INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

FORECASTING OF FINANCIAL RESOURCES FOR PUBLIC INVESTMENT;
AN ANALYSIS AND APPRAISAL OF THE FORECASTS
OF THE BANK'S GENERAL SURVEY MISSIONS

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Forecasting of financial resources for public investment: an analysis and appraisal of the forecasts of the Bank's general survey missions.

Introduction.

In connection with the activities of the International Bank it repeatedly occurs that forecasts of financial resources for public investment have to be made or appraised.

In the first place general survey missions have to face this problem. For them the forecasting of financial resources for public investment is an important task since in many cases the advisable magnitude of a public investment program set up by a mission, will be directly dependent on the financial resources which can reasonably be expected to become available during the programming period chosen. This explains why, of the seventeen general survey missions which have so far published their reports, fourteen have given forecasts of financial resources; only the missions to Cuba, Mexico and Somaliland made no projections for various reasons.

Frequently the problem is also encountered by general missions of the Bank which go to examine a country's development program with a view to determining its soundness and the contribution which the Bank might make to its financing. Inevitably an ordinary Bank mission cannot address itself to a forecast of financial resources in as much detail as a survey mission. But it is often necessary to do this at some length in order to establish to the Bank's satisfaction that a country can, on the one hand finance its projected development without running serious danger of inflation and that on the other hand the country is making a serious effort to mobilize domestic resources. Accordingly, a number of the Bank's economic reports, such as those on India and Pakistan, have also dealt with the problem in recent years.

This memorandum directs itself to an analysis and appraisal of the forecasts of the general survey missions. As will be seen below, these forecasts show considerable differences between them, and sometimes deficiencies. Although the viewpoints and recommendations presented in this paper are most directly related to the task of general survey missions, it is felt that many of them can also be relevant to the work of future ordinary missions.

The various aspects of forecasts.

1. Number of years covered by the forecasts.

As is shown in Table 1, all past general survey missions, with the exception of those to Jamaica, Jordan, and Surinam, have made their forecasts of financial resources for a 5- or 6-year period. These periods were not determined independently; they corresponded logically with those covered by the public investment programs. Most of the missions have not explained explicitly why they chose these periods. However, it can be concluded from their reports that on the one hand they intended to concentrate on long-term developments, whereas on the other hand they did not wish to cover still longer periods of time in view of existing uncertainties.

1/ The report of the mission to Thailand was available in provisional form only when this paper was finalized; references in this paper are to the draft dated March 1959.
TABLE 1

<table>
<thead>
<tr>
<th>Country</th>
<th>Total period</th>
<th>Years</th>
<th>Forecasts for parts of total period</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Guiana</td>
<td>1954 - 1958</td>
<td>5</td>
<td>None</td>
</tr>
<tr>
<td>Ceylon</td>
<td>1953/54-1958/59</td>
<td>6</td>
<td>None</td>
</tr>
<tr>
<td>Colombia</td>
<td>1951 - 1955</td>
<td>5</td>
<td>&quot;Demonstration model&quot; for 1953</td>
</tr>
<tr>
<td>Guatemala</td>
<td>1951/52-1956/57</td>
<td>6</td>
<td>For each year</td>
</tr>
<tr>
<td>Iraq</td>
<td>1952/53-1956/57</td>
<td>5</td>
<td>None</td>
</tr>
<tr>
<td>Jamaica</td>
<td>1952/53-1961/62</td>
<td>10</td>
<td>For each year (for budgetary resources)</td>
</tr>
<tr>
<td>Jordan</td>
<td>1955/56-1964/65</td>
<td>10</td>
<td>For each year</td>
</tr>
<tr>
<td>Malaya</td>
<td>1955 - 1959</td>
<td>5</td>
<td>For each year</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>1952/53-1956/57</td>
<td>5</td>
<td>None</td>
</tr>
<tr>
<td>Nigeria</td>
<td>1955/56-1959/60</td>
<td>5</td>
<td>For each year (for budgetary resources)</td>
</tr>
<tr>
<td>Surinam</td>
<td>1952 - 1961</td>
<td>10</td>
<td>None</td>
</tr>
<tr>
<td>Syria</td>
<td>1955 - 1960</td>
<td>6</td>
<td>None</td>
</tr>
<tr>
<td>Thailand</td>
<td>1959 - 1963</td>
<td>5</td>
<td>For each year</td>
</tr>
<tr>
<td>Turkey</td>
<td>1952 - 1956</td>
<td>5</td>
<td>For first year (1952)</td>
</tr>
</tbody>
</table>

Future missions will have to weigh the same considerations. From the point of view of forecasting available financial resources it would in general also seem desirable not to make public investment programs exceed a period of 5 or 6 years. But other considerations may lead to the choice of a longer.
period at the risk of more uncertainty with respect to the forecasts of financial resources.2/

2. **Forecasts for consecutive years or other parts of total planning period.**

As can again be seen from Table 1, some of the missions made their forecasts of financial resources for the planning period taken as a whole, whereas others went more into details.

The missions which limited their forecasts to the total planning period sometimes have stated explicitly that they confined themselves to a global program and left its refinement and implementation to the governments themselves, whereas in other cases they refrained from making yearly forecasts in view of the uncertainties involved. On the whole it might be better to refrain from year by year forecasts if uncertainties are deemed too large. For example, in the case of countries which are predominantly agricultural and where the harvest fluctuates with weather conditions or where the prices of the main agricultural products are subject to considerable fluctuation, it may be too hazardous to forecast financial resources on an annual basis.

On the other hand there seems to be no reason for giving only one forecast for the whole planning period in all cases, as is confirmed by the experience of some of the past missions. By itself the value of forecasts may be increased by a breakdown per year, notably for budgetary resources. First, a better judgment may be obtained in this way about the financing possibilities in the consecutive years of the total planning period. Second, insofar as a mission has made recommendations on additional financial resources, it may be useful to try to indicate quantitatively to what extent their adoption and execution should increase the amounts of available resources in the course of time. By expressing views on these points, the work of a mission may also be more directly useful to a government in connection with its task of implementing public investment expenditures and their financing through annual budgets.

In view of these various considerations future missions might at least give serious consideration to the implications which their global forecast for the whole planning period has for the first fiscal year of this period. Whether it will be possible to go further will depend in particular on a mission's judgment about the uncertainties involved.

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2/ In the cases of the Jamaica and Surinam missions, there were special reasons for choosing a 10-year period. The Jamaica mission took into account "the projects already included in the Ten-Year Development Plan drawn up by the government in accordance with the requirements of the Colonial Development and Welfare Act of 1945". (Mission report, p.X). And in the case of the Surinam mission "the starting point was a preliminary report of the Surinam Planning Bureau, setting forth a provisional list of projects to be included within the Ten-Year Program". (Mission report, p.XXIII-XXIV). The Jordan mission selected a 10-year period in view of the changes that had occurred in the Jordan economy in recent years, in particular those resulting from the Arab-Israeli war; it was thought necessary to take a long view of the potentialities and problems of economic development. (Mission report, p.407).
3. Completeness and breakdown of financial resources to be projected.

Most estimates of financial resources, made by past general survey missions, have been complete insofar as they were related to total public investments to be financed.

In the cases of Guatemala, Jamaica and Jordan, however, not all resources were considered. The Guatemala mission only projected resources to finance public investment on top of its existing level. The Jamaica mission excluded some development expenditures (mainly for roads and public works). And the mission to Jordan excluded as being outside its terms of reference expenditures for the relief of refugees or for placing them in self-sustaining employment. Defence expenditures, hitherto met by foreign grants, were also omitted by the Jordan mission.

Leaving aside special circumstances that may make a different procedure preferable, it would seem desirable for missions to give estimates of resources to finance total public investment programs. In this way a better impression can be obtained about the total financial burdens resulting from public investment. Moreover, when the additional investments are carried out, the distinction between "normal" and "additional" investments will tend to fade away. To compare estimates and realization figures, complete forecasts will then be more useful.

On the other hand, the Iraq, Guatemala and Nicaragua missions have included some increases in current expenditures in their public investment programs, and consequently their forecasts of financial resources also cover these expenditures. With respect to future forecasts, there seems to be no objection against following this procedure when it would be desirable for policy reasons.²

Another point of difference in completeness is that some missions have based their public investment programs (and so their forecasts of financial resources) on gross investment, and others on net investment. Future missions might try to give a separate estimate for the item of depreciation. The difficulties involved can however not be overlooked.

Furthermore, it seems quite important that in connection with future forecasts at least four categories of resources be considered systematically, viz. resources from a budgetary surplus (on current account), domestic savings to be attracted through government borrowing, money creation (due to borrowing from banks or drawing from available cash reserves), and foreign resources. To the first category should be added, in relevant cases (insofar as not automatically included in budget figures), resources from public enterprises available for investment.

As is shown in Table 2, the analysis of some past missions has been rather incomplete from this point of view.³

² Apart from this problem of procedure every mission will of course be faced with the problem of reaching a conclusion on the extent to which the investment program proposed will entail additional government expenditure of a recurrent nature (see below, section 6).
³ The table pretends no more than to give a rough indication on the degree of detail of the various forecasts. All forecasts show peculiarities, partly connected with the special situation in the countries. On account of this, the distinctions made in the table are inevitably to an extent arbitrary.
<table>
<thead>
<tr>
<th>Country</th>
<th>Budgetary receipts of government</th>
<th>Budgetary expenditures of government</th>
<th>Domestic savings to be attracted by government</th>
<th>Money creation</th>
<th>Foreign resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Guiana</td>
<td>Forecast of budgetary surplus</td>
<td>Some detail</td>
<td>Some detail</td>
<td>Some detail</td>
<td></td>
</tr>
<tr>
<td>Ceylon</td>
<td>Forecast of budgetary surplus</td>
<td>Forecast for domestic borrowing only</td>
<td>Some detail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colombia</td>
<td>No forecasts (discussion of &quot;demonstration model&quot; for middle year only)</td>
<td>No forecast</td>
<td>No forecast</td>
<td>Some detail</td>
<td></td>
</tr>
<tr>
<td>Guatemala</td>
<td>Detailed forecast of additional revenue (also from state enterprises) and additional investment expenditures</td>
<td>No forecast</td>
<td>Some detail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iraq</td>
<td>Receipts from oil companies only</td>
<td>No forecast</td>
<td>No forecast</td>
<td>(apart from oil recs.)</td>
<td></td>
</tr>
<tr>
<td>Jamaica</td>
<td>Some detail</td>
<td>Some detail</td>
<td>Some detail</td>
<td>No forecast</td>
<td>Some detail</td>
</tr>
<tr>
<td>Jordan</td>
<td>Much detail</td>
<td>Much detail</td>
<td>No forecast</td>
<td>No forecast</td>
<td>No forecast</td>
</tr>
<tr>
<td>Malaya</td>
<td>Some detail</td>
<td>Much detail</td>
<td>Some detail</td>
<td>No forecast</td>
<td>No forecast</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>No forecast</td>
<td>No forecast</td>
<td>No forecast</td>
<td>Some detail</td>
<td></td>
</tr>
<tr>
<td>Nigeria</td>
<td>Much detail</td>
<td>Much detail</td>
<td>Some detail</td>
<td>Some detail</td>
<td>Some detail</td>
</tr>
<tr>
<td>Surinam</td>
<td>Forecast of budgetary surplus</td>
<td>No forecast</td>
<td>No forecast</td>
<td>Some detail</td>
<td></td>
</tr>
<tr>
<td>Syria</td>
<td>Some detail</td>
<td>Some detail</td>
<td>Much detail</td>
<td>Some detail</td>
<td>Some detail</td>
</tr>
<tr>
<td>Thailand</td>
<td>Some detail</td>
<td>Much detail</td>
<td>Some detail</td>
<td>Specified amount</td>
<td>Some detail</td>
</tr>
<tr>
<td>Turkey</td>
<td>Forecast of budgetary surplus and self-financing of state enterprises</td>
<td>Some detail</td>
<td>No forecast</td>
<td>No forecast</td>
<td></td>
</tr>
</tbody>
</table>
By and large budgetary receipts and expenditures have received most attention in the forecasts, whereas forecasts on money creation are generally lacking. Domestic savings, to be attracted by the government, and foreign resources have sometimes been forecast with a certain amount of detail, but in other cases they were not quantified at all.

4. Use of alternatives in forecasts.

The procedures followed by past missions with respect to alternatives in their forecasts of financial resources have varied considerably. In some cases (British Guiana, Colombia, Iraq, Malaya, Surinam and Thailand) very little or no consideration was given to alternatives. In the case of Guatemala, alternatives were introduced for external resources only, giving rise to three investment programs of different size. The missions to Ceylon, Jamaica, Nicaragua, Syria and Turkey used one alternative in their forecasts for some or all of the categories of resources they analyzed. The Jordan mission in projecting government revenues, deducted a fixed amount in each year to provide for reduced revenues because of drought. The Nigeria mission followed a still different procedure: it kept its revenue estimates purposely on the conservative side and made an allowance on the expenditure side for contingencies.

It would seem in principle advisable to consider the problem of alternatives. For most forecasts will inevitably imply considerable uncertainties, notably in view of the fact that resources in most of the underdeveloped countries are strongly dependent on one or only a few important export products.

Here again it seems unjustified to suggest one strict line of conduct which should be followed under all circumstances. Some missions may find it most useful to adopt a procedure similar to that of the Nigeria mission and produce only one set of figures, staying on the safe side. This method has the advantage of simplicity of exposition, but may give rise to criticism in view of the general desire of underdeveloped countries to mobilize resources to the maximum extent. This criticism can be forestalled by presenting a "main alternative" of the public investment program, based on the best possible estimates of financial resources (to be stated explicitly) together with a "maximum program", based on relatively more favorable assumptions. In this way a quantitative basis is laid for reserve projects in the investment program, to be realized if circumstances would turn out favorably. If uncertainties are very large and even the realization of the "main alternative" might be endangered in certain circumstances it will be useful to add some indications about what these circumstances are and how the program would preferably have to be curtailed to a "minimum alternative" in this situation.

When considering alternatives, in principle all resources should be taken into account (e.g. not external resources alone, as in the case of Guatemala).
5. **Recommendations on measures to influence available financial resources.**

It seems advisable that future missions should pay attention to measures that could be taken to increase financial resources. In many cases (though not in all) the maximum public investment program which can safely be recommended will also depend on the prospects for raising additional financial resources by means of special measures. Even when this is not so, consideration of the subject will be useful for different reasons (e.g. to improve the tax structure).

Among budgetary resources, taxation deserves special attention. Recommendations to increase revenue from this source via changes in legislation cannot be made independently of those to improve tax structure and administration. Practically all of the past general survey missions have paid attention to the problem of taxation, most of them extensively. Frequent evils, reported by several missions, were strong preponderance of indirect taxation, giving rise to regression and lack of flexibility of the tax system (e.g. in the cases of Iraq, Jordan, Nicaragua, Syria and Thailand), weak administration (e.g. in Colombia, Guatemala, Nicaragua, Syria, Thailand and Turkey) and needlessly low rates of taxation (e.g. in Guatemala, Iraq, Nicaragua and Syria). The proposals of the missions implied increases and revisions of income and/or property taxes (e.g. in Ceylon, Guatemala, Jordan, Malaya, Nicaragua, Syria, Thailand and Turkey), increases in indirect taxes (e.g. in Malaya, Nigeria, Syria and Thailand) and decreases in indirect taxes in order to improve selectivity and diminish regression (e.g. in Iraq and Nicaragua).

Another evil often reported was the weak state of local public finances (e.g. in Ceylon, Colombia, Jordan, Malaya, Nicaragua and Syria), giving rise to recommendations to increase revenues of lower public bodies. Comparison of the exposition of the various missions shows that general directions for improvement of the tax system in underdeveloped countries can hardly be given: every mission will have to appraise the system of a country in the light of the specific circumstances prevailing.

Furthermore, non-tax revenues and current government expenditures will sometimes deserve the special attention of missions. Problems which may give rise to recommendations are too low a level for certain charges for services provided by government enterprises (owing to their lagging behind a general rise in prices or unjustified subsidy policies) and a tendency of current government expenditures to rise too quickly or to be devoted to relatively unimportant purposes.

The next category of resources deserving scrutinizing are the various sources of domestic savings, which might be attracted by the government. The main problems, lending themselves for recommendations, will generally be the creation or widening of a market for government securities, the improvement of possibilities to save via savings-banks and other banking institutions, the promotion of institutional savings through life-insurance and pension funds and sometimes the repatriation of domestic savings, held or invested abroad.
With respect to external resources, useful recommendations will mostly concern general matters such as the maintenance of financial stability and fair treatment of foreign capital.

Recommendations on money creation in connection with the financing of public investment mainly concern an appraisal of its tolerable amount and its most desirable direction. These problems will be discussed in section 8 below.

6. **Forecasts of budgetary receipts and expenditures and of resources from public enterprises.**

The degree of detail, applied by past missions when forecasting budgetary resources available for public investment, differed considerably. As is shown in Table 2, the missions to British Guiana, Ceylon, Surinam and Turkey confined themselves to giving an estimate for the current budgetary surplus, whereas the missions to Jamaica, Jordan, Malaya, Nigeria, Syria and Thailand investigated both current receipts and expenditures. Of these missions, the ones to Jordan and Nigeria went into most detail, the missions to Malaya, Syria and Thailand gave considerable, though on the whole, less detail, whereas the analysis of revenue by the Jamaica mission was briefer.

It would in general be useful to analyze the expected trends of both current receipts and expenditures in the report. Furthermore, it would be desirable that both estimates show a certain degree of detail. With respect to tax revenue, the expected trends of national income and of the share to be absorbed by taxation may provide a basis for the forecasts.2/ But this may not be sufficient, since the revenue from separate taxes does not depend, in all cases, primarily on the course of the national income. Such factors as exports (for export duties), imports (for import duties), consumption (for consumption taxes), or a part of these aggregates are sometimes more important as a guidance for estimates. The analysis of historical figures is also important in this connection. A thorough analysis also makes it necessary to isolate the effects of changes in tax legislation or enforcement, and to assess their quantitative importance separately.

For non-tax revenues, insofar as they are important, similar considerations apply. Resources from public enterprises might be projected by means of an analysis of the most important factors determining these resources.

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2/ The Guatemala mission made no allowance for the rise in receipts to be expected from the growth of the national product during the planning period (although this growth had been 2.5% in real terms over the past six years), (page 295 of mission report); the Jamaica mission assumed that the government would take steps to insure that its revenues would increase in accordance with national income (page 133 of report); the Jordan mission gave separate estimates for the various sources of revenue and considered others more globally (page 407 et seq of report); the Malaya and Nigeria missions followed a similar procedure (pages 192-5 and 644 et seq of report respectively); the Syria mission limited itself to assuming a growth of existing revenues of 3-4% a year (page 176 of report); and the Thailand mission assumed a yearly rate of growth of revenue of 4%, adding revenue from improved administration, proposed tax increases and new charges (Chapter IX, pages 256 and 265-269 of report).
With respect to current government expenditures, it will not be feasible to consider every item in detail. It is therefore recommended to limit a detailed analysis to a number of important items, which may be influenced by special factors; all other items will have to be projected by means of more global methods, such as a rate of growth related to that of national income or of population.

The task of projecting current government expenditures will be facilitated if apart from the traditional administrative classification of budget accounts a mission can make use of budget data that have been rearranged according to economic and functional criteria. 

A factor that will require a mission's special attention in the context of a study of future current government expenditures is the impact of the proposed investment program itself on these expenditures. Among the most outstanding examples are increased investment expenditures for health and education purposes. It is clear that the building of hospitals creates a permanent need for more medical staff and that of schools for more teachers. Similar additional current expenditures often arise in connection with investments in agriculture, transportation, etc. Experience has shown that this important aspect of development programming sometimes has not received the attention which it deserves; survey missions, therefore, should be on the alert to give it proper treatment.

7. Forecasts of domestic savings attracted through government borrowing.

Of the past survey missions, a number have given consideration to the possibility of attracting domestic savings and quantified the amounts which they expected to become available from this source (see Table 2). A thorough treatment of this subject can be found in the report of the Syria mission. An analysis of this kind, adjusted to the situation of the special country concerned and paying attention to the various sources of domestic savings is undoubtedly worth attempting whenever possible.

8. Forecasts of government borrowing or use of cash balances, implying money creation.

Another possible source of finance for a public investment program is money creation either in the form of new credit extended by the banking system or in the form of drawing down existing balances with the Central Bank or other banks.

6/ The economic classification shows in a systematic way the various categories of current expenditures on goods and services and transfer payments as distinct from capital expenditures, whereas the functional classification brings together systematically expenditures with respect to the various government functions, such as defense, police, justice, education, health, social security. Reference is made in particular to A Manual for Economic and Functional Classification of Government Transactions, United Nations, Department of Economic and Social Affairs, New York, 1958.
Some of the past missions have given a forecast of domestic borrowings or drawings on government cash balances, without, however, dealing explicitly with the monetary impact of these steps. Recently the mission to Thailand has discussed in some detail the scope for a future increase in the country's money supply. Several missions, on the other hand, have left money creation as a source of finance out of consideration in view of already existing inflationary pressures or dangers.

It may be suggested that in those cases where financial resources in the form of genuine savings (including capital imports) are obviously inadequate to finance a public investment program completely, it would be appropriate to try and measure the impact on the economy if part of the program were to be financed through money creation. In doing this it would also be in order to estimate - however tentatively - the demands for new credit likely to arise both from the private sector and from the possible pressure on prices and wages which any substantial investment effort might entail through reallocation (or relocation) of some part of the productive resources of the country.

Through this approach it may not be impossible to reach some kind of judgment as to the extent to which a partial use of money creation to finance the public investment program might unduly narrow down the credit means remaining for the private sector, or as to the extent to which inflationary pressures might develop and/or as to the type of credit control measures which should be recommended in the chapters of the report dealing with currency and banking.

This recommendation is meant only for the guidance of the mission itself and should not be interpreted as advocating a full treatment of the subject in the final text of the report. In the first place quantitative forecasts in this field are obviously quite hazardous. In the second place, many factors other than investment have an influence on money supply; they are even less susceptible to accurate forecasting: velocity of circulation and external price movements are among the most volatile.

In the third place there is a real danger in suggesting to any government or monetary authority that there is such a thing as a "permissible" increase in the money supply. True, the growing amount of transactions in a growing economy does imply that money supply will rise with national income without necessarily involving pressure on the price level. True also a widening of the "money economy", i.e. a reduction in the barter sector does absorb money without adverse effects. Moreover, a decrease in foreign exchange reserves may offset the creation of new means of payments by cancelling some of it.

But experience with development planning - outside of IBRD survey missions - indicates that the computation of a so-called "permissible" increase in money supply has not infrequently resulted in using the permissible figure as the minimum limit for the public investment program. This threatens to lead to an actual increase much higher than the "permissible" level. In view of this danger it may be better not to include additional recourse to the banking system as a separate item among available financial resources for a public investment program, even when a "permissible margin" would seem to exist in fact.
9. **Available foreign resources.**

Foreign resources, already available for the financing of public investment, have been reviewed by most of the past general survey missions; they include amounts available from loans and grants. They present no particular problems and are relatively easy to review.

A forecast of foreign resources still to be secured to close a residual gap in total resources required to finance a development program of a projected size should preferably be related to an over-all forecast of the balance of payments (see below, section 12). Past general survey missions have generally been reluctant to go into a complete discussion of the capital account of the balance of payments. This is understandable, since a detailed analysis might commit the Bank too much. On this point the position of general survey missions differs substantially from that of the Bank's ordinary missions, for which the examination of the Bank's specific lending contribution against the background of the over-all creditworthiness and necessities and opportunities of capital import of the country concerned is often a main task.

10. **Resources for central government versus those for local governments.**

The financial relationships between the central government and lower public bodies (states or provinces, municipalities etc.) have attracted the attention of past survey missions in connection with the problem of financing of public investment in two contexts. In the first place it is not sufficient that total financial resources, projected for a certain period, can reasonably be expected to be adequate to finance a public investment program of a certain size. Financial resources will have to be distributed in the right proportions over the various bodies executing the program. This problem has been dealt with at length by e.g. the Nigeria mission. Secondly, several missions found the state of finances of lower public bodies to be weak or very weak (see section 5 above), while noting a strong, generally excessive, centralization of government responsibilities. Consequently, these bodies were unable to finance a fair share of development projects and often even absorbed considerable amounts of central government resources for consumptive purposes. In view of these facts, it is understandable that a number of missions have insisted and made recommendations on the strengthening of local finances.

The problems mentioned here will inevitably draw the attention of future survey missions.

11. **Relationship between financing of public investment and financing of private investment.**

Most of the past general survey missions have not treated this problem, although there were exceptions (the Colombia, Jamaica, Thailand and Turkey missions). One of the main causes of this attitude presumably has been the lack of readily available information about the financing of investment in the private sector. Although this will doubtless also be a handicap for future missions, it would be helpful if they could devote some of their time to this subject. The financing of public and private investment are closely related.
This is first of all true as far as the most desirable level and kinds of taxation are concerned. The effort to maximize public savings in view of the intended stepping up of public investment should not unduly affect incentives for the private sector. For, even in those countries where the impact of the public sector is relatively large, the share of private investment in total national investment often remains preponderant. Tax devices like provisions for accelerated depreciation, compensation of profits with previous losses, tax holidays and investment rebates will deserve consideration as a safeguard of adequate incentives for the private sector in a climate of high over-all fiscal levies.

The financing of public and private investment is also closely connected with respect to possibilities of borrowing in the domestic capital market, the distribution of money creation between public and private sectors and the use of available foreign resources.

12. **Relationship between financing of public investment and balance of payments.**

When a complete estimate has been made of financial resources to finance a public investment program of a certain magnitude, the relationship between domestic and foreign resources to finance that program will have been determined at the same time. However, this relationship will in general not be the same as that between expenditures in local currency and in foreign exchange on account of the program. When the import-content of public investment outlays is relatively large, whereas the share of foreign resources in total financial resources available for financing of a program is relatively small, a decline of foreign exchange reserves may occur on balance, having as its counterpart a withdrawal of money from circulation. In the opposite case (small import-content and relatively large availability of foreign resources) foreign reserves may rise and money supply may expand.

It does not seem very fruitful, however, to consider this problem for the public sector in isolation. A more useful frame of reference will be provided by a forecast of the balance of payments on current account, embracing both the public and private sectors of the economy. But it should be realized that even when the foreign exchange needs of the public sector are reviewed in this wider context the impact of the anticipated public investment program on the marginal propensities to import and to export should be taken into consideration insofar as possible.

Of the past survey missions, the mission to Iraq met with the peculiar situation that financial resources for its investment program could be expected to become available entirely from payments in foreign exchange by oil companies, whereas a considerable part of the investment program gave of course rise to local currency expenditures. Consequently, the mission had no need to worry about the effect of its program on foreign exchange reserves. Its main concern was the upward effect of local expenditures on prices and incomes which it discussed at length.

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7/ When a rise in imports associated with the public investment program exceeds additional foreign resources for its financing, no decrease of foreign reserves may occur if part of the program is financed by additional current government revenue or proceeds from more domestic borrowing outside the banking system. The rise in imports, connected with the program, will then be partly or wholly compensated by a reduction in imports owing to non-spending by income recipients of funds transferred through taxation or lending to the government.
Other survey missions have paid little or no attention to the ultimate effect of their public investment program on the foreign exchange position, although in some cases (Colombia, Guatemala, Nicaragua, Ceylon and Surinam) estimates were made of foreign exchange costs of programs.

It would appear desirable for missions to try and relate their forecast of financial resources for public investment with the balance of payments.

### 13. Relationship between forecasts for various financial resources and background of national accounts.

One theoretical criticism can be made of most forecasts of past general survey missions. They have generally been made without reference to the major macro-economic aggregates (projections of national accounts). Here too, of course, the lack of available or reliable information is a major explanation. Nevertheless, there may be cases where financial forecasts can be attempted against the background of national accounts. The advantage of national account projections as one of the starting-points for making financial forecasts would be that the coherence of the various forecasts and consequently their consistency would be increased. Moreover, special questions such as the impact of a public investment program on the balance of payments, referred to in section 12 above, could be considered in a wider context.

If forecasts of national accounts could be made, a next step would be the presentation of forecasts for financial resources in the form of financial accounts, showing the financial transactions between the major sectors of an economy (central government, lower public bodies, private sector, money creating institutions and outside world). Financial accounts would also contribute to a more systematic analysis and exposition of certain problems, e.g. that of the relationships between the financing of public and private investment.

It would be unrealistic, meanwhile, to expect significant results in this field in the near future; even the construction of financial accounts on a historical basis still presents many difficult problems.

### Recommendations with respect to future forecasts.

The main recommendations with respect to future forecasts of financial resources for public investment by general survey missions, resulting from the preceding analysis, can be summarized as follows:

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8/ Forecasts of the major economic aggregates have been made by the Colombia mission.

9/ Reference is made in particular to the article of Earl Hicks, Graeme S. Dorrance and Gerard R. Aubanel - Monetary analyses, Staff Papers IMF, Feb. 1957, page 342 et seq, and to a previous article of Graeme S. Dorrance - Financial accounts in a system of economic accounts, Staff Papers IMF, Feb. 1955, page 319 et seq.
1. Forecasts should preferably not try to exceed a period of 5 or 6 years;

2. Missions should give serious consideration to the implications of their global forecasts covering the whole planning period for the first fiscal year of this period, notably for budgetary resources. Whether it will be possible to give more details for other fractions of the total planning period will depend in particular on a mission's judgment about the uncertainties involved;

3. Forecasts should preferably be made for total public investment and its financing and not for only a part of it;

4. Forecasts should in the first instance be concentrated on gross investment and its financing; an effort should be made if possible to give a separate estimate for the item of depreciation;

5. Forecasts should be made for all financial resources and a breakdown should be given for resources from a budgetary surplus (on current account), domestic savings to be attracted through government borrowing, money creation and foreign resources. With regard to a detailed analysis of foreign resources it may be necessary to observe caution since such an analysis could be interpreted to involve commitments for the Bank;

6. Forecasts should when possible be presented in the form of alternatives in view of the substantial uncertainties involved;

7. Forecasts of financial resources should include an analysis of possible reforms, especially those intended to increase budget revenue;

8. Forecasts of budgetary receipts and expenditures should preferably show a certain amount of detail and special attention should be given to the impact of the proposed investment program itself on current government expenditures.

9. The possibility of money creation, resulting from government borrowing or use of cash balances, as a source of finance for public investment should preferably be studied, but it would in general not seem advisable to mention explicitly an amount for a permissible increase in money supply in a mission's report;

10. The financial relationship of central and local governments should be analyzed whenever possible;

11. The relationship between financing of public and private investment is well worth some special analysis;

12. Some attention should be given to the impact of the public investment program on the balance of payments on current account;
13. There may be cases where financial forecasts can be attempted against the background of national accounts.

Finally, it is only fair to note that limitations of time, staff and above all, readily available information, which have hampered past missions, doubtless will also make it difficult in future cases to consider all aspects of forecasts in as much detail, as is suggested in this paper. The only purpose of this paper is to suggest some directions of thought which may be helpful to future survey missions when they are confronted with the problem of forecasting financial resources.