise, the Board would implicitly call on the country to cease and desist. Some form of sanctions, such as suspension of IMF voting rights, might be applied to a country that flagrantly disregards surveillance. Of course, any sanctions should be applied multilaterally and not unilaterally, and supporters of liberal trade will wish to see them take some form other than trade sanctions.

Why should member countries take note of Fund advice structured along these lines when it is well known that they largely ignore the Fund's advice in its current surveillance operations? The answer is not about sanctions, but basically: because the Fund would be drawing on a body of analysis that is not available to individual member countries. Without the reference rates and the background of a consistent global picture, the IMF offers nothing more than the countries can figure out for themselves, because it is offering an analysis that draws exclusively on countries' own situations. Since all the major member countries have many more trained economists available than the IMF can deploy on any one country, it is rational to take little note of what the Fund says. This situation changes fundamentally if the Fund is drawing on a body of analysis of what is needed to produce a globally consistent outcome—because that analysis is not available to individual countries.

The other reason that countries might be willing to take note of Fund advice is that it would be part of the bargain needed to introduce a significant modification of the laissez-faire international monetary system. Countries understand that their partners can be constrained from adopting beggar-my-neighbor policies only if they are willing to be constrained themselves. Heeding Fund advice is the form that this constraint would take.

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2. There is a problem with this criterion: A country with an exchange rate that is undervalued by the market might be subject to inflation if the country bowed to IMF advice and expanded demand. (Similarly, a country whose exchange rate is overvalued by the market, as judged by the reference rate calculations endorsed by the IMF, could be pushed into deflating demand and recession.) The IMF would need to be aware of this potential difficulty but could sidestep it by requesting only modest policy adjustments. However, those policy adjustments would result in the ex ante creation of demand conditions that would support payments adjustment as and when the market recognized reality and moved the exchange rate toward the reference rate.

Inflation Targeting

It has been claimed that a disadvantage of a reference rate system is that it would undermine inflation targeting, and that this is a superior system (see the interview with Rodrigo de Rato in the *Financial Times,* January 28, 2006). I am not going to argue that reference rates offer a superior system to inflation targeting. Nor do I believe that they offer an inferior system. The two are simply different, and compatible.

Inflation targeting offers a rule for managing the domestic economy. A correct comparator would be the Keynesian proposal that macro policy should be directed at "internal balance" or a full employment target. One may argue that inflation targeting would be better than a Keynesian rule, because it offers a nominal anchor that would preemptively prevent an acceleration of inflation as well as an efficient way to do what monetary policy can to preserve high employment (e.g., Bean 1998), or that it would be worse, because it ignores the importance of maintaining high employment. Inflation targeting may be better or worse than a more Keynesian approach, but it is undeniable that one must choose between them.

However, one does not have to choose between inflation targeting and reference rates. One can perfectly well have a central bank that regards its main mission in life as the pursuit of an inflation target but that also adopts (or has thrust upon it) a reference rate for the value of its currency. Unlike a traditional central rate, whose defense can force a country to intervene and may thus require it to alter its monetary policy, which indeed may threaten its inflation target, a reference rate only prohibits actions to increase the distance of market exchange rates from the reference rate. Since it imposes no *obligation* to act, a reference rate cannot be in conflict with an inflation target.

No Impact

Another criticism of the reference rate proposal is that it involves such a weak commitment that it would in practice change nothing. But if one believes that sterilized intervention may influence market exchange rates, then disciplining the potential to intervene, via a reference rate, must be capable of affecting exchange rates. And if one believes that one of the channels through which intervention works is by influencing the expectations of market participants, then an agreed reference rate must also be capable of influencing exchange rates indirectly. If one accepts the evidence that this impact is stronger when the authorities of different countries agree (as shown by international concertation of intervention), then international agreement on a reference exchange rate can be expected to have a bigger impact on exchange rates than would unilateral intervention. To this impact on current exchange rates one must add any change in private-sector behavior as businesspeople

come to feel that they have more basis for predicting where exchange rates are likely to be in the longer term, plus any change in government behavior that results from a more robust system of surveillance.

These are not necessarily second-order channels. It is true that the economics profession is still divided on the question as to whether sterilized intervention in the foreign exchange market is a worthwhile policy instrument. Skeptics include Schwartz (2000) and Edison (1993), but against them are Sarno and Taylor (2001) and Dominguez and Frankel (1993). My own view is closest to that of Kubelec (2004), who presented empirical evidence in support of his thesis that intervention is more effective when there is a large misalignment that needs curbing. The intuition is that markets sometimes go off on errant paths but that they may be pushed back toward reality by a determined act of the authorities. A central bank that tries to defend a disequilibrium exchange rate will be run over by the market, whereas one that intervenes when it is the market that has established a disequilibrium rate is far more likely to have an impact. It is debatable whether the impact of such intervention should be counted as long lasting. If one believes that exchange rates have a tendency to revert toward equilibrium in the long run, then one would neither expect nor want intervention to have an effect in that long run. The function of intervention is to lessen the size and length of misalignments, not to influence the long-run average exchange rate.[3]

As noted before, Fratzscher (2004) argued that one should really be thinking of intervention as comprising two instruments rather than one: buying and selling foreign exchange, which is the usual interpretation of intervention, and also what he calls "oral intervention." Oral intervention, a.k.a. jawboning, involves telling the market things like what the authorities believe the equilibrium rate to be (or what they think a disequilibrium rate is). One might expect that oral intervention would become increasingly effective if and as the authorities establish a track record of naming plausible estimates of equilibrium exchange rates. The fact that for long periods the exchange rates in the European Monetary System held together with no intervention suggests that this mechanism can be powerful as confidence builds up.

Similarly, it would be an error to dismiss the possibility that an effective system of policy coordination might emerge on the basis of a system of reference rates. Historically, most examples of effective policy coordination that have occurred, whether in the context of the G-7 (notably the Plaza and the Louvre Agreements) or the European Union (European Monetary System), have been centered around exchange rate targets rather than focusing directly on fiscal or monetary policy. An attempt to envisage a consistent global scenario for successful adjustment would necessarily involve demand policies as well as exchange rates and might prove a potent means for inducing changes in macroeconomic policies.

3. It follows that tests of the effectiveness of intervention that treat all interventions as equal, irrespective of whether the central bank is trying to reduce a misalignment or defy the market, are worthless.