

SPECIAL PAPERS IN INTERNATIONAL ECONOMICS

No. 14, JUNE 1980

**HAVE FLEXIBLE EXCHANGE RATES
HANDICAPPED MACROECONOMIC
POLICY?**

MORRIS GOLDSTEIN

INTERNATIONAL FINANCE SECTION

DEPARTMENT OF ECONOMICS

PRINCETON UNIVERSITY • 1980

This is the fourteenth number in the series SPECIAL PAPERS IN INTERNATIONAL ECONOMICS, published from time to time by the International Finance Section of the Department of Economics at Princeton University.

The author, Morris Goldstein, is Assistant Chief of the Special Studies Division in the Research Department of the International Monetary Fund. Before joining the Fund in 1970, he was a Research Fellow in Economics at the Brookings Institution. This paper was written while he was on a leave of absence with the Office of International Monetary Research, U.S. Treasury. The views expressed are solely those of the author and do not necessarily represent the views of either the IMF or the U.S. Treasury. An earlier version was presented at the Conference on Macroeconomics under Flexible Exchange Rates, sponsored jointly by the Ford Foundation and the Bank of Spain and held in Madrid in September 1979.

The Section sponsors papers in its series but takes no further responsibility for the opinions expressed in them. The writers are free to develop their topics as they wish.

PETER B. KENEN, Director
International Finance Section

SPECIAL PAPERS IN INTERNATIONAL ECONOMICS

No. 14, JUNE 1980

HAVE FLEXIBLE EXCHANGE RATES
HANDICAPPED MACROECONOMIC
POLICY?

MORRIS GOLDSTEIN

INTERNATIONAL FINANCE SECTION

DEPARTMENT OF ECONOMICS

PRINCETON UNIVERSITY · 1980

INTERNATIONAL FINANCE SECTION
EDITORIAL STAFF

Peter B. Kenen, *Director*

Ellen Seiler, *Editor*

Susan Ciotti, *Editorial Aide*

Kaeti Isaila, *Subscriptions and Orders*

Library of Congress Cataloging in Publication Data

Goldstein, Morris, 1944-

Have flexible exchange rates handicapped macroeconomic policy?

(Special papers in international economics ; no. 14 ISSN 0081-3559)

Bibliography: p.

I. Foreign exchange problem. 2. Economic policy. I. Title.
II. Series: Princeton University. International Finance Section. Special papers in
international economics ; no. 14.
HG3811.G64 339.5'09172'2 80-16268

*Copyright © 1980 by International Finance Section, Department of Economics,
Princeton University.*

All rights reserved. Except for brief quotations embodied in critical articles and reviews, no part of this publication may be reproduced in any form or by any means, including photocopy, without written permission from the publisher.

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

International Standard Serial Number: 0081-3559

Library of Congress Catalog Card Number: 80-16268

Contents

INTRODUCTION	1
A Caveat	2
THE DISCIPLINE HYPOTHESIS	6
Political Costs of Devaluation	7
Dispersion of Inflation Rates	7
Asymmetry in Reserve Discipline	9
External Constraints under Flexible Rates	9
Internal Discipline under Flexible Rates	10
Conclusions	12
THE RATCHET HYPOTHESIS	13
Laffer-Mundell Thesis	13
Effect on Domestic Prices of Changes in Import Prices	15
Conclusions	17
VICIOUS AND VIRTUOUS CIRCLES	18
The Case for the Vicious Circle	18
The Case against the Vicious Circle	25
Escaping from the Vicious Circle	27
Conclusions	29
FLEXIBLE EXCHANGE RATES AND UNEMPLOYMENT	30
Flexible Rates and the Inflation-Unemployment Tradeoff	31
Flexible Rates and Frictional Unemployment	33
Conclusions	34
MONETARY POLICY UNDER FLEXIBLE RATES	36
Control over the Money Supply under Fixed and Flexible Rates	36
Effectiveness of Monetary Policy under Flexible Rates	40
Conclusions	47
THE INSULATING PROPERTIES OF FLEXIBLE RATES	48
Insulation with High vs. Low Capital Mobility	48
Insulation against Overall vs. Relative Price Changes	51
Empirical Evidence	52
Conclusions	54
FLEXIBLE RATES AND FOREIGN TRADE FLOWS	55
Nominal vs. Real Exchange-Rate Changes	55
Short-Run vs. Long-Run Price Elasticities	57

The Dominance of Real Income Movements	59
Nonprice Characteristics of Traded Goods	60
Effects of Flexible Rates on the Size of Price Elasticities	60
Conclusions	62
CONCLUDING OBSERVATIONS	64
REFERENCES	66

List of Tables

1. Summary Indicators of Macroeconomic Performance for the Seven Largest Industrial Countries, 1962-72 Average vs. 1973-78 Average	3
2. Domestic Price Effects of Exchange-Rate Changes: Representative Estimates of Key Parameters for the Seven Largest Industrial Countries	20
3. Trade Balances, Current Accounts, Exchange Rates, and Relative Prices for the Seven Largest Industrial Countries, 1976-78	56

Introduction

This paper examines the impact of greater exchange-rate flexibility on the conduct of macroeconomic policy in industrial countries. The basic plan is to survey both the 1973-79 experience with managed floating and the literature on flexible exchange rates in order to determine if and how flexible rates have made macroeconomic policy more difficult.

To keep the paper to manageable proportions, a number of restrictions have been placed on its scope. First, while an important characteristic of floating rates is that lines of influence between exchange rates and domestic macroeconomic policies run in both directions, the emphasis here is on the effect of the exchange-rate regime on domestic policies and targets rather than the other way around. Put in other words, the paper is not a survey of exchange-rate determination.¹

Second, any discussion of the relative merits of managed floating or flexible rates must by definition have some standard of comparison in mind—the familiar “Compared to what?” question. Rather than consider a wide range of alternatives (pure floating, truly fixed rates, crawling pegs, target zones, reference rates, etc.), this paper uses the adjustable-peg system as the sole benchmark for the existing floating-rate system.² Managed floating is assumed to be differentiated from the adjustable-peg system by the greater frequency of exchange-rate changes, by the larger share of the external adjustment burden that is assigned to the exchange rate, and by the absence of a publicly declared target exchange rate.³

I am indebted to Jacques Artus, John Bilson, Anne Braun, Arturo Brillembourg, Andrew Crockett, Jacob Dreyer, Gottfried Haberler, John Helliwell, John Karlik, Mohsin Khan, Anthony Lanyi, Angelo Mascaro, Michael Porter, Robert Solomon, Erich Spitaeller, George von Furstenberg, Thomas Willett, and John Williamson for providing valuable comments on earlier drafts.

¹ This restriction is not hard to rationalize, because several excellent surveys of exchange-rate determination already exist (see Isard, 1978; Schadler, 1977; and Kohlhaugen, 1978).

² Although the vast majority of countries now maintain pegged exchange rates of one type or another (95 out of 134 members as of October 1978), the existing exchange-rate system is best characterized as “floating” when the measure is either the proportion of world trade conducted by countries with floating rates or the proportion of world trade conducted across floating-rate areas. Recent IMF staff estimates indicate, for example, that less than one-fifth of world trade in 1977 moved across pegged exchange rates (see IMF, 1978, p. 38).

³ Farber *et al.* (1977) compared the distribution of exchange-rate changes under fixed (1957-71) and floating (1971-75) exchange rates for seventeen developed countries. They found that the proper distinction in the 1960s and 1970s was not between fixed and fluctuating rates but between large infrequent adjustments and small frequent adjustments of exchange rates. Because the empirical distributions

Finally, the paper does not include much detailed description or evaluation of the actual macroeconomic policies followed by individual industrial countries during the floating-rate period.⁴ Instead, the focus is on the major issues and arguments among the industrial countries about how, when, and where flexible rates complicate the task of macroeconomic management, and on the empirical evidence relevant to choosing among these competing views.

The paper is organized around the discussion of seven major questions about the effects of flexible rates. The first three deal with inflation, the fourth with unemployment, the fifth with monetary policy, the sixth with shocks or disturbances, and the seventh with trade flows. These questions can be compactly stated as follows: (1) Do flexible rates reduce the authorities' will or discipline to fight inflation? (2) Do flexible rates *cum* downward price inflexibility have a tendency to ratchet up country and global price levels? (3) Do flexible rates exacerbate intercountry inflation differentials by drawing weaker countries into a "vicious circle" of inflation and currency depreciation, and stronger ones into a "virtuous circle" of price stability and currency appreciation? (4) Do flexible rates affect unemployment either by allowing some countries to maintain higher inflation rates than would be possible under fixed rates or by generating enough "noise" in relative price signals to increase frictional unemployment? (5) Do flexible rates increase the independence or effectiveness of domestic monetary policy? (6) Do flexible rates have much value as insulators or shock absorbers against external disturbances? And (7) do flexible rates alter the responsiveness of trade flows to exchange-rate changes? Conclusions appear at the end of the discussion of each major question and in a final section that draws together the main lessons from the analysis.

A Caveat

Table 1 provides a quick comparison of inflation, unemployment, real income growth, and unused industrial capacity for the seven largest industrial countries during the floating-rate period (1973-78) and during the last decade of the adjustable-peg system (1962-72). The clear message is that the industrial countries as a group have fared far worse during the past six years of floating rates than during the preceding decade of adjustable par values. Indeed, the last column of Table 1 says

are non-normal for all these countries, a comparison of standard deviations does not adequately summarize the difference between the two exchange-rate regimes.

⁴ Black (1977) provides a detailed analysis of the macroeconomic and exchange-rate policies followed by Germany, France, Sweden, the United Kingdom, and the United States during the early years of floating. An update is given in Black (1978).

TABLE 1
SUMMARY INDICATORS OF MACROECONOMIC PERFORMANCE FOR THE SEVEN LARGEST
INDUSTRIAL COUNTRIES, 1962-72 AVERAGE VS. 1973-78 AVERAGE

	Canada	France	Germany	Italy	Japan	U.K.	U.S.	Unweighted Average
Consumer prices: ^a								
1962-72	3.1	4.5	3.1	4.4	5.7	4.9	3.1	4.1
1973-78	8.9	10.1	5.1	15.5	11.5	15.0	7.7	10.6
Unemployment rate: ^b								
1962-72	5.0	1.8	1.0	3.2	1.2	2.3	4.7	2.7
1973-78	6.9	4.0	3.7	3.7	1.7	4.4	6.7	4.4
Real GNP: ^a								
1962-72	5.5	6.0	4.6	4.6	10.3	2.4	3.9	5.3
1973-78	4.0	3.1	2.3	2.7	4.7	3.0	3.0	3.2
Output gap in manufacturing: ^c								
1962-72	-4.5	n.a.	-1.7	-4.0	-1.9	-3.2	-2.0	-2.9 ^d
1973-78	-7.8	n.a.	-7.6	-7.0	-15.6	-8.9	-5.6	-8.7 ^d

^a Annual percentage change.

^b As per cent of labor force.

^c Defined as potential output less actual output, as percentage of actual output. A negative figure indicates manufacturing sector is operating at less than normal capacity. The figures are recent revisions of those in Artus and Turner (1978).

^d Excludes France.

that inflation rates have been over twice as high, unemployment rates more than one and a half times as high, real income growth only about 60 per cent as fast, and output gaps in manufacturing about three times as large.⁵ If macroeconomic policy were judged only by what happens to the "bottom line," the conclusion would be hard to escape that it has been noticeably less successful under floating rates.

But care needs to be taken to avoid confusing the *period* of flexible rates with the *effects* of flexible rates themselves. Specifically, one wants to be able to distinguish between the proposition that macroeconomic policy in general has become less effective in industrial countries during the floating-rate period and the proposition that flexible rates per se have made macroeconomic policy less effective.

To appreciate the extent of this identification problem, it is sufficient to mention just some of the other major factors affecting the stance and efficacy of macroeconomic policies during the period of floating rates.

As regards shocks or disturbances, the two major ones according to Black (1978) were the tripling of world oil prices in 1974 (Pierce and Enzler, 1974) and the huge expansion (57 per cent) in international reserves from 1970 to 1972 associated with the collapse of the Bretton Woods system (Heller, 1976).⁶ The oil shock produced large stagflationary effects in most industrial countries, even given the recycling of much of the OPEC current-account surplus and the avoidance of competitive devaluation among the oil-consuming countries. From 1975 on, macroeconomic policy had to deal with high inflation and high unemployment simultaneously. The international liquidity shock, in combination with the decision of many countries to pass through reserve increases to their money supplies, meant that the floating-rate period began with substantial monetary expansion in the pipe, the impact of which allegedly contributed to the high inflation rates of 1973-75.⁷

On the structural and institutional fronts, there were the changes in

⁵ The qualitative conclusion of this comparison is not much affected by the dating of the adjustable-peg period (1960-70 vs. 1962-72), the number of countries included in the industrial-country average (14 vs. 7), the weighting of the individual country figures (GNP-weighted vs. unweighted), or the particular price indices or output-gap measures employed.

⁶ Some observers would also want to include the world commodity boom of 1972-74 as another major shock. It cannot, however, be considered totally exogenous to the exchange-rate system because the exchange-rate instability of 1973-74 apparently fueled some speculation in commodities (see Cooper and Lawrence, 1975).

⁷ Heller (1976) has estimated that a 10 per cent increase in world reserves leads to an increase in world consumer prices of about 5 per cent, and that the mean lag is roughly three years. For a critique of Heller's estimates, see Sweeney and Willett (1977). On the question of causality, Khan (1979) finds uni-directional causality running from international reserves to inflation for the fixed-rate period but two-way causality for the floating-rate period.

the demographic composition of industrial-country labor forces, with their effects on measured and natural unemployment rates (Perry, 1970, and Haveman, 1978); the spread of indexation of wages and salaries in response to the high and variable rates of inflation (Braun, 1976), with its implications for the magnification of supply shocks (Fisher, 1977) and the reduced scope for real exchange-rate changes (Modigliani and Padoa-Schioppa, 1978); the rapid growth of the Eurodollar market and the switch from asset to liability settlement of external imbalances for even non-reserve-currency countries; and the adoption of pre-announced money-supply targets by several industrial countries in response to both high inflation and excessive exchange-rate variability (IMF, 1979b).

Finally, even the theoretical support for stabilization policy underwent some revision with the general acceptance of the vertical nature of the long-run Phillips curve (Friedman, 1968, 1977) and the growing popularity of the rational-expectations critique of activist stabilization policy (Lucas, 1976, and Sargent and Wallace, 1976).

The practical upshot of this intermingling of shocks, policy responses, and structural and institutional changes is that there are strong limits to the inferences one can draw from the observed data about the independent effects of flexible rates on macroeconomic policies. This should be kept in mind when the "evidence" on the various hypotheses about flexible rates is presented.

The Discipline Hypothesis¹

One of the older arguments against flexible rates is that they reduce the resolve or discipline to fight inflation. This argument is worth examining in some detail, because even long-time supporters of flexible rates like Sohmen (1963), Haberler (1964), and Yeager (1968) have regarded it as perhaps the most potent objection to a system of flexible rates.

The discipline hypothesis can be stated as follows: Under fixed exchange rates, a country that inflates at a rate higher than its trading partners will, *ceteris paribus*, suffer a deterioration in its balance of payments (i.e. a loss in international reserves). Since a devaluation will be regarded as an indicator of the failure of government policies, the high-inflation country will have to discipline itself by restraining aggregate demand so as to bring its inflation rate into line with those of its trading partners. Implicit here is the notion that the fixed exchange rate and the declining stock of international reserves provide the rallying points necessary to convince the public or the authorities in the high-inflation country to accept the imposition of unpopular domestic restraints (e.g. the unemployment costs associated with refusing to validate excessive money-wage increases). A much weaker discipline is said to exist for surplus countries under fixed rates because there is no equivalent constraint on the accumulation of reserves.

This asymmetry in discipline is claimed to be absent under flexible rates. When rates are floating, the immediate consequence of a relatively high inflation rate is a currency depreciation and, in turn, a higher nominal price level in the high-inflation country. But since a flexible exchange rate automatically equilibrates supply and demand in the foreign-exchange market, the balance-of-payments constraint upon domestic policy is said to be eliminated for surplus and deficit countries alike. Thus, external pressures to reduce the inflation rate in the high-inflation country will disappear, and, according to the discipline argument, inflation will be higher than under fixed rates.

The merits of the discipline hypothesis can perhaps best be ascertained by looking one at a time at its component propositions: (1) A devaluation under fixed rates carries heavy political costs. (2) Fixed rates reduce the dispersion of inflation rates across countries by preventing both low- and high-inflation countries from exercising their different inflation/unemployment preferences. (3) This reduction in dispersion is narrowed more by reducing the inflation rates of high-inflation countries

¹ Much of this chapter draws heavily on Crockett and Goldstein (1976).

than by increasing those of low-inflation countries (i.e. discipline operates asymmetrically). (4) External constraints on domestic policy are removed by the balance-of-payments clearing properties of flexible rates. And (5) the internal discipline on high-inflation countries under flexible rates is weak.

Political Costs of Devaluation

Evidence on the political costs of devaluation is scanty, quite apart from the question of whether economists are best qualified to make such judgments. In a study of thirty-six devaluations in less-developed countries, Cooper (1971) found that in nearly 30 per cent of the cases the government fell within a year after the devaluation; the corresponding figure for the control group of countries (those not devaluing) was 14 per cent. Ministers of Finance fared worse, nearly 60 per cent losing their jobs in the year following devaluation (vs. 18 per cent for the control group).

No similar analysis exists for industrial countries, but there are some clues to suggest that the political costs of devaluation are apt to be lower. For one thing, the emerging public-choice literature, which seeks to relate voting behavior and government popularity to economic variables, generally finds that only the traditional domestic macro targets (real income growth, inflation and unemployment rates, etc.) matter, and further that only recent performance counts; voters have very short memories (Fair, 1978; Frey and Schneider, 1978). This would imply that devaluation is politically costly in industrial countries only insofar as it has adverse effects on real income, inflation, or unemployment and, even then, only if these effects show up within a year or two of election time. The observed frequency of exchange-rate changes and the preponderance of devaluations during the adjustable-peg period also cast doubt on the devaluation-aversion thesis. For example, from 1959 to 1970 the longest period without an exchange-rate change by any of sixteen OECD countries was four years (1962-66). The number of departures from the "snake" by high-inflation countries also does not lend much support to the discipline hypothesis.

Dispersion of Inflation Rates

On the question of dispersion of inflation rates across countries under fixed and flexible rates, quite a bit of empirical work has been done but its interpretation is ambiguous. Calculations of the standard deviation of inflation rates among the industrial countries invariably indicate greater dispersion of inflation rates under floating than during the adjustable-peg period (Whitman, 1976; Fieleke, 1978). A representative calcula-

tion is that the standard deviation of consumer-price-index inflation rates among the seven largest industrial countries listed in Table 1 increased from 1.6 for 1962-72 to 4.4 for 1973-78.² The difficulty with such comparisons is that lower dispersion of inflation rates under fixed rates is consistent not only with the hypothesis that countries have less freedom to exercise their differing inflation propensities but also with alternative hypotheses, such as increased transmission of inflation across countries, stronger common external price shocks, greater vulnerability to such shocks, greater convergence of rates of productivity growth across countries, the then smaller relative size of the nontradable sector in most countries, and the endogeneity of the exchange-rate regime itself to the size of these inflation differentials. Thus, while it is clear that inflation disparities were smaller under fixed rates, it is not clear why this was so.³

A second line of approach to the dispersion question is to try to establish that the intercountry inflation differences that did exist during the fixed-rate period were small enough so that it is meaningful to speak about a single world inflation rate. The trick here, of course, is to find an appropriate measuring rod for these differences. It is not enough merely to observe that correlations of price levels or of inflation rates across countries were high (R^2 's = 0.9) under fixed rates. Genberg (1977) has offered perhaps the most original idea by proposing that differences in inflation rates among U.S. cities be used as the benchmark for intercountry differences. Using quarterly inflation rates for sixteen OECD countries over the 1959-70 period (and various subperiods, including the 1962-66 period of no exchange-rate changes), Genberg concludes that, on balance, the variation in inflation rates between countries was no greater than that within the United States. Hence, if the United States is considered to be an integrated market, so too should the world economy. Lawrence (1979) has recently shown, however, that Genberg's analysis-of-variance tests were inappropriate to the question at hand. Once corrected, they yield the robust result that inflation rates were much more similar within than across countries, in both the short and long run.

² If the coefficient of variation is used as the relevant dispersion measure rather than the standard deviation, the differences between the two periods are not surprisingly much reduced (e.g. 0.39 for 1962-72 vs. 0.41 for 1973-78). Which measure to use depends on one's purpose. The standard deviation seems more appropriate when the aim is to measure how the exchange-rate regime affects the dispersion of countries' relative price levels (Parkin, 1976).

³ Swoboda (1977) suggests that the observed inflation differences across countries during the fixed-rate period can be explained in terms of the nonfixity of exchange rates, impediments to trade and sluggish goods arbitrage, the existence of nontraded goods, and errors of measurement in the price data.

Asymmetry in Reserve Discipline

Even if we accepted that greater fixity of exchange rates reduces the dispersion of inflation across countries, lower dispersion would not by itself make fixed rates anti-inflationary unless reserve discipline operated more strongly on the high-inflation countries.⁴ What can we say about such an asymmetry?

One can certainly identify periods under the fixed-exchange-rate regime when individual industrial countries were led to adopt restrictive domestic policies for balance-of-payments reasons—the United Kingdom (1954-55, 1957, 1960-61, 1965-66), Italy (1963-64), Japan (1956-57, 1963-64, 1966-67), France (1956-57), etc. The trouble is that it is not much harder to find cases where other or the same deficit high-inflation countries did not adopt restrictive domestic policies, the United States during the Vietnam period in the late 1960s being perhaps the classic counterexample.⁵ Cases can similarly be cited on both sides of the aisle as regards surplus low-inflation countries (see Crockett and Goldstein, 1976).

All in all, the Bretton Woods experience probably lends qualified support to the proposition that balance-of-payments deficits prompted stronger demand-management adjustment measures than comparable surpluses. This is essentially Michael's (1971) conclusion from his study of the responsiveness of demand policies to balance-of-payments developments in nine industrial countries over the 1950-66 period:

Countries whose monetary policy generally responds to changes in the balance of payments tend to make exceptions to this pattern of behavior mainly when they are in surplus. Similarly, compliance of monetary policy with balance-of-payments requirements in generally non-complying countries tends to be found at times of deficit. . . . The loss of reserves is viewed with concern; but their accumulation . . . is viewed, in fact, with satisfaction or indifference" (pp. 63-64).

External Constraints under Flexible Rates

The next step in the discipline argument, that flexible rates will remove the external constraint on domestic policy via the market-clearing properties of the exchange rate, would seem to be the weakest link. Whatever the explanation, be it the absence of supporting macropolicies, or the importance of nonprice factors in international trade, or the perceived temporary character of exchange-rate changes, it is by now clear

⁴ Indeed, some economists (e.g. Haberler, 1979) view the greater dispersion of inflation rates under floating simply as evidence that floating has enabled some countries to become much-needed oases of price stability in an inflationary world.

⁵ Reserve-currency countries, of course, represent a special case for the discipline hypothesis (see Black, 1977).

that even sizable real exchange-rate changes will not equilibrate current accounts in the short run (Artus and Young, 1979).⁶ Even more to the point, where there have been conflicts between internal and external targets under managed floating, the conflict has often been resolved in favor of the external target. Black (1978), for example, identifies the following periods as classic dilemmas in the sense of Meade: Germany in 1973, France in 1974-76, Japan in 1974, the United Kingdom in 1974-76, Italy in 1974 and 1976, Canada in 1974-76, and Sweden in 1974-76. His conclusions are worth reporting:

In most cases, some influence of the external target on monetary or fiscal policy is evident, except for Germany in 1973, the United Kingdom in 1974, and Canada in 1974. Furthermore, the influence of external targets appears to have been rising, as the 1976 conflict cases (France, Italy, Canada, the United Kingdom, and Sweden) have all been resolved in favor of the external target over the internal target. This flies in the face of the conventional wisdom about floating exchange rates, which should supposedly *reduce* [his italics] the influence of external targets (p. 626).

Internal Discipline under Flexible Rates

The view that internal disciplinary pressures against inflation would be weak under flexible rates has also been challenged.⁷ Emminger (1973), for one, argues that the only immediate consequence of a high-inflation policy under fixed rates is a rundown in the stock of reserves. Under flexible rates there will be a currency depreciation, and this will lead to an additional increase in domestic prices and to recognition by the public that domestic incomes carry less and less purchasing power over foreign goods. Thus, pressures will soon be brought to bear on the authorities to halt their inflationary policies.

The import of this argument would seem to depend on the time span under consideration and on the public's response to many small price changes vs. a single large one. That is, once one admits the reasonable possibility that under an adjustable-peg system, a high-inflation country will ultimately have to devalue, then the issue reduces to (1) whether a given increase in inflation now will have a greater disciplinary effect than the perceived inflationary cost of a devaluation later; and (2)

⁶ In Artus, 1979, it is noted that private capital flows have covered little of the current-account imbalances for the three largest industrial countries over the 1970-78 period. Artus argues that the relevant question is not whether flexible rates will clear the current and capital accounts without any official intervention, but rather at what *level* of exchange rates the market will clear without intervention.

⁷ Another argument for why flexible rates can provoke stronger discipline than fixed rates is that flexible rates "bottle up" inflation in the originating country (relative to the sharing of exporting of inflation under fixed rates). The counterargument to this is that flexible rates bottle up unemployment as well, so that it is unclear why inflationary mistakes would be avoided more than deflationary ones.