

International Finance Discussion Papers

Number 112

November 1977

APPROACHES FOR ASSESSING THE RISK INVOLVED IN LENDING
TO DEVELOPING COUNTRIES

by

Yves Maroni

NOTE: International Finance Discussion Papers are preliminary materials circulated to stimulate discussion and critical comment. References in publications to International Finance Discussion Papers (other than an acknowledgement by a writer that he has had access to unpublished material) should be cleared with the author or authors.

Approaches for Assessing the Risk Involved
in Lending to Developing Countries

by

Yves Maroni*

The enormous increase in the external debt of the developing countries in recent years, and the prospect that this debt will continue to grow in coming years, have focussed attention on the risk involved in lending to those countries. An assessment of this risk is important to the private commercial banks in the industrial countries, which have become a major source of loans to the developing countries, and which must decide how large an exposure they may safely accept in particular countries or regions. It is also important to the regulatory authorities in the industrial countries, which are concerned with the soundness of the banking system under their jurisdiction and with the safety of the deposits entrusted to the banks. More generally, an assessment of this risk is important to the economic community at large, including both the industrial and the developing economies, as part of the background needed for an effective formulation of economic and financial policies, at a time when the continued good health of the world economy might be threatened, should difficulties in servicing developing countries' external debts cause a spread of insolvency among banks in the industrial countries.

It is not the purpose of this paper to discuss the likelihood that developing countries will run into debt servicing difficulties,

* This paper was prepared for presentation at the XIV Meeting of Technicians of Central Banks of the American Continent, San Carlos de Bariloche, Argentina, November 6-11, 1977. The views expressed do not necessarily reflect those of the Board of Governors of the Federal Reserve System or of its staff.

or that such difficulties might escalate into a severe financial crisis. Rather it is with the methods used in assessing the risk that particular countries might encounter debt servicing difficulties that this paper is concerned.

Individual Statistical Indicators of Risk

It is tempting to make an assessment of the risk involved in lending to developing countries on the basis of statistical indicators. For loan officers and bank regulators, who find that simple rule-of-thumb guidelines facilitate their task, the use of such indicators presents obvious advantages. For loan officers in particular, who must deal with large numbers of varied clients and who do not always have detailed knowledge of all of the circumstances surrounding their clients, statistical indicators may seem to offer a convenient short-cut. The presumption is that these indicators are, by nature, objective and therefore free from subjective bias, and that they will reliably predict debt servicing difficulties.

Historically, the debt service ratio, relating amortization and interest payments to earnings from exports of goods and services, was the first indicator to come into fairly extensive use. But, because of its shortcomings, a number of additional indicators were developed later, to complement it or to substitute for it.

The debt service ratio measures the proportion of a country's foreign exchange earnings on current account which is channeled into debt servicing. At first glance it would seem that, the higher this ratio, the more constrained is the country's capacity to import, relatively speaking, and (given the social and economic consequences

of holding down imports for long periods of time) the greater the likelihood that such a country will experience debt servicing difficulties.

But, this is an oversimplification. A country's capacity to import is not determined solely by its ability to export more than it must set aside to service its external debts. It is also a function of its ability to attract direct investment capital and other capital inflows intended to finance productive undertakings. In addition, a country's capacity to import may be sustained by grant aid, especially if this is a country with a very low per capita income, or (at least for a time) by drawing down international reserves. In fact, the need to import does not have a uniform degree of intensity from country to country and some countries have more leeway than others to compress imports.

Consequently, the debt service ratio may give false signals of impending debt servicing difficulties. A high ratio may be found in countries which are well managed and are able to roll over maturing obligations and to attract additional capital each year on the strength of the confidence they inspire among investors and lenders. The market judges that the capital in question is being soundly and productively used, and the high debt service ratio is no cause for concern. On the other hand, a low debt service ratio may be found in poorly managed countries which are unable to attract capital because they do not use it soundly and productively. In such cases,

the low ratio does not justify a favorable assessment. In fact, the first type of country is far less likely than the second to face the prospect of debt servicing difficulties.

Similarly, a high ratio may be an alarming sign for a country with a relatively low level of international reserves and little leeway to compress imports (either because the great bulk of its imports are essential products, or because the political environment will not tolerate a retrenchment). But the same ratio may be cause for less concern for another country possessing more ample international reserves (and therefore time to take remedial action) and enjoying some leeway to compress imports (either because a significant proportion of its imports are non-essentials or because the political climate is conducive to austerity).

An increase in a country's debt service ratio over a period of time may not even reflect a deterioration in its creditworthiness. This may be a country in process of establishing its reputation as a deserving borrower, one pursuing sound policies and investing capital productively. Such a country may have been underutilizing its potential as a borrower and may formerly have had a low debt service ratio simply because it had few debts. Even if an increase in the debt service ratio over a period of time does reflect a deterioration in the country's creditworthiness (because funds are being borrowed for unsound investment or for consumption), this does not provide, by itself, any indication of how close the country may be to encountering

debt servicing difficulties. Moreover, before debt servicing difficulties develop, the country in question may take steps to correct the problem-- i.e. move to place the unsound investments on sounder bases, or discourage consumption.

Apart from these conceptual problems, there are also statistical difficulties. The statistical data needed to calculate debt service ratios are not available in full, so that we must choose between ratios based on incomplete data and ratios representing educated guesses. Specifically, complete information is available from the World Bank on debt service payments for public and publicly guaranteed debt with an original maturity of one year or more. But, in most cases, little is known about short term public debt or about unguaranteed private debt of any maturity. Moreover, even the World Bank data are available only with a lag.

In an attempt to overcome this difficulty, it has been proposed that the ratio of interest payments to earnings from exports of goods and services be used instead of the more conventional debt service ratio. Data on interest payments are available from balance of payments statistics, with a shorter lag and with a more comprehensive coverage. However, the other criticisms of the debt service ratio would seem to be applicable to this new ratio as well. In addition, because the interest/exports ratio leaves out amortization payments, it will fail to reflect the debt servicing difficulties associated with a bunching of maturities. In particular, a given interest/exports ratio

has a different meaning for countries which have borrowed substantial sums subject to generous grace periods on the repayment of principal and for countries enjoying only short grace periods on their external debts.

Another indicator which has also been proposed is the ratio of the total external debt outstanding at the end of a given year to the total earnings from exports of goods and services during that year. As a measure of the importance of the debt in relation to the size of the economy, this ratio may serve a useful purpose, although from a statistical point of view, it may be criticized because it relates a stock concept to a flow concept.

But as an indicator of impending debt servicing difficulties, it suffers from the same conceptual shortcomings as the debt service ratio, and therefore may give false signals. It is also of limited usefulness in current analysis because, like the debt service ratio, it relies on a concept, the total external debt, for which data are available only with a long lag, and then only in an incomplete form (i.e. for a portion of the debt).

The same points may be made also with respect to another proposed indicator, the ratio of the total external debt outstanding at the end of a given year to the total output of the economy during that year. In addition, the debt/total output ratio may be criticized for relating the debt to a variable which only indirectly bears upon the country's ability to earn the foreign exchange needed to make debt service payments.

Another ratio which is sometimes proposed as an indicator of impending debt servicing difficulties is the ratio of the current account deficit to the earnings from exports of goods and services. However, like the debt service ratio, this ratio takes no account of the country's ability to attract capital to finance productive undertakings or of its status as a recipient of grant aid or of the availability of international reserves. Consequently, it too may give false signals of impending debt servicing difficulties.

Still another ratio, which may help to identify potential difficulties associated with the bunching of maturities, is the ratio of debt amortization in a given year to the total debt outstanding at the beginning of that year. For this specific purpose, such a ratio is undoubtedly useful, although data on outstanding debts may be available only with a lag and in incomplete form. But, it does not follow, because maturities are bunched, that debt servicing difficulties are inevitable, or even probable. If the country is able to earn substantial amounts of foreign exchange from exports of goods and services, or to attract large amounts of capital in the form of direct investment or new loans, or if it has ample foreign exchange reserves or leeway to compress imports, the bunching of debt maturities may cause no debt servicing difficulties. In contrast, a country with the reverse characteristics would be more likely to experience difficulties in servicing its debts even with a more limited bunching of its

debt maturities.^{1/}

Still another ratio, which some would use as a short term measure of a country's ability to meet its debt servicing obligations, is the ratio of interest payments to the level of international reserves. This indicator focusses on the fact that reserves are the last source of funds with which to service debts if all else fails. On the other hand, its significance is quite limited, and it surely cannot serve as a signal of impending debt servicing difficulties, since it ignores all of the current inflows of foreign exchange available to the country, whether from exports of goods and services or from movements of capital⁻⁻⁻ attracted by investment opportunities or otherwise, nor does it reflect or take account of the magnitude and flexibility of the payments for imports.

^{1/} In an article entitled "Measurement of Debt Servicing Capacity: an Application of Discriminant Analysis" (Journal of International Economics, I (1971), pp. 327-344), Charles R. Frank and William R. Cline correctly point out that "a low value for this indicator suggests that a country has predominantly long term debt liabilities." But they go on to argue that "a country in this situation does not have very much short run flexibility in reducing its debt service commitments by temporary reduction of borrowing," and that therefore, "ceteris paribus such a country is more likely to reschedule." This reasoning seems erroneous, in as much as a high value for this indicator would reveal a bunching of maturities, which would be far more likely to cause debt servicing difficulties than an inflexibility in reducing debt service commitments on long term obligations.

Frank and Cline argue further that, in a country with a low value for this indicator, "the absence of short-term liabilities also indicates that a country does not have significant access to short-term commercial credit facilities, i.e. the country is not particularly 'creditworthy'." This reasoning may correctly describe one type of situation. But it is possible also that a country with a relative absence of short-term debts has succeeded in lengthening the average maturity of its debt, deliberately eschewing short-term borrowings, and that it was able to do this because it was "creditworthy." Generally, it is the less creditworthy countries which borrow on short-term, and they are usually forced to do so because they cannot raise long-term funds from the market.

Composite Statistical Indicators

The shortcomings of the individual statistical indicators mentioned so far have led to the recognition that there are several types of debt problems and to the suggestion that the use of several debt indicators jointly might help to devise a more reliable method of identifying impending debt servicing difficulties.

Along this line, Frank and Cline^{1/} have explored a combination of 8 indicators, of which only three were found to be statistically significant at the 5 per cent level. They estimated quadratic functions as well as iterated linear functions, confining them to the three variables, and tested them for their ability to predict debt reschedulings in the period 1960-68. They also repeated the tests with only two of the variables. They found that the first iteration of the two-variable linear function correctly predicted 12 of the 13 rescheduling cases, but also predicted 17 reschedulings which did not occur. However, 13 of these 17 errors involved cases where a rescheduling took place in a nearby year, i.e. they were in the nature of timing errors. They also found that the two variable quadratic function correctly predicted all of the rescheduling cases, but also predicted 12 reschedulings which did not occur. Of these errors, 10 were errors in timing.

The two variables in the Frank and Cline model are the debt service ratio (measured in relation to the "normal" level of exports rather than in relation to the actual level) and the ratio of debt amortization in a particular year to the total debt outstanding.

^{1/} Charles R. Frank and William R. Cline, "Measurement of Debt Servicing Capacity: an Application of Discriminant Analysis," Journal of International Economics, I (1971), pp. 327-344.

Frank and Cline attempt to predict future debt servicing difficulties for 17 countries from 1967 to 1992 by making projections of these two ratios. They identify four countries for which the debt servicing difficulties will be exceptionally serious,^{2/} and discuss factors which appeared, at the time of writing, to be likely to invalidate their findings. They conclude that, if anything, they have erred on the optimistic side, i.e. the outcome is likely to be worse than they have predicted.

However, from a practical point of view, as Frank and Cline themselves recognize, the data on debt outstanding and on debt service are incomplete. They note that the unguaranteed private credits, which are excluded, can add significantly to the debt service burden and can cause a bunching of debt service payments, as a result of which debt servicing difficulties may arise suddenly. Similarly, short-term debts, which they do not specifically cite in their comments but the exclusion of which they implicitly recognize in a footnote describing the source and nature of their data, can have effects of the same nature.

Moreover, the need to rely on projections in order to make predictions of debt servicing difficulties is related not only to the interest Frank and Cline had in long range forecasts, but also to the fact that external debt data are available only with a substantial lag, so that even short-term predictions of debt servicing difficulties

^{2/} Three in Asia, one in Africa.

are likely to be hampered by the lack of firm data. The element of judgment which this introduces in the predictions detracts from the presumed reliability of the model.

The fact that the model gives a number of false predictions (albeit mainly related to timing errors) is a further drawback. Finally, while the model has been tested with respect to its ability to predict debt reschedulings, it is not known how well it might work in predicting less severe debt servicing difficulties.

The Export-Import Bank of the United States has developed an early warning model which serves as the first part of its evaluation system. The model uses some 50 explanatory variables, from which a number of ratios are determined. The model has been tested for its ability to predict reschedulings of the debts of the borrowing countries in the period 1960-75, apparently with some measure of success. The explanatory variables which were especially significant for this purpose were: (1) the ratio of total debt outstanding to exports, (2) the ratio of debt amortization in a given year to the total debt outstanding, (3) the ratio of reserves to imports, (4) the ratio of gross fixed capital formation to GDP, (5) the ratio of disbursements on new debts to exports, (6) the rate of consumer price inflation, and (7) the country's IMF position.

However, this model has serious limitations in so far as its practical application is concerned. Because it relies in part on external debt statistics, which are either not available at all or available only with a long lag, it is not likely to be very useful in making current predictions. Moreover, while the model has been tested for its ability to predict reschedulings of debt owed to the

Export-Import Bank, it is not known how well it might work in predicting less severe debt servicing difficulties, or whether it might make reliable predictions for lenders other than the Export-Import Bank.

The most elaborate attempt of which I am aware, to identify impending debt servicing difficulties by combining a number of statistical debt indicators, is the study by Pierre Dhonte, of the IMF staff.^{1/} This study analyzed in combination 18 external debt indicators for 60 countries. Included were countries which renegotiated their debts during the period 1957-71. For these renegotiating countries, the indicators behaved somewhat differently than for the average of the group of 60 countries. But, when an attempt was made to combine 10 of the indicators to test whether they would have any predictive value, the analysis correctly predicted 8 of 12 renegotiation cases, narrowly missing a ninth, but also predicted renegotiation in nine other cases where no renegotiation did in fact take place.

In the face of this rather unsatisfactory result, Mr. Dhonte concluded modestly that "Debtor countries which manage to maintain a balance between the extent of their involvement in debt and their borrowing conditions and keep the growth of their debt in some relation to the growth of their exports are not subject to debt renegotiations. Where these equilibria fail to be maintained, there is a good probability

^{1/} Pierre Dhonte, "Quantitative Indicators and Analysis of External Debt Problems," (unpublished IMF staff paper), February 1974.

that debt problems emerge and provide an incentive to seek a negotiated revision of debt service payments." This is far from a systematic reliance on statistical indicators.

It is, of course, possible that statistical indicators other than those discussed in this paper will be tested and will be found to be more reliable in predicting impending debt servicing difficulties. One approach which would seem to have the potential of yielding useful results would be to focus on the characteristics of an economy which economic analysis and experience have taught us to associate with the onset of balance of payments crises.

These characteristics include (1) a fiscal deficit which is rising rapidly as a proportion of total public expenditures or as a proportion of total output (either GNP or GDP), and which is increasingly being financed by borrowing from the central bank, (2) a volume of commercial bank credit to the private sector which is rising more rapidly than the total output of the economy and whose growth represents an increasingly large proportion of money supply, (3) an exchange rate which is not adjusted at sufficiently frequent intervals and in sufficient proportions to compensate for the difference between the rates of inflation at home and in the principal trading partner countries, and therefore fails to preserve the country's international competitiveness, (4) wage increases which are consistently in excess of the rise in productivity, (5) nominal interest rates which are lower than the rate of inflation and therefore

fail to yield a positive real rate of return to domestic investors and savers, (6) a rate of business profits in relation to capital invested which is less than could be earned elsewhere on equally risky undertakings or is not sufficiently above what could be earned elsewhere to compensate for differences in the risk involved, and (7) an average economic rate of return on investments of all types which is less than needed to attract capital and which suggests that capital is being used unproductively.

Any one of these indicators, taken by itself, may well give false signals of impending debt servicing difficulties. But, in combination, they would seem to constitute an imposing array of ominous signs. A country could avoid debt problems for a time in spite of following policies conducive to such unsound results if it had an ample cushion of international reserves or could draw on a reservoir of goodwill among foreign lenders. But, sooner or later, both would become exhausted, and a crisis would ensue, unless the country took remedial action by vigorously altering these policies.

The reliability of such a system remains to be tested scientifically. In this respect, it would be well to conduct the tests in relation to a number of dependent variables. Many of the tests used with other indicators or systems of indicators have specified official reschedulings of external debts as the dependent variable. But a debt rescheduling is an extreme situation, and debt

servicing problems may never reach this stage. Short of it, there may be cases in which scattered arrears develop in debt service payments; at a more severe stage, these arrears may become more general or of greater duration; beyond this, the creditors may decide to undertake the refinancing of some portion of the debt (i.e. by offering new loans which enable the borrowing country to continue servicing its old loans). The testing of statistical indicators should be conducted with respect to as many of these potential situations as may be practicable.

Even if statistical indicators are not reliable in predicting debt servicing difficulties, they may serve a secondary purpose, that of acting as warning signals, suggesting that a closer analysis be undertaken to ascertain what the situation really is. As such, however, statistical indicators are not in a different position from any other presumed sign of impending difficulties, and non-quantifiable signals may be equally if not more useful.

Finally, a drawback common to all statistical indicators must be mentioned. It is that they are, by nature, retrospective and not prospective. That is, they tell us what the situation has been and, if the data are reasonably current, what the situation now is. But they do not tell us what the situation is going to be. Yet, the prediction of impending debt servicing difficulties is essentially a look into the future, and knowing the past is not necessarily a good indication of what the future holds. While it may

be possible to make projections of the statistical indicators, as Frank and Cline did, this opens up the possibility, indeed the probability, of a new kind of error, a forecasting error. At this stage, the presumption that statistical indicators would be objective and therefore free from subjective bias ceases to be correct.

The Checklist System

The problems encountered in attempting to devise a reliable statistical method of identifying impending debt servicing difficulties have led to the development of what may be called a checklist system of assessing risk. This consists of assigning a rating to each country with respect to a number of indicators. The ratings for the several indicators are then aggregated into a summary score for each country, using a common set of weights.

In a recent survey of 37 American banks, concerning the techniques used to assess the risk of lending to foreign countries, the Export-Import Bank of the United States found that 5 banks used such a system.^{1/} The economic indicators included in the system varied somewhat according to the banks, and the survey results in this respect may be summarized as follows:

^{1/} See Stephen Goodman, "How the Big U.S. Banks Really Evaluate Sovereign Risk," Euromoney, February 1977.

INDICATORS INCLUDED IN
CHECKLIST SYSTEM

| <u>Variable</u> | <u>Number of Banks Using Variable in its System</u> |
|--|---|
| I - Variables relating to the internal economy | |
| GNP | 5 |
| GNP per capita | 5 |
| Growth in GNP per capita | 5 |
| Inflation rate | 4 |
| Money Supply growth | 3 |
| Ratio of investment to income | 3 |
| Net budget position | 1 |
| Ratio of income growth to fixed capital formation | 1 |
| II - Variables relating to the external economy | |
| Exports and export growth | 5 |
| Imports and import growth | 5 |
| International reserves | 4 |
| Ratio of reserves to imports | 4 |
| Trade and current account balances | 3 |
| Debt service ratio | 2 |
| IMF borrowings | 2 |
| Current collection experience of U.S. suppliers | 1 |
| Debt service payments | 1 |
| Ratio of principal payments to total external debt | 1 |
| Share of gold holdings in total reserves | 1 |
| Share of leading non-oil export in total exports | 1 |
| Share of trade in GDP | 1 |
| Share of short term credit in total credit | 1 |
| Total external debt | 1 |
| III - Social and political variables | |
| Political stability | 1 |
| Past trend in unemployment | 1 |
| Regional rating | 1 |

This system includes indicators covering the internal and external sectors of the economy and also political and social factors. The inflation rate, the money supply growth and the government's budget position provide indications of the soundness of the financial management of the country. At the same time, the level and efficiency of capital formation can be measured by the ratios of investment to income and of income growth to fixed capital formation. The three GNP measures provide an indication of the level of development of the country and of the dynamism of the economy.

But, the surveyed banks using this system do not rate countries according to the extension of central bank credit to the public sector or to the banks, the rate of growth of commercial and development bank credit to the private sector, the relationship between prevailing interest rates and the rate of inflation, the rate of increase in wages, and the adequacy of the prices charged for public services and goods sold by public enterprises. These variables would appear to provide important information regarding the soundness of financial and economic management of the country, and properly ought to be included, in so far as the data are available.

The list of variables relating to the external sector also appears inadequate. It fails to include measures of capital inflow (e.g. private direct investment, borrowings from official institutions^{1/}

^{1/} Except for IMF borrowings, which are considered by two banks.

or from private markets).^{1/} It also fails to include a comparison between the trend of the exchange rate and that of the inflation rate. Without these variables, the assessment of the external sector would seem to rest on insufficient bases.

Another source of weakness in the checklist system as it is now used is the set of variables related to social and political conditions. The past trend in unemployment may be measured objectively in only some of the developing countries, as statistics on this variable are lacking in many countries. More importantly, the other two variables are entirely subjective. For example, the banks using political stability in their system simply choose a number from a pre-determined scale.

Even if a more complete list of variables were included and even if the social and political variables could be reduced to objective indicators, the checklist system would still have serious drawbacks. How is a rating applied for each of the variables, and on the basis of what standards? In aggregating these ratings into a single score for each country, how are the weights selected? It seems inevitable that subjective judgments will play a large role in answering these questions, especially the second one.

Not surprisingly, the results do not appear to be very satisfactory. None of the five surveyed banks using the checklist system places primary reliance on it, considering it instead merely as a supplement to its main evaluation method, or as the first step

^{1/} It would be desirable to include also measures of capital outflow. But lack of data would severely hamper efforts to do so.

in the process. Only one of the five banks tests the country scores against ensuing events by comparing the scores with its subsequent experience in collecting the amounts it has loaned. This bank has found that the checklist score performs badly in predicting the cases in which debt servicing difficulties will occur. This bank is reported to be attempting to improve the system, and is investigating standard econometric and statistical tests of predictive accuracy in choosing the variables to be included in the checklist system and in determining their weights.

Qualitative Country Evaluation

The problems associated with the use of statistical indicators, either singly or in groups, in assessing the risk of lending to developing countries have made it inevitable that primary reliance be placed on country evaluation reports. These are, most often, qualitative evaluations based on careful analysis of available statistics and of other information pertaining to the country's economic, social, and political prospects.

Of the 37 banks surveyed by the Export-Import Bank of the United States, 27 use such an approach.^{1/} 4 others, which appear to be in an intermediate stage of developing a system suitable to their needs, use a more general, purely qualitative evaluation, which does not rely on systematic statistical analysis.^{2/}

^{1/} This number includes 4 banks which combine this approach with a checklist system.

^{2/} The survey also included 5 banks which apparently use no system in assessing country risk. These may be banks in an early stage of developing involvement in the business of lending to developing countries.

The survey results, as well as independent descriptions given by bank officials at a recent symposium on the debt situation in the developing countries,^{1/} reveal that the scope of the country evaluation reports, at least those developed by the largest group of banks, is very broad. The banks may not all undertake the evaluation in the same depth, but there is no doubt about the comprehensive nature of the analysis carried out, at least by some banks.

On the economic side, the reports^{2/} contain background information on natural resources, population, and institutional aspects, and they deal with short-term and long-term trends in the internal and external sectors of the economy. They are concerned with the past and prospective growth of total output, consumption and investment, with the share of investment financed from domestic savings, and with the factors causing inflation, particularly the government budget. They assess the outlook for inflation and evaluate the policies being used to deal with it. On the external side, they evaluate the balance of payments outlook and in particular they analyze the trade account, the current account, the capital account, the adequacy of international reserves, the composition and trend of external indebtedness, the maturity profile of the debt and the terms of borrowings, and such other factors as the degree of export diversification and import

^{1/} "Outlook on Private Market Financing and Risk in Developing Countries," a one-day symposium on developing countries' debt sponsored by the Export-Import Bank of the United States, April 21, 1977. The papers given at this conference will be published in a volume now under preparation.

^{2/} At least, those which present the most thorough evaluations.

compressibility and the availability of external resources, particularly those of the IMF. They especially stress the quality of the management of economic policy and the degree of political backing which it enjoys, the quality of business management in the country and the social and political constraints interfering with business operations, and the commitment of the country to the development of its human capital.

On the political side, they undertake to analyze political stability by assessing the orderliness of the process of political succession, the homogeneity of the population, the degree of popular unrest, and the channels for its expression. They also analyze the country's external relations, particularly the quality of the relations with its major trading partners, among them especially the United States. They make long run political and social projections.

The private banks do not always have access to all of the pertinent data needed to carry out the evaluation in all of its aspects. It is for this reason that the Chairman of the Board of Governors of the Federal Reserve System has suggested that the flow of data should be improved and that steps should be taken to encourage the lenders to request and the borrowers to supply more and speedier information, especially on external debts. Work is currently being done, with the help of the Bank for International Settlements, to develop an agreed list of the types of information which might be covered.

Another way of improving the information available to the banks would be to release to them the country evaluation reports

prepared by the International Monetary Fund in the course of its work (or selected portions of these reports). The proposal reflects the fact that the Fund's country evaluations are the most thorough and complete assessments of current economic and financial conditions and short-to-medium term prospects of any done by lending institutions, official or private, thanks in part to the Fund's access to a wealth of information, some of which is not generally available.

But serious objections have been raised against the idea. First, there is a danger that giving the banks access to material obtained by the Fund on a confidential basis might tend to dry up the flow of this information to the Fund. Second, if the authors of Fund reports knew that their judgments were going to be released to the banks, they might feel constrained in expressing them. On both grounds, the Fund's country evaluations would lose much of their usefulness. Third, if all lenders assess a country's creditworthiness on the basis of the judgments made available by one of them, the Fund, this may amount to a form of collusion and the assessments may become self-fulfilling. These objections refer especially to the disclosure of material dealing with forecasts and future prospects. While an improved exchange of information on past events may be more acceptable, it would be considerably less valuable. The matter is currently receiving attention within the Fund.

Of course, the Fund's country evaluations are not concerned with the identification of prospective debt servicing difficulties.

Rather, the Fund undertakes these evaluations because it must decide (1) what comments it should make to its members regarding their policies as part of its annual consultations with them, (2) what conditions it should require a country to observe in return for approving a drawing or a stand-by arrangement under its "tranche" system, and (3) whether particular members are eligible to draw, either under a previously approved stand-by arrangement, or under one of the Fund's other facilities (e.g. the compensatory financing facility).

Similarly, the World Bank has developed a country evaluation system of its own, not because it wishes to identify countries in danger of encountering debt servicing difficulties, but rather because it must decide on a lending level for each of its creditworthy members, as part of the formulation of its overall lending program.^{1/}

The qualitative country evaluations are a blend of objective information and subjective judgments. This is unavoidable because not all aspects of a country's situation can be reduced to objective statistical form and because statistical data require interpretation. In the final analysis, their purpose is to ascertain how much confidence deserves to be placed on the countries concerned. The crucial element

^{1/} The World Bank's country evaluations are a blend of the qualitative and the statistical. They include an assessment of the country's export potential, an appraisal of the nature of the external debt (i.e. the purposes for which old debt was incurred and for which new debt is contemplated), and an evaluation of the quality of the country's economic and financial management. The latter is based on an analysis of the policies being followed with respect to (1) real interest rates, (2) the exchange rate, (3) the prices and tariffs charged by public enterprises, (4) incomes policy, (5) debt management, and (6) the development of a local capital market through which domestic savings may be mobilized. The country assessments are related to long term projections of economic and social variables.

in this is a judgment on the quality of their economic and financial management, much as the wisdom of buying shares of a private enterprise on the stock exchange depends to a large extent on an assessment of the management running that enterprise. But this is not enough; a high-quality economic and financial team may be to no avail if the political determination to implement the policies they recommend is absent or is weakened by social or other considerations. To say so is not to deny the importance of social or other factors in the formulation of national policy. It is only to say that these factors inevitably have an economic and financial price. In any concrete case, the evaluation will reveal whether national policy is achieving a reasonably harmonious blend of the social and political objectives with the economic and financial requirements imposed by the necessity of obtaining the confidence of potential lenders.

Concluding Comments

This paper has been concerned with the methods available to identify countries which may be encountering debt servicing difficulties. But this may not be the most important use made of the techniques. An earlier passage noted that the International Monetary Fund and the World Bank have other objectives in mind. The same may be true of private banks. Of the 37 American banks surveyed by the Export-Import Bank of the United States, only 9 were found to use the country evaluation results to help analyze the quality of

their portfolio. Six of these, and also 20 others, use the results to set maximum exposure limits for the countries, and in some cases to set sub-limits for specific loan maturities and categories of loans.

Of course, these objectives are not totally unrelated. In setting maximum exposure limits (or in deciding whether to increase such limits and by how much), the danger that a country may soon encounter debt servicing difficulties will surely be taken into account. At first glance, it would seem as though the prospect of debt servicing difficulties would be a sufficient reason to reduce the maximum exposure limit, or at least to refrain from raising it. But lenders must be careful that their actions will not bring about the debt servicing difficulties they foresee, that is, that a decision not to continue increasing loans to a country will not be the cause of an insurmountable balance of payments gap. In the end, the lenders must walk a narrow path between an unduly generous loan policy, which allows a borrowing country to postpone the adoption of needed corrective actions, and an unduly restrictive loan policy, which forces a borrowing country into an intolerable position involving more austerity than it can reasonably stand and thereby brings about the realization of its own prophecy.

This is not an easy choice to make. It requires a mature judgment of all of the complex aspects of the economic, financial, social, and political condition and future prospects of the country concerned. Surely this cannot be left entirely to a set of statistical indicators, no matter how carefully they have been constructed.

From the point of view of the bank supervisory authorities, there is a further problem. It is that of devising a procedure allowing the authorities to make appropriate comments to the banks on their foreign loans, where this may be desirable, without at the same time unfairly damaging the creditworthiness of borrowing countries. If the authorities develop country assessments and translate them into a country classification according to the degree of risk involved, it is very likely that the existence of such a classification will become known and that the listing of particular countries as "problem" countries will hamper their future efforts to borrow.

In an attempt to avoid this difficulty, and at the same time to make sure that the judgment of the authorities is not substituted for that of the banks when it comes to deciding on whether or not a particular loan should be made, the Federal Reserve is looking into the possibility of dealing with foreign loans, in the process of periodic bank examinations, by measuring the degree of country concentration of the foreign loans held by each individual bank, and by evaluating the quality of the information possessed by banks and relied on by them in assessing the degree of risk involved in their foreign loans.

The second of these two criteria may well give the banks an added incentive to develop the best possible method of assessing

risk, based on the most comprehensive information available.

Given the complexity of this task, the banks should not be satisfied with a method relying entirely on statistical indicators.