ESSAYS IN INTERNATIONAL FINANCE

No. 154, December 1983

THE MANY DISAPPOINTMENTS OF FLEXIBLE EXCHANGE RATES

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INTERNATIONAL FINANCE SECTION

DEPARTMENT OF ECONOMICS

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Library of Congress Cataloging in Publication Data

Dunn, Robert M.
The many disappointments of flexible exchange rates.

(Essays in international finance, ISSN 0071-142X ; no. 154 [Dec. 1983])
Bibliography: p.
1. Foreign exchange problem. I. Title. II. Series: Essays in international finance ; no. 154.
HG136.P7 no. 154 332'.042s [332.4'562] 83-26543 [HG3852]
ISBN 0-88165-061-7

Printed in the United States of America by Princeton University Press at Princeton, New Jersey.

International Standard Serial Number: 0071-142X

International Standard Book Number: 0-88165-061-7

Library of Congress Catalog Card Number: 83-26543

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The Many Disappointments of Flexible Exchange Rates

The experience of the last ten years has made most academic supporters of flexible exchange rates sadder but wiser. During the early 1970s, the prevailing academic view was that flexible exchange rates would solve the increasingly obvious problems of the Bretton Woods system and thereby create a far less difficult environment for the management of domestic monetary and fiscal policies. A broadly accepted body of theory had been developed during the 1950s and 1960s that drew clear and strong contrasts between the workings of fixed- and flexible-exchange-rate regimes and produced a widespread preference among academic economists for the flexible-rate alternative.

When floating exchange rates were adopted by the major industrial countries in 1973, many academic economists expected that international finance was about to become a much less active area. Since the problems and conflicts of the fixed-exchange-rate regime were to be solved and since balance-of-payments problems were no longer possible, macroeconomic policy could return to a purely domestic focus. A few colleagues even suggested that those of us who worked in the area of international finance might find it advisable to develop new specialties in which to teach and do research.

Flexible exchange rates have not performed as expected. Nobody has been banished to labor economics, and international finance is at least as active as it was in the last days of Bretton Woods. Abundant theoretical and policy problems create continuing opportunities for teaching, research, and other remunerative activities. It is occasionally said that doctors bury their mistakes; economists often seem to prosper from theirs.

The current system of flexible exchange rates has not functioned in a manner that even approximates the predictions of previously accepted theory, and large and frequent exchange-rate changes have produced a range of unforeseen and generally disruptive side effects throughout the economies of the industrialized countries. The purpose of this essay is to review this disappointing experience. After a brief return to the body of theory that existed in the early 1970s to see what was expected of a system of flexible exchange rates and to note some of the assumptions behind those expectations, the predictions are compared with the events of the 1973-82 period. Recent theoretical and empirical work is then reviewed that suggests why the actual experience contrasts so strikingly with earlier expec-

tations. The final issue is whether there are more attractive alternatives to the current international monetary system.

The Earlier Promises of Flexible Exchange Rates

Proponents of flexible exchange rates have almost always assumed that long-run trends in exchange markets would be dominated by relative rates of inflation, that is, that exchange rates would follow purchasing power parity. Friedman's (1968, pp. 419-420) classic defense of floating rates made this argument strongly, suggesting that it was far easier to allow exchange rates to adjust to differing rates of inflation than to compel price levels to adjust to a fixed parity. Other monetarists provided later support for this argument by suggesting that relative rates of growth of national money supplies would determine both relative rates of inflation and the exchange rate. Temporary factors such as shifting interest rates might cause temporary deviations from purchasing power parity, but both monetarists and other supporters of flexible rates expected constant real exchange rates beyond the short run. Friedman (1968, p. 417) argued that short-term factors should not significantly disturb exchange markets, because speculators would force the market toward its long-run equilibrium, thereby reducing deviations from purchasing power parity.

Supporters of flexible exchange rates like Friedman (1968, pp. 418-420) and Sohmen (1969, pp. 132-135) argued that such a system would isolate the domestic economy from foreign business cycles. The well-known foreign-trade multiplier linkage through which such cycles are transmitted from one economy to another assumes a fixed exchange rate, and it was argued that a flexible rate would absorb the effects of sudden changes in foreign demand for exports in a way that would leave domestic aggregate demand largely unaffected. Under fixed rates, for example, a U.S. recession would cause a reduction in the demand for Canadian exports and a recession in Canada, but if the Canadian dollar were floating, it would have quite different impacts. With the exchange rate adjusting to maintain balance-of-payments equilibrium, a recession-induced decline in the U.S. demand for Canadian goods would produce a depreciation of the Canadian dollar sufficient to fully adjust the balance of payments, and most of the adjustment would occur in the trade account. The Canadian balance of payments would be totally unaffected by a U.S. recession, and the Canadian trade account would be affected only slightly.[1] The Canadian economy would

[1] The conclusion that there is a net impact on the Canadian trade account is based on the assumption that part of the short-run payments adjustment to the exchange rate occurs in the capital account in the form of stabilizing short-term capital flows. This is particularly likely if

become independent of the United States and would consequently be protected from the effects of misguided U.S. macroeconomic politics and the business cycles they cause.

Independence from the Keynesian process of business-cycle transmission was extended to independence in determining monetary policy. Both Sohmen (1969, pp. 148-149) and Mundell (1960, pp. 227-230) argued that fixed exchange rates meant that national monetary policy could not be significantly different from policies prevailing abroad and that attempts to maintain an independent monetary position would be frustrated by the effects of the balance of payments on the domestic money supply. A fixed parity between the U.S. and Canadian dollars made Canada the Thirteenth Federal Reserve District, an unkind but accurate phrase that was occasionally heard during the 1962-70 period when Canada had such a fixed rate. Flexible exchange rates, however, promised to emancipate central banks. A totally independent monetary policy could be maintained without undesirable impacts of balance-of-payments shifts on the domestic money supply. The exchange-rate changes caused by shifts in domestic monetary policy would actually augment the desired impacts of the policy on aggregate demand. An expansionary monetary policy in Canada, for example, would cause an outflow of capital, a depreciation of the Canadian dollar, and a resulting improvement in the Canadian trade account that would expand domestic aggregate demand. There would be a parallel decline in aggregate demand in Canada's trading partners such as the United States, but this was typically seen as a minor problem. Skeptics such as Kindleberger (1970, pp. 200-201) suggested that flexible exchange rates would produce considerably less than complete macroeconomic independence, but supporters of floating exchange rates convinced most students of economics that the abandonment of fixed parities really would mean that central banks could pursue whatever domestically targeted policies they desired.

It is hardly surprising that young economists working for central banks tended to support floating exchange rates. What could be more enjoyable than working for an organization whose policies had suddenly become far freer and almost awesomely powerful in their effects on the economy? No longer would central banks have to tie their policies to those being determined abroad, only to see any attempts at independence washed out by the effects of the balance of payments on the domestic money supply. From being subservient to foreign monetary policy and the balance of payments, central bankers would become both free and powerful. It was occasionally noted by doubters that this wonderful prospect assumed that a central bank

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the U.S. recession and the resulting depreciation of the Canadian dollar are viewed as being temporary.

or government was prepared to accept whatever exchange-rate changes resulted from domestic or foreign shifts in monetary policy. Defenders of a floating-rate regime replied that the exchange rate was just another price; if it rose or fell occasionally, that would be no worse than similar changes in the price of copper or wheat. After all, how could an economist object to price flexibility, and why should the price of foreign exchange be different from any other price?

With the apparent elimination of the Keynesian business-cycle linkage and the increased independence and power of domestic monetary policy, flexible exchange rates promised a world of macroeconomic autarky. Inflate or deflate, manage your economy wisely or foolishly, the exchange rate would adjust to protect and even strengthen your policies. After decades of economic interdependence, in which economies were constantly affected or even dominated by foreign developments and were strictly limited in their policy options by balance-of-payments considerations, the prospect of national freedom for macroeconomic policy was inviting to those inclined toward a nationalistic view of economic policy.

In addition to gains for macroeconomic policy, flexible exchange rates also promised to eliminate mercantilism as an argument for tariffs and other protectionist devices, thus producing an era of free or at least more liberal trade. Johnson (1970, pp. 100-101) noted that a tariff merely causes an appreciation of the local currency that taxes export and unprotected import-competing industries without improving the trade account or increasing aggregate demand. The expectation that protectionism will improve the balance of payments and generate an increase in aggregate demand obviously makes no sense if the exchange rate adjusts to maintain payments equilibrium and most of the payments adjustment to the exchange rate occurs in the current account. If the appreciation of a currency improves a country's terms of trade, the net impact of a tariff on aggregate demand might actually be deflationary. This example of the Laursen-Metzler effect is likely to be of modest importance at best, but the point remains that a tariff cannot be expected to generate an improvement in the balance of payments or in the level of aggregate demand (Laursen and Metzler, 1950, pp. 281-290, and Johnson, 1956). It will instead impose a tax on unprotected traded-goods industries in a world of floating exchange rates. It was widely expected, or at least hoped, that the elimination of this ancient argument for tariffs would lead to a far more liberal trading environment.

Some Assumptions behind the Earlier Promises

It is worth noting briefly the underlying assumptions behind the predicted macroeconomic effects of floating exchange rates.

Purchasing Power Parity

As was suggested earlier, Friedman and other supporters of flexible rates expected exchange rates to follow purchasing power parity. Yet, the circumstances under which real exchange rates can be expected to remain constant are decidedly unlikely. Purchasing power parity would prevail, for example, if the only source of significant shocks to the balance of payments were differing rates of inflation, or if the elasticities of demand for exports and imports were so high that shocks from other sources could be adjusted through very small exchange-rate changes.

The first possibility can be seen through a simple example. In a trade-only world with flexible wages and prices that starts from balance-of-payments and exchange-rate equilibrium, a 10 per cent inflation in one small country will be just offset by a 10 per cent depreciation in that country's currency. The new exchange rate will return all relative prices to their previous pattern and restore the earlier equilibrium. If the only source of shocks to the exchange rate is an event such as a 10 per cent increase in prices caused by a 10 per cent increase in the nominal money supply, a flexible exchange rate can be expected to follow purchasing power parity. But if the balance of payments and the exchange rate are affected by factors other than changes in relative price levels, another unlikely circumstance is necessary to produce a constant real exchange rate.

This second possibility is that short-term elasticities of demand for traded goods are so high that very small changes in the exchange rate would be sufficient to adjust to payments shocks from a variety of sources and no significant change in real exchange rates would occur. A large shift in the capital account, for example, would be absorbed or adjusted with only a slight change in the exchange rate, leaving the pre-existing purchasing-power-parity situation largely undisturbed. In the far more likely event that the relevant elasticities are lower, the same shift in capital flow would require a sizable exchange-rate change and purchasing power parity could not be expected to hold during the adjustment process.

Purchasing power parity might be saved in the case of low short-run and high long-run demand elasticities if Friedman's rational speculators always conclude that the long-run exchange-rate path will follow relative price levels and that recent rates of inflation are a good predictor of the future (Friedman, 1968, p. 426). If these speculators move large sums of money on the basis of this expectation, relatively constant real exchange rates might be expected despite low short-run demand elasticities and a variety of shocks to the exchange market. The obvious problem is the requirement that speculators conclude that recent rates of inflation are a sound basis on which to predict future price changes and therefore the likely future exchange rates. This would be an extremely naive way to form expectations. Modern port-

folio models of exchange-rate determination (e.g., Dornbusch, 1976) sometimes produce sharp movements away from purchasing power parity despite the presence of speculators with rational expectations.

Finally, complete flexibility of domestic wages and prices would maintain purchasing power parity, because any shock to the exchange rate would first produce a change in the price of tradables and then rapid and parallel changes in wages and all other prices in the economy. A 10 per cent depreciation from whatever source will raise the price of tradables by 10 per cent, which will put upward pressure on wages and then on all other prices until the general price level has risen by 10 per cent, thereby maintaining the real exchange rate. This scenario assumes that the central bank is willing to support such a result with an appropriate increase in the nominal money supply. Otherwise, tighter monetary conditions resulting from a decline in the real money supply will move the exchange rate and prices back toward their original level. Complete wage and price flexibility should mean, however, that purchasing power parity holds throughout the process.

Complete flexibility of wages and the prices of nontradables does not seem to be characteristic of the economies of the United States and other industrialized countries, however, particularly when the pressure on wages and prices is downward. Explanations are numerous, including the traditional kinked oligopoly demand curve, purported customer preferences for stable prices, and the direct costs of making and publicizing frequent price changes. Wage rigidity can result from union contracts that have less than full indexing. Downward rigidity in wages may also occur in nonunion sectors of the economy, because employers fear that wage cuts will both encourage the best workers (who may have options) to leave, and sharply reduce morale among remaining workers in the firm. Each of these two effects could reduce labor productivity to such an extent that lower wages would not produce lower unit labor costs.

Wage indexing is far more common in Europe than in the United States and is often designed to offset price-level changes completely. On this side of the Atlantic, fewer contracts are indexed and they typically provide for wage increases that do not fully cover price-level increases (Sachs, 1979, pp. 271-273). As a result, wages and perhaps nontradables prices are likely to be somewhat more rigid here than in Europe.

In all these situations, the law of one price is implicitly assumed for tradable goods. In particular, it is always assumed to hold for a single traded good where product differentiation does not exist. In general, however, broad price indices for tradables need not follow purchasing power parity even if the law of one price is valid. Product differentiation may make similar products in different countries less than perfect substitutes (e.g.,

prices of Volkswagens in Germany and Fiats in Italy may not follow purchasing power parity), or the same products may carry different weights in the price indices for two countries. The law of one price can be expected to operate only for single homogeneous traded goods, and even then it requires that markets be sufficiently competitive to produce prompt and effective arbitrage whenever the exchange rate moves.

If markets for homogeneous tradables are not sufficiently competitive to bring about such prompt adjustment of relative prices after an exchange-rate movement, the payments-adjustment process becomes far more complicated (Dunn, 1970, pp. 140-151). The assumption that the law of one price obtains for single homogeneous tradables is crucial for any expectation that a flexible exchange rate will closely follow purchasing power parity for more broadly defined price levels. The law of one price for tradables is far from sufficient for the continuous maintenance of purchasing power parity, but it would appear to be necessary.

Adjustment of Current and Capital Accounts

Some large and simplifying assumptions also lie behind the suggestion that flexible exchange rates will greatly weaken the mechanism through which business cycles are transmitted between countries, strengthen an independent national monetary policy, and generally produce a world in which macroeconomic policies can be managed solely on the basis of domestic economic priorities.

In much of the work by proponents of flexible exchange rates, the current account was viewed as a simple function of relative price levels and of domestic and foreign levels of national income. The possibility was usually not considered that the current account and hence the exchange rate might be significantly affected by events such as OPEC pricing decisions or instabilities in other individual commodity markets. If such events were dealt with, it was assumed that they were inherently temporary and that rational speculators would keep the exchange rate at or close to its long-run equilibrium.

The view of capital flows implicit in the work of Sohmen (1969, pp. 142-143) and Mundell (1960, 1961) on macroeconomic independence and monetary policy under floating exchange rates was based on a flow-adjustment model. Capital was assumed to flow continuously in response to a constant interest-rate differential. This assumption made it possible to conclude that a tight monetary policy would attract continuing capital inflows that would maintain an appreciated currency and a weaker trade account as long as a high interest rate remained in effect. It was widely recognized that a stock-adjustment model was a far more realistic approach to the capital account,

but this approach was very difficult to incorporate in the policy-assignment models that were popular in the late 1960s and late 1970s. If domestic aggregate demand is a function of the interest-rate level and the capital account is a function of the change in interest rates, it is hard to reach firm conclusions on the use of monetary policy to deal with domestic business cycles through its effects on the capital account and the exchange rate.

Attempts were made to introduce a stock-adjustment aspect to this discussion, but they had little apparent impact on the typical view of how monetary policy would operate under a flexible exchange rate. McKinnon and Oates (1966) dealt with this problem under the rather demanding assumption that international differences in interest rates were completely arbitraged away, and both Branson (1976) and Willett and Forte (1969) dealt with a stock-adjustment approach to the policy-assignment problem under the assumption of a fixed exchange rate. Although published research attempted to introduce a stock-adjustment process to the policy-assignment literature, the conventional academic wisdom on the subject of how monetary policy would work under flexible exchange rates was still based on Mundell's flow-adjustment model.

The early 1970s view of the capital account also said little about changing inflation and interest-rate expectations or about their potential impact on a floating exchange rate. Expectations were typically ignored or assumed to be neutral. It was not widely forseen that large changes in inflationary expectations, some of which were later reversed, could have disruptive impacts on exchange markets and rates.

From the perspective of 1983, it is clear that the preceding pages represent an excessively optimistic view of the prospects for a flexible-exchange-rate regime. Nevertheless, this discussion does approximate the conventional academic view of the late 1960s and early 1970s. At least, it roughly describes what my students were taught twelve years ago. What follows might be viewed as an attempt to atone for past sins.

Expectations *vs.* Events: 1973-82

Constant Real Exchange Rates

Purchasing power parity was a short-lived hope. Movements in real exchange rates have been large and have often been quickly reversed. The trade-weighted U.S. dollar depreciated in real terms by about 10 per cent in 1976-78 and then appreciated by over 20 per cent in 1981-82. Sterling depreciated in real terms by about 15 per cent in 1975-76 before appreciating by over 60 per cent in 1977-80. The Swiss franc rose in real terms by

over 30 per cent in 1977-78 and then fell by about 25 per cent in the next two years. The yen followed a similar pattern, rising in real terms by over 30 per cent in 1975-78 before falling by about 25 per cent in 1978-79 (*The Economist*, 1981, p. 31). Since real exchange rates are measured after allowance for domestic and foreign rates of inflation, none of them would have changed significantly if purchasing power parity had held.

Data developed by Korteweg (1980, p. 18) indicate that the average change in the real exchange rate for sixteen industrialized countries between March 1973 and the end of 1979 was 6.8 per cent. Sterling and the Swiss franc appreciated in real terms by 18.7 per cent and 16.2 per cent respectively over that period, while the Canadian dollar experienced a real depreciation of 7.2 per cent. Expectations that exchange rates would follow relative price levels, thereby keeping real exchange rates largely unchanged, have certainly not been supported by the 1973-82 experience (see Frenkel, 1981).

If these real-exchange-rate changes were a long-run or permanent response to changing patterns of technological competitiveness or other factors that required fundamental payments adjustment, they might reasonably be viewed as necessary or even desirable. This has often not been the case, however; large changes in real exchange rates have often been a response to temporary factors and have often been reversed subsequently. For example, sterling appreciated sharply in 1979-80 when the arrival of a new Conservative administration led many market participants to expect a prompt deceleration of U.K. inflation. Since nominal interest rates remained very high, expected real yields increased sharply, making British assets very attractive. Increasing North Sea oil production, combined with increases in oil prices, added to the upward pressure on sterling. When inflation failed to decline promptly and oil prices stopped rising, sterling depreciated sharply. The dollar declined sharply in 1977-78 because of a weaker current account and widespread doubts about the macroeconomic policies of the incoming administration. It then appreciated sharply in 1981-82, when extraordinarily high nominal yields combined with an expectation of decelerating inflation to create very high expected real yields on dollar assets. These and other changes in real exchange rates have not been based on a need for adjustment to permanent shifts in payments patterns but have instead resulted from temporary factors, some of which were partially speculative.

Gains and Losses from Changing Real Exchange Rates

Large changes in real exchange rates have produced a range of disruptive and undesirable side effects within the economies of countries maintaining flexible exchange rates. One such effect was that sizable capital gains and