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EVALUATING THE VIABILITY OF AGRICULTURAL DEVELOPMENT BANKS: A METHODOLOGY

by

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Abstract

Concern with the performance of public agricultural development banks has prompted efforts to evaluate their viability and to ascertain the determinants of their viability. This paper prepared a methodology (list of issues) for a study of development banks, sponsored by the Interamerican Development Bank, in an effort to promote the viability of the intermediaries with which the IDB operates. Determinants of viability include the environment (infrastructure, technology, prices, legal and political system), macroeconomic management (inflation, exchange rate), bank prudential supervision, regulation, and policies (interest rates, reserve requirements, rediscounting, and credit allocation), institutional organization and procedures, as well as financial technologies. Caution is recommended in the use of farm models and budgets in order to establish customer viability.

EVALUATING THE VIABILITY OF AGRICULTURAL DEVELOPMENT BANKS: A METHODOLOGY[1]

by

Claudio Gonzalez-Vega[2]

I. Introduction

During the past decade, the preoccupation among bankers, representatives of international agencies, and the financial authorities of the developing countries, as well as among professionals concerned with economic development, regarding the performance of the agricultural development banks, has been increasing.[3] The main problem with the public agricultural development banks has been their lack of viability. Evaluations of the viability of particular agricultural development banks as well as explorations about the determinants

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[1] This paper was prepared for the Office of External Review and Evaluation (ORE) of the Inter-American Development Bank (IDB), as background material for the Study of the IDB's Experience with Institutional Strengthening Assistance, under the direction of Francisco Guzmán. The author is solely responsible for the views expressed here. These views may or may not be shared by the sponsoring institution.

[2] Professor of Agricultural Economics and of Economics at the Ohio State University. Previously, Dean of the Faculty of Economic Sciences at the University of Costa Rica. The author thanks comments by Douglas H. Graham and Francisco Guzman.

[3] An earlier concern with the performance of the public agricultural development banks was strongly voiced by the Rural Financial Markets Program at the Ohio State University. These preoccupations were summarized by Compton Bourne and Douglas H. Graham in "Problems with Specialized Agricultural Lenders," in Dale W Adams, Douglas H. Graham, and J. D. Von Pischke, eds. Undermining Rural Development with Cheap Credit, Boulder, Colorado: Westview Press, 1984.

of such viability have thus attracted the attention of agencies and experts concerned with these issues.

The lack of viability of the agricultural development banks has been reflected by a steady reduction of the flow of their loanable funds, in real terms. The lending capacity of the agricultural development banks has declined, in turn, because they have not protected their portfolios from inflation, because they have not vigorously collected their loans, in order to be able to grant new credit, because they have not aggressively mobilized local resources, in order to be able to widen the range of their services, and because, in view of the poor quality of their services and the high transaction costs that they impose, they have lost the support of their clientele. Moreover, as their institutional weaknesses have become increasingly evident, they have lost the support of the international agencies, as well, and, as a result, their loanable funds have substantially declined.

This paper attempts to develop a methodology for an assessment of institutional viability at an agricultural development bank.[4] This methodology is, in turn, grounded on a conceptual framework developed elsewhere.[5] It was claimed there that a viable financial institution is self-sustaining and valued by its clientele. This requires an agency that is able

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[4] The Interamerican Development Bank, interested in policies and systems that promote the long-term institutional viability of the intermediaries with which it operates, in late 1989 initiated a study of its experience with its institutional strengthening efforts. The Bank's External Review and Evaluation Office was asked to assess the effectiveness and efficiency of agricultural development banks and the impact of the Bank's loan and technical cooperation activities. The present methodology was prepared for that study and will be first applied in Costa Rica, the Dominican Republic, Ecuador, and Paraguay.

[5] See Claudio Gonzalez-Vega, "On the Viability of Agricultural Development Banks: A Conceptual Framework," Columbus, Ohio: Rural Financial Markets Program, The Ohio State University, 1990.

to cover its costs, that provides high quality services, that reaches an increasing number of customers, that is dynamic in providing new financial services and products, and that actively searches for ways of improving its efficiency, as reflected by the level and the degree of dispersion of the transaction costs incurred by its depositors, its borrowers, and the intermediary itself. Viable institutions possess credibility and are able to mobilize deposits from the public, collect their loans, and retain good management and staff.[6]

II. Conceptual Framework

The determinants of the viability of a public agricultural development bank may be classified into four classes:

(a) the environment in which the institution operates;

(b) the policies that regulate the institution's behavior;

(c) the institution's organizational structure and procedures; and

(d) the financial technologies employed by the institution.

The nature of the rural economy represents a major dimension of the difficult environment in which the agricultural development banks operate. Potential depositors and borrowers are heterogeneous and geographically dispersed, their transactions are small, and the risks implicit in their productive activities are high, because the outcome of their efforts is highly dependent on exogenous forces. In addition, infrastructure and the provision of

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[6] See Richard L. Meyer, "The Viability of Rural Financial Institutions and the System as a Whole," Report of the Fourth Technical Consultation on the Scheme of Agricultural Credit Development, Rome: FAO, 1988, pp. 41-44

public services are limited, the levels of education and of human capital formation are low, information is scarce and costly, the size of markets is small, and the institutional organization of the rural economy is incomplete.

The consequences of fragmentation, limited market integration, and incomplete institutional organization are high transaction costs and high risks. Both high costs and high risks reduce the demand for and the supply of rural financial services. In these circumstances, to become a viable financial intermediary is a difficult task for an agricultural development bank. Potential depositors find that the net returns on their deposits are too low and save in other forms. Potential borrowers find that the total costs of formal loans are too high and seek the informal sources of credit. The development bank discovers that the costs of administering a multitude of small savings accounts are too high and that the costs and risks of evaluating and administering a multitude of small loans are too high as well.

These and other elements of the environment determine the profitability and risks of agricultural activities and, as a result, the profitability and risks of loans to farmers. If the growth potential of a financial intermediary depends to a large extent on the solvency and dynamism of its clientele, these features of the environment reduce the viability of a specialized agricultural development bank. Farmers with low and unstable returns cannot become good bank clients. Low incomes limit their savings capacity and their ability to transform some of their assets into financial deposits. Low incomes reduce their desire to borrow, limit their opportunities to profitably use loan funds, and diminish their ability and willingness to repay loans.

Agricultural development banks will be more viable when farmer returns are high, rural incomes grow, and policies do not discriminate against farming. The development of the country's infrastructure, greater security in land tenure arrangements, and a legal framework that protects property rights and the enforcement of contracts increase resource productivity and reduce transaction costs and, in this way, also promote the viability of agricultural development banks.

In addition to the price policies, taxes and subsidies that critically influence farmers' incomes, appropriate macroeconomic management and financial policies are crucial for the viability of agricultural development banks. A cautious macroeconomic management promotes stability and protects financial transactions from inflation. Effective prudential supervision of financial intermediaries promotes their solvency and, thereby, the public's confidence. This trust is indispensable for firms and households to channel their savings through a development bank.

Rigid financial policies have repressed the performance of agricultural development banks in many countries. Combined with inflation and devaluation, interest-rate restrictions have resulted in negative net returns for depositors, in real terms, and have promoted dollarization and the contraction of regulated financial institutions. High and differential reserve requirements have had the same effect. Interest-rate restrictions have forced many development banks to adopt non-price rationing criteria that have penalized "difficult" clientele. When they have not protected their portfolios in this way, they have rapidly become decapitalized. The viability of agricultural development banks will require a set of policies and a regulatory framework that give them more freedom to determine the terms

and conditions of their deposit and loan contracts, such as the setting of interest rates, and that avoids the targeting, selective credit controls, and other attempts at exogenously constraining the allocation of their loanable funds. These policy reforms are already taking place in an increasing number of countries.

In order to be viable, agricultural development banks need to become independent, permanent, and efficient institutions. Inconsistent objectives reduce their viability. Excessive specialization increases their risks. Lack of deposit mobilization weakens them. Institutional performance is determined largely by the behavior of managers, employees, and customers. The incentives that guide the actions of these agents are critical. Also important is enough authority to evaluate loan applications with independence and collect loans with energy. Political intrusion and other interferences with the bank's decision-making process, on the part of governments, international agencies, and domestic interest groups, reduce the institution's viability. A much lesser reliance on external funds and a greater reliance on deposit mobilization would then contribute to a lower degree of outside interference with the bank's decisions.

The viability of an agricultural development bank depends on the adoption of new financial technologies, needed to increase access to services for larger numbers of customers, to improve the quality of the services provided, and to reduce transactions costs both for the bank and for its customers. Instruments and procedures must be evaluated in order to determine the extent to which they could more efficiently take advantage of information and improve risk management. Access to appropriate financial technologies is indispensable for the expansion of the supply of financial services when markets are deregulated.

III. Assessment of the Economic, Political, and Policy Environment

An assessment of the environment in which agricultural development banks operate may include an exploration of the following dimensions:

(a) the level and variability of the returns to rural activities and their determinants;

(b) the nature of macroeconomic policies and their implications;

(c) the structure and performance of the financial sector of which the agricultural development bank is a component;

(d) the policies and regulations that constrain the behavior of the agricultural development bank; and

(e) the overall legal, administrative, and political system as well as the cultural and geographical realities of the country and their implications for the performance of the bank.

Technology, prices, and government interventions are usually the main determinants of the returns to agricultural enterprises. An evaluation of the viability of an agricultural development bank will usually require some assessment of the profitability of the projects financed by the institution. Farm budgets and other enterprise models that could be used for this purpose are frequently available, particularly if a supervised credit program, such as those associated with the Interamerican Development Bank (IDB), is being implemented. Many agricultural development banks do indeed use these budgets in their credit decisions.

Extreme caution should be used, however, in utilizing these farm budgets in order to establish the profitability of the enterprises of potential borrowers. These farm models represent ideal circumstances under optimal conditions and not actual situations. They

assume that experimental-station technologies will be readily adopted by farmers and that similar yields will be obtained. They frequently ignore (and, indeed, could not ever capture) the tremendous diversity and heterogeneity of individual farming circumstances. They frequently rely on specific-crop parameters and ignore the multiple farm and off-farm activities of the rural household, as well.

Very seldom do these farm budgets consider the nature of the risks involved in the productive activities to be funded and almost never do they lead to credit allocations that take variability of returns into account.[7] They are usually presented in terms of constant flows of yields and values over time, without consideration of yield variability or of inflation as well as of relative price changes. As a tool to determine the profitability of the activities financed by the agricultural development bank and as an instrument for portfolio decisions, these farm models and typical budgets are instruments of little value. Care should be taken during the evaluation if they are to be used as a proxy of the profitability of agriculture, while the assessment should also explore the extent to which they are being used as a decision-making device by the bank.

Several aggregate indicators may also be employed in order to predict changes in the profitability of agricultural enterprises. The rate of growth of agricultural output, in contrast with the rate of growth of GDP, reflects the relative dynamism of the sector. Rates of growth of output in various subsectors, such as traditional and non-traditional exports, basic

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[7] On the importance of yield variability and other enterprise risks in loan evaluation and the determination of repayment capacity, see J. D. Von Pischke, "Improving Donor Intervention in Rural Finance," in Dale W Adams, Douglas H. Graham, and J. D. Von Pischke, eds. Undermining Rural Development with Cheap Credit, Boulder: Westview Press, 1984.

consumption crops and other food items for domestic consumption, as well as raw materials, also indicate the growth potential of different types of agricultural enterprises. Variations in these rates of growth may signal either opportunities or problems in a particular sub-sector and would warrant additional enquiries as to the possible causes of the changes.

Relative price series are particularly useful in gauging changes in profitability. The domestic terms of trade of the agricultural sector, as given by the ratio of the implicit deflator of agricultural value added with respect to the GDP deflator, indicate the extent to which domestic price policies may be biased in favor or against the sector. Real prices for individual crops, obtained by deflating nominal price series, signal changes in the profitability of specific activities. The country's international terms of trade are another useful relative price indicator in nations where exports of agricultural products are important. When available, coefficients of nominal and effective protection represent the most accurate measure of relative profitability in agricultural enterprises.[8] All of these relative prices are influenced critically by trade and domestic price policies. Ceilings on the prices of essential foodstuffs, import and export taxes, and production subsidies as well as the operation of price stabilization schemes are relevant here. The evaluation may include an assessment of the nature of these policies and of the types of distortions thereby introduced.

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[8] For a definition of concepts and estimation procedures for the assessment of effective protection see Bela Balassa, Development Strategies in Semi-Industrial Economies. Baltimore: The Johns Hopkins University Press, 1982. For specific applications consult "Development Strategies and * Ernst Lutz and Pasquale L. Scandizzo. "Price Distortions in Developing Countries: A Bias against Agriculture." European Review of Agricultural Economics, VII, 1, 1980 (pp. 5-27).

An assessment of macroeconomic policies and of their results is critical in an evaluation of the viability of agricultural development banks. The policies that determine the rate of inflation and the degree of overvaluation of the domestic currency are the most important. The evaluation should include a time series of inflation rates, with indication of the relative reliability of the alternative price indexes chosen for the report. These rates of inflation would then be compared to the structure of interest rates, in order to determine the level and dispersion of the real interest rates in the system.

Similarly, the evaluation should consider the evolution of the foreign exchange regime and of the exchange rate. Estimates of the real exchange rate could also be used in order to determine the degree of overvaluation of the domestic currency. Most of the estimates available about the real exchange rate are based on some application of the purchasing-power-parity (PPP) methodology. Caution should be used in the interpretation of changes in the real exchange rate, in order to distinguish monetary changes, leading to overvaluation, from real shocks that shift the equilibrium level of the real exchange rate. A correct interpretation of the evolution of the real exchange rate would contribute to an explanation of changes in the relative profitability of agriculture. A clear understanding of the foreign exchange regime would make it possible to evaluate the nature and extent of the foreign exchange risk assumed by the development banks in their foreign borrowing.

Interpretation of the evolution of these key macroeconomic indicators may require an exploration of topics such as the level of interest rates, the rate of growth of the money supply, the level, rate of growth, and method of financing of public sector expenditures, the magnitude and burden of service of the external debt, the flows of savings and investment,

and the magnitude of the country's foreign trade and capital flows. It is important to know if a estabilization program, with or without support of the International Monetary Fund, is in place or if a liberalization or structural adjustment effort is being undertaken and what are the main dimensions of these programs.

Agricultural development banks are components of national financial systems whose structure and performance influence their behavior. An evaluation of their viability requires a description of the system and an assessment of the kinds of competition faced by these banks. This requires an inventory of the existing market segments, institutions, products and instruments.

Some of the key issues to be explored are:

(a) the degree of concentration of financial activity in the hands of a few large institutions and the extent of competition in the markets for deposits and for loans. The market share of the few largest banks is a useful indicator, to be compared to the market share of the agricultural development bank. When available, Herfindhal indexes are useful.

(b) the relative importance of the agricultural development bank in the provision of rural financial services, through time, must be measured. The comparison must be made both for stocks (outstanding balances) and flows (new loans). Flows of new loans or new deposits are good indicators of recent activity. Outstanding balances reflect the greater incidence of long-term credit in development banks, but may also include uncollectable loans not yet written off.

(c) the terms and conditions of deposit and loan contracts at various types of financial institutions, contrasted with those prevailing at the agricultural development banks. These terms and conditions include fees, interest rates, and commissions charged, collateral and other guarantees required, the rules for valuing collateral, maturity terms, grace periods, requirements for compensating balances, and the flexibility of amortization schedules.

(d) the diversity of the instruments used to compete in the market and the terms and conditions associated with the different instruments. The existence of a special treatment for the agricultural development bank with respect to reserve requirements, tax obligations, and other regulations. The authorization or prohibition to undertake particular types of transactions. How do the typical operations of the agricultural development bank differ from those of the other financial intermediaries?

(e) observable differences between the agricultural development bank and other institutions in the system with respect to the size and qualifications of their staff, the style and efficiency of their management, the level of their profitability, the extent of their installed capacity, including the size and location of their network of branches, the quality of their information systems, and other institutional characteristics.

(f) the nature, modus operandi, and major features of parallel and informal financial markets.

The evaluation should also describe the implications of the regulatory framework that constrains the behavior of the agricultural development bank and of the other institutions in the system. This includes any central bank regulation of the interest rates, commissions, and other prices of financial services, the setting of quantitative or qualitative credit ceilings and other administrative credit allocations, the terms and conditions for central bank rediscounting, the level and structure of reserve requirements, and other mandates influencing the terms and conditions of financial transactions.

Special attention should be given to the existence of a different regime (either less demanding or more repressive) for the agricultural development bank and the implications for the relative profitability of the bank. Agricultural development banks are frequently utilized as instruments for the implementation of the government's agricultural policies. Fiscal incentives have been provided in some countries in order to promote specific transaction types or clientele targets. These mandates and incentives modify the behavior of the bank's management.

The evaluation should similarly discuss the nature of prudential supervision of the financial system. This may include the mandates of commercial codes, as they apply to credit transactions, as well as the rules for examination of banks and the determination of capital adequacy, for the accumulation of reserves for bad loans, and for the classification of loans in order to determine portfolio quality. Other regulatory limits and controls on risk exposure may be described. The criteria used by the superintendency of banks for all other financial institutions must be contrasted with those applied for the agricultural development bank and with risk management practices at this institution.

Several elements of the socio-political environment are interesting: how concentrated are wealth and land ownership, what is the nature of the political process leading to policy adoption and what are the major roadblocks to policy reform, what are the country's main interest groups and what is their relative power, what are general attitudes towards banking, towards paying loans back, and towards the government? How culturally adapted are the operations of the agricultural development bank as compared to those of its competitors? Particularly important are the legal system that defines property rights and mechanisms for the definition and enforcement of contracts and an evaluation of the costs of foreclosing through the judicial system as well as a description of the patterns of land tenure and collateralization practices.

IV Assessment of Institutional Viability

An evaluation of the viability of an agricultural development bank requires a careful consideration of its institutional structure and behavioral patterns. This requires the exploration of at least the following issues:

(a) the nature, feasibility, and consistency of its goals and objectives. Contradictory or unattainable objectives create tensions that destroy the institution. Are the goals of foreign interventions in the institution, such as an IDB program, compatible with the bank's own objectives? How has the bank, in practice, implemented a set of multiple objectives?

(b) the degree of institutional independence or of political intrusion. To what extent can the agricultural development bank establish the terms and conditions of its loan

operations or to what extent these are dictated from outside the institution? To what extent has an IDB program, for instance, taken away some of the bank's autonomy in decision making as well as some of the responsibility for the final outcome? What is the style of management and how discretional is it? To what extent is the bank forced to adjust its operations to the government policies for the agricultural sector? Are some of these political objectives mandated by law or are they a reflection of the country's political realities?

(c) the scope of the agricultural development bank's operations. Does it mobilize deposits from the public? What kinds of instruments does it use? How much portfolio diversification is it allowed to achieve and how much has it concentrated its operations in particular regions, for particular activities, at particular terms? What are the criteria for portfolio management that lead to the degree of diversification achieved? To what extent are its operations biased towards a particular clientele?

(d) the nature of its organizational structure. What is the degree of decentralization of decision making? What are the levels of authority at the bank's headquarters, regional centers, and local branches? What are the channels of communication throughout the organization? How effective is the communication of guidelines from headquarters and of information for management decisions from the field? How are the responsibilities of management and the staff established? What are the rewards and penalties associated with decision-making?

(e) the incentives that motivate the decisions of its management and staff members. Describe the system for personnel recruitment, for promotion and for bonus payments. Compare staff salaries and fringe benefits with those at other financial institutions. How much rotation of personnel there is? Have international donor interventions, such as the IBD's programs, created a parallel bureaucracy, with different rewards and responsibilities?

(f) the agricultural development bank's installed capacity. Describe the network of branches: how many offices, how large, where are they located. What is the average number of staff members per branch and what is the work load that they deal with (number of operations per staff member)? What computing facilities does the bank have and how effectively are these used? Compare the logistical support of the IDB special unit within the agricultural development bank with the bank's overall standards.

(g) the agricultural development bank's risk management. What are the mechanisms for dealing with risk at the bank? What are the criteria for the evaluation of portfolio risk and for the estimation of risk in lending operations? What kinds of collateral and other guarantees are required, from what types of borrowers? What are the early warning systems to anticipate loan delinquency? How is the degree of portfolio delinquency measured and what actions are taken on the basis of this information? Evaluate the bank's procedures to collect overdue loans. Are delinquent borrowers ever taken to court? What legal, political, and social constraints prevent the bank from foreclosing on bad loans? What incentives do

bank employees have to emphasize loan collection? How explicitly are penalties for defaulting customers made public?

(h) the agricultural development bank's policies and procedures. What are the criteria for elegibility for loans? What kind of documentation is requested from old and new loan applicants? What criteria are used for loan evaluation? Are uniform farm budgets employed to determine loan amounts? How many steps does it take to process a loan application? How long does it take, from the application to the disbursement of the loan? In how many tranches is a loan typically disbursed? How do the terms and conditions of various loan types compare across the bank and with respect to loans from special (IDB, for instance) programs? How does the procedure for loan evaluation differ across several lending programs? Have the IDB programs introduced practices and procedures that have later been generalized for the whole bank? In what ways do the bank's practices and procedures increase the customer's transaction costs?

V. Performance and Outcomes

The performance of the agricultural development banks may be evaluated in terms of the following criteria:

(a) the numbers of costumers reached. How many borrowers, of various types, and how many depositors have been serviced by the bank, over time? Is this a stagnant or a growing clientele? How many hectares of production have been financed?

(b) the range of services provided. What is the number of operations of different types executed over time. How has the range of services offered expanded over time? Are these services or their close substitutes provided by other financial intermediaries in the same rural areas serviced by the bank?

(c) the volume of purchasing power transfered. What has been the evolution of the agricultural development bank's deposit mobilization and lending activities, measured in real terms, over time? What has been the evolution of the average size of loan and average size of deposit? What have been the sources of funds and, in what ways, has the volume of real loanable funds expanded? What measures has the bank taken in order to protect the integrity of its loanable funds?

(d) the quality of the services provided. What has been the range and scope of its services, the stability of its operations, the flexibility of its procedures, and the reliability of its supply of services.

(e) the transaction costs imposed on its customers. Non-interest costs of borrowing have been measured in a few instances. When they are not available, they may be proxied by the distance to the bank branch, the number of trips required to obtain a loan, the number of documents requested, etc. A similar exercise must be undertaken in order to evaluate the transaction costs imposed on depositors.

(f) the bank's financial results (profits). What have been the level and main sources of revenues? What have been the level and main components of costs for the bank? How do the bank's transaction costs compare to the intermediation margins that it has been allowed? How do the regulatory framework and the bank's own policies

influence the level and structure of revenues and costs? Information on revenues and costs can be obtained from the bank's income and expenses statements. Frequently, the accounting statements need to be adjusted in order to reflect "economic" rather than "legal" magnitudes. For example, it is important to distinguish between interest accrued and interest payments actually received.

(g) the bank's collection record. Most difficult to obtain are accurate measures of the extent of delinquency in the portfolio. The evaluation should discuss the nature of the information available as well as the results reflected by these data.

A final evaluation of the agricultural development bank's viability must emphasize its level of profitability, the degree of delinquency in its portfolio, the nature of its sources of funds, the cost and quality of the services that it provides, and the possession of an organizational structure and institutional culture that promotes efficiency and survival.