CARIBBEAN DEVELOPMENT BANK

CREDITWORTHINESS AND COUNTRY RISK ANALYSIS

by

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1. INTRODUCTION

The paper considers the issues which would arise in using an objective approach to creditworthiness and country analysis in the context of the regional multilateral development bank (MDB), the Caribbean Development Bank (CDB), against the background of the general situation facing the MDBs.

The paper proceeds in the following manner:

(a) attention is focussed on the main international sources of funds available to CDB and the rules for determining creditworthiness, which the Bank faces in trying to mobilise resources from both commercial and institutional sources;

(b) an analysis is made of CDB itself, in terms of the main reasons for its establishment and how it attempts to set criteria for creditworthiness in order to earn and maintain the confidence and support of its main sources of funds;

(c) an assessment is made of the criteria for creditworthiness in the relationship between CDB and its own borrowers; and

(d) an overall assessment is made in terms of the effectiveness of creditworthiness criteria in the functioning of the international system of long-term credit intermediation in which the Bank is involved.

A basic proposition underlying the paper is that for the defined system of international long-term credit intermediation to function efficiently, the rights and obligations (if not the expectations and duties) of the three main interest groups would, to a large extent need to be met. To the extent that these rights and obligations are not being met, the internal dynamic for the process of intermediation would be weakened and ultimately, if the situation persists, then the system would disintegrate.

Another underlying proposition deals with the relative importance of the rights and obligations of the different interest groups. The paper assumes that the rights of the sources of funds in practice have a superior claim because unless funds can be mobilised, then the allocation process could not be undertaken. However, it could perhaps be equally argued that unless there is the expectation that the funds which are to be mobilised and which in fact are mobilised could be allocated, then there would be no logical basis for the mobilisation of those resources. Consequently, at least in theory, it seems that there is no particular reason for either party to have an absolute prior rank. Perhaps in times of excess liquidity caused by over-mobilisation, the borrowers' rights might tend to dominate while in times of tight liquidity the rights of the market would gain ascendancy.

The freedom of action available to CDB as an intermediator would depend on the circumstances affecting the system from time to time. Growth in the Bank's discretionary powers would ultimately depend on its success over time as a manager of the funds with which it is entrusted. The paper's concern with the concept of creditworthiness restricts the measure of that success to the criteria of financial performance, even though it is known and recognised that for the Bank as a whole (Ordinary Operations plus Special Operations) the measures of success are much wider and could include measures of economic performance particularly among its less developed borrowing member countries (LDCs).

The paper interprets the obligations of each interest group within this system of financial intermediation strictly in terms of financial performance in keeping with legal stipulations as agreed by the relevant parties concerned. Other wider obligations based, for example, on social, political and economic relationships and antecedents are not handled in the paper.

Country risk analysis, which is an important area of creditworthiness analysis, arises in the context of international lending and is given detailed consideration. The paper seeks to identify the main areas of emphasis by international lenders and to suggest the usefulness of adopting the approach in a structured manner by the MDBs.

Throughout, the paper restricts itself to the treatment of an objective as against a subjective approach to creditworthiness and country risk analysis. This was done despite the fact that there appears to be ample evidence internationally for suggesting that the subjective approach is also quite popular. In fact, credit allocation on the basis of criteria such as colour, class and creed are not unknown. However, based on an acceptance of the principle of multilateralism, the paper assumes that the objective approach represents the more equitable criteria for the determination of creditworthiness among individuals, corporations and countries.

The paper defines creditworthiness analysis as the basis on which financial institutions determine the allocation of loans, in terms of the choice of borrowers to whom loans are to be made, quantities, cost and credit terms. Meanwhile, country risk analysis relates to an assessment of the exposure to a loss which affects all lending in the country in question - whether the loan is to the Government, a private sector company or to an individual.

Interest in the area of creditworthiness and country analysis has increased in recent times given the background of debt servicing difficulties experienced, for example, by Mexico, Argentina, Poland and Brazil.

2. CREDITWORTHINESS ANALYSIS

An important concern in the area of creditworthiness analysis is to determine the basis on which the criteria are determined. In order to pursue that enquiry, we proceed to a look at a basic concept and the environment which influences the character of intermediation by CDB and other MBDs.

The Concept of Financial Prudence

In the management of financial resources, institutions are usually judged against the yardstick of financial prudence. In the final analysis, the definition of this concept would need to impact positively on the institutions' viability, otherwise it would not be a useful concept to the institutions. In an effort to devise useful guidelines for their operations, lending institutions have determined a set of criteria, namely the so-called five Cs of credit, to be used as reference points in credit analysis. The five Cs of credit are character, capacity, collateral, conditions and capital.

"Character" deals with the probability that the borrower will be willing to honour its obligations. "Capacity" gives a judgement of the borrower's ability to service the proposed loan based on its past record and other observations of its behaviour as a borrower. "Capital" indicates financial strength based on ratio analysis and other aspects of the borrower's finances and tangible net worth. "Collateral" deals with the assets that the borrower is able to offer as security against non-payment of the loan. "Conditions" refers to the implications of the general economic environment on the borrower's operations and its likely effect on the borrower's ability to meet its debt obligations.

The five Cs are usually associated with the assessment of companies and individuals but are also used to some extent in the assessment of sovereign borrowers. In respect of sovereign borrowers, the emphasis is likely to be on capacity and conditions.

The approach is of relevance to all lending institutions and represents a checklist of the main factors which are generally to be considered in lending decisions. Therefore to the extent that most lending institutions put this approach to use it could serve as an area of common thinking among similar types of lending institutions.

The International Financial Market

The international financial market is CDB's main source of funds. For analytical purposes, the market is viewed as:

(a) commercial; and
(b) institutional.

Commercial

The main commercial sources of funds are dominated by the commercial banks and brokers, and funds managers who are acutely sensitive to:

(a) earnings and profitability performance;

(b) levels of liquidity; and

(c) quality of assets held by borrowers.

In the vast majority of cases the operators on the international financial market are themselves in a fiduciary position, entrusted with the task of investing other peoples' money. They obviously have no emotional attachments to the MDBs and could be expected to continue to relate to the latter strictly on the basis of their record of performance as banks.

The market responds very positively to companies rated "Triple A", particularly in the aftermath of the major market collapses that occurred in the early 1980s. The signal which the market transmits to institutions like CDB is therefore clear: creditworthiness must be based on a proven track-record of stable or increasing profitability. At the same time, information on the credit rating of potential borrowers flows freely among institutions operating on the international financial market. Credit reporting agencies like Dun and Bradstreet could, for a fee, provide prompt and reliable information on the financial status of most large companies operating in the world today.

Institutional

The International Bank for Reconstruction and Development (IBRD), more popularly known as the World Bank, stands at the apex of the international system for long-term institutional credit. The world Bank, in its own operations, needs to meet the criteria of financial performance because it also needs, from time to time, to raise funds on the market.

Consequently, when the World Bank lends to other development banks like CDB it has little choice but to transmit the market's definition of creditworthiness. In this regard, borrowing from the Inter-American Development Bank (IDB) is on a similar basis.

The situation is somewhat tempered when account is taken of funds made available under the International Development Agency (IDA) programme, for example. However, strictly speaking, IDA credits are not considered as loans by the World Bank in its conception of creditworthiness. Eligibility for IDA credit is based on stipulated maximum per capita income (originally set at US$375 in 1970 and revised annually) and "lack of creditworthiness". This means that a country which the World Bank considers to lack creditworthiness because it does not have the capacity for incurring debt on the World Bank's conventional terms (hard terms) would, with a low enough per capita income, become eligible for IDA credits.

This apparent departure from the dictates of the market is, however, understandable given the "developmental" role of IDA as the soft window of the World Bank. Further, the benefit of the extremely soft terms on IDA credits which are onlent through regional development banks like CDB would not accrue to them, but be transmitted to the ultimate borrowing country.

Even the existence of IDA credits would therefore not change the signal which is transmitted from the World Bank when its funds are used by the regional development banks.

The Caribbean Development Bank

In essence, CDB was established as a mechanism for mobilising and channelling long-term capital from the developed countries to assist in the development of the economies of the Caribbean. The Bank was also designed to fill a gap for long-term financing in the regional financial market, and this arose largely from a belief that the then existing funding institutions like the commercial banks were unable or unlikely to meet those needs. The Bank was therefore established and conceptually divided into two sections: Ordinary Operations and Special Operations, in keeping with the fine traditions of the premier development bank, the World Bank.

CDB's policy towards creditworthiness is conditioned on the one hand by the general principles of financial prudence as generated by the market and, on the other, by its own experiences in its lending operations. As previously mentioned in the context of the World Bank, the concept of creditworthiness is more correctly used in respect to conventional lending; the allocation of soft loans being more inversely related to the creditworthiness of a borrowing member country.

The accepted guidelines for financial prudence do not allow significant variations by a small and relatively new institution like the CDB. Concepts of significant financial innovation are not easily allowable except to the extent that the MDB has a proven record of financial success in its operations. Given the present depressed economic situation facing a number of countries in the Caribbean, there seems to be a case for greater inflows of soft funds combined with some degree of innovation in the approaches to conventional lending. However, the dilemmas which this would pose for the regional MDB are as follows:

(a) accept the market's definition of financial prudence and therefore the position that CDB is a bank like any other bank and should operate on the basis of conventional banking wisdom; or

(b) accept the alternative hypothesis that the development needs of the small island economies of the Caribbean are in many respects unique and require innovative approaches to defining creditworthiness in order to foster their development.

If the latter approach is taken then it implies the need for CDB to try to mobilise significant amounts of long-term financing from regional sources like the life insurance companies and pension funds. Perhaps it is only by controlling greater amounts of regional resources that a viable base for financial innovation could be developed. The viability of the regional funding approach, however, assumes that regional sources of funds would respond to a different and more flexible approach to creditworthiness than would the conventional market. Since there is little evidence to support that assumption, it appears that the more logical position would be to accept the need for achieving conventional standards of financial performance.

Under the conventional approach to creditworthiness, it would be expected that the operational approaches of CDB would very closely resemble those of the other MDBs. The effectiveness of CDB would then be measured in terms of how well it achieves credit standards normally expected of an MDB and ultimately its ability to directly borrow on the best terms available from the market.

The capital structure ratio (defined as long-term debt/total capitalisation, where total capitalisation is equal to paid-up capital plus long-term debt plus reserves) is a useful indicator of the extent to which the MDBs are influenced by a shared market perception in their definition of creditworthiness. The following table provides comparative capital structure ratios on a selected number of MDBs.

TABLE 1: COMPARATIVE CAPITAL STRUCTURE RATIOS

MDB	1983 (Dec. 31) (%)
IBRD	82.2
IDB	47.5
AsDB	57.7
CDB	42.8
AfDB	35.2

These proportions of borrowings by the development banks indicate that the market could have a significant impact on their definition of creditworthiness.

Based on the 1981 rating of the MDBs by Moody's and Standard & Poor's, the MDBs for which ratings were available, namely the World Bank, IDB, Asian Development Bank and the European Investment Bank, were each rated triple A, based on the assessment of earnings and profitability ratios, liquidity ratios, capital ratios and asset quality ratios. A representative set of the type of ratios used by the credit-rating companies is given in Appendix 1. The strengths of these institutions is generally ascribed to their implementation of conservative financial policies in terms of lending, borrowing, investment and liquidity. More importantly, however, the rating agencies have been influenced in their assessment of those MDBs by the fact that market borrowings by the MDBs surveyed were backed substantially by the callable subscription of member countries which themselves have a "Triple A" rating.

3. COUNTRY RISK ANALYSIS

In the process of extending a long-term loan, the international lender is often interested in making some assessment of country risk: country risk being defined as the exposure to a loss which affects all lending in the country in question - whether the loan is to government, the private sector or to an individual.

The approach adopted by the World Bank is to seek, over time, to assist borrowing countries to pursue an appropriate policy mix which will result in improved economic performance and creditworthiness. The World Bank approach to country analysis would focus, among other things, on the following areas:

(a) the adequacy of the country's economic policies affecting resource allocation, exports, import substitution and prospects for growth in overall output in a stable economic environment;

(b) the market prospects of the country's main exports;

(c) the country's resource endowment;

(d) the country's current and projected debt situation;

(e) the country's current and projected fiscal situation; and

(f) the projected balance of payments and national accounts situation.

In the World Bank's approach, a country which is adjudged to be non-creditworthy on the basis of a macro-economic analysis would be given the kind of guidance and assistance which is deemed necessary for attaining creditworthiness. In most cases a combination of IDA credits and short-term support from the International Monetary Fund (IMF) might be prescribed.

CDB adopts a similar approach to that of the World Bank on the question of country risk assessment. By definition all the Commonwealth and regional members of CDB are eligible borrowing members of the Bank regardless of the risk associated with lending to each country. Further, Article 1 of CDB's Charter specifies that the Bank should pay special attention to the needs of the less developed borrowing members (LDCs). Consequently, some 70% of the special or soft resources of the Bank were been loaned to the LDCs during 1970-1984.

In general, the MDBs tend to react less sharply to country risk and economic fluctuations than other international lending institutions. To a large extent the MDBs have served as a stabilising force in providing capital even in cases where the current economic situation of borrowing countries appears quite unattractive.

As far as the international banking system is concerned, the question of country risk has always been of cardinal importance in determining the international structure of their loan portfolio. In an interesting survey of country risk assessment, P.J. Nagy reports that the approaches used by such banks range from simple checklist ranking of risk indicators to quite elaborate econometric and probabilistic models. The commercial banks seem to be of the view that the fact that a measure of risk is expressed numerically, provides ample evidence of the objectivity of their method of country risk assessment. However, in attempts to apply the quantitative approach in developing countries, one usually confronts serious problems of data inadequacy or unavailability. Also, despite being ostensibly objective, the results of the model depend on the assignment of a number of subjective probabilities. Appendix 2 gives a simplified version of the data requirements for a probabilistic model of country risk assessment as outlined by Nagy, with adaptations for the Caribbean Region. Nagy proposes the probabilistic model as the most advanced approach to country risk quantification.

The basic arguments of the model are that:

(a) given the probability of occurrence of a set of events which are likely to result in the materialisation of country risk; and

(b) given the associated probability and timing of particular types of country risk resulting when the events occur; then

(c) a set of conditional probabilities could be found such that the summation of the weighted value for each type of risk represents a unique country risk factor.

In conclusion, while the MDBs are not presently involved in the computation of country risk factors, and although the so-called objective approach being adopted by the commercial banks seems to suffer from subjectivity and data inadequacy, it appears that a useful purpose would be served by some degree of country risk quantification by the MDBs. The results could be used in ensuring greater counter-cyclical flows of special resource from the MDBs to those countries which are suffering as a result of a deterioration in their assessed level of creditworthiness. With repeated application of the approach, one would expect the achievement of greater levels of data availability and appropriate modifications in the methodology.

4. THE EFFECTIVENESS OF CREDITWORTHINESS ANALYSIS IN THE PROCESS OF FINANCIAL INTERMEDIATION BY THE CARIBBEAN DEVELOPMENT BANK

The Relationship Between the Borrowers and CDB

As CDB gains in operational experience, an area of growing concern is that of understanding the factors which would serve to influence creditworthy behaviour by borrowers. The set of factors could perhaps be divided into two categories: endogenous and exogenous.

(a) <u>Endogenous</u>: (to the relationship between CDB and the borrower) - the following factors would serve to encourage borrowers to service CDB loans on schedule:

(i) the Bank's legal right to enforce loan recovery on private sector loans and seek government compliance based on reference to the relevant statutory provisions and understandings; and

(ii) the Bank's ability to withhold future loans to the Borrower.

In terms of the strict bilateral relationship with CDB, the borrower would repay provided the <u>benefits</u> of loan repayment (that is, access to present undisbursed balanced and expected future CDB loans) exceed the <u>cost</u> of loan repayment (that is, the present value of the sum of interest payment and principal repayment on total loans outstanding to CDB). If this condition does not hold, the endogenous inducement is eroded.

(b) <u>Exogenous</u>: (to the relationship between CDB and the borrower) - when taken in the wider context of the financial market, the borrower would, in addition, be influenced by the expected negative market reaction to a deliberate infringement of the terms of the loan. In fact such an action could trigger a cross-default reaction in cases where that is stipulated, with the result that on the basis of any default, the borrower would be considered to have been in default on all its external borrowings. Even in cases where a cross-default clause is not stipulated, given ready access to credit information by all lenders and their ability to withhold funds, a rational borrower would have little choice but to service its debts. In genuine cases of hardship, renegotiation of the repayment terms with the lender would be a viable option for the borrower to pursue.

The Demand for Credit by CDB Borrowing Members

The demand for credit among CDB borrowing members is based on the inadequacy of appropriate current resources available to borrowers for meeting the following expenditure items:

- Consumption
- Investment
- Government Expenditure
- Net Imports (i.e. the current account deficit on the balance of payments)

The strength of the borrowing motive is derived from the intensity of need for any or all of the expenditure items mentioned.

Public and private sector capital investment projects are the main areas in which CDB loans have been made. The strength of effective demand in these categories is measured by the Marginal Efficiency of Capital as compared with Cost of Capital. In CDB's approach to project appraisal the marginal efficiency of capital is indicated by the Financial and Economic Rates of Return. The minimum rates for CDB financing are 12% and 15%, respectively.

Conceptually, the demand for loan funds for Consumption, Government current expenditure and Net Imports would only qualify for CDB funding if such loans could be shown to assist in a programme of structural change which would strengthen the economy in the medium to long-term. However, the Bank would generally prefer not to compete in this short end of the market, even though it is recognised that this demand is usually seen as most urgent by borrowing members.

The low, and in some cases negative, level of domestic savings in the Borrowing Members of the Bank is another powerful "push-factor" which acts to keep CDB borrowing members aware of the need to have access to foreign financial markets. Foreign savings are usually a very critical component of the financing for domestic investments.

Implications for the Bank's Lending Programme

Between 1970-1984 the sectoral allocation of total net financing approved for the Bank's ordinary capital was as follows:

ITEM	%
Manufacturing	21.8
Agriculture, Forestry and Fishing	15.5
Transportation and Communication	29.3
Power, Energy and Water	9.8
Tourism	7.2
Services	3.4
Housing	8.6
Multi-sector	4.4
TOTAL	100.0

The Bank maintains a common interest rate on all its conventional lending and, therefore, the difference in the level of sectoral allocation largely reflects differences in sectoral demand coupled with differences in the Bank's overall perception of inter-sectoral creditworthiness. The difference in the level of sectoral allocation is, however, interesting given the fact, for example, that over 15% of the funding was for agriculture, forestry and fishing and over 44% was for the productive sectors (manufacturing plus agriculture, forestry and fishing plus tourism). This substantial share of loans to agriculture and the wider productive sector, for example, is a positive aspect of the Bank's operations, particularly given the usual allocation of less than 10% and 30% respectively to those sectors by the commercial banks.

The Process of Financial Intermediation

Creditworthiness and its impact on CDB's understanding of financial prudence has been effective in ensuring that the Bank meets its obligations to the international financial community. Debt service payments by CDB have remained current while fairly stable annual levels of net income have been earned. The Bank has also implemented policies to ensure its own viability.

The effectiveness of creditworthiness analysis in the Bank's operations with its borrowers has, however, faced a number of challenges. Significant levels of loan arrears have arisen as a result of macro-economic problems affecting a number of the Bank's borrowing member countries.

This means that in practice, despite the implementation of creditworthiness criteria in terms of prescribed minimum financial and economic rates at the project level, this has not guaranteed the achievement of debt service targets by borrowers. The situation normally arises either because the anticipated rates of return at the appraisal stage are not realised and/or because the overall macro-economic situation of the borrowing country will not permit the satisfaction of normal debt service obligations.

Whatever the causes underlying the growth of debt service arrears, the impact on the financial intermediation process is debilitating. The aggregate flow of long-term finances available within the system is reduced and this in turn undermines the Bank's own liquidity and viability, while depriving new borrowers of the chance of using resources arising from repayments.

The likely corrective measures by the Bank could include:

(a) tightening the terms and conditions of new lending, thus making it less and less attractive for borrowers to use such funds; or

(b) increasing the level of detailed country analysis so as to reinforce the project-related database for project monitoring; or

(c) increasing the supervision and technical assistance effort in order to promote project success.

At the same time, the national government and the project borrowers would be expected to take decisive action to ensure greater positive results in the area of increasing the value of real national production. Ultimately this is the source from which the income for servicing foreign debts would need to be earned.

In the overall operations of the international capital market, the reverse flow of country performance data is also an important source of new thinking for the market. Recent debt crises in a number of countries are ample proof of the extent to which the performance by borrowers could feedback into process of determination of a workable definition of creditworthiness criteria.

5. CONCLUSION

Country risk assessment forms a basic element in creditworthiness analysis and is an area which seems to merit greater analytical work by the MDBs. The refinement of existing methodologies and the development of databases, particularly within the LDCs, appear to be the main areas for further research.

The regional MDB in the Caribbean, operating as a member of the international financial system, will perhaps need to operate by the established rules of that system as revised from time to time, based on new developments from the market and from borrowers. To the extent that the development needs of the Region might be better served by new financial initiatives then it appears that the basis for any such shift would necessarily be founded on the inflow of greater levels of long-term funds from the Region. Such long-term resources could be in the form of debt (or equity, if appropriate legal changes were made to allow it). The most likely sources of such regional funds are expected to be the life insurance companies and pension funds. At the same time, however, CDB will need to be aware of the fact that regional capital might not necessarily prove more malleable than foreign capital and that, ultimately, the criteria of financial viability remain the basis on which its actions would be interpreted.

6. RECOMMENDATION

Arising from this paper it is recommended that the MDBs seek to improve the quality of their country risk assessment as the basis for determining the allocation of their Special Resources and as a means of signalling to borrowers the criteria of creditworthiness that the market suggests.

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