Controlled Floating and the Confused Issue of Money Illusion

This article begins with a general appraisal of problems faced in a currency system of controlled floating. Subsequently I will turn to a detailed analysis of a specific question that has received increasing attention in recent writings and discussions. This is the question of the place to be assigned in the analysis to money illusion — to a lack of sufficient realization that one's income in the relevant sense depends on prices as well as on the nominal size of the income. Is money illusion responsible for any existing differences between the domestic side-effects of achieving *current-account* objectives under *exchange-rate flexibility* on the one hand, and achieving these objectives under *fixed rates* on the other? The question calls for exploration because it would be unsound to build long-run policy on money illusion. The article will end with suggestions concerning the 1972 American balance-of-trade effects of the 1971 exchange-rate modifications.

I. Will the Provisional Last?

(1) *The present form of limited flexibility and the danger of rebureaucratization.* During the long period in which strenuous efforts were made to postpone exchange-rate adjustments as long as it was possible to do so, abrupt rate-modifications were often anticipated by the markets well ahead of time. Toward the end of the period — in the final years of the Bretton Woods era — such sudden breaches of successive rate-structures occurred in increasingly frequent intervals. Not only was the dollar overvalued in relation to a good many other major currencies but these too were significantly out of equilibrium with each other, and the repetitive major exchange-rate modifications caused substantial disturbances. Finally the old system became untenable, and on March 16, 1973, temporary arrangements went into effect for a controlled floating of currencies.

These arrangements leave room for support-interventions by central banks but only when smoothing operations seem desirable, or at least acceptable, to all concerned. The meaning of the concept of desirability and of all-around acceptability is, of course, vague but the same statement can be made about these concepts with respect to the activities of many decision-making groups the members of which have learned to cooperate effectively in other areas; and it should be remembered that the group of countries on which the viability of the Western exchange-rate system depends is not very large. The principle underlying a system of controlled floating — the principle that calls for specific interpretation in given sets of circumstances — is that smoothing operations *may* have justification but official interventions should not be used for trying to counteract sustained market pressures on the exchange-rate structure. The reason why smoothing operations are not excluded is that speculation may in some cases cause unnecessarily large swings instead of performing its stabilizing function efficiently.

The "temporary" or "interim" arrangements of last March may well evolve into lasting ones, and in my appraisal the main danger now is that under the flag of systematic international reform a heavy bureaucratic superstructure will be erected over the present loser framework. Such a rebureaucratized system would presumably operate again with a bias toward making official support-interventions a matter of routine, though with various exceptions tolerated. Many of the rigidities that plagued us in the past would then become reintroduced.

The present interim system provides for jointness of the floating (with allowance for "snake" margins) among countries of the EEC, not including the U.K. and Italy, yet with the participation of Sweden and Norway. Jointness of floating of the currencies of countries forming a bloc involves an effort to exclude changes of currency-rates within the bloc from the variables equilibrating the international accounts. Outside the bloc, the exchange rates are not excluded from the set of equilibrating variables but it is essential to keep in mind that even for currencies that float in relation to each other any reasonable policy will often rely heavily on the

monetary-fiscal variables which would be used for balancing under fixed rates (thus also within blocs). This is another way of saying that no intelligent policy maker can disregard the feedback which exchange-rate movements have on domestic economic conditions. The difference between fixed rates and floating is that under floating the exchange rate is one of many variables on the adjustment of which it is possible to rely. Under the Bretton Woods system reliance on other variables was supposed to be the ruling procedure and administrative adjustments of exchange-rates a means of last resort, but in the late part of that era the last resort started playing an increasingly large role and even "exceptional" reliance on floating became less exceptional. Since mid-March 1973 the intrabloc fixity of several European exchange-rates vis-à-vis each other (aside from a small margin) has been the atypical feature of the system and floating with not much intervention its more general characteristic. The markets for financial transactions are separated from the trade-currency market in a few countries.

Countries wishing to tie their currencies to others within a bloc do presumably need a rather elaborate administrative apparatus for achieving this objective and the EEC countries do have such an apparatus. This does not necessarily mean that administrators will prove successful in tying these currencies to one another but if the task can be performed at all, it can be performed only with reliance *within the bloc* on a coordinating agency possessing considerable power. On the other hand, proper behavior of countries (or blocs) whose relationship to one another is that of controlled floating is more apt to develop usefully in a loose framework. What is needed here is merely a very light bureaucratic touch "from above" to facilitate contacts among the countries with floating currencies and to promote the gradual development of mutually consistent practices involving occasional smoothing interventions but no suppression of sustained market tendencies. After all, the avoidance of interventions at cross-purposes is clearly in the mutual interest, and to achieve this by coordinating the "controlling" of the floats *whenever they are controlled* is one of the two main cooperative tasks required by such a system. The other closely related task is the mutual reconciliation of monetary policies with whatever exchange-rate movements are allowed to develop freely or are to be influenced by interventions. Straightening these matters

out requires contacts among parties adhering to accepted conventions rather than an elaborate administrative apparatus.

However, 1973 being the historical point of departure there do exist specific technical problems, representing carry-overs from the preceding era, which may require more detailed concern of the international supervisory body that used to administer the Bretton Woods rules. These problems are not inherent in a system of controlled floating per se but reflect the survival of part of the past in any "present" situation, economic or other. I think the IMF and its various committees would render the world a much more valuable service if they focused entirely on fitting the inevitably surviving elements of past structures into the evolving new system than if they tried to revive arrangements under which official support operations of administratively set rates represent the rule and flexibility represents the exception calling for approval. If the adherents of the old system — or of that system with minor modifications — should prove successful, their victory will be a Pyrrhic one. What they would like to see as a viable system would soon break down again.

A brief look follows here on tasks remaining for the IMF under schemes of limited rate-flexibility, beyond the task of providing from above the light touch needed for facilitating contacts among the countries.

(2) *Possibility of Limited Convertibility For Two Specific Purposes.* The flexibility that has become introduced is not based on the conception of crawling pegs which had played a large role in earlier writings; most varieties of the crawling peg would have required the setting of parity-rates between currencies under the aegis of the IMF, and *some* varieties of that conception (though not mine) would have required also general convertibility into primary reserves and therefore the administrative setting by the IMF of par values in terms of primary reserves. What we now have differs in some respects from crawling-peg schemes and it should enable us to obtain all the advantages of limited flexibility even more readily. We should cling to what we have and recognize its implications. Under controlled floating parity-rates between currencies have no justification (except, of course, in intrabloc relations) and hence the aegis of the IMF is not needed for this purpose. As for par values of the currencies in terms of primary reserves — SDRs or

monetary gold — these par values do not develop in markets and hence they lack meaning unless they result from an administrative decision presumably made by the IMF. The question arises whether under controlled floating there is need for administrative decisions concerning par values in terms of primary reserves, since controlled floating excludes that kind of convertibility into SDRs or monetary gold which was part of the earlier adjustable-peg conception and which some crawling-peg schemes would also have stipulated.

Given the historical antecedents, a case can nevertheless be made for leaving room for specific kinds of limited convertibility into primary reserves — *ad hoc* varieties — even as things now stand. Smoothing interventions in mutual understanding *are* envisaged even for currencies that float in relation to each other; if a country wishes to support its currency in the market it can do so by selling foreign currencies which it possesses or which it borrows. Yet it is possible to take the position that any country should be enabled to acquire foreign currencies alternatively from the central bank of another country by transferring to that central bank some of the primary reserves it owns. If this were to be made possible then whenever such a transfer of primary reserves takes place, there would essentially occur ad hoc conversion because when the country supporting its currency in mutual understanding with others acquires another currency for its primary reserves and when it buys its own currency back in the market for the other currency, the result is *precisely the same as if the other central bank had bought a specific quantity of the weak currency and had presented it for conversion.* This is one sense in which there could exist the equivalent of limited "convertibility into primary reserves" in a system of controlled floating.

Aside from this, consolidation of the now outstanding large official dollar reserves could in part assume the form of the acquisition for dollars of SDRs which in this case would have to be newly issued by the IMF. This too describes a form of limited ad hoc convertibility into primary reserves which would be compatible with controlled floating, though it needs to be stressed that neither of these forms of convertibility is a prerequisite of such a system.

In the event of a desire to make room for one or both of these varieties of ad hoc convertibility the operations reflecting these would require setting prices for primary reserves in terms of the

individual currencies.[1] This would raise problems calling for a procedure that cannot avoid being somewhat arbitrary but if any such procedure should be adopted it should meet at least two conditions. One of these is that the owners of primary reserves should be better protected against exchange-rate risks than are owners of any single currency, and the other is that the inevitable arbitrariness should express itself in a rule of thumb generally applicable as we go along and not in the need to strike a bargain in each case in which currencies are exchanged for primary reserves.

The following would be a way of overcoming the difficulty. Consider a quantity of SDRs that is worth $400 on the basis of the par values in effect when agreement is reached, and assume acceptability of the idea that these SDRs should be made to represent a mixture of currencies valued *in the mix* "forever" in the proportion which their market values bear to each other initially. A fairly large number of currencies could be selected for this purpose, but merely for the sake of simplicity I will use for illustration a mix consisting of four currencies: the dollar, the D-mark, the Swiss franc and Sterling; and merely for the sake of simplicity I will imply equal representation of these in the mix. If at the relevant date a dollar should be worth 2.70 D-marks, 0.40 pounds sterling, and 3.15 Swiss francs then the quantity of SDRs which until then had the par-value equivalent of 400 in terms of dollars would become valued at 100 dollars plus 270 D-marks plus 40 pounds sterling plus 315 Swiss francs *at the current market rates*, and it would be so

[1] Such price-setting would be required also if a scheme suggested by Richard N. Cooper in his recent (February, 1973) testimony before the Joint Economic Committee of the U.S. Congress were incorporated into a system of controlled floating. Cooper developed this scheme prior to the adoption of controlled floating and not with a view to the present interim arrangements, thus taking the existence of par values expressed in SDRs for granted. The scheme would have the IMF issue new SDRs in cases in which, as a result of support interventions, large quantities of a foreign currency held by private owners in a country are acquired by the central bank of the country. If we think primarily of the dollar, this would mean that in the event of a temporary transfer to central banks of large amounts of privately held dollars the IMF would help out in temporary support operations, and that in the event of a lasting transfer one of the possible methods of consolidation — the method relying on special issues of SDRs by the IMF — would become extended to the previously "private" dollars in question. However, given a system of controlled floating opinions will presumably differ on *how easy* the resort to official support operations — i.e., to controlling the float — should be made. In its present form, Cooper's scheme would make this much easier than I would like to see it made (and the reader should bear in mind that the proposal was made prior to March, 1973, hence in its present form was intended to supplement a different kind of system).

valued in the future regardless of any changes in currency rates. SDRs would still be used only in transactions among central banks, and if the central bank of country A acquired the currency of country B for SDRs the medium to be transferred would still be the SDR itself and not a mixture of the currencies in question. But the valutation of the SDRs in terms of any currency — not merely in terms of the currencies represented in the mix — would be based on a rule such as that here described. Instead of, or along with, the valuation of currencies in terms of SDRs I could have used for illustration the valuation of currencies in terms of monetary gold, but in the present circumstances movements of monetary gold among central banks are of negligible significance.

(3) *Ambiguities of the attitude to gold.* Gold movements among central banks could acquire importance in the future if, instead of adhering to the two-tier system, the banks were charging to each other the market price which has recently soared to heights that even a short while ago would have seemed almost unbelievable. This, however, would involve highly speculative transactions for the institutions in question regardless of whether they engaged in transactions also in the free market. The monetary authorities of the world have not so far developed a consistent position in relation to gold; in many countries official holdings are exceedingly large as compared to the amounts traded in markets so that by liquidating part of their stock in the market the authorities could have greatly reduced the precipitous recent rise of the free-market price. This is so partly also because such behavior would make it clear — clearer than some would like to make it — that the authorities do not intend to revive an exchange-rate system based on support operations of currencies by means of gold sales and purchases, with all the speculative implications of that system in a world in which prices in general have an upward trend. In such a world, it is impossible to tell what the appropriate trend in the gold price would be for the establishment of which the official institutions buying and selling gold would have to aim. The inflationary consequences of a return to gold with market-purchases and sales might also prove to be very large.

A return to gold with purchases and sales in the market would be a very risky last resort in the unfortunate event that cooperative systems of controlled exchange-rate flexibility should at the end

prove nonviable and the monetary authorities should decide to try again for a fixed-rates system with general convertibility, but with convertibility into a primary reserve which (in contrast to the SDR) has all along been traded in markets. What concerns us here is, however, mainly the fact that if under controlled-float arrangements, such as we now have, some amount of primary reserves should be needed for limited convertibility in specified circumstances, then the SDR-type reserve would be the suitable candidate for this role. At present monetary gold would not be that.

(4) *Methods of Consolidation.* A rule adopted for the valuation of existing SDRs would presumably be made to apply also to any future allocations and the IMF would remain the issuer of future SDRs as it has been the issuer of the existing ones.[2] The recipients' obligations to accept SDRs from other central banks would also be stipulated by the IMF. But as things have developed, the need for additional SDRs in the years to come is very questionable, to say the least. The answer will depend on what part (if any) of their reserve-currency holdings the individual central banks of the world will decide to consolidate. In view of the large size of foreign official dollar holdings the present degree of world liquidity is excessive, and it does not seem likely at all that the central banks would want to consolidate — remove from their *liquid* holdings — a sufficiently large quantity of liquid dollar holdings to have world liquidity fall below the level appropriate to the reasonable management of a system of controlled floating.

It would be useful, however, if quite a bit of consolidation *did* take place. This could assume one of several forms. I have already mentioned one specific form which would have to be administered by the IMF and which would consist of the exchange of official dollar holdings for special issues of SDRs, with the IMF taking over dollar securities now owned by the central banks in question. It is uncertain to what extent individual central banks might opt for this kind of consolidation. To that extent they would reduce their exchange-rate risks but would greatly reduce their interest-earnings too. Indeed, barring miscalculation they would reduce their interest-earnings by the equivalent of the risk-reduction plus

2 The currency valuations in the mix would, however, reflect market valuations as of the times when agreements are reached concerning new issues.

by the administrative costs of this particular method of consolidation, since the risks will have to be borne by the dollar holders, whoever they are. The market rates of return earned by the dollar holders contain allowances for all risks. Either the risks themselves will have to be borne by the present owners or, if they so choose, an interest-reduction corresponding to the risks as well as to the additional administrative costs of consolidation via the IMF will have to be accepted by them; this is so barring misjudgments of the risks but the consequences of misjudgments would, of course, also fall on IMF members, though presumably not in the proportion of their dollar holdings. It remains to be seen how successful the efforts at bringing about consolidation will be, and on the assumption that they will be reasonably successful it remains to be seen what forms of consolidation the dollar-holding institutions will prefer.

To my mind the most desirable way of promoting consolidation is to encourage the undertaking on a major scale of *long-term foreign private investment, including direct investment, in the United States*. This could be made to absorb foreign official dollars if in no other way than by enabling the central banks to sell dollars to the investors without unsettling the market.

The charge is occasionally made that the world has become faced with a dollar risk because the United States withdrew its earlier promise to convert official dollar holdings into gold. This is not a fair presentation, no fairer than would be the claim that Europe or Japan are responsible for all mistakes that were made in the area of monetary policy. It is an incontestable fact that a very high proportion of the present official dollar holdings was acquired at a time when it was obvious that neither a gold guarantee nor an exchange-guarantee attaches to these aquisitions.

More than one-half of the dollar amounts held by official institutions at the time when the interim system of floating was adopted in March 1973 had been purchased by these institutions after June 30, 1971. Dollar-convertibility into gold was officially suspended shortly afterwards, on August 15, 1971, and a high proportion of the present official holdings was acquired since *that* time. But this is an unduly formalistic way of looking at the matter since during an extended period prior to the summer of 1971 it was quite clear to all concerned that attempts to convert dollars into gold on any scale other than negligible would by necessity have

to lead to the closing of the gold window. Instead of allowing the dollar rates to decline well before 1971, foreign official institutions acquired huge amounts of dollars during those years, with their eyes open in this regard and with great concern for "protecting" their export industries by overvaluing the dollar. But while this absolves the United States from the "guilt" with which it is occasionally charged, the same fact does not exempt the United States from the obligation to help to reduce the difficulties that have arisen as a result of excess dollar-liquidity abroad. This is not merely an obligation but a requirement of American self-interest.

II. Placing the Money-Illusion Argument in Perspective

(1) *Doubts Suggested by the New Skeptics.* Many conventional objections to exchange-rate flexibility have become increasingly less convincing to earlier skeptics even in the few months that have elapsed since the introduction of controlled floating. In the meantime internal political events in the United States gave rise to the kind of excitement which under the Bretton Woods system would almost certainly have caused large additional dollar flows to the central banks abroad, with great uncertainty developing as to when parities will be changed by sizable margins. Under the new circumstances the foreign-currency equivalent of the floating dollar has gradually declined by roughly 10 per cent in relation to the "jointly floating" currencies other than the D-mark, by more than 15 per cent in relation to the D-mark (which was revalued upward relative to Germany's partners in the "joint float"), by a similar percentage in relation to the Swiss franc, but the dollar declined very little in relation to the other important currencies. There seems to be a widespread feeling that the dollar has become undervalued, so that official interventions for smoothing the rate-movements may now be appropriate, and they are being planned.

The ideas of "theorists" many of whom had been urging greater flexibility for a long time are proving less "impractical" than has so often been alleged in the course of the debate, though it should be stressed that the learning process has very definitely been a mutual one between the members of the economics profession and the practitioners. Theorists have a strong tendency to question their own

premises as well as those of others. It is interesting to note that an important skeptical question concerning flexibility was also raised by theorists, and not exclusively by authors who were opposed to flexibility in the decisive stages of the debate.

The question which does, indeed, deserve to be raised is whether *in the absence of money illusion* permitting a country's exchange-rates to adjust downward is a more readily accepted method of eliminating a trade-deficit — generally: of raising its exports of goods and services as compared to its imports of these — than is the deflation of the country's money income at fixed exchange rates. Considering that if at any time there ceases to develop a flow which would offset a country's trade-deficit it becomes inevitable to equilibrate the trade-account, the expression " more readily accepted " calls for clarification. It will be interpreted as meaning: *accepted with a distinctly better chance of avoiding a reduction of the rate of resource-utilization, particularly a reduction of the rate of employment.*[3]

Money illusion is said to be absent if the public's economic-welfare objectives are capable of being expressed in terms of *real* magnitudes, such as real income and real wealth, i.e., if in the event of a doubling of the price level two dollars are regarded as equivalent to a former dollar. One may at first be inclined to conclude that in the absence of money illusion there is no difference between the " acceptability " of deflation and that of permitting exchange-rates to adjust downward, because the real burden in the sense of reduced domestic absorption is the same in either case. Alternatively expressed, even though I will continue to follow the convention of using the word deflation in relation to nominal monetary magnitudes, it should be recognized that policy makers deciding to keep aggregate money income constant, and to reduce domestic absorption by means of exchange-rate adjustment and price-increases, could be regarded as " deflating " *real* incomes (and presumably also as deflating *real* balances). I will not use this terminology — deflation here will mean the reduction of nominal monetary magnitudes — but what was just said brings out the point that any difference which the public may

3 Gottfried Haberler has placed emphasis on the fact that, if an offsetting balance-of-payments item ceases to be forthcoming and a trade-deficit needs to be eliminated, then without further specification or qualification — i.e., literally interpreted — nonacceptance of the burden of reduced domestic absorption is a meaningless concept. The burden expresses a constraint imposed on an economy. See Gottfried Haberler, *Money in the International Economy*, The Institute of Economic Affairs, London: 1969, Second Edition, p. 45.

sense between the acceptability of achieving the same result by deflating money incomes on the one hand, by allowing foreign currency rates to rise, on the other hand, is somewhat suspect of being a mark of money illusion on which one might not want to build policy. Subsequently I shall argue that this suspicion, this New Skepticism,[4] is *unjustified*. The difference in " acceptability " is not simply a matter of money illusion, but in the present section I shall first try to place the problem in perspective by making it clear that while the question of the validity or invalidity of the money-illusion argument *is* of considerable significance, there need be no firm link between the validity or invalidity of this argument and one's preference for or against exchange-rate flexibility. Even if the greater acceptability of exchange-rate adjustment than of deflation for trade-balancing *were* merely a matter of money illusion, this would by no means wholly destroy the case for rate-flexibility.

(2) *The answer to the question bears importantly on the flexibility issue but does not decide it.* Some amount of money illusion may probably be taken for granted *in the short-run,* and even on the assumptions on which the greater acceptability of rate adjustment for trade-balancing would depend on money illusion the question would still be left open whether the required money illusion would not be merely of the short-run variety. The reduction of a country's domestic absorption when its trade-deficit becomes eliminated is a once and for all event which should come to an end before long,

4 I know of no author or practitioner who in writing or in oral discussion would have stated *entirely without qualifications* that arguments favoring " devaluation " as a means of reducing or eliminating a goods-and-services deficit would have to rest on money illusion. Still the views in question, which I call those of the New Skeptics, have been interpreted by many readers and listeners as conveying " essentially " this notion, and I too am strongly inclined to interpret them this way. But it is more adequate to say that these views range from (a) *almost* unqualified belief that when it comes to current-account effects the argument favoring exchange-rate reduction would have to be outright *based* on money illusion to (b) the belief that, to be convincing, the argument favoring exchange-rate reduction would need to receive *much help* from money illusion. I would place Mundell at the first-mentioned end of the range, McKinnon at the other end, and Johnson perhaps in between but close to Mundell. See Robert A. Mundell, « A Theory of Optimum Currency Areas », *American Economic Review*, September 1961, and *Monetary Theory*, Santa Colomba Publishing, Siena, 1971; R.I. McKinnon, « Optimum Currency Areas » in R.N. Cooper, ed., *International Finance*, Penguin Books, Middlesex, 1969; Harry G. Johnson, Chapter III in *Inflation and the Monetarist Controversy*, North Holland Publishing Co., London, 1972, and « The Monetary Approach to Balance of Payments Theory », in Michael B. Connolly and Alexander B. Swoboda, eds., *International Trade and Money*, Allen and Unwin, London, 1973.

and from there on the rate of change of domestic absorption is not affected by what happened during the adjustment process. This way of looking at the matter would suggest that whatever money illusion may be at stake here would be of the short-run type. Yet, on the other hand, we need to recognize that while the subsequent *rates of increase* of a Western country's standard of living will be unaffected by the past adjustment during which the money illusion lasted, the base from which these subsequent increases take place will have become lowered permanently, and hence the standard of living itself will be lower in each future period. So *if it were true* that a downward adjustment of a country's exchange rate works through the public's deceiving itself in real terms as a result of money illusion, the greater acceptability of rate adjustment for trade-balancing *might* in a sense have to be viewed as depending on *long-run* money illusion that outlasts the adjustment process. But the reasoning by which the long-run character of the illusion would be established would still remain elusive because it is not clear whether in the absence of long-run money illusion a person should be assumed to insist on making up subsequently for the consequences of his having had short-run money illusion or should be assumed to write off these past losses. Short-run in contrast to long-run money illusion probably being a realistic assumption, it is unclear where we would be left concerning the goods-and-services effect of rate-adjustment if it were correct to say that the effect depends on money illusion.

What is more important, it still would be true that relatively small rate-movements frequently put an end to a wave of speculation in the currency markets, since speculators have to bear the risk of a reversal of these movements, while under a Bretton Woods type system "attacking" a suspect currency is not a particularly costly operation. Wider bands help in this regard even in a Bretton Woods type system but it is a piece of tautology to say that with sufficiently wide bands such a system becomes practically indistinguishable from one of floating. Referring to the recent experience on which I commented above — none-too-large movements of floating currencies with little central-bank activity in a period of American internal political difficulties which in the preceding era would have resulted in a massive attack on the dollar — a German official made an apt remark in conversation. Nothing very bad happened, he said, because *speculators had to speculate against speculators;* they were no more in a position to speculate against official agencies committed to fixed rates until

forced to abandon them. The statement would remain true even if the conclusion were valid that greater acceptability of rate-adjustments than of deflation for current-account balancing depends on long-run money illusion. If this money-illusion argument were well-established (which is not the case), countries might discover that they should not rely on rate-movements to correct imbalances in trade accounts and it then would be important to bear this in mind. But controlled floating would still have the advantage of letting speculators speculate against speculators, with exceptional smoothing operations which would be of limited duration and would be flexible enough not to remove the risks from speculative activity.

III. Specifying the Policies to Be Compared

We shall now focus on the question whether the greater acceptability of rate-adjustment than of deflation for *trade-balancing* — generally, for increasing exports as compared to imports — does in fact depend on money illusion. To be analytically manageable the question needs to be formulated more specifically.

(1) *Excluding money illusion.* It will be assumed that no one in the economy has money illusion, short or long-run. The objectives of all decision makers are expressed in real terms, and policy makers act accordingly.

(2) *The criterion for distinguishing between the results of alternative policies.* We shall assume that a country with a trade-deficit finds itself in the situation that an offsetting item in its balance of payments — say, a capital inflow — is gradually becoming reduced to zero, and that measures by which some other offsetting item could be generated are excluded from the range of policy choices. The country cannot help but accept a reduction of domestic absorption by balancing its trade account. The results of policies can, however, differ from each other concerning the side-effects of the trade-balancing. The problem to be considered here is whether the chances of balancing without a reduction of employment are or are not smaller under fixed exchange rates with deflated aggregate money income than under exchange-rate flexibility with unchanging money income. In the present analysis a larger or a smaller output or employment, a larger or a smaller rate of money income, etc., during

the period of adjustment will mean larger or smaller than the values which these variables would otherwise assume (crudely expressed: a correction for trend is implied).

(3) *Deflation under fixed exchange rates.* The first of the two policies to be compared is consistent with the fixed-rates blueprint and it is described by managing the deficit country's effective demand, in response to reserve movements, in such a way that the aggregate money income of the domestic economy should become deflated to the extent needed for trade-balancing. Assuming that money *wage rates* become "sufficiently" reduced along with aggregate money income,[5] it will be possible to achieve trade-balancing at an unchanging level of employment, *provided* the following conditions are satisfied. (*a*) The surplus countries must *not obstruct* the adjustment process (on this see (6) of the present section). (*b*) Given (a), the domestic *price-elasticities* of demand for imports and the foreign price-elasticities of demand for "our" exports must be such that when, in response to a cheapening of domestic import-substitutes relative to imports and in response to a cheapening of nonexportable goods and services relative to exported goods, the real quantity of imports declines and that of exports rises, then after a large enough shift, the *value* of imports ceases to exceed the *value* of exports (a condition which in the Western context probably is always satisfied). (*c*) Given (*a*) and (*b*), it is necessary to be able to establish, and to maintain up to the point of completing the required resource-reallocation, the *price-differentials* providing the needed incentive for substituting in the consumer budget import-substitutes for imports, and for substituting in production import-substitutes for other products of the economy, and/or for substituting in production exported goods for other products.

As for condition (c), closeness of the substitution relationship in consumption reduces the price-differentials that can be established, but on the other hand, high elasticity of supply with respect to price-differentials in the expanding sectors can make small differentials sufficiently effective. (Only in the unrealistic case in which the relevant substitute-relationships in consumption would be *perfect* would this last proposition have to be replaced by the statement that, with the supply-elasticities also infinite, the outcome would be indeterminate because one would then have to answer the question how a system would react to *literally* zero price-differentials if the system were infinitely sensitive to potential price differentials. This unrealistic case of identical goods can play *no* useful role in the analysis of our problem though its usefulness for describing a "limit" has repeatedly been suggested or implied).

5 "Sufficiently" here means: in accordance with the downward shift of labor's marginal productivity functions. In the unrealistic extreme case in which all domestic output would be physically identical with the internationally traded goods, the marginal productivity functions would stay unchanged and, to remain terminologically consistent, we would have to say that zero reduction of money wage rates would be "sufficient" reduction. Given no money-wage reduction, a trade-balancing tendency could develop only at a reduced level of output (not at the unchanging level). This is consistent with the statement in the text because in this extreme case condition (*c*) would not be satisfied.

The *extent* to which aggregate money income must become deflated for the balancing of trade depends on how comfortably or narrowly conditions (a), (b) and (c) are satisfied.

As was said above, the adjustment process can take place at the unchanging level of employment only if money wage rates become sufficiently reduced along with aggregate money income. If this is not the case, the trade-balancing process assumes different characteristics. If say, money wage rates remain essentially unaffected despite the reduction of aggregate money income, employment will be reduced. During the recession which follows in this latter case trade would tend to become equilibrated as a result of the contraction of business activity. The improved relation between exports and imports would not necessarily be limited to the recession — would not be a mere inventory-liquidation phenomenon — but could continue after stabilization of the rate of utilization at a lower level. This is so because at the lower level of activity the relative weight of the export sector will be greater — this being the sector the sales potential of which depends on foreign rather than on domestic demand-management — and the change in the output-mix has a favorable net effect on the trade account. Yet at the lower levels of activity money-wage rates may well *also* become lowered, even if initially they were not.

Contraction of output is an undesirable potential side-effect of deflation unless a reduction of the level of activity would have been desirable for its own sake, in which event the authorities should have reduced aggregate money income quite aside from balance of payments considerations. The conclusion that if the reduction of output is desirable per se, and at the same time domestic absorption needs to be reduced, then the authorities should deflate, is merely an

application of the basic proposition that even under regimes of exchange-rate flexibility reasonable policy makers will in certain circumstances behave as if they were operating under a fixed-rates system (see Section I). Whenever a reduction of domestic activity is undesirable per se, the method of balancing through deflation can be said to work smoothly only if money wage rates adjust downward sufficiently at approximately the unchanging level of activity.

(4) *Exchange-rate adjustment.* The method of balancing with which deflation should be compared is that of *not changing* the course of aggregate money demand, and of allowing the deficit country's exchange rates to decline to the level at which the substitution of domestic goods for imports and the channelling of additional resources into the export sector become jointly sufficient. The prices of foreign goods will have risen in domestic currency, and the general price level will also have risen. Assuming that money wage rates do not rise, the conditions that need to be satisfied if a sufficient degree of rate-adjustment is to achieve trade-balancing at an unchanging employment level are the same as those listed as (*a*), (*b*) and (*c*) in (3) above. Condition (c) requires, as we know, the price-differentials which will provide the needed incentive for substitution up to the point of completed resource-reallocation toward the import-substitute and export sectors. As concerns this condition, it is true here too that closeness of the substitute-relation in consumption reduces the price-differentials that can establish themselves, though given sufficiently high supply-elasticities with respect to price-differentials small differentials become very effective. [Further, it is true here too that the analysis becomes deadlocked — leads to indeterminate results — in the unrealistic case in which the relevant substitute-relations in consumption would be *perfect,* and supply elasticities too would be infinite,[6] because it makes no sense to ask what the effect would be of *literally* zero price-differentials in a system that would potentially be infinitely sensitive to differentials. This unrealistic case does not describe a useful "limit" for the analysis of *close* consumer substitute-relations because if the supply elasticities are high enough in the expanding sectors, close consumer substitute-relations do not imply a violation of condition (c)].

The *extent* of the needed exchange-rate adjustment depends —

6 This is the case of the physical identity of the entire domestic output with the internationally traded goods.

by analogy to what was said in (3) — on how comfortably or narrowly conditions (a), (b) and (c) are satisfied.

If money wage rates should *rise* while aggregate money income is kept constant, then (by analogy to what happens in the event of deflation when money wage rates do not *decline sufficiently*) the trade-balancing process possesses different characteristics. Output and employment will contract and this will generate a tendency toward balancing with the same undesirable side-effects as were discussed in (3).

(5) *Integration as an alternative to the policies discussed.* A case deserving special attention is that in which condition (c) is only narrowly satisfied, in the sense that moving enough resources into (or out of) the import-substitute and the export sectors is associated with large changes in the cost-structure and hence will take place only in response to large changes in the price structure. This implies that the needed exchange-rate modification too is large, as indeed the deflationary method would *also* have had to operate through a large policy impact on aggregate money income. On realistic assumptions (at least in the Western context) the consumer substitute-relations and the supply-elasticities are probably such that with sufficiently large initiating forces condition (c) would become satisfied even where the circumstances are relatively unfavorable for satisfying it. But stresses are greater in such circumstances than if resources can be reallocated more easily between the import-substitute and export sectors on the one hand, and sectors producing other goods, on the other hand. Any major balance-of-payments adjustment between countries whose mutual trade makes up a large part of their economic activity therefore creates strains. For understandable reasons the suggestion is often made that such countries should form blocs and should, with the passage of time, behave increasingly like *regions* within a nation, with common demand-management, with a willingness to subsidize temporarily the "backward areas", and with great ease of migration. The question left open by such programs is whether in given instances the political and cultural stresses of thorough-going integration are in fact smaller than the stresses of balance-of-payments adjustment between independent but cooperating nations.

(6) *Problems of surplus countries and the need for cooperation.* Surplus countries are on the other side of the adjustment processes

which were explained for deficit countries in (3) and (4) above. Under fixed rates surplus countries can obstruct the adjustment process by not allowing their aggregate money income to rise, under flexible rates by not allowing their exchange-rates to move up. In a sense such obstruction is always "irrational" because it prevents domestic absorption from rising in the surplus countries, but the temptation to block the adjustment is nevertheless often present particularly because the reallocation of resources needed for eliminating the excess of exports over imports is apt to violate the interests of politically influential groups. Also, under fixed rates the deficit country may not live up to its obligation to deflate, or may deflate very little, and an uncomfortable degree of inflation would then be required in the surplus countries to bring about balancing under fixed rates. Surplus countries may have very good reasons for blocking a fixed-rate adjustment process possessing these characteristics.

In the event of controlled floating the surplus countries can "control" the floating by interventions in such a way as to obstruct exchange-rate adjustments, though for this they cannot be said to have "good reasons", just as deficit-countries cannot be said to have "good reasons" for intervening to reduce their exchange-rates below the level toward which there is a market-tendency. Both these varieties of "dirty floating" can serve the interests of pressure groups but not of countries or of the world economy.

Under any system countries can engage in restrictive practices (they may erect barriers to the movement of goods and of capital) instead of adopting policies which will bring about equilibrium without suppressing the forces of the market. These are some of the reasons why the development of conventions and of a tradition for correct behavior in mutual understanding is a prerequisite of the proper functioning of any international monetary system.

(7) *Lags and perverse effects.* The adjustment processes described in the foregoing pages take effect with lags. Quite aside from the obvious fact that monetary and fiscal policies do not affect money incomes instantaneously, we must keep in mind that the movement of resources into (or out of) the import-substitute and the export sector takes time. Meanwhile, under fixed rates and deflation the trade-account of a deficit country may not improve. Under flexible rates the trade-account of a deficit-country is even likely to deteriorate in the initial phase — pre-substitution phase — because under this regime the price of foreign goods rises in terms of domestic currency. This is what may cause the so-called perverse effect of rate-adjustments in the initial phase, before resources become reallocated.

(8) *Some degree of contraction may be inevitable in deficit countries.* I shall return in the next section to the central issue whether *in the absence of money illusion* the chances of balancing at some specified activity level by a sufficient degree of money-wage reduction under deflation are not equally good or equally poor as are the chances of balancing at the same specified activity level when a sufficient degree of exchange-rate adjustment is used. I shall argue that *given the role of unions in the contemporary Western setting* exchange-rate adjustment offers a better chance. But this assumes that in the event of rate-adjustment aggregate money income is kept constant in the deficit country, rather than is stepped up in such a way that an inflationary spiral develops which suppresses the balancing tendency resulting from the rate-adjustment. The latter kind of mix — exchange-rate reduction coupled with offsetting inflation — is doomed to failure, and the fact that such mixes have failed in the past reflects on policy makers but not on the substance of our problem. Regardless of one's views about the better chances of achieving balance at unchanging output if the policy is that of rate-flexibility rather than of deflation, it must, of course, be regarded as quite possible that even rate-flexibility will lead to some degree of output-contraction because money wage rates may rise while aggregate money income is kept unchanged. *In this case* the contraction must be allowed to take place; any ill-conceived effort to avoid it by inflating money incomes will generate an inflationary spiral and will after a while force the policy makers to adopt a deflationary policy that needs to be all the more severe.

IV. The Difference Between Deflation and Exchange-Rate Adjustment Results Largely from Concern with Relative Real-Wage Positions Rather than from Money Illusion

(1) *Objectives of labor unions.* In an economy in which labor is unorganized, or in which labor unions play merely a minor role, only a faint shadow of the problem to be here discussed would

exist.[7] The difference between the two policies we are considering results almost exclusively from their bearing on labor-union objectives.

Unions bargain for money wage rates, and while one nowadays occasionally hears voices favoring real-wage bargaining — generalized full escalator clauses — the complications which such a change would create would be very large indeed. The leadership of each individual union is aware of the fact that the real wage rate corresponding to the agreed-upon money-wage rate will depend on price movements during the contract period. With respect to the future cost of living the bargaining parties can merely have *expectations;* if one wants to be somewhat spuriously precise these expectations may be said to express themselves in subjective probability distributions (subjective density functions).

Any competent union official must assume a negative relation between the height of the money wage rates resulting from a bargain and the amount of employment likely to be forthcoming to the membership during the period. But with rising money wage rates the employed percentage of the membership usually declines less than does the absolute amount of employment offered because the size of the membership itself varies with the amount of employment obtainable by members of a bargaining unit.

Even if formally all organized workers of a Western nation were members of a single union, the success of those in charge of specific bargains would presumably be measured in large part by the height of the wage rates secured in the individual bargains — their height relative to past wages and their height relative to the wages of other members of the country's labor force. There is, to be sure, an upper limit beyond which only a clearly inefficient bargaining agency would try to press the money wage rate because at that point the negative employment effect would become very great; yet normally the wage rates resulting from a bargain are very likely to be at least *somewhat* lower because that upper limit would be reached only if the union dictated the terms of the bargain unilaterally. An even closer approximation to the union's desired upper limit, with some reduction of the members employed, could frequently be "forced" by the union, though at the risk of strained labor-management relations and even at the risk of more or longer strikes than those which occur in fact.

7 The view that what I call the side-effects of accepting the burden of reduced absorption are strongly influenced by the unionization of the labor force is clearly implied by Haberler in the passage to which I referred in footnote 3.

In each bargain union officials are indubitably influenced by the wage rates earned by other members of the labor force. These other wage (and salary) rates result partly also from union-bargaining and partly from individual employer-employee negotiations. The *relative real-wage positions* of members of the labor force are almost entirely decided by *money*-wage bargains and by individual negotiations relating to *money* wages and salaries: with a negligible degree of imprecision we may say that, important as price changes are for determining the level of real wages, these changes hit all income recipients *in the proportion of their money wages.* Hence price changes have no noteworthy effect on the relative "real" positions of the employed. One needs to attribute no money illusion whatever to the public to conclude that the terms of money-wage or salary contracts almost wholly determine each income-recipients place in the real-wage structure and that in this regard *money* wages have a special status in any analysis relating to *real* incomes.

(2) *The difference between the side effects of the two policies.* Now, consider a union, or a bargaining unit within a union, faced with the following situation. The unit used to receive 6 percent money-wage increases per annum. Recently the deflationary policy described in the preceding section for trade-balancing at fixed exchange-rates has become adopted. If no sacrifice is to be made at the expense of the amount of employment offered to the membership of the bargaining unit, then for a transition period extending over a year a wage increase of merely 4 percent would have to be accepted in a new contract. There exists the possibility that the transition period will have to be prolonged, involving (at that time) either a somewhat smaller or greater shortfall of further money-wage increases as compared to the usual 6 percent. After the possibly extended transition period, money-wage increases could continue at 6 percent though from a lower base than would have been the case if there had been no need to reduce domestic absorption. The 4 percent increase would impose on the employed workers of the union a "burden" corresponding to anywhere between 2 percent of their yearly income (the difference between 6 percent and 4 percent) and twice this much (or even more). At first sight this may appear to be a very "strong" illustration of a difficulty

because even if initially imports should be the equivalent of 15 percent of GNP and they should exceed exports by 10 percent of the latter, the algebraic product of these two figures would be only 1-1/2 percent of GNP. Yet the money-wage rate reduction needed for deflationary balancing at a constant employment level is determined not by this but by the deterioration of the terms of trade and possibly by the rising costs of employing resources in the import-substitute and in the export sectors as more resources are moved there.

I submit that if a labor union, or a bargaining unit forming part of a union, becomes faced with the question how to behave when only the money-wage moderation here described could keep employment unchanged, it will put up great resistance against this moderation, and will exert vigorous pressure for a continuation of the 6 percent increase even if this implies reduced employment. It will do so in spite of the fact that previously — before domestic absorption had to be reduced — it did not exert nearly the same degree of pressure to obtain money wage increases exceeding 6 percent at the expense of the amount of employment.

Consider a bargaining unit coming up for a contract when the deflationary policy has just started taking effect. At that time a sizable proportion of the labor force has already obtained, for a period ahead, the previously customary money-wage increase (which for our unit is assumed to have been 6 percent). By agreeing now to the 4 percent increase, our union would worsen its position in the real-wage structure as compared to all those who already have a new contract. During the period to which our unit's new contract applies, and at a time when other units will be receiving their increases, the "appropriate" increase — the increase consistent with the effort to prevent a contraction of output — will presumably not be 4 percent: for a while the in this sense "appropriate" increase may become either greater or smaller, but before long it will again become 6 percent because the needed reduction of domestic absorption is a once and for all process. Indeed, the in this sense "appropriate" increase may well again become 6 percent for our unit, before the expiration of the new contract which we are now considering. The 4 percent scheme would upset relative positions in the real-wage structure in a way that is unpredictable, except that those who have already received their increases would become placed higher up in the structure. The resistance against this is likely to be strong

enough to lead to "using up" the deflated aggregate money income for paying the same wage rates as would otherwise be paid but for paying these wages to a smaller number of workers producing a smaller output.

The elimination of a trade-deficit — or its turning around into a surplus — by means of exchange-rate adjustment at given aggregate money income (hence with a temporary steepening of the price-trend) has different characteristics in this regard. Given such a policy, continued acceptance of the 6 percent money-wage trend with no adverse employment effect — a willingness to abstain from forcing a steepening of the money-wage trend at reduced employment — leaves *relative real-wage positions unchanged regardless of when wage contracts were or will be concluded.* The adverse real-wage effect of a temporary steepening of the price-trend during adjustment process hits all employed workers in proportion to their money wages, with the timing with which the burden itself develops to the economy and in the amount in which it develops. It seems safe to suggest that, given a monetary-fiscal policy implying a contraction of output *if* money-wage rates should rise by more than our 6 percent, the 6 percent has a better chance of closely approximating the "acceptable" than does the 4 percent under deflation. This proposition is not even vaguely similar to any conjecture about the existence of money illusion. The implication here merely is that if a "real" burden needs to be accepted, the distribution of the burden does matter.

A case — perhaps a somewhat weaker one — can be made for the second of the two policies also as viewed from a surplus country's vantage point, because a struggle over the distribution of a gain in domestic absorption may touch off money-wage escalation which is avoided if the gain becomes realized through a lowering of the prices of internationally traded goods in domestic currency. In any event, to be accepted without undesirable side-effects, the adjustment process must qualify from both vantage points. In the past the lesser acceptability of the fixed-rates adjustment process has shown in the fact that monetary systems trying for fixed rates have in reality led to abrupt rate-adjustments in frequent intervals. It is surely preferable to build flexibility into the system rather than have the rate-structure break again and again, especially because the markets have become aware of how unsuccessful the effort must be to cling

to an administratively determined rate structure in the present circumstances.

A final word on *why* the "relative positions" argument for greater acceptability of real-wage reductions by way of exchange-rate adjustment rather than by way of money-wage reduction is essentially an argument based on union behavior. In the first place with labor unorganized there would probably be fewer contracts tying down the terms of employment for a period ahead. Also, a union that in the event of the reduction of aggregate money income presses vigorously for the unchanging wage rates at the expense of the amount of employment does not typically act the way in which an unorganized labor force would. This follows from the fact that when output is reduced many unemployed union members would prefer employment at a somewhat reduced money wage rate to unemployment; even in the cases in which they would not, they would in the absence of negotiated (downward rigid) wages be regarded as *voluntarily* unemployed, though given the various methods used for estimation they might not always be so classified. Merely a faint shadow of our problem would remain in the absence of labor unions. This suggests the answer to the question why the problems discussed in the present article have not received attention until unions have acquired very significant influence in Western labor markets.

V. Empirically Based Speculations About the Effects of the 1971 Rate-Adjustments on U.S. Trade in 1972

(1) *The difference between an insufficient dose of a medicine and using the wrong medicine.* It is admittedly difficult to form a judgment on whether a specific act of exchange-rate adjustment has in fact moved the trade figures in the expected direction. It is especially difficult to do so after a period of very limited duration because in an initial phase exchange-rate adjustment may well exert a "perverse influence" on the trade-account (to illustrate with the deficit country: foreign prices have already risen in domestic currency but it takes time for additional resources to move into the import-substitute and export sectors). Yet it is safe to state that the most frequently heard (simple and "popular") reasoning about the long duration of the perverse effect of the 1971 rate-adjustments on the American trade position is erroneous. This is the reasoning emphasizing the deterioration of the American trade balance from 1971 to 1972.

The American net trade-deficit did grow significantly from 1971 to 1972, but as concerns the problem under consideration this means very little. Say that initially our imports (in dollars) bear the proportion r to our exports (in dollars) and the annual compound growth-rate of imports bears the proportion p to the growth-rate of exports, where for the U.S. in 1971 r was only slightly in excess of unity but p was much larger than unity. Then a movement towards balance requires not only that the growth-rate of imports should cease exceeding that of exports but it requires that the *growth-rate of exports should exceed that of imports in a proportion higher than r.* Indeed, if in view of the normal American position we want to explore the conditions of gradually arriving at a trade surplus, then we need to recognize that this requires a higher growth-rate of exports than of imports beyond the time when balance will be reached.

If for the time being the growth-rate of imports still continues to exceed the growth-rate of exports but does so in a lesser proportion than the previous proportion p (or if the growth-rate of exports already starts exceeding that of imports but in a proportion smaller than r), then *while the deficit is still growing,* a policy measure to which the change may be attributed is for the time being *insufficiently effective but not counter-productive.* Should the measure *remain* insufficiently effective, a larger dose of the medicine may be needed, but in this case it is a mistake to conclude that the wrong medicine has been administered. This is frequently overlooked in the current popular and semi-popular debate. However, the American situation becomes further complicated by the great difficulty of making the appropriate correction for the business cycle, quite aside from the complicating factor introduced by the probability of an initial perverse exchange-rate effect.

(2) *The data.* Let us now note the following facts. The American trade balance started deteriorating after 1964, a year in which the trade *surplus* was almost $7 billion, while by 1971 the U.S. had a *deficit* of somewhat in excess of $2-1/2 billion and by 1972 one of close to $7 billion. From 1964 to 1971 the annual compound growth-rate of exports was 7.4 percent (roughly the same as that of money

GNP), *while the growth-rate of imports was 12.7 percent, i.e., about 1.7 times the growth-rate of exports.* Major exchange-rate adjustments took place during 1971 — the dollar declined in relation to most of the important currencies — and from 1971 to 1972, during a year of very rapid cyclical expansion, the *relation of the import to the export growth-rate of the U.S. remained almost precisely the same.* These two rates were 18.2 percent and 10.4 percent, *the ratio being 1.75.* From 1971 to 1972 the export growth rate exceeded the GNP growth rate by a small margin.

As concerns the import-export growth-rate relation, a similar picture emerges if we limit ourselves to exports and imports of manufactured goods, remembering that during the period under consideration these goods have greatly increased their weight in American imports and to some extent also in exports. For some purposes it is useful to exclude the other trade items because changes in the quantity and the value of oil imports and of agricultural exports give rise to problems of a special kind. For manufactured goods the 1964-71 import-export growth-rate ratio was about 2 (i.e., 17.2 percent versus 8.7 percent), and the 1971-72 ratio was 2.1 (i.e., 21.5 percent versus 10.4 percent).

(3) *Assumptions and conclusions.* Noting that the import-export growth-rate ratio has shown very pronounced cyclical variations, it is possible to make "reasonable" though not "compelling" assumptions which would lead to the conclusion that the comparison of 1972 with 1971 already discloses an exchange-rate effect in the desired direction. I consider the following assumptions "reasonable", and at any rate I have more confidence in them than in whatever results may be obtained at this stage from more formalized econometric efforts.

(a) The seven-year period 1964-71 *as a whole* is not very much affected by business-cycle distortions nor, as concerns the United States, by exchange-rate modifications in relation to our principal trading partners.

(b) The initial perverse effect of the 1971 rate-changes had no greater influence on the second half of 1971 than on the early part of 1972.

(c) For 1971-72 distortions caused by the business cycle *raised* the American import-growth beyond normal and reduced the export-growth below normal, because all available data indicate that, in sharp contrast to 1971, the 1972 American "real" expansion rate was *very far above normal* and that the expansion rates of our main trading partners were on the whole *distinctly below normal.*[8] It is for practical purposes impossible to tell what the proper evaluation of the cyclical distortions would be if the size of the "slack" — the deficiency of output relative to the so-called potential output of the various countries — rather than the supernormality or the subnormality of their expansion rates were regarded as the measure of export-promoting or import-promoting cyclical forces. But it is clear that the conventional way of estimating the American "slack" as an export-promoting cyclical factor leads to a significant overestimate of this factor. As a result of pronounced, monotonic shifts in the composition of the American labor force toward teenagers and women, a general unemployment rate of close to 5 percent, as estimated by the American methods, now seems to express just about that degree of "full-employment" tightness which the conventional 4 percent rate used to express. Also, there can be little doubt that by the first quarter of 1973, with an unemployment rate of 5 percent, the American economy had arrived in a very tight situation in terms of capacity utilization rates in a large number of industries. As was said above, we can try to formulate here merely "reasonable but not compelling" assumptions, and the assumption that in 1972 the cyclical developments in the Western World and in Japan were import-promoting rather than export-promoting *for the United States* does meet this requirement. (We should remember that if we focus on manufactured goods then such items as farm products, on the one hand, and oil, on the other, are disregarded).

(d) While in 1972 inflation steepened abroad in relation to the U.S. in terms of the consumer price index, the admittedly not very dependable data on export prices do not suggest that (with the export prices expressed in domestic currencies) the changed relation would have so far had any strong import-reducing or export-raising effect on the United States.

(e) Therefore, one might have expected that the cyclically *very* sensitive ratio of the American import growth-rate to the export

8 See OECD *Economic Outlook* No. 12, December 1972, particularly p. 9.

growth-rate would worsen for 1971-72 in comparison with 1964-71. This has not been the case, and hence the data are "suggestive" of a favorable net exchange-rate effect when the year 1972 as a whole is compared with 1971 as a whole. On these assumptions any net "perverse effect" would have had to be of very limited duration. The 1971 rate-adjustments have turned out to be too small, but the worsening of the net trade-balance from 1971 to 1972 is not an indication of an effect in the wrong direction.

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