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THE CASE FOR FLOATING EXCHANGE
RATES RECONSIDERED

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INTERNATIONAL FINANCE SECTION

DEPARTMENT OF ECONOMICS

PRINCETON UNIVERSITY

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FRITZ MACHLUP, Director
International Finance Section

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ECONOMIC FACTORS

A few years ago, in a panel discussion on the pros and cons of floating exchange rates, Milton Friedman expressed his discontent with the progress that had been made in "the state of intellectual discourse on these issues." Friedman's discontent is justified; the debate goes round and round without a stopping place, with proponents and opponents of floating rates for the most part talking past each other. It is not difficult to understand why this is so. Those on each side of the controversy have been so concerned with scoring debating points against each other that hardly anyone—certainly not Friedman himself—has bothered to tackle what is, after all, the chief task of the economist: to present a calculus in which the relative costs and benefits of the alternatives before us can be presented, quantified, and compared.

To be sure, the costs and benefits in this case are difficult to specify, both theoretically and empirically. (In addition, there are political factors, discussed at the end of this essay, which are incapable of quantification.) According to opponents of floating rates, their chief cost would result from the discouragement of foreign trade and investment. According to proponents of floating rates, their chief benefit would derive from the greater freedom permitted domestic economic policies in attaining macroeconomic goals. The approach that first suggests itself is to attempt to estimate (1) the welfare losses accompanying the estimated decline of foreign trade and investment, and (2) the welfare gains due to the estimated improvement in the macroeconomic performance of the economy. Both these complicated estimates would have to take into account the counterarguments that (a) the use of trade barriers and capital controls for balance-of-payments purposes under fixed exchange rates tends to reduce the volume of foreign trade and investment, and (b) the attainment of macroeconomic goals may be made more difficult under floating rates to the extent that the latter result in the introduction of an inflationary bias into the system. Obviously, there would have to be a good deal of guesswork in constructing such estimates, but even "guesstimates" provide a better basis for economic decision-making than lists of arguments.

Yet the estimates just described would not be based on the most comprehensive possible view of the problem. They would be based on the

assumption that a reduction in the volume of foreign trade and investment necessarily entails a welfare loss owing to a poorer international allocation of goods and resources, just as, for example, an increase in tariffs is usually assumed to lead to a welfare loss. But there is a difference between the case of floating exchange rates and the case of tariffs. Tariffs represent an artificial barrier to trade, which creates a discrepancy between the domestic price ratio of foreign and domestic goods facing importers and exporters and the terms of trade (the ratio of c.i.f. import prices to f.o.b. export prices). In the case of floating exchange rates, foreign trade is burdened by an additional exchange risk that creates no discrepancy between these two ratios but does add a real cost to the activities connected with importing and exporting commodities. But if this is a real cost why does it not appear, or why is it much smaller, under fixed exchange rates? It is because by pegging the exchange rate, thereby removing a large part of exchange risk, the government is in effect subsidizing those engaged in international transactions. The next sections of this essay explain this line of reasoning in greater detail.

THE EFFECTS OF EXCHANGE RISK

The risk caused by uncertainty about future profits can be assumed to represent a cost to an entrepreneur. *Ceteris paribus*, a rise in the variance of expected profits in an activity will tend to diminish its attractiveness to entrepreneurs and thereby to induce some resources to be transferred to other activities, while a *reduction* in the variance of expected profits will tend to draw resources from other activities. In some cases it will be possible to acquire, at the entrepreneur's own cost or that of the government, insurance against the variance in profits owing to exchange-rate variation, in which case the risk appears as an objective money cost in the profit calculation of the firm or the public costs of society. In part, the variance of expected profits cannot be eliminated by insurance and is treated in the theory of the firm as a "subjective cost" in the entrepreneur's calculations. Since the inclusion of nonmonetary elements (probability distributions and the like) in economic theory greatly complicates analysis and makes it difficult to arrive at any conclusions about Paretian efficiency, we will in what follows make the drastically simplifying assumption that the variance in profits resulting from exchange-rate variations—that is, exchange risk—can be represented as a monetary cost. We will call this the cost of exchange risk.

The greater the variations in exchange rates, the greater will be the variance of expected profits in all activities involving foreign-exchange transactions. (This assumes that greater variation in exchange rates would not result in, and be offset by, smaller variations in other variables

affecting profits.) Since exchange-rate variations can be expected to be at least somewhat greater in amplitude, frequency, and unpredictability under freely floating exchange rates than under fixed rates, the cost of exchange risk will also be greater. Thus, if exchange rates were permitted to float, the additional cost would force marginal firms out of the exporting or importing business, eliminate marginally profitable exports, eliminate imports that are marginally cheaper than domestic substitutes, and discourage marginally profitable foreign investments.

In short, floating exchange rates should, *prima facie*, have some dampening effect on international trade and investment. This is the ineluctable result of general equilibrium analysis. There are three arguments that can be put up against this reasoning: (1) that the additional cost will be so small that the effects on the volume of foreign trade and investment will be negligible (2) that the change-over from fixed to floating rates would be accompanied by the abolition of many or all officially sponsored trade barriers, so that the *net* effect will be an increase, or at least no decline, in international economic activity, and (3) that, under fixed rates, the temporary quotas or controls imposed for balance-of-payments reasons constitute for those engaged in international commerce a risk at least as great as exchange risk under floating rates. Let us look briefly at each of these arguments in turn.

As far as argument (1) is concerned, the proponents of floating exchange rates generally treat the cost of exchange risk as if it were tantamount to the cost of forward cover. This seems to me to be a confusion. The cost of forward cover is indeed kept very small—except, perhaps, during serious foreign-exchange crises—by interest arbitrage. But the exchange risk eliminated by forward cover is of a very specific and limited kind; it is the risk that the profit on a particular *transaction* will be eliminated by a variation in exchange rates. The discussion above refers to a more general type of exchange risk: the risk that profits in a particular *activity* over a particular period of time will be unsatisfactory owing to changes in the exchange rate. This type of exchange risk cannot be eliminated by forward cover. Although the above analysis assumes that this risk can be translated into a monetary equivalent, there is at present no market where insurance against such a risk can be bought; hence, we do not know the magnitude of cost of exchange risk as defined above, except that it is presumably greater than the normal cost of forward cover, which eliminates a risk based on less uncertainty.

The second argument is based on the extremely questionable assumption that what prevents the existing set of trade barriers from being removed are balance-of-payments considerations. In fact, it is the power of special interests which maintains trade-distorting policies, and neither

these interests nor their power would disappear with the coming of greater exchange-rate flexibility.

The weakness of the third argument is that as long as quotas or controls are temporary, foreign traders and investors are not faced with a *permanent* loss of markets or sources of supply or funds invested abroad; however, it is always possible that a change in the exchange rate may never be reversed.

PEGGED EXCHANGE RATES: A SUBSIDY TO FOREIGN TRADE AND INVESTMENT

I have just argued that the cost of exchange risk is (normally) likely to be greater under floating than under fixed exchange rates. Pegging the exchange rate is equivalent to granting a subsidy to those activities involving the purchase or sale of foreign exchange. Of course, exchange risk is only one of many types of risk, and all activities are subject to risk of some kind. If certain firms are subsidized by the removal of a part of their risk, while others are not so assisted, there results a different allocation of resources than would be the case if no such assistance were given. Removing or reducing exchange risk by means of pegging the exchange rate represents a peculiarly complicated sort of subsidy, varying in degree for each firm depending on the relative extent of the firm's dependence on foreign trade or investment. It is not surprising, therefore, that international bankers and traders, whose involvement in international commerce is relatively the greatest, are precisely the ones who are most vociferous in their opposition to floating rates, for they receive the greatest relative subsidy from the government's pegging of the exchange rate.

Pegging the exchange rate represents government intervention in the free market, but with a different effect than such interventions as import tariffs, quotas, and exchange controls. These constitute an artificial *barrier* to international commerce, while pegging the exchange rate constitutes an artificial *encouragement* to the same. One might also add that, while ordinarily artificial barriers to trade are, at least in their intended and direct effects, one-sided (that is, barring domestic purchases of foreign goods and assets, but not foreign purchases of domestic goods and assets), the effects of pegging the exchange rate are obviously two-sided. Without the pegging, the additional cost of exchange risk raises the cost of imports and the profitability of exporting for all countries; there is a change in the profitability of foreign trade and investment for all countries, enough to encourage greater national self-sufficiency, exactly as would be the case if transport costs relative to the value of merchandise were to rise.

It is a curious fact that economists, who carry around neoclassical general equilibrium theory as a part of their mental equipment, rarely if ever see fit to question the assumptions that a reduction in international

commerce is bad and its encouragement is good. If one should ask an economist whether it is necessarily desirable to subsidize industry X while not subsidizing industry Y, he would immediately reply in the negative. But then, considering the fact that some degree of risk and uncertainty is present in all markets, is it necessarily true that special assistance should be given to those in the business of exporting or importing goods or securities? Are we necessarily better off because international commerce is subsidized through the government's bearing the exchange risk, while most types of domestic commerce receive no government assistance in risk-bearing? The answers to these questions must also be in the negative.

Are the social costs of the present method of subsidizing international commerce justified by the benefits (if any) society derives as a result of the subsidy? This is the question which properly poses the chief economic issues of the debate over greater exchange-rate flexibility. To facilitate the following discussion, I should like to put this question in a somewhat different way: do the macroeconomic costs of the present method of subsidizing international commerce justify the net increase (if any) in productive and allocative efficiency resulting from the subsidy? Before discussing these costs and benefits in detail, it would perhaps be helpful to describe them briefly.

First of all, the net increase in efficiency. If there were no externalities involved in the international economic activities of persons and firms, there would be some reason to presume that the governmental subsidies given to them produce a misallocation of resources in favor of internationally oriented activities. There may, however, be externalities involved. Two that immediately come to mind are (1) the greater variety of goods available, and (2) the competitive spur to greater efficiency and to more energetic innovating efforts in domestic industry.

The macroeconomic costs of pegging the exchange rate are threefold: first, the difference between the cost of holding international reserves under fixed exchange rates and the cost under floating exchange rates; second, the social cost represented by the difference between the best attainable values of macroeconomic "target variables" under fixed exchange rates, and the best attainable values under floating rates; and third, the social cost represented by the more inequitable distribution of the cost of exchange-risk insurance under fixed rates than under floating rates.

THE EFFECTS OF PEGGED RATES ON ALLOCATIVE AND TECHNICAL EFFICIENCY

Through its effects on the volume of foreign trade, the introduction of floating exchange rates would affect the domestic allocation of goods and

resources and the efficiency of resource utilization. Through its effects on the volume and pattern of foreign investment, floating rates would affect the international allocation of capital resources. We will now consider what these effects are likely to be and whether they would tend to increase or decrease economic welfare.

The Effects on Foreign Trade

A government subsidy to particular industries misallocates resources in favor of those industries unless the subsidies offset an excess of private cost over social cost, or of social over private benefits, in those industries. This statement must be qualified, however. According to the theory of the second-best, assertions of this sort are not generally valid in a world of market imperfections, and the absence of perfect foresight (producing uncertainty and risk) is just such an imperfection. Nevertheless, speaking on the level of practical economics, an economist has a visceral reaction against a policy of subsidizing certain industries and not others, unless there is a very clear case for doing so based on obvious and significant disparities between private and social costs or benefits.

One disparity between social and private benefits in foreign trade may occur as a result of the wider range of choice of products which foreign trade permits. Maintaining a wide range of consumer choice has been suggested as a separate goal of economic policy, and there may be a price to be paid for maintaining a wide choice. The profit that the importer makes reflects only the benefit given to those actually purchasing the imported varieties. But even the consumer who ends up purchasing a domestically produced good may receive benefits from the availability of an imported substitute: (1) his satisfaction from the good may be greater when he knows it is the best (for him) of a wide range of available varieties than when he has picked it out from a more limited range, (2) a wider range of choice may also increase the pleasure of shopping for the good, and (3) the external aspect of life in a country may be more pleasant and interesting for all its inhabitants when there is a larger variety of clothes being worn, cars being driven, and other publicly visible goods being consumed.

The effects of foreign trade on domestic firms bring about further external economies for domestic consumers. Foreign competition stimulates technical and managerial efficiency, as well as innovations in both technique and product. This is obviously a benefit for the consumers in a society, although not necessarily a benefit for producers, who enjoy less leisure than they would in a protected market. Whether or not there is a net benefit involved is a question best answered by the reader. In any

case, the benefit to the *consumers* is not internalized in the form of profits by those in the import trade.

It should be clear that any reduction in foreign trade also reduces the degree to which the above-mentioned benefits are present. An overall rise in the cost of imports will lead to the elimination of those imported goods whose importation had previously been only marginally profitable. This results in a smaller variety of goods available for the consumer and in reduced external competition for industries producing import-competing goods.

The Effects on Foreign Investment

Nothing has been said thus far about the welfare effects of marginal reductions in foreign investment. It was the opinion of Keynes—and subsequent writers have followed him in this—that floating exchange rates would discourage foreign investment, with its relatively long time horizons, to a far greater extent than foreign trade with its relatively short time horizons. More recently, this opinion has been qualified, by Leland Yeager and others, by the suggestion that floating exchange rates may affect the *form*, not only the total *volume*, of international flows of capital. Foreign investment under floating rates would tend to concentrate on equity shares rather than bonds, since any change in the exchange rate owing to different rates of inflation would tend to be matched by corresponding changes in the money value of equity shares.

Let us assume, for the sake of discussion, that floating exchange rates would affect both quantity and quality of foreign investment. What can we say about the resulting effects on economic welfare? Economic theory tells us that international flows of capital tend to result in an improved international allocation of capital resources; that, if freed from government controls, capital will move from countries where the marginal efficiency of capital is low to countries where it is high. If this were indeed the case, any reduction of international movements of capital through increased exchange risk should be expected to lower the world's real income, and this is a reason often adduced against floating exchange rates.

But is it in fact the case that capital moves internationally to those places where its marginal efficiency is highest? More specifically, would the elimination of the least profitable foreign investments, as a result of floating exchange rates, really lower world income? Most economists would immediately answer these questions in the affirmative, but there are reasons for supposing that no definite answer is possible, at least not on the basis of our present knowledge.

In the first place, it is to be doubted, as Friedrich Lutz has recently reminded us, that international differences in the marginal efficiency of capital are accurately reflected in the international interest-rate differentials which motivate international flows of *financial* investment. This is because differences in money interest rates are to some extent due to differences in rates of price inflation. If the price level in country *A* is rising more rapidly than that in country *B*, and the marginal efficiency of capital is the same in both countries, the equilibrium money interest rate is likely to be higher in country *A*. If exchange rates are expected to remain fixed indefinitely, it will pay residents of *B* to invest in *A*. (This may, in fact, be a partial explanation of American financial investment in Europe.) There cannot, therefore, be a presumption that a reduction of financial investment would bring a less desirable international allocation of capital resources.

Even *direct* foreign investment, one suspects, does not necessarily flow from low- to high-productivity uses. This may be particularly true of foreign investments by the great international corporations. Once the management of such a corporation has decided to seize and maintain a share of foreign markets, it may press ahead with this program even when marginal investments are not as profitable as alternative investments at home. Moreover, it may be doubted whether direct investments of large corporations would be much affected by exchange-rate stability (witness, for instance, the extent of North American investment in Brazil.)

Thus, as far as a reduction in the *quantity* of foreign investment is concerned, we must remain agnostic in regard to the welfare effects, at least as far as the level of world income is concerned. (It may, however, be unambiguously the case that recipient countries are worse off with a smaller inflow of foreign capital.) As far as the *quality* of international investment is concerned, floating exchange rates may actually lead to improvements. The increased concentration on equity investment, suggested earlier as a likely consequence of floating exchange rates, would probably lead to a closer correspondence of the actual flow of foreign investment to that justified by international differences in capital productivity. In addition, the foreign investment in bonds taking place under floating rates would be less likely to be distorted by the effects of different rates of price inflation. This is so because the effects of different rates of inflation on money rates of interest would be offset at least in part by changes in the exchange rate. Thus, to take our earlier example, the attractiveness of investing country *B*'s funds in country *A*, with its higher money interest rate (resulting from a higher rate of inflation), would be

offset by the depreciation of *A*'s exchange rate (also due to its higher rate of inflation).

In short, the welfare effects of changes in the volume and form of international investment resulting from floating rates are most uncertain, and it would appear that whatever loss of welfare occurs as a result of declines in the volume of foreign investment may be offset by a new routing of investment that is more sensitive to international differences in the marginal efficiency of capital.

In considering, then, the effects of fixed exchange rates on the allocative and productive efficiency of economic resources, we should concentrate our attention on the effects on trade. Assuming that pegging the exchange rate encourages international trade, there is some reason to suppose that its net effect as regards efficiency is positive. On the one hand, a misallocation of resources may be involved when certain economic activities are subsidized and others are not, but studies of other types of resource misallocation, such as those created by monopolies or tariffs, suggest that the welfare effects of such misallocation would be negligible. The importance of technical and managerial efficiency, together with casual observation of the effect of reducing tariffs inside the European Economic Community on the range of consumer choice and prices in Western Europe, suggests that the welfare effects of resource misallocation could easily be more than offset by the external economies of trade which we have discussed above.

The question remains, however, whether this net benefit outweighs the macroeconomic costs of pegged rates. Let us now turn to a consideration of these costs.

THE MACROECONOMIC COSTS OF PEGGED RATES

The chief argument in favor of greater exchange-rate flexibility is that the latter would provide greater freedom for achieving national macroeconomic goals than is possible under the balance-of-payments discipline of pegged rates. One possibly valid criticism of this proposition is Robert Triffin's argument that, assuming floating exchange rates would lead to greater fluctuations in the exchange rate, a "ratchet effect" would tend to raise the price level more rapidly over time than would be the case under pegged rates. Every time there is a depreciation of the exchange rate, the resulting rise in the cost of living will prompt increases in domestic wages and prices, while, because wages and prices are downwardly inflexible, no symmetrical fall in their level will occur each time the exchange rate appreciates. Another possibly valid argument that could be made against floating rates is that, if they produce significantly