RECENT EXCHANGE RATE ADJUSTMENTS CAUSES AND CONSEQUENCES

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I am happy that the Bombay Management Association is organising this seminar on the recent exchange rate adjustments in the rupee. It is no surprise that an important decision such as this should have evoked much controversy and some heat as well. However, it is important that we address this issue as an economic question free from emotion. I propose to take this opportunity given to me this morning by the organisers of the seminar to spell out the background to the recent downward adjustment of the exchange rate, the need for it and the conditions for its success.

Factors Leading to the Exchange Rate Adjustments : Balance of Payments Difficulties and Decline in Foreign Exchange Reserves

In early July (July 1 and July 3), the RBI effected exchange rate adjustments in which the value of the rupee declined by about 18 - 19 per cent against major currencies. These adjustments have to be viewed in the context of developments in the balance of payments and the foreign exchange reserves position and I would, therefore, like to first give you the broad contours of the problem.

The Seventh Plan saw a widening of India's current account deficit. The ratio of current account deficit to GDP averaged 2.2 per cent during the period 1985-90 which was far above the figure of 1.6 per cent projected for this period in the Seventh Plan document. In absolute terms, the current account deficit averaged Rs. 7,771 crore (US $ 5.5 billion) as against that of Rs. 2,277 crore (US $ 2.3 billion) during the Sixth Plan period. During 1990-91, the balance of payments position, which was already under severe pressure, worsened considerably. The current account deficit increased sharply by about US $ 1.1 billion from that in the preceding year, reaching an estimated US $ 7.3 billion, equivalent to about 2.5 per cent of GDP.

The current account faced pressure simultaneously on several counts. There was a sharp deceleration in the growth of exports (down from the average annual 10 per cent volume growth of the preceding four years), a steep increase in POL imports (of US $ 2.2 billion) and a decline in net receipts from invisibles. The adverse shocks arising from the Gulf crisis contributed in no small measure to this deterioration, with the hike in oil prices, partial loss of export markets and reduced remittances.

Exacerbating the deterioration in the current account was a drastic fall in the usual modes of financing, particularly commercial borrowings. Also, the net inflow of non-resident deposits decelerated. The extent of shrinkage of external financing implied that even current account deficits of the order of those prevailing in 1988-89 or 1989-90 could not be financed.

The combination of developments on the current and capital accounts necessitated a massive drawdown of reserves as well as recourse to IMF resources. During 1990-91, foreign currency assets declined by US $ 1.2 billion despite the drawdown of India's Reserve Tranche position of SDR 487.26 million ($666.50 million) and a drawal of US $ 1.8 billion from the IMF. The severe pressures on the external position have persisted during the current financial year (1991-92), with a further fall in foreign currency assets of US $ 1.1 billion during April. Thereafter the fall in reserves has been contained and the reserves stand today at around US $ 1.3 billion.

Several measures were taken to improve export realisation, to cut imports and thus shore up reserves. These included raising the cost of imports by applying steep cash margins and also raising the cost of credit. Apart from the approach to the IMF, additional support was

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sought from other international institutions and bilateral sources. Gold transactions also provided bridge finance.

The Exchange Rate Adjustments : Rationale, Timing and Magnitude

The response to the balance of payments difficulties has to be at two levels. First, in the short-run, there is an immediate need to stem the drain on foreign exchange reserves and to meet the liquidity and financing problem. Second, the fundamental imbalance on the trade and current account has to be corrected. As I mentioned, the balance of payments position had been weakening over the past several years. This reflected the growing internal imbalance, in macro-economic terms, of spending more than we were producing. Over and above this, we face increasing cost of financing. An adjustment to more sustainable levels of capital flows has become imperative.

Downward adjustment of the exchange rate of the rupee is one of the instruments among others for resolving these problems. A situation of continuing depletion of foreign exchange reserves generates destabilising market expectations. In the immediate short-run, the exchange rate adjustment helps to reverse market expectations and thereby stems the outflow of capital in the first instance and later encourages its inflow. Over the short and medium-term, the downward adjustment becomes an instrument to improve the country's international competitiveness and to correct the imbalance in the trade and current account deficit. It raises the relative price of traded goods (by increasing the domestic price of foreign currency) to non-traded (or home) goods, thereby encouraging production of tradables while discouraging their consumption.

The real exchange rate (RER) of a currency which is the nominal exchange rate adjusted for the relative change in prices in the respective countries is a proxy for a country's degree of competitiveness in world markets. A real exchange rate appreciation reflects a deterioration in the country's international competitiveness, while an RER depreciation reflects the converse.

Between October 1990 and March 1991 the real effective exchange rate (REER) of the rupee appreciated by about 2 per cent, as a result of widening inflation differentials between India and the major industrialised countries[1] And the REER increase was despite continuing, albeit slower, nominal depreciation (2.4 per cent against five currencies, over the same period). Further, in the 5-month period between February 1991 and June 1991, the nominal effective exchange rate decreased only by 2.5 per cent while the inflation differentials continued to widen. All this had resulted in an erosion of India's international competitiveness.

In fact, with respect to twenty of our trade competitors the REER of the rupee appreciated for a long time—by over 20 per cent—between 1979 and 1986. It is only from 1987 that the rupee has been depreciating in real terms compared with these countries and by 1989 we were only back to roughly the same real exchange rate as prevailed in 1979.

Indeed, many of our trade competitors have made substantial exchange rate adjustments over the past few years. China and Indonesia, for instance, have depreciated their currency against the US dollar more than India has, despite lower inflation; over the period end-December 1980 to end-December 1989 (the latest available), China depreciated by 68 per cent and Indonesia by 65 per cent ,while India depreciated by only 53 per cent against the US dollar, whereas the increase in consumer prices in China and Indonesia were lower (at 100 per cent and 111 per cent respectively) against India's 114 per cent over the same period.

To restore the competitiveness of our exports and in general to bring about a reduction in the trade and current account deficits, it had become imperative to make a downward adjustment of the rupee. In determining the extent of adjustment, it is necessary to bear in mind four relevant factors : (1) differentials in the price levels between India and the major industrialised countries, (2) extent of real

1. The nominal effective exchange rate (NEER) is a weighted average of the bilateral nominal exchange rates of the rupee against the foreign currencies. The real effective exchange rate (REER) is NEER adjusted for price differentials.

depreciation of the currencies of the countries competing with India, (3) the degree of correction required in our balance of payments and (4) market expectations. Taking all these factors into account, the depreciation of the rupee value by 18-19 per cent seems appropriate.

A question that has been raised in this context is: why such a large exchange rate adjustment over a short span of time? Couldn't we continue to make small changes in the exchange rate as we had been doing? The answer lies in the role of expectations. In certain circumstances, it is better to make a significant adjustment and dampen anticipations, so as to attract remittances and capital inflows. Even in these days of fluctuating exchange rates many countries have effected large, discrete devaluations in the recent past. Countries which made discrete changes of over 20 per cent in the eighties include Indonesia, China, Bangladesh and Philippines. Such changes also help to make certain other adjustments more easily such as the removal of export subsidies.

Yet another question that has been raised is why the adjustment was made in two stages than in one. Basically the first adjustment enabled us to test the reaction, so to say. After the second adjustment, it has been made clear that there will be no further change. I would like to reiterate it this morning. In a regime of fluctuating exchange rates, it is impossible to stay fixed in relation to all currencies. The rupee is staying more or less steady in relation to the dollar and consequently the rupee-sterling rate fluctuates according to the relative strength or weakness of the pound-sterling in relation to dollar.

Impact on the Trade Balance

For the depreciation of a currency to become effective, the relative price change should bring forth the requisite change in production and consumption patterns. Exchange rate depreciation could lead to an improvement of the current account only if export volumes rise and/or import volumes fall sufficiently to outweigh the price effect. Various formulae have been derived to indicate the conditions under which the trade balance would improve. The basic condition (known as the Marshall-Lerner condition) is that if the sum of the price elasticities of the demand for exports and imports exceeds unity, a real exchange rate depreciation should improve the trade balance (if initially the trade balance is not in deficit and there are no supply bottlenecks). There have been subsequent modifications to this formula, relaxing its assumptions.

It is claimed that the price elasticities of demand for Indian exports and our imports are intrinsically low and, therefore, exchange rate depreciation would not help in improving the trade balance. It has also been argued that production patterns are not sufficiently flexible to respond to exchange rate changes. Some have pointed to the experience of the past few years where despite real exchange rate depreciation the trade deficit has not improved.

To answer these criticisms, we need to know

i) Is the RER relevant in determining exports?

and

ii) Is the RER a relevant factor in containing imports?

First, the RER has been an important factor in determining our export growth. From 1986-87 to 1989-90, export volume growth was running at a strong 10 per cent average annual rate. This period coincides with a sharp real exchange rate depreciation; the real effective exchange rate depreciated about 25 per cent between 1985 and 1989. Similarly, the period 1975-76 to 1978-79 when the REER depreciated almost 20 per cent also witnessed strong export volume growth (an average annual 6.8 per cent) led by manufactured exports (a volume growth of over 13 per cent per annum on average). Between 1979 and 1985, the REER appreciated and export volume growth was stagnant.

It would be wrong to relate export volume growth to one factor alone such as the real effective exchange rate. There are a host of other factors such as world demand, quality of products, marketing abilities and supply

availabilities. Nevertheless many studies have shown that the REER is an important explanatory factor of export growth.

Econometric estimation shows that the elasticity of exports with respect to the REER is −0.66, i.e., for a one percentage point depreciation of the REER, export volume would increase by 0.66 of one per cent.[1] Exports of manufactured goods are even more price-sensitive. In this context we need to note that the composition of India's exports has undergone significant changes, since the mid-sixties. Manufactured exports today constitute over 70 per cent of total exports.

How does the exchange rate play a role in export promotion? Exchange rate depreciation increases the domestic currency proceeds from exports. The exporter may pass this benefit on, by reducing the foreign currency price of his exports, in which case export demand should respond positively. Or, if the exporter does not pass through the benefit by lowering his export price, then he would realise a higher profitability and should have an incentive to increase his supply and improve quality. Depending on the commodity, therefore, either one of the mechanisms may be predominantly operative.

In answer to the second question, I would like to state that despite notions to the contrary, our imports are also sensitive to relative price changes. A study done by us recently shows that the price elasticities are greater than 1 for manufactured goods and machinery and transport equipment, which amounted to an estimated 50 per cent of total imports in 1989-90.[2] This does not mean that consumer demand for other imports is not responsive to prices; in many cases higher import prices are not passed through to consumers because of administered prices. If imports as a whole are not that price sensitive, it is because a proportion of our imports such as defence imports and bulk imports are insulated from price factors. Consequently, the impact of the change in the value of the currency is not fully reflected in imports.

I would also like to add that the exchange rate is important not only for the trade balance but also for private transfers. In fact, financial flows respond to price signals more quickly than do the flows of goods, which are typically slower to adjust. And invisibles are an important part of our current account transactions. Gross receipts from invisibles is almost as large as the trade deficit. Therefore, exchange rate depreciation should have a positive effect on the current account balance too.

In talking of the impact of the exchange rate changes, one must reckon with lags in the response to exchange rate changes. There is the well known J curve effect of the improvements

1. The estimated export demand function for India for the period 1977-90 is given below.

$$\ln EXQ = 4.28 + 0.71 \ln WGDP - 0.66 \ln (REER)_{-1}$$
$$(3.73)\ (5.38)\qquad (5.26)$$

$$\bar{R}^2 = 0.94 \quad DW = 1.7 \quad F = 104.90$$

t — statistics are given in parentheses

EXQ : Export Volume Index, India; WGDP: Index of World Domestic Product. The REER as defined earlier is used with a one-period lag.

2. The import functions estimated for India's imports of manufactures and machinery and transport equipment are

$$\ln MGQ = 0.59 + 2.09 \ln GDPFC - 1.27 \ln RPMG$$
$$(0.33)\ (9.77)\qquad (4.80)$$

$$\bar{R}^2 = 0.91 \quad D.W. = 0.95 \quad F = 88.10$$

and

$$\ln MTEQ = 0.11 + 2.10 \ln GDPFC - 1.04 \ln RPMTE$$
$$(0.17)\ (6.62)\qquad (6.99)$$

$$\bar{R}^2 = 0.94 \quad D.W. = 1.84 \quad F = 59.84$$

MGQ and MTEQ are volumes of India's imports of manufactures, and machinery and transport equipment, respectively; RPMG and RPMTE are the ratios of their import prices to their respective domestic prices, and GDPFC is India's gross domestic product at factor cost (1980-81 prices). For a more detailed analysis of export and import functions see (1) Kannan, R., *Nominal and Real Effective Exchange Rate of Rupee, 1975-90*, (Mimeo), RBI, June 1991, and (2) Patra, M. D., and Rajiv Ranjan, *The Structure of India's Imports, 1970-89*, (Mimeo), RBI, April 1991.

in balance of payments occurring after an initial deterioration. However, in the present context when imports are subject to various monetary restrictions, one should expect to find the impact on the trade balance sooner.

For the depreciation of the currency to become truly effective, it is necessary to ensure that domestic prices do not rise to wipe out the price advantage provided by such a depreciation. It is quite true that depreciation, through an increase in the price of imported goods, will exert an upward pressure on prices. However, in the Indian situation imports still constitute only about 8 per cent of the GDP. An analysis done using the input-output table of 1983-84 indicates that the maximum upward pressure on prices due to the downward adjustment in the value of rupee may be around 3 per cent. This assumes that there is a complete pass-through of the price effect on all commodities. However, we need to take into account the effect of other policy measures that have been simultaneously undertaken. A tight monetary policy has been in place for several months. By bringing down the budget deficit from 2.1 per cent of the GDP in 1990-91 to 1.3 per cent of the GDP in the current year, the pressure on prices arising from aggregate demand would be reduced. This should counter-balance to some extent the inflationary pressures.

As economists are fond of saying, the depreciation of the rupee is a necessary but not a sufficient condition for export growth and for an improvement in the balance of payments. A complementary set of policies needs to be put in place which will facilitate expansion of output particularly for exports and curb aggregate demand to keep prices under check. This is precisely what has been done. In the immediate short run, exchange rate adjustment should facilitate the realisation of outstanding export receipts and accelerate in general the inflow of remittances by quelling the destabilising market expectations. With some time lag, it should improve the balance of trade by stimulating the growth in exports and curbing the increase in imports. The tight monetary policy, however irksome it may be, has to be continued till such time as the balance of payments shows a significant improvement. In conjunction with the fiscal adjustments during the current financial year, the various measures that have been taken should make the difficult balance of payments situation manageable.