EXCHANGE RATE EXPECTATIONS AND MONETARY POLICY

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The adjustment process to a monetary disturbance is studied in a model of perfect capital mobility and flexible exchange rates. Exchange rate expectations are emphasized and used to establish an adjustment process. In the short run, a monetary expansion gives rise to a depreciation in the exchange rate and a reduction in saving due to the terms of trade deterioration. The exchange rate depreciation, in the short run, may be in excess of the long-run depreciation. The trade balance in the short run may worsen. The long-run equilibrium of the analysis conforms to the Mundell–Fleming results that establish the force of monetary policy under flexible rates.

1. Introduction

The purpose of this paper is to reassess the effects of monetary policy under flexible exchange rates and to give attention to the details of the short-run adjustment process. The paper is stimulated by a recent study of Niehans (1975), who explores the adjustment process by drawing a distinction between actual and expected or 'permanent' exchange rates and notes the implications of that distinction for the trade balance and capital flows. Specifically, Niehans concludes that a monetary expansion may worsen the trade balance and lead to a capital inflow and that, in extreme cases, it may actually lower income and employment. These results derive from a combination of 'perverse' short-run trade balance responses to an exchange rate change and less than unit elastic expectations that cause a depreciation of the spot rate to give rise to the expectation of an appreciation and therefore to an incipient capital inflow.

The Niehans conclusions are of importance because they run counter to the established Mundell–Fleming view that monetary policy is most effective under flexible rates with capital mobility, that a monetary expansion under these conditions will lead to an expansion in output and employment, and that it will cause a trade surplus and a capital outflow. The present paper links the two strands of analysis and uses elements of the Niehans approach, modified to the case of perfect capital mobility, to provide an explicit adjustment mechanism

of the economy in response to a monetary disturbance. In such a view, the short-run departure of actual from anticipated exchange rates serves to dampen the output expansion and gives rise to the possibility of a trade balance worsening. Over time, exchange rate expectations adjust and the associated adjustment of interest rates and trade flows moves the economy to the Mundell–Fleming equilibrium.[1]

In section 2 we briefly restate the Mundell–Fleming model. In section 3 exchange rate expectations are introduced and their effect on interest rates gives rise to an adjustment path in response to a monetary expansion. It will be shown that the trade balance may worsen in the short run but that, for the stable system, output increases throughout the adjustment process. The effect of exchange rate expectations on the trade balance is introduced in section 4 and is used, in conjunction with some further empirical restrictions, to generate an adjustment path which implies fluctuations in exchange rates and a slow response of output to an increase in money.

2. The Mundell–Fleming model

We assume a country that is small in the sense of facing a given world interest rate and a perfectly elastic supply of imports at a given price in terms of foreign currency. Domestic output is in perfectly elastic supply at a given nominal price. Aggregate spending by domestic residents, E, depends on income and the interest rate, while the composition of spending between domestic goods and imports depends on the relative price of these goods that, in the present context, can be identified with the exchange rate. Foreign demand for domestic goods or exports is just a function of the terms of trade or the exchange rate. With these assumptions, we can write the goods market equilibrium condition in the home country:

$$y = E(i, y) + T(e, y), \quad E_i < 0, \quad E_y = 1 - s > 0,$$
$$T_e > 0, \quad T_y = -m < 0, \tag{1}$$

where y denotes domestic output, i the domestic interest rate, T the trade balance surplus and e the exchange rate – defined as the domestic currency price of foreign exchange.

Asset market equilibrium in the home country will be discussed in terms of the money market. The demand for money is a function of income and the interest rate and for monetary equilibrium has to equal the existing supply of money, L:

$$L = L(i, y), \quad L_i < 0, \quad L_y > 0. \tag{2}$$

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[1] Earlier work that emphasizes the role of exchange rate expectations for monetary policy under flexible rates includes Mundell (1964) and Wonnacott (1972). Argy and Porter (1972) have developed a formal analysis of the effects of policies under alternative expectations mechanisms.

Domestic and foreign securities are assumed to be perfect substitutes. Arbitrage in the security markets therefore implies that the domestic interest rate will equal the given foreign interest rate, i^*,

$$i = i^*. \tag{3}$$

Substituting (3) in (1) and (2) allows us to show market equilibrium schedules for goods and money in the home country. In fig. 1, following Mundell (1968), the XX schedule shows combinations of exchange rates and output levels for
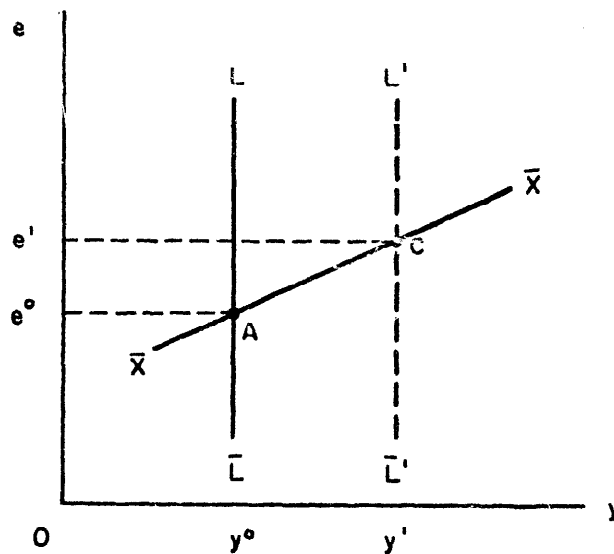

Fig. 1

which the goods market clears. A higher level of output will create an excess supply of goods because the marginal propensity to spend is less than unity and therefore has to be accompanied by an exchange rate depreciation that improves the trade balance and diverts demand toward domestic goods. The positive slope of the XX schedule therefore reflects the assumption that the Marshall–Lerner condition holds, $T_e > 0$. The LL schedule reflects monetary equilibrium. Given the interest rate, there is a unique level of income at which the money market clears. Initial equilibrium obtains at point A with an exchange rate e^0 and a level of output y^0.

Consider now the effect of an increase in the money supply. At the initial equilibrium level of income there will be an excess supply of money, and in order for monetary equilibrium to be restored at the given interest rate, income would have to increase to y'. This is reflected in the shift of the LL schedule to LL'. The adjustment process to the new equilibrium at point C can be thought of in the following manner. The excess supply of money at point A would cause an *incipient* decline in interest rates and capital outflow that will cause a depreciation of the exchange rate. The depreciation in the exchange rate in turn

raises the demand for domestic goods and causes income to rise until money demand matches the higher money supply. Corresponding to the higher income level at point C we have a trade surplus, since the increase in income is not matched by an equal increase in absorption or spending. The trade balance surplus, in turn, is financed in the world capital market by a capital outflow or an acquisition by domestic residents of claims on the rest of the world.[2] The magnitude of the exchange rate change required to restore equilibrium will be inversely related to the substitutability between domestic and foreign goods. High substitutability implies a small change in the equilibrium exchange rate or terms of trade.

3. Exchange rate expectations and interest rates

Exchange rate expectations introduce the possibility that the domestic interest rate may differ from the world rate because what matters to investors is the expected net return on alternative assets, that is, interest rates less anticipated depreciation of the exchange rate. Accordingly, if, in terms of expected net returns, domestic and foreign securities are perfect substitutes, then the relevant relationship between interest rates is

$$i = i^* + (\bar{e}/e - 1), \tag{3'}$$

where $\bar{e}$ is the expected future spot rate, or, in terms of Niehans' terminology, the 'permanent' rate.[3] From (3') it follows that if the price of foreign exchange is expected to increase, the domestic interest rate will exceed the foreign rate in order to compensate holders of domestic assets for the anticipated depreciation or foregone capital gain. To the extent that a monetary expansion causes a depreciation in the spot rate relative to the expected rate, or equivalently, an anticipated appreciation of the domestic currency, it will allow domestic interest rates to decline relative to the world rate. This decline in domestic interest rates in turn will lower velocity and thus dampen the expansionary effects of an increase in money. In the remainder of this section we will formalize this argument and consider the adjustment process of the economy, including the adjustment of expectations.

For the points to be made, it will be convenient to assume that in the short run the elasticity of expectations, σ, is less than unity, while in the long run it will equal unity. Thus, in the short run, a depreciation of the spot rate will give rise to an anticipated appreciation of the exchange rate and thus to a decline in

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[2]McKinnon and Oates (1966) note that this acquisition of net claims on the rest of the world in turn induces a further adjustment process by affecting asset demands and, through disposable income, the level of spending. We disregard this further adjustment process in the present paper.

[3]Implicit in (3') is the choice of a given discrete period. Accordingly, $\bar{e}$ represents the exchange rate expected to obtain next period, and i and i^* are the one-period interest rates.

domestic interest rates. In the long run, variations in the exchange rate have no effect on the interest rate because exchange rate expectations fully adjust:[4]

$$di/de = \sigma - 1 \leqq 0. \tag{4}$$

Consider now the modification to the Mundell–Fleming model that arises from exchange rate expectations, or the endogeneity, in the short run, of the domestic interest rate. Replacing eq. (3) by (3′), and substituting in (1) and (2), we note that both money demand and aggregate spending by domestic residents become responsive to the spot exchange rate.
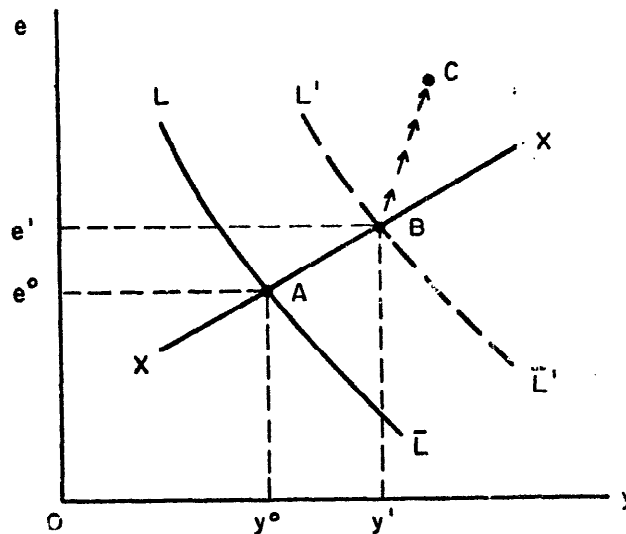

Fig. 2

In fig. 2 we show the LL schedule that reflects monetary equilibrium under this alternative specification. A depreciation in the spot rate will give rise to an anticipated appreciation and thereby lower interest rates and raise money demand. To maintain monetary equilibrium, a higher exchange rate (lower interest rate) will have to be matched by a lower level of income. The goods market equilibrium schedule similarly reflects the effect of exchange rates on interest rates. A depreciation of the spot rate now raises aggregate demand for domestic output, both via the substitution effect of the implied terms of trade change and via the effect of exchange rates on interest rates and thereby on spending. Accordingly, the XX schedule is flatter than the corresponding schedule, $\overline{X}\overline{X}$, in the Mundell–Fleming model, where we only have the terms of trade effect.

A monetary expansion in this framework creates an excess supply of money at the initial equilibrium and requires an increase in income, or a depreciation

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[4]At the initial equilibrium, we assume that $e = \bar{e} = 1$ and $i = i^*$.

in the exchange rate (a decline in interest rates), to restore monetary equilibrium. This is reflected in the shift of the money market equilibrium schedule to LL'. The short-run equilibrium moves to point B with an increase in income and a depreciation of the spot rate. The expansion of income, however, falls short of that in the Mundell–Fleming model because the domestic interest rate declines so that the induced decline in velocity dampens the income expansion. Formally, the increase in income at point B is given by:

$$dy/dL = [E_i(\sigma - 1) + T_e]/\Delta > 0, \tag{5}$$

where

$$\Delta \equiv L_i(\sigma - 1)(s + m) + [E_i(\sigma - 1) + T_e]L_y > 0.$$

It is readily apparent from (5) that with an elasticity of expectations less than unity the income expansion falls short of the traditional result:[5] that is, $dy/dL = 1/L_y$.

Consider next the short-run effect of a monetary expansion on the trade balance,

$$dT/dL = [sT_e - mE_i(\sigma - 1)]/\Delta \gtrless 0. \tag{6}$$

From (6) we observe that the trade balance in the short run need not improve. The interpretation of that possibility is as follows. The expansion in output, given a marginal propensity to spend that is less than unity, implies an improvement in the trade balance, since absorption does not rise as much as income. There is, however, the effect of a reduced interest rate on aggregate spending that may more than offset the positive effect of the output expansion. Whether such a result is likely depends, among other things, on the interest response of aggregate demand and on the elasticity of expectations. The Niehans conclusion that a monetary expansion, in the short run, may worsen the trade balance and lead to a capital inflow, is therefore confirmed by the present analysis, even under circumstances where the Marshall–Lerner condition holds.

Consider next the adjustment process that is induced by the revision of exchange rate expectations. For that purpose we note that the equilibrium at point B could only be sustained by expectational errors. The spot rate has depreciated relative to the permanent rate. Accordingly, the estimate of the permanent rate will come to be revised and will cause the economy to converge over time to the Mundell–Fleming equilibrium at point C, where actual and expected exchange rates are equal. That adjustment process can be thought of in the following manner. At the short-run equilibrium B, an increase in the permanent rate will, from (3'), raise the domestic interest rate and therefore create an excess supply of money and an excess supply of goods. In response to the interest rate increase, the money market equilibrium schedule will shift up and

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[5]The standard results can be seen in (5) and (6) by setting $\sigma = 1$.

to the right, while the goods market equilibrium will shift up and to the left. Since the money market equilibrium schedule will shift up further than the goods market equilibrium schedule, the net result is a depreciation in the spot rate that does not fully match the increase in the permanent rate, an increase in velocity and an increase in income.[6] That adjustment process, as indicated by the arrows in fig. 2, will continue until the expected rate has fully caught up with the actual rate, so that interest rates are again at the world level and accordingly, the output expansion is that predicted by the Mundell–Fleming model.

The adjustment from *B* to *C* is essentially one where the revision of the permanent rate gives rise to *incipient* capital outflows that cause the spot rate to depreciate and thereby to raise demand for domestic output. The resulting income expansion raises money demand and interest rates and thereby causes domestic absorption to be progressively displaced by a trade surplus. It is this process of crowding out which reconciles the possibility of a short-run trade deficit with the long-run trade surplus.

So far we have assumed that the net effect of an exchange rate depreciation is to raise demand for domestic output, $E_i(\sigma - 1) + T_e > 0$. Consider now the case where that condition is not satisfied because the Marshall–Lerner condition does not hold, and sufficiently so for that effect to dominate the interest rate effect of an exchange rate change. Under these circumstances, the goods market equilibrium schedule, *XX*, in fig. 3 will be negatively sloped and the short-run effect of a monetary expansion would be to lower output, along with a depreciation of the spot rate. The interpretation of this result is that the reduction in interest rates attendant upon a monetary expansion gives rise to an incipient capital outflow that depreciates the spot rate and thereby exerts a net deflationary effect on domestic aggregate spending.

This very unorthodox result is noted by Niehan. as an extreme possibility and it is, in fact, consistent with stability if we take the expected rate as given. Allowing, however, for the subsequent adjustment of the expected rate and the induced further depreciation in the actual spot rate, we recognize that such a process will be unstable, since it involves progressive depreciation and a continuing decline in output.[7]

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[6]The money market equilibrium schedule will shift upward exactly in proportion to the increase in the expected rate, since only under these conditions do interest rates stay unchanged and therefore, with unchanged income, money market equilibrium continues to obtain. The *XX* schedule shifts up by less since the exchange rate affects aggregate demand for domestic output, not only via the interest rate but also via the relative price effect. The upward shift equals

$$\mathrm{d}e/\mathrm{d}\bar{e}|_{XX} = [E_i(\sigma - 1)]/[E_i(\sigma - 1) + T_e] < 1.$$

[7]More formally, consider the dynamic adjustment according to which the spot rate depreciates in proportion to the excess supply of money, output expands in proportion to the excess demand for goods, and the expected rate adjusts in proportion to the forecast error. Under these assumptions it is readily shown that the Marshall–Lerner condition is necessary and sufficient for stability.

The possibility that the Marshall–Lerner condition would not hold is explicitly recognized as a short-run effect and follows from the recognition that trade flows will adjust to the permanent rate rather than to the actual rate, as was assumed in the present section. We turn therefore in the next section to a more detailed consideration of the alternative hypothesis and formalize the argument in a manner more consistent with the spirit of Niehans' analysis.
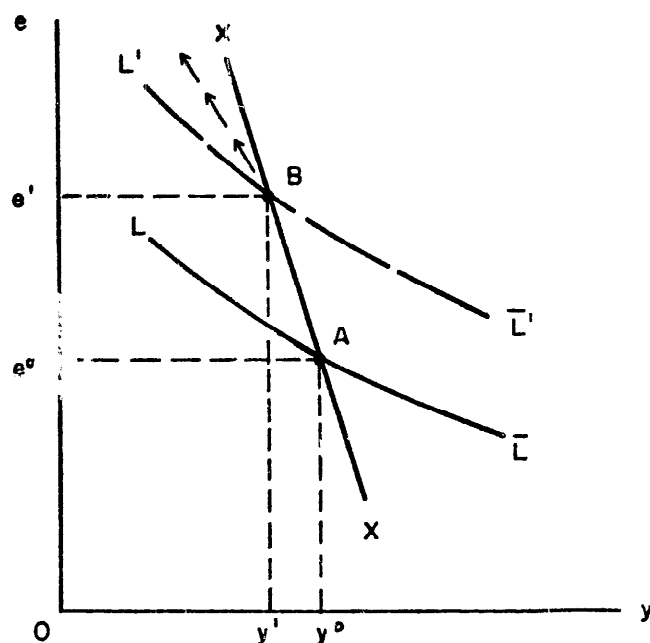

Fig. 3

4. Exchange rates and aggregate spending

The concern of the present section is with the effect of actual and expected exchange rates on the level and composition of spending. The concern arises from the recognition that, in the short run, physical trade flows are relatively unresponsive to exchange rate changes, while in the long run, substitutability between commodities is very high. To generate this effect in a formal manner it will be convenient to assume that physical trade flows respond only to the permanent rate and that, accordingly, we can write the trade balance as

$$T = X(\bar{e}) - eM(\bar{e}), \qquad T_e = -M, \quad T_{\bar{e}} > 0, \quad T_e + T_{\bar{e}} > 0, \qquad (7)$$

where X and M denote physical exports and imports. On this assumption, a depreciation in the spot rate, as of a given permanent rate, will worsen the trade balance by exactly the terms of trade effect on income, $-M\,\mathrm{d}e$. A depreciation of the permanent rate, by contrast, will improve the trade balance since it raises exports and reduces imports. An equiproportionate change in the spot rate and the expected rate, finally, is assumed to improve the trade balance.

The latter is the long-run Marshall–Lerner condition that we treat as satisfied on the argument that, in the long run, substitutability between goods is high.

In treating physical trade flows as just a function of the permanent rate, we throw the full weight of the terms of trade effect on income into the domestic goods market. If aggregate spending were unresponsive to the terms of trade, as has been assumed in the previous sections, then a terms of trade worsening implies a reduction in demand for domestic output by Mde. Such treatment, however, lacks symmetry since, clearly, what causes imports to adjust to a permanent change in relative prices should similarly affect the demand for domestic goods. On that argument, it is appropriate to assume that the full weight of the terms of trade effect on income is absorbed by an offsetting reduction in saving, so that neither imports, nor demand for domestic output in the short run, are affected by relative price changes.[8] With this respecification, aggregate spending by domestic residents, E, becomes

$$E = E(i, y, e, \bar{e}), \qquad E_e = -T_e = -E_{\bar{e}} = M, \tag{8}$$

and the goods market equilibrium condition can be written as

$$y = E(i, y, e, \bar{e}) + T(e, \bar{e}, y). \tag{1'}$$

The preceding argument implies that in the short run a depreciation of the spot rate will raise the demand for domestic goods to the extent that it lowers interest rates and causes a depreciation of the permanent rate. We will assume that this short-run effect falls short of the long-run effect that is due to a full adjustment of spending patterns to a terms of trade change,

$$E_i(\sigma - 1) + (E_{\bar{e}} + T_{\bar{e}})\sigma < T_e + T_{\bar{e}},$$

or

$$\theta \equiv E_i + T_e + T_{\bar{e}} > 0. \tag{9}$$

The latter condition will be satisfied if aggregate spending is relatively unresponsive to the interest rate. The condition is assumed here to impose a particularly interesting property on the adjustment path of exchange rates. Fig. 4 summarizes the preceding argument in the short-run and long-run goods market equilibrium schedules XX and $\bar{X}\bar{X}$, respectively. The long-run goods market equilibrium schedule holds interest rates constant and implies full adjustment to the terms of trade, and is therefore equivalent to the Mundell–Fleming treatment of the goods market in fig. 1. The short-run schedule, by contrast, allows only partial adjustment of expectations and, accordingly, by

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[8]This assumption is obviously a special case. It is adopted here because of the symmetry in the treatment of domestic goods and imports. The general case goes back to Laursen and Metzler (1950), who recognized the effect of the terms of trade on saving. More recently, the effect of relative prices on spending has been emphasized by Rodriguez (1976) in an extension of the monetary approach to the balance of payments.

(9) finds aggregate demand less responsive to a change in the spot rate. Finally, the treatment of the money market exactly replicates that of the previous section.

Consider now the adjustment process to a monetary expansion. The concern with the dynamic properties that motivates this section suggests that one wants to think of the money market as clearing instantaneously, while the goods market adjustment occurs only over time. Accordingly, the impact effect of a monetary expansion is to lower interest rates, as of given income, and to cause the incipient capital outflow to bring about a depreciation in the spot rate to point A'. At
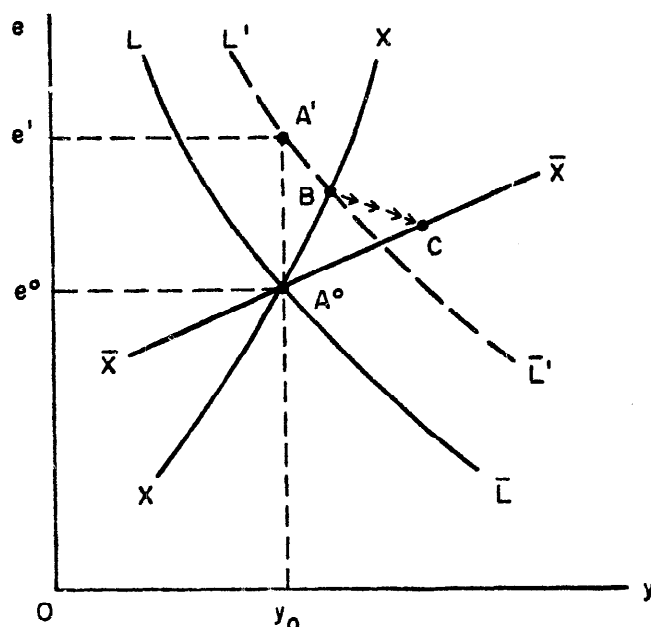

Fig. 4

that point, the reduction in interest rates is matched by a depreciation in the spot rate relative to the permanent rate. The impact effect of a monetary expansion, therefore, is to induce a sharp depreciation in the spot rate. The depreciation is larger the smaller is the interest elasticity of money demand and the higher is the elasticity of expectations.[9]

The reduction in interest rates and the partial (if any) depreciation of the permanent rate at point A' imply an increase in demand for domestic output and therefore an expansion in income that moves us to a position of short-run equilibrium at point B. The adjustment comes about through the effect of the output expansion on interest rates. The rising output raises money demand and

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[9]From (2) and (4), the depreciation in the spot rate as of a given level of income is $de/dL = 1/L_i(\sigma-1)$. For a more detailed discussion of the short-run adjustment of exchange rates, see Dornbusch (1976).

interest rates and therefore invites an incipient capital inflow that appreciates the spot rate. We conclude, therefore, that in the short run the exchange rate will overshoot, and that this depreciation will be offset once the income adjustment tightens up the money market. The short-run effect of the monetary expansion on income is given by

$$dy/dL = (\sigma\theta - E_i)/\Delta',$$

where   (10)

$$\Delta' \equiv (\sigma\theta - E_i)L_y + (s+m)L_i(\sigma - 1) > 0.$$

It is immediately obvious from (10) that if the elasticity of expectations is close to zero, the short-run effect of money on income approximates that of a fixed exchange rate world without (perfect) capital mobility. This result therefore confirms Niehans' conclusion that inelastic exchange rate expectations, and adjustment of trade flows in response to permanent exchange rates, serve to dampen the short-run income adjustment to a monetary expansion. We note, however, that in the present formulation income will invariably rise. This is so because the deflationary effect of a terms of trade deterioration is entirely absorbed by a decline in saving rather than in the demand for domestic output.

The short-run trade balance effects of a monetary expansion will depend critically on the elasticity of expectations. Specifically, if the elasticity of expectations is close to zero, so that the actual and permanent exchange rates diverge considerably, the trade balance must worsen:

$$dT/dL = [-m(\sigma\theta - E_i) + (s+m)(T_e + T_{\hat{p}}\tau)]/\Delta'.$$ (11)

The explanation for this result is that with a lo w elasticity of expectations the worsening of the trade balance due to the income expansion and the actual terms of trade deterioration is not sufficiently offset by a permanent rate adjustment and therefore an adjustment in real trade flows. At the same time, we note that as the elasticity of expectations rises, and therefore the discrepancy between the actual and the permanent rate vanishes, the trade balance effect of an increase in money is more closely represented by the Mundell–Fleming prediction of a surplus, $dT/dL = s/L_y$.

The short-run trade balance effect can also be interpreted in terms of the absorption approach. In this perspective, the favorable effects of an income expansion on the trade balance may be more than offset by an increase in spending relative to income that results from a decline in interest rates and a deterioration in the terms of trade that is perceived as transitory. Since a low elasticity of expectations implies that the income and permanent rate adjustment are small, while the interest rate change is large, we recognize this as a circumstance that is likely to lead to a net increase in spending relative to income and therefore to a trade deficit.

The role of the interest rate effect on spending and the trade balance is of interest in a slightly different perspective. Corresponding to the trade deficit that is likely to arise in the short run, there is a net capital inflow that finances the excess of spending over income. The capital inflow will be larger the larger the decline in domestic interest rates. Such a result can obviously not be explained in terms of portfolio considerations and therefore emphasizes once more that for considerations of the trade balance, and hence under flexible rates for the direction and magnitude of actual capital flows, it is essential to cast the question in terms of spending decisions rather than portfolio choices. To the extent that this is possible in a general equilibrium framework, one may want to describe the equilibrium as one where the exchange rate is determined by portfolio choices, while the rate of capital flows is determined by spending decisions.[10] Viewed in terms of the absorption approach, a decline in interest rates or a transitory worsening in the terms of trade appear quite naturally as circumstances in which individuals will wish to borrow in order to finance expenditures in excess of income.

The short-run equilibrium at point *B* will only be transitory, since to sustain it would require persistent expectational errors. Accordingly, the revision of expectations about the permanent rate will cause the equilibrium to move over time until the Mundell–Fleming long-run position at *C* is reached. The adjustment process is one where the increase in the expected rate causes the demand for domestic output to increase and the resulting expansion of income to raise interest rates. The incipient capital inflow to which the increase in interest rates gives rise in turn causes the spot rate to appreciate and thereby serves to reduce the discrepancy between expected and actual rates.

The details of the adjustment process depend on the relative speeds with which output and expectations adjust. In particular, if output adjusts fast relative to expectations, the adjustment will be asymptotic, as shown in fig. 4. In this case, the expected rate, during the adjustment process, falls short of the long-run equilibrium rate, while the actual rate is above its long-run level. This is therefore a circumstance where exchange rate predictions are consistently in error. Conversely, if output adjustment is sluggish, the adjustment process will be cyclical in all variables.

5. Concluding remarks

This paper has discussed the adjustment process to a monetary disturbance under flexible rates and capital mobility. Exchange rate expectations play a critical role in this adjustment process since they will allow the economy to accommodate a monetary increase before the output response raises the demand

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[10]This point has been made in a number of papers collected in the *Scandinavian Journal of Economics* 2, 1976.

for money to match the higher money supply. In the short run, with inelastic expectations, the spot rate depreciates and the interest rate declines sufficiently for the existing stock to be held; if exchange rate expectations are inelastic, this result is consistent with perfect capital mobility in the sense of equalization of net returns on domestic and foreign assets. The lower domestic interest rate is offset by the expectation of an appreciation.

The decline in the interest rate will stimulate absorption. The deterioration in the terms of trade is slow in affecting trade flows but will imply an increase in absorption, as of a given real output, as saving declines to offset the terms of trade effect on income. The presumption, therefore, is that in the short run, before output expands significantly and expectations adjust, the trade balance will worsen and there will be a corresponding capital inflow.

The adjustment of output and exchange rate expectations over time serves to raise interest rates and adjust real trade flows until the long-run Mundell–Fleming equilibrium is attained. In the adjustment process the trade balance will turn from an initial deficit to an ultimate surplus. The exchange rate will overshoot the ultimate level of depreciation. In the very short run, the depreciation is determined entirely by the interest elasticity of money demand; in the long run it is determined primarily by the responsiveness of the trade balance to the terms of trade.

The implications of the present paper for the use of stabilization policy are two. First, we note that monetary policy, in the presence of inelastic expectations, can still stimulate aggregate demand – even if it fails to generate a trade surplus in the short run. The reason is that interest rates decline and thereby provide a basis for an expansion in spending and output. The second point to note is that the shortrun decline in velocity that dampens the effects of a monetary expansion on output has a counterpart in the scope it provides for fiscal policy. In the short run, fiscal policy will work because inelastic expectations will cause an appreciation in the spot rate to give rise to an increase in interest rates and therefore to an increase in velocity. How interesting are these short-run results for policy purposes? It is likely that in the long run the system exhibits considerable homogeneity, so that the quantity of money effects the level of the exchange rate but not the level or composition of real spending. In these circumstances the usefulness of monetary policy lies primarily in the short run, and a flexible rate system provides the requisite control over the quantity of money that would not be available under fixed rates and perfect capital mobility.

References

Argy, V. and M. Porter, 1972, The forward exchange market and the effects of domestic and external disturbances under alternative exchange rate systems, I.M.F. Staff Papers, November.
Dornbusch, R., 1976, The theory of macroeconomic policies under flexible exchange rate regimes, Scandinavian Journal of Economics 2, forthcoming.

Fleming, M., 1962, Domestic financial policies under fixed and floating exchange rates, I.M.F. Staff Papers 9.

Laursen, S. and L. Metzler, 1950, Flexible exchange rates and the theory of employment, Review of Economics and Statistics 18.

McKinnon, R. and W. Oates, 1966, The implications of international economic integration for monetary, fiscal and exchange rate policy, Princeton Studies in International Finance no. 16.

Mundell, R. A., 1964, Exchange rate margins and economic policy, in: C. Murphy, ed., Money in the international order (Southern Methodist University Press, Dallas, TX).

Mundell, R.A., 1968, International economics (Macmillan, London).

Niehans, J., 1975, Some doubts about the efficacy of monetary policy under flexible exchange rates. Journal of International Economics 5, August, 275–282.

Rodriguez, C., 1976, The terms of trade and the balance of payments, unpublished manuscript (Columbia University, New York).

Wonnacott, P., 1972, The floating Canadian dollar (American Enterprise Institute, Washington, DC).