

Speaking notes for a presentation to the
EEC Governors, on 11th April 1989,
on exchange rates in a longer-term perspective

- The tenth anniversary of the EMS seems an appropriate occasion to reflect on longer-term exchange rate developments, but as the EMS is a regional agreement within a wider international context, I shall enlarge my perspective to include all EEC currencies and the two major currencies outside of the EEC, the US dollar and the Japanese yen.
- Let me explain briefly how I have approached the subject. Exchange rates as a market phenomenon are bilateral by nature. However, when a large number of currencies are being considered, it becomes rather difficult to keep track of the bilateral relationships, even though they vary widely in importance. I shall look at effective exchange rates for the currencies concerned, based on trade weights calculated from export and import flows for twenty-one industrialised countries, and also taking into account third-market competition on the export side. For some time the BIS has been using its own method for this calculation which has, however, been revised recently. The decision to employ our own formula was taken in view of the fact that no clear "winner" has emerged so far from among the different approaches. In the absence of a broad consensus, one has to use one's own judgement to decide how best to combine the maximum number of advantages with a minimum of disadvantages. Our method differs from that of the OECD and the IMF mainly in its definition of "goods" (which is wider, not just confined to manufactured goods) and in its

treatment of trade with countries for which effective rates are not calculated (i.e. LDCs, OPEC and eastern bloc countries).

- Exchange rates are, of course, strongly influenced by inflation differentials. If inflation differentials are large and consistent, they will, over time, assume dimensions which completely dominate exchange rate developments. As the different inflation performances of different countries is not our subject we shall look at real effective exchange rates. Statistically this implies an additional complication; it necessitates using the trade weights of the effective exchange rate also to construct the price indices abroad in order to obtain an effective inflation differential.
- One question in this context, to which there is no obvious answer, is which price index to use. The two most commonly used indices are the consumer price index and the index of unit labour costs, with a slight preference, it seems, for the latter, even though it is subject to much greater statistical problems than the former. The choice has, clearly, to do with the purpose of the calculation. If one calculates real exchange rate changes as a guide to changes in competitiveness, the index of unit labour costs in manufacturing or industry is obviously the better one, as productivity gains - which, together with wages, are reflected in unit labour costs - are of prime importance for competitiveness, although they do not, by any means, include all cost elements (interest rates, raw material prices, etc.)..
- There is, however, a different way of looking at what the inflation-adjustment of exchange rates is about. One can simply use purchasing power parity as a benchmark, as Rudiger Dornbusch put it, by which to judge the level of an exchange rate. Except in rather special circumstances, the best indicator for the development of purchasing power is the consumer price index. Deflating

effective exchange rates by relative consumer price indices best serves the purpose of eliminating inflation differentials so as to be able to concentrate on the other elements that contribute to changes in real exchange rates over time. In fact, most of the not particularly extensive discussion of these other elements in the literature has grouped them under the heading of "factors explaining deviations from purchasing power parity". I do not like that way of putting it because it implicitly assumes that purchasing power parity prevails over the longer term, or, to put it in normative terms, that real effective exchange rates should be stable. As we shall see, the factual statement proves to be the exception rather than the rule. The list of reasons for effective exchange rates not being stable is long and there are perfectly good reasons alongside less good or even bad ones. As there is not always a consensus on what is "good" or "bad" in any particular area, it may be more useful to distinguish between reasons on the real side and reasons on the monetary side.

- It must suffice for the moment just to indicate a few reasons for a permanent change in real effective exchange rates on the real side of the economy. The most striking reason is obviously higher productivity growth, which is often linked to higher growth in general and to a strong export orientation. The next most important reason may be terms-of-trade changes, particularly for exporters of raw materials. For other countries it can be conceptually difficult to distinguish between cause and effect as changes in real effective exchange rates themselves have terms-of-trade effects. Perhaps it may now become clearer why I prefer deflating by the consumer price index rather than by unit labour costs. The latter method offers more than inflation adjustment, it also contains an element of productivity adjustment, but it is done in a somewhat untidy way. From a practical point of view it may still, in the short run, provide an

acceptable approximation for evaluating changes in competitiveness, but interpretation becomes difficult. I shall come back to this a little later.

- Nobody would argue, though, that the changes in real effective exchange rates which we observe are predominantly, or even solely, due to developments on the real side of the economy. Particularly in the short run, exchange market dynamics, such as overshooting, and influences of monetary and fiscal policy are clearly the dominant factors. A country that shifts unilaterally in the direction of tight money must expect a real appreciation, and vice versa. The effect of changes in fiscal policy is more controversial as the experience of the US differs from that of other countries. Factors which influence international portfolio decisions also have a bearing on real exchange rate changes. Fürstenberg argued in 1985 that portfolio holders have a preference for the currencies of low-inflation countries, which he found causes these currencies to appreciate. It appears, however, that this held true only at a time when real interest rates were low or negative in high-inflation countries. More recently this has certainly ceased to be the case. In addition, expectations of stability in nominal exchange rates seem to have tended to cause a real depreciation of low-inflation currencies.
- May I now ask you to look at Table 1 of the statistics which I have distributed. The year 1979 has been taken as the base year (= 100); the data are annual averages. 1979 has been used as the base year not only because it marks the birth of the EMS, but also because it was a year when current-account imbalances were on the whole relatively modest. There can be no perfect base year, but 1979 seems less imperfect than any other.
- Over the period from 1979 to 1988 real effective exchange rates remained stable only in the case of Portugal, which may merely demonstrate that the escudo

is managed, presumably on a trade-weighted basis, in a way not dissimilar to that used for our calculation. Four of the thirteen currencies appreciated in real terms over the same period; these are, in descending order, the currencies of Japan (+ 36 %), Italy (+ 18 %), Ireland (+ 13 %) and the United Kingdom (+ 4 %). That leaves eight currencies which depreciated; again, in descending order, they are the currencies of Belgium (- 15 %), Germany (- 13 %), Greece (- 11 %), the Netherlands (- 9 %), France (- 8 %), Spain (- 7 %), the United States and Denmark (- 4 %). The fact that the appreciation rates were higher partly accounts for the asymmetry between the number of appreciating currencies (four) and the number of depreciating currencies (eight). (Another reason is the fact, mentioned earlier, that these effective exchange rates are calculated on the basis of twenty-one countries, as against only thirteen shown here; those missing from this table include Canada, Australia and Switzerland.)

- Table 2 gives for comparison the same results for unit labour costs. As you can see, they are quite different for a number of currencies, such as the Irish pound (which drops from third to twelfth place) and the Portuguese escudo (from fifth to eleventh). Strong movements in the opposite direction can be observed for Germany and Greece. Otherwise the "league" table is similar, with Japan in the lead, and United Kingdom and Italy towards the top and Belgium at the bottom of the list, but the actual figures are nevertheless quite different.
- The interpretation of these differences - as I mentioned earlier - is not easy. It may be necessary to look at developments in profits in manufacturing on a country-by-country basis. The fact that the appreciation of the yen is lower in CPI terms than it is in terms of unit labour costs might suggest that profit margins in manufacturing in Japan have been reduced. The fact that the Deutsche Mark is shown to have been stable in unit

labour cost terms but to have depreciated in CPI terms might well be explained by the restoration of profit margins. But this is certainly not the whole story, as the consumer price index does not include export prices and, indeed, may be dampened by import prices. Price performance in the export sector and in the rest of the economy can differ widely.

- Table 3 takes the time series for the CPI-deflated real effective exchange rates of the thirteen currencies back to 1960, well into the time of the Bretton Woods system. It would not be surprising to find that changes in real effective exchange rates turned out to be larger between 1960 and 1973 because of the stickiness of nominal exchange rates under a fixed exchange rate system. That was, -taking the period as a whole - not generally the case, but it does hold true for quite a number of countries, including the UK, the Netherlands, Denmark and Greece, with Germany, Italy, Spain and Portugal on the border-line. In six countries, the US, Japan, France, Spain, Denmark, Greece, the direction of change was the same before and after 1973, in other words: if these currencies had been depreciating or appreciating in real terms over the period 1960-73, they continued to do so over the period 1973-88. Clearly, it would be very difficult to attribute such a long-term trend to anything other than quite fundamental characteristics of the economies concerned. Neither speculative capital movements nor fiscal or monetary policies qualify as explanations. Things would, no doubt, be different if we looked at the year-on-year changes, which, however, we cannot do here.

- Table 4 shows instead the variability of changes in real effective exchange rates based on the consumer price index for the periods 1960-73 and 1973-88. There is not a single currency whose variability was not substantially greater during the latter (floating) period than in the period before; in some cases the increase is

dramatic. The smallest increase in the variance of changes is observed for the currencies of Ireland and Germany, with multipliers of 1.1 and 1.2. The largest increase is that of the yen, where the variability of changes in the real effective exchange rate is three times what it had been under the Bretton Woods system. For the US dollar the variability has been multiplied by 2.2; for the currencies of most EEC countries the increase in variability is smaller.

- Even more interesting than the contrast between the two periods is the actual level of variability in the later period. Here we can see demonstrated the well-known fact that real effective exchange rates have fluctuated less for the currencies of the EEC countries than for the yen or the US dollar. The currencies of those EEC countries not participating in the EMS - the United Kingdom, Spain, Greece and Portugal - have, however, figures for variability which are close to that for the US dollar, but still well below that for the Japanese yen.
- I should draw your attention to the fact that we have been looking at the variability of changes from year to year (based on annual averages). Short-term volatility from day to day, week to week or month to month has been left out of account. You all know the verdict on the floating rate system: that, while high volatility can be tolerated, severe misalignments cause trouble because of the wrong signals they imply for investment in capital goods. Given the increased changes from year to year, one must conclude that severe misalignments have become more frequent. Non-misaligned real effective exchange rates may well have to change over time, but certainly not by as much as we have observed here. But this is only a tentative observation. To discover whether any particular effective exchange rate is "out of line" at a particular time requires, clearly, a much broader analysis than one which looks at exchange rates and nothing but exchange rates.