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March 11, 1985

To: Members of the Executive Board

From: The Secretary

Subject: World Economic Outlook: Supplementary Note 11 - Medium-Term Projections by Staffs of the Bank and the Fund: Note on Differences in Methodology and Assumptions

The attached note on differences in methodology and assumptions of medium-term projections by staffs of the Bank and the Fund provides background material for the Executive Board discussion on Monday and Wednesday, April 1 and 3, 1985 of the World Economic Outlook.

If Executive Directors have technical or factual questions relating to this paper prior to the Board discussion, they should contact Mr. Crockett (ext. 8982).

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World Economic Outlook: Supplementary Note 11

Medium-Term Projections by Staffs of the Bank and the Fund: Note on Differences in Methodology and Assumptions

Prepared by the Staffs of the World Bank and the IMF

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March 11, 1985

I. Introduction

The Research Department of the IMF and the Economic Analysis and Projections Department of the World Bank are separately responsible for preparing projections for operational use in their respective institutions. Until a few years ago, the focus of projections prepared in the Fund was on short-term economic prospects, while that of the Bank's was on medium- and long-term trends. There was thus only a limited overlap of time horizons for the two institutions. The purposes for which these analyses were used also differed. Reflecting the Fund's responsibilities for multilateral surveillance, forecasts prepared for the WEO were aimed, on the one hand, at identifying areas where the interaction of economic policies and conditions among major countries might be inadequately taken into account in country-by-country appraisals of policies and, on the other, at assessing the impact of changes in the external environment on economic management and external adjustment in developing countries. Bank projections were aimed at providing a consistent and realistic set of parameters on the basis of which efficient long-term investment decisions could be made and a framework within which policy dialogue with member governments on developmental issues could be carried out. These differences in focus affected the underlying assumptions made by the two institutions and the emphasis given to particular aspects of the analysis. It also affected the timetable according to which projections were gathered, analysed, and disseminated to the respective Executive Boards.

In recent years, a number of developments have served to increase the areas of overlap in the analyses made by the two institutions. The Fund has extended the horizon of its projections of selected economic variables into the medium term, while the Bank has increased the focus given in its analysis to interactions of economic developments and policies among member countries. As a result, coordination between the staffs of the two institutions in this field has increased. Given the fact that important differences of emphasis in analysis still remain, and that schedules differ, it has been felt that no essential purpose would be served in producing a single quantitative scenario. On the contrary, separate analyses produce the opportunity for a cross-checking of estimates, and allow the separate perspectives of the staffs of the two institutions to be more fully used.

The analyses undertaken in advance of the spring meetings of the Interim and Development Committees have involved collaboration between Bank and Fund staffs in the following ways:

(i) Initial discussion of the basic policy assumptions to be employed.

(ii) Joint review of the implications of these policy assumptions for "environmental" variables, such as economic growth in industrial countries, interest rates, price trends, bank lending, and so on.

(iii) Comparison of estimated outcomes for key variables, such as growth and balance of payments trends in indebted developing countries.

(iv) Joint discussion of policy implications of the "baseline" or "central" scenarios and alternative outcomes.

The remainder of this note is devoted to identifying some of the differences in emphasis that have arisen in stages (i)-(iii) above. It also attempts to explain the reasons for the variations in approach and some of the consequences.

II. Basic Policy Assumptions

The Fund's baseline scenario has been developed on the basis of an assumption of "most likely" policies. This involves taking the existing stance of policies, modified where appropriate to take account of intended policy changes, or of external developments that are judged likely to induce an adjustment in policy stance. The Bank, in its paper for the Development Committee has developed a scenario based on an assumption of policy adjustments in the medium term judged necessary to achieve a long-term path of stable and moderate growth and unwinding of financial tensions in the world economy. While the assumed policy changes are considered feasible, the Bank did not proceed on the premise that national authorities were in fact most likely to act in that way. As is traditional, the Bank does not spell out the annual path of its medium-term scenario. Its paper provides estimates and projections for 1985 and for 1990.

The Fund staff has also developed four "variant scenarios," on the basis of "better" and "worse" policies for industrial and developing countries, respectively. These variant scenarios were developed using the expertise of specialists in Area Departments to judge the scope for divergence from the policies assumed under the baseline scenario. The Bank's "worse" policy assumption is essentially a non-adjustment scenario, in which existing imbalances in the industrial countries are allowed to develop further and trade protectionism is assumed to increase. Developing countries' own adjustment possibilities are also lessened in this scenario. The consequences of this alternative set of policies are only partially quantified.

III. Implication of Assumptions for Global Economic Conditions

1. Growth in industrial countries

Fund and Bank staff both estimate growth in the industrial countries to average 3.1 percent over the period 1986-90 in their central scenarios. In the Fund's "better policies" scenario variant, growth in industrial countries is initially slightly lower than in the baseline scenario (the result of impact effects of fiscal restraint in the United States), then rises gradually to 3 1/2 percent in 1990. In the "worse policies" variant, growth averages about 2 percent over the scenario period. In the Bank's "no adjustment" scenario industrial countries' growth averages 2.5 percent per annum.

2. Inflation

The Fund staff has assumed that average inflation (as measured by GDP deflators) in industrial countries would stabilize at roughly the rate being projected for 1985. Because of exchange rate factors (see below) this would involve a slight increase in inflation in the United States, and a further consolidation in price performance in other countries. U.S. inflation would be about 4 1/2 percent over the medium-term projection period, while the equivalent figure in Germany would be about 2 1/2 percent, and in Japan about 1 percent. The Bank staff has used an inflation assumption of 5.2 percent (as a weighted average in local currencies) for industrial countries over the projected period.

3. Interest rates

Both institutions have assumed that real interest rates would decline gradually over the remainder of the decade, and that the London Interbank Offer Rate (LIBOR) would be 3 1/2 percentage points above the U.S. domestic inflation rate by 1990. A minor difference is that the Bank staff uses six-month LIBOR rates as its reference point, while the Fund staff uses the three-month LIBOR rate. The precise nature of the assumptions, including the time path followed by rates, is described in the respective staff papers.

4. Exchange rates

The Fund has employed its customary assumption of constant nominal exchange rates throughout its short-term projection. This period runs to end-1986 and the rates employed are the average rates prevailing during the month of November 1984. From 1987-90, the Fund staff has assumed an annual depreciation of the U.S. and Canadian dollars of 5 percent in real terms against all other industrial country currencies. The Bank staff has assumed an overall depreciation of the U.S. dollar in terms of the SDR of 16 percent beginning in 1986 and continuing steadily through 1990. The effect of these different assumptions is more on the timepath of exchange rate changes than on the pattern of rates that would prevail in 1990. The difference between the two assumptions should not be exaggerated. It arises not out of a firm difference in expectations concerning exchange rate trends, but because of the qualitatively different nature of the technical assumptions underlying the Fund's short-term projections and medium-term scenarios, respectively. The impact of the difference in assumptions on growth, debt and balance of payments developments in developing countries is quite small.

5. Oil prices

The Fund staff has assumed that oil prices in 1985-86 would be unchanged, in dollar terms, from those prevailing in February 1985. This implies that in real terms (i.e. relative to the price of manufactured exports) oil prices would be about 7 percent lower at the end of 1986 than in early 1985. From 1986 onwards, oil prices are assumed to be unchanged in real terms. The Bank assumption is that oil prices in real terms decline by close to 5 percent during the projection period; this can be interpreted as one less year of stable nominal prices than in the Fund assumptions.

6. World trade prices

The Fund staff has assumed that unit values in dollars for exports of manufactures would rise broadly in line with the U.S. GNP deflator in 1986. (Since exchange rates are assumed unchanged from November 1984, there is no direct impact from exchange market developments in 1985 and 1986.) With the depreciation of the dollar that is assumed from 1987 onwards, manufactured unit values are assumed to rise by 7 1/2 percent per annum. 4 1/2 percent of this reflects U.S. inflation and 3 percent the weighted average effect of exchange rate changes.

The Bank staff has assumed that manufactured unit values would rise at an average rate of 7.9 percent per annum over the whole projection period. Underlying the Bank staff's projections is the expectation that domestic inflation in industrial countries will be higher (at 5.2 percent per annum), than envisaged by the Fund staff, but that competition in export markets will lead to export prices growing more slowly than domestic prices. As a result the two projections are quite similar.

Non-oil commodity prices are assumed by the Fund staff to fall by 2 percent, in dollar terms, in 1985 and to rise by 5 percent in 1986. These assumptions are derived by aggregating commodity-by-commodity projections developed by experts in the Commodities Division. They do not involve any major change in real commodity prices; a small decrease in 1985 would be followed by a small rise in 1986. In the period 1987-90, the dollar prices of commodities are projected to rise at a nominal rate of 8 percent, largely as a consequence of the assumptions made concerning the depreciation of the dollar, output and domestic prices inflation in industrial countries, and supply adjustments. As this rate of increase is only marginally greater than that projected for the unit values of manufactured exports, little change is expected by the Fund in real commodity prices during this period. The World Bank has very similar projections for 1985 for its "moderate adjustment" scenario. Over the whole projection period, it projects non-oil commodity dollar prices rising by 9.5 percent per annum. The difference between this projection and that of the Fund is explained largely by the difference in assumptions concerning domestic inflation in the industrial countries and exchange rate movement.

7. Financing

a. Official development assistance. Under its baseline scenario, the Fund staff has assumed that official development assistance will be unchanged, in real terms, from the levels projected for 1985. At the margin, these flows are assumed to be responsive to the "better" and "worse" policies of the variant scenarios. The Bank staff has assumed official development assistance as a constant share of the industrial countries' GNP.

b. *Direct foreign investment. The Fund staff has assumed that* direct foreign investment inflows to developing countries would rise by about 11 percent per annum (in U.S. dollar terms) from the levels projected for 1985. This rate of growth reflects output increases in host countries, historically the major determinant of direct investment flows. Under variant scenarios, direct investment flows differ in proportion to changes in the rate of growth of domestic output. The Bank assumed a rate of growth of direct foreign investment of 12.5 percent per annum, which is consistent with historical experience.

c. Private lending. The Fund staff has approached the issue of lending flows by making assumptions about the increase in foreign exposure that banks in industrial countries might be willing to contemplate. It is assumed that lending to finance imports of developing countries will rise at the rate of growth of underlying imports. The availability of non-trade-related financing would be subject to limitations. In total (i.e. including trade-related financing), bank lending to developing countries would increase by not more than 6-7 percent per annum in dollar terms over 1986-90, while total private lending would grow not faster than 8 percent per annum. (These ceilings are not reached under the baseline scenario.) About 1 percent per annum more bank finance is available under "better" policies in developing countries, and the same under "better" policies in industrial countries. Under worse policies in developing countries, private exposure to developing countries grows by about 3 1/4 percent per annum.

The Bank staff has approached the assessment of private capital lending by asking what increase in international indebtedness of developing countries would be consistent with their debt servicing capacity. It was generally assumed that private lending would be forthcoming only in amounts which, given projected export growth and servicing requirements on existing debt, would result in lowering debt ratios to levels previously judged as acceptable. In the middle-income countries, it was assumed that private capital flows would be forthcoming in amounts that would result, by 1995, in a decline in debt ratios to the levels prevailing in 1980. External debt ratios in 1995 were projected to be higher than those prevailing in 1980 in the case of a few middle-income countries (the oil exporters) where the present value of net resource outflows (the excess of interest payments over new net lending) exceeded 25 percent of the present value of exports during the projection period, and in the case of some low-income Asian countries where, in the view of Bank staff, higher levels of external debt are sustainable. Using this procedure, it was estimated that private bank lending to developing countries could increase at about 10 percent per annum (in nominal terms) from 1985 to 1990. Such an increase would result in a decline of the commercial banking system's exposure to developing countries as a share of its total assets during the projection period, and a decline of developing countries' debt service ratio.