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BANGLADESH AGRICULTURAL RESEARCH PROJECT PHASE-II

**A Comprehensive Long-Term Cooperative Project
to Strengthen Agricultural Credit Research**

A. N. Choksi



BANGLADESH AGRICULTURAL RESEARCH COUNCIL
INTERNATIONAL AGRICULTURAL DEVELOPMENT SERVICE
January 1985

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A Comprehensive Report
on the
Activities of the Short-Term Consultant to the
IADS' Bangladesh Agricultural Research Project
Phase-II

A Comprehensive Long Term Cooperative Project
to
Strengthen Agricultural Credit Research

BANGLADESH AGRICULTURAL RESEARCH COUNCIL
INTERNATIONAL AGRICULTURAL DEVELOPMENT SERVICE

January, 1985

February 14, 1985

To
Dr. Kazi M. Badruddoza,
Chairman, Bangladesh Agricultural Research Council,
Farmgate, Dhaka-15

Dear Dr. Badruddoza,

Subject: Report on the Activities of the Short-Term Consultant to IADS,
Bangladesh Agricultural Research Project, Phase-II.

A Comprehensive Long Term Cooperative Project to Strengthen
Agricultural Credit Research.

In accordance with the letter of appointment and the terms of reference of the undersigned short-term consultant to IADS' Bangladesh Agricultural Research Project, Phase-II, a comprehensive report on his activities under the above consultancy is transmitted herewith.

The work of consultancy commenced on 1 September, 1984 and was completed on 17 January, 1985.

The Report is divided into two parts. Part-I - The Main Report outlines the main features of the proposed research project, refers to the outputs of the consultancy and describes the activities of the consultant. It concludes with the main finding, conclusion and recommendation of the consultant. Part-II comprises the principal documents prepared by the consultant.

The title of the project, namely, Study of Impact of Agricultural Credit on Rural Financial Market, Agricultural Productivity, Assets Formation and Savings Mobilization reflected its scope. The project is presented in Part-II of the report in the document entitled: A Comprehensive, Long Term, Cooperative Project to Strengthen Research in Agricultural Credit.

Your attention is invited to the main finding, conclusion and recommendation of the consultant on page 11 of the Main Report.

With kind regards,

Yours sincerely



A. N. Choksi

- cc: 1. Dr. Ekramul Ahsan, Member-Director(AESS), BARC.
2. Dr. D. M. Daugherty, Project Supervisor, IADS.
3. Dr. D.S. Athwal, Vice-President,
IADS, Arlington, USA with reference to his
letter to the undersigned dated 22 August, 1984.

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A COMPREHENSIVE LONG TERM COOPERATIVE PROJECT
FOR STRENGTHENING AGRICULTURAL CREDIT RESEARCH

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Some aspects of the factual data which the study would yield are referred to below by way of illustration.

1. Impact of Credit on Rural Financial Market:

A fairly exhaustive picture of the borrowing and lending activities in this market would emerge from the study, for the country as a whole and for different regions of the country; for all rural households, cultivators as well as non-cultivators and for different categories among these two main classes. The amount borrowed, repaid, defaulted and the resulting indebtedness, per family, per acre, etc., as well as the proportion of families borrowing, defaulting, indebted, would be revealed by the data.

The data would also bring out: the relative importance of different credit agencies in financing rural households; the change in their roles over the year covered by the study; the rates of interest paid and the nature of security offered by the rural households; and the purposes for which they borrowed. Data on the above lines would be available separately for each credit agency.

The loan policy and procedure and the financial viability of each credit agency as judged by its profitability, liquidity and net worth, would be studied in depth.

The study of rural savings would receive special attention and emphasis, as explained below.

The cost of credit to the borrowers, direct as well as indirect, that is various types of expenditure incurred by them for getting loans, would be studied with the help of case studies of loans.

2. Impact of Credit on Agricultural Productivity:

The study aimed at finding out if there was any connection between the use of credit and the adoption of modern farm technology represented by inputs such as improved seeds, fertilizers, pesticides, irrigation equipment, etc. The sample households would be classified into two groups, namely, those who availed of credit and those who did not, for the above purpose. The per acre

yields and incomes of the two groups would be compared. Diversion of credit meant for productive purposes to non-productive uses would be brought out by comparing the stated purposes of borrowing and the expenditure incurred by the households on corresponding purposes.

The data on current farm expenditure according to crop, which would be collected for studying the impact of credit on agricultural productivity, would help illuminate several aspects of the country's agricultural and rural economy including the employment opportunities provided by agriculture, expenditure incurred on factor payments such as wages, interest and rent, etc;

3. Impact of Credit on Assets Formation:

The study would enumerate and evaluate the physical and financial assets of the selected rural households. The position at the beginning and the end of the year would be recorded. The data would be of interest from several angles. They would reveal the pattern of assets held by rural households, that is, the relative importance of different types of physical and financial assets would be brought out. Net investment/investment, gross savings and capital formation during the year of study, for different classes and categories of rural families, in different regions of the country, would be studied. It would be possible to assess the burden of debt on different groups as proportion of their assets. It would also be possible to assess the overall improvement/deterioration in the economic condition of rural households over the year of study, with reference to the role of credit.

4. Savings:

The study of the whole question of rural savings would receive special attention. Where savings originated, their extent, how they were invested or used, the role played by financial intermediaries in mobilizing savings, the extent to which they could or could not exploit the potentialities and the reasons therefor, and finally, the extent to which rural savings were used for financing rural economic activities and were diverted to urban areas. The data collected under the study would permit an analysis of rural-urban flow of funds on capital account in the private household sector.

Relevance of the Study to Policy Issues in the Sphere of Agricultural Credit:

The key policy issues in the agricultural credit sector were:

1. Inadequate mobilization of rural savings by financial intermediaries and their diversion for financing urban trade and industry, resulting in their heavy dependence on the Bangladesh Bank and the Government of Bangladesh for resources.
2. Inadequate margins between the cost of and return on funds, inability to maintain liquidity, and inability to build reserves commensurate with their estimated bad debts, leading to dependence on subsidies, defaults to creditors and negative net worth.
3. Inefficiency of credit systems, in terms of proper management of funds, maintenance of accounts and adoption of appropriate policy and procedures in appraising, documenting, sanctioning, disbursing, supervising and recovering loans.
4. Inappropriate policy in locating their field outlets followed by credit agencies, reducing their cost-effectiveness, efficiency and the potential for mobilizing savings.

The range and quality of data and the depth of analysis needed to deal with the above issues effectively were such that they could be provided only by an exhaustive study such as the one envisaged under the proposed project.

Time-Frame for the Proposed Study:

A time-frame of about three years was envisaged for completing all aspects of the study commencing from field investigations, through scrutiny and processing of data and production of the main reports on the findings and conclusions of the study.

The principal outputs and activities of the consultant are referred to below against the above background.

B. OUTPUTS:

The consultant prepared the following four main documents, apart from several other intermediate documents from which the above documents emerged.

<u>Sl.No.</u>	<u>Title of documents</u>	<u>Page number</u>
1.	A Project for Strengthening Agricultural Credit Research	1-51
2.	A Discussion Paper on the Plan and Design of the Study	52-73

<u>Sl.No.</u>	<u>Title of documents</u>	<u>Page number</u>
3.	A Frame-work for Analysis of Data Collected under the Proposed Study	74-103
4.	Organization of and Scope for Research in Agricultural Credit in Bangladesh	104-112

The above documents are also transmitted herewith as an integral part (Part-II) of this report. A table of contents precedes each document. A further description of their contents may, therefore, be superfluous.

C: ACTIVITIES

The activities of the consultant in preparing a comprehensive long-term cooperative project for strengthening research in agricultural credit in pursuance of his terms of reference were geared to the outputs referred to above. The activities were carried out in collaboration with the Member-Director, AESS, BARC, the Department of Agricultural Economics, BARI and the Department of Agricultural Finance, Bangladesh Agricultural University, Mymensingh, as described below. The relationship between the activities and the terms of reference of the consultant is referred to thereafter. This report concludes with the main findings conclusion and recommendation of the consultant.

Definition of the Roles of BARC, BARI and BAU:

The terms of reference of the consultant envisaged assistance to BARI in strengthening research in Agricultural Credit, and to BARC in developing inter-institutional linkages among agencies in the country involved in agricultural credit systems. The role of BARC in agricultural credit research was discussed with the Member-Director, AESS, and the Chairman, BARC. It was decided that the Department of Agricultural Finance, Bangladesh Agricultural University at Mymensingh would be the appropriate institution to be assisted by the consultant in developing inter-institutional linkages. Accordingly, the roles assigned to different agencies in preparing and executing the proposed project were defined as under:

1. Demand-side Study of Rural Households: Department of Agricultural Economics (DAE), Bangladesh Agricultural Research Institute (BARI), Joydebpur.
2. Supply-side Study of Credit Agencies: Department of Agricultural Finance (DAF), Bangladesh Agricultural University (BAU), Mymensingh.
3. Coordination: Member-Director, Agricultural Economics and Social Science (AESS), BARC, and Director-General, BARI, Joydebpur.

Rationale of the Roles Assigned to BARC, BARI and BAU: The DAE, BARI had acquired considerable experience in field studies involving interview of rural households through pre-set questionnaires. The Director and one senior officer had specialized experience in agricultural credit. Organizationally, BARI had regional centres which could provide the base for conducting field studies in different parts of the country.

The DAF, BAU, Mymensingh, had specialized experience in the study of credit agencies. Its head was engaged as a consultant for carrying out certain studies under the Bangladesh Krishi Bank, the largest institution in the field of agricultural credit. Other members of faculty of the department also had experience of field studies in agricultural credit.

The Member-Director, AESS, BARC and the Director General, BARI, were best suited to provide overall guidance and to coordinate the activities of agencies engaged in the research project in agricultural credit. Technical supervision, administrative and financial arrangements, and preparation of report on policy recommendations emerging out of the main findings and conclusions of the study, could be appropriately dealt with by them through the committees constituted for accomplishing defined tasks.

Defining the Scope and Objectives of the Project: The scope and objectives of the proposed study initially evolved by the consultant, were discussed with the Member-Director, AESS, BARC. The following criteria were applied in this connection.

1. The immediate needs of the country, based on an assessment of the existing lacunae in the availability of data needed for evaluating current policies and programmes and developing new ones.

2. Limitations of personnel and funds, and the best and the most economical means of developing and using them.
3. Terms of reference of the consultant.

On receiving clearance from the BARC to develop a project in consonance with the proposed scope and objectives, work commenced on drawing up a plan and design for the research study to be developed under the project.

Developing a Plan and Design for the Study of Impact of Agricultural Credit

The study of impact of agricultural credit was to be carried out from the point of the recipients of credit, namely, the rural households; and from that of the suppliers of credit, namely, the credit agencies, formal as well as informal.

The designing of the demand side study of impact of credit on rural households posed several problems the most important of which was the size of the sample to be selected. The statistical sampling methods used in Bangladesh for studying the economic characteristics of rural households were, therefore, reviewed by the consultant at the outset. He found that in 1982 the Bangladesh Bureau of Statistics had experimented with the problem of determining the minimum sample of households needed for preparing reliable estimates, in connection with the forthcoming Agricultural Census. The Pilot Agricultural Census, as it was designated, evolved recommendations regarding size of sample and methodology of sampling. These recommendations were suitably adapted for the proposed study and discussed with the experts in the field. The sample size and the method of stratification and selection of rural households recommended for the proposed study were evolved on this basis. The plan and design of the demand side study were then discussed in the Technical Committee appointed by the Member-Director, AESS, BARC. Clarifications were provided by the consultant on theoretical as well as practical aspects. The committee comprising economists, bankers and statistical experts, broadly endorsed the plan and design of the study as developed by the consultant without any modifications, as the basis for further processing the project.

The supply-side study of credit agencies did not aim at preparing statistical estimates. It was decided that all important credit and refinance agencies would be covered by the study and an adequate number of their retail outlets as well as loan cases would be selected for intensive investigation in consultation with each agency.

Preparing Questionnaires and Guidelines for Field Studies:

The demand-side study was proposed to be conducted by interview method, by canvassing two pre-set questionnaires among selected rural households. Further, a general questionnaire was proposed to be canvassed among all the households of selected mauzas, for determining their operational holding size and occupation. This information was required for drawing a sample of cultivators and non-cultivators from each mauza for intensive investigation. Accordingly, one of the important activities taken up under the project was to prepare draft questionnaires for the demand-side study.

In regard to supply-side, it was proposed to prepare guidelines for the investigators in consonance with the objectives of the study, to ensure that data on all relevant aspects were collected by them from the credit agencies and selected farmers on a uniform basis. Accordingly, guidelines for the supply-side study were also prepared.

Assessing the Requirements of Staff, Equipment and Cost of the Study:

Based on the draft demand-side questionnaires and supply-side guidelines, and the objectives of the study, a preliminary, tentative, assessment was made of the strength, quality and duration of staff that would be required for organizing and supervising the study, carrying out the field work, scrutinizing and posting the data, preparing the reports of the study, etc. It was assumed that data processing would be done with the help of a computer and its cost was estimated accordingly. The requirements of equipment, its cost and expenditure on other items were also estimated.

To sum up, the likely cost of various activities under the proposed project was estimated on the above basis. The cost of the demand and the supply-side study was estimated separately. Further, the cost of the demand-side study, to be carried out in each of the four regions of the country, was estimated separately.

Developing a Frame-work for Analyzing the Data and for Presenting the Main Findings and Conclusions of the Study

Data will be collected from the rural households on their assets (physical and financial) and liabilities (mainly indebtedness) at two points of time separated by about twelve months; as well as those on their receipts (from farm business, wage-employment, borrowing, remittances, sale of assets, etc.) and expenditure (on business and family living on current and capital accounts), through two questionnaires. The data will have to be tabulated in a way that would facilitate their analysis for presenting the main findings and conclusions of the study. The scheme of tabulation and analysis will have to be prepared in advance, so that as soon as the filled-in questionnaires were received from the field and scrutinized for their internal consistency, etc., they could be fed into the computer according to a pre-designed tabulation scheme. This scheme, in turn, would depend upon the types of analyses that it may be decided should be pursued. It was thus necessary to develop a frame-work for analyzing the main features of the data and the inter-relationship between them.

There was practically no limit to the possibilities in this regard. A choice had to be made keeping in view the limitations of time, cost, the main objectives of the study and technical factors. The technical committee appointed by the Member-Director (AESS), BARC decided at its meeting held in December, 1984, that it was necessary to prepare a preliminary frame-work for analyzing the data. The task was entrusted to the consultant. He prepared a paper entitled: A Framework for Analysis of Data to be Collected under the Proposed Study, 30 pages, in the form of a synopsis of the Report on the Study. It was proposed to present its Main Findings and Conclusions into 16 chapters on the Demand Side (Rural Households), and 4 chapters on the Supply Side (Credit Agencies), in consonance with the objectives of the study.

Discussion of the Project Plan, Design and Cost by Technical Experts and the BARC.

The draft plan and design of the study of impact of agricultural credit and the related cost - estimates were discussed at several stages in different forums. At first the documents were transmitted to the Member-Director, AESS, BARC and discussed with the staff and experts attached to him, as well as with the concerned professional staff in DAE, BARI and DAF, BAU, Mymensingh.

A Discussion paper was then prepared for consideration of the technical aspects of the proposed study by a high-level technical committee. The heads of important credit agencies and their expert technical staff were invited to serve on this committee. The Chief Officer of the Agricultural Credit Department of the Bangladesh Bank, the central bank of the country which plays a vital role and has wide-ranging responsibilities in the field of agricultural credit, and the expert staff of the Bangladesh Bank, including a statistician, actively participated in the meeting of this technical committee held in December, 1984.

The above Technical Committee broadly endorsed the plan and design of the study after a detailed discussion in which various alternatives were examined and the rationale of the approach contained in the plan and design recommended by the consultant was clarified in response to questions. The technical committee thereafter proposed that the consultant prepare a frame-work for analysing the data to be collected under the study, so as to present a clear and a detailed picture of the scope of the main findings and conclusions of the study and to establish beyond any doubt that there would be no duplication of work in relation to any other study, past or presently in progress. The time-frame for preparing the frame-work was set at middle of January, 1985.

Simultaneously, the heads of the Department of Agricultural Economics, BARI, and Department of Agricultural Finance, BAU, Mymensingh, were requested by the Member-Director, AESS, BARC to prepare project proposals for the demand

and the supply-side study, respectively, in the prescribed proforma. These proposals were accordingly prepared by them and thereafter were reviewed by the consultant.

These proposals were placed before the highest committee of the BARC, presided by Chairman, BARC and comprising representatives of all institutions and universities functioning under the umbrella of the BARC. The above committee approved both the projects, one for the demand-side and the other for the supply-side study of impact of agricultural credit, subject to certain limitations of cost.

Relationship between Activities/Outputs and Terms of Reference(TOR) of the Consultant.

Terms of Reference:

The terms of reference of the short-term consultant enclosed with the letter of his appointment were as under:

1. He will be based at BARC and be responsible to the Member-Director, Agricultural Economics and Social Science.
2. He will assist in developing a comprehensive long-term cooperative project in agricultural credit, working primarily to assist in strengthening agricultural credit research through the Department of Agricultural Economics at the Bangladesh Agricultural Research Institute.
3. He will assist BARC in developing inter-institutional linkages among agencies in the country involved in agricultural credit systems.
4. He will submit a comprehensive report on his activities, prior to the termination of his report.

TOR: 1: The consultant was based at BARC and reported to the Member-Director, AESS, BARC.

TOR 2: The demand side study of impact of agricultural credit was developed in collaboration with the Department of Agricultural Economics, BARI. In this process, the Department and some Senior Members of its staff, including its Director, were exposed to various problems of carrying out research in the field of agricultural credit. The scope and methodology of research and the analytical approach were considered in detail. The process of strengthening research in agricultural credit through DAE, BARI thus

commenced with its association in the task of formulating the project. This process would gather momentum and would be consolidated with the assumption of responsibility by the DAE, BARI for executing the project with expatriate assistance.

MAIN FINDING, CONCLUSION AND RECOMMENDATION:

1. Main Finding:

Based on a study of literature and research studies on agricultural credit in Bangladesh, the consultant found that the quality of work done in this field was generally high. Long term policy planning, however, was impaired by two factors, namely:

1. The scope of the studies was generally not commensurate with the range and complexity of the problems.
2. Some of the larger studies relied too heavily on collection of data from head offices of credit agencies; a systematic study of what was happening in the field was not attempted.

In the result, the studies did not identify the key issues and the inter-relationship between them. The remedial measures suggested by them were fragmentary and were based on an inadequate and unreliable mass of facts and data.

2. Main Conclusion:

From the foregoing, the consultant came to the conclusion that a systematic, scientific and objective study of facts, from the point of credit agencies as well as the rural households using credit, was urgently needed. He also came to the conclusion that the complexity of the problems and the difficulty of solving them were often under-estimated in the anxiety to produce quick results. For instance, it was hardly ever emphasized that what was needed was a simultaneous change in the attitude of borrowers and the culture and organization of credit agencies, to produce lasting results. A few policy measures, handed down from the top, could not possibly deal with the difficult situation characterized by a low

level of savings, small, non-viable farm management units, and the consequent high opportunity cost of lending to agriculture.

3. Main Recommendation:

Based on the above analysis of the country's agricultural credit situation, the consultant felt that only a systematic and patient exploration and exposition of the facts and the dynamic inter-relationship between them, could provide the basis for long range policy planning and create the climate in which the policies could take roots. A comprehensive long term cooperative project in agricultural credit was developed with this end in view. The consultant recommends that a serious effort be made to process this project further and that adequate financial and manpower resources be provided for its implementation.

A COMPREHENSIVE LONG TERM COOPERATIVE PROJECT
FOR STRENGTHENING AGRICULTURAL CREDIT RESEARCH

A COMPREHENSIVE LONG TERM COOPERATIVE PROJECT
FOR STRENGTHENING AGRICULTURAL CREDIT RESEARCH

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A COMPREHENSIVE LONG-TERM COOPERATIVE PROJECT FOR STRENGTHENING
AGRICULTURAL CREDIT RESEARCH

Terms of Reference

The terms of reference of the short-term consultant on the above subject were as under:

1. Assist in developing a comprehensive long-term cooperative project in agricultural credit, working primarily to assist in strengthening agricultural credit research through the Department of Agricultural Economics at the Bangladesh Agricultural Research Institute.
2. Assist BARC in developing inter-institutional linkages among agencies in the country involved in agricultural credit systems.

A preliminary draft proposal for a research project is presented in this paper in accordance with the above terms.

A PROJECT TO STUDY
THE IMPACT OF AGRICULTURAL CREDIT ON RURAL FINANCIAL MARKET,
AGRICULTURAL PRODUCTIVITY, ASSETS FORMATION AND SAVINGS
MOBILIZATION

Relevance of Proposed Study to Policy Issues in the Sector

Institutional agricultural credit expanded rapidly from Tk. 378.4 million in 1975-76 to Tk. 2,940.3 million in 1981-82 and further to Tk. 10,086.9 million in 1983-84, in terms of the amount of loans disbursed by formal agencies to finance farmers.

The impact of this massive infusion of credit into the agricultural sector on the rural financial market could be surmised. A recent study revealed that 58.6 per cent of the total credit to farm families in nine villages of Comilla district was accounted for by institutional agencies; professional moneylenders accounted for only 25.6 per cent of the total and relatives for the remaining 15.7 per cent. The study was not representative of the whole country. However, even after making an allowance for regional variations and other factors the picture revealed by the study was in consonance with what might be expected on the basis of a priori reasoning. The resources of the small village moneylenders could not be expected to have grown as rapidly as institutional agricultural credit did over the past few years. Moreover, the availability of credit to the farmers from institutional sources at relatively low interest rates would have improved their liquidity, reducing their dependence on borrowing from moneylenders.

The main objective of proposed research project was to study the impact of agricultural credit on the rural financial market, agricultural productivity, assets formation and mobilization of savings.

One of the dilemmas facing the credit agencies was that they could mobilize savings in the form of deposits in proportion to the variety and range of banking services they provided. For this reason the commercial banks trade, industry and agriculture attracted more deposits than specialized institutions such as the BKB or the cooperatives, engaged mainly in financing agriculture. However, a portion of the

deposits of the rural branches of commercial banks was utilized for financing trade and industry. Consequently they depended on the Bangladesh Bank for financing farmers to some extent.

The process of mobilizing savings represented only one dimension of the problem of reducing dependence of institutional agencies on Bangladesh Bank for agricultural finance. The other dimension of the problem was that of canalizing the savings mobilized by banks for financing farmers. It was more profitable to finance trade and industry through a relatively small number of large loans against readily marketable security such as stocks of commodities, than it was to provide a large number of loans to small farmers against the security of land which could not be readily sold. For this reason, even the BKB established exclusively for financing utilized its deposit resources mainly for financing agriculture, commercial enterprises. It depended almost entirely on refinance from the Bangladesh Bank for its agricultural credit operations.

Thus, any study of agricultural credit in poor, developing countries had to look at the problem of canalizing the savings of the community for financing the farm business, in the context of the high opportunity cost of such financing. The proposed research project envisaged the case study of a new selected retail credit outlets of institutional agencies, specifically for the purpose of studying their savings mobilization efforts, agricultural credit operations and financial viability. The study will address itself not only to the problem of savings mobilization but also to that of canalizing such savings for financing farmers.

The General Frame-work of the Proposed Study

The proposed research project will be divided into three independent but inter-related components, namely: (1) a study of agricultural credit policy development in historical perspective; (2) the demand side of credit; and (3) the supply side of credit.

1. Historical Background

A study of the evolution of agricultural credit policy and institutions in Bangladesh in historical perspective.

2. Demand Side of Credit

A study of the economic activities of selected households in the agricultural and the rural sector, with particular reference to the adoption of modern technology, generation of savings, the pattern of investment and the role of credit. As users of credit these households represented the demand side of credit.

3. Supply Side of Credit

A case study of loans of credit agencies, to determine the influence of their loan policy and procedure on the end-use of credit; and a case study of the retail outlets of credit agencies to assess their viability in terms of their profitability, liquidity and security of the funds placed at their disposal by their creditors/depositors. As suppliers of credit, the credit agencies represented the supply side of credit.

Plan and Design of Study

The objectives, plan and design of the proposed study of the demand and the supply sides of credit are described in Annex 'A'. The sampling techniques, the questionnaires to be canvassed, etc., are described therein. Definition of important terms used are given in the Appendix to Annex 'A'.

Annotated Bibliography

An annotated bibliography of selected literature, especially surveys and studies on agricultural credit, and a general bibliography of other available literature on the subject, is given in Annex 'B'.

Organization, Management and Coordination of the Proposed Study

A. Organization

(i) Demand Side Study

One of the objectives of the proposed research project was to bring out regional variations in the availability and impact of agricultural credit and in the pattern of savings and investment. The demand side study of selected households will be organized separately in the four divisions of the country, namely, Dhaka, Chittagong, Khulna and Rajshahi, under a sub-project for each division. The results of the four projects will be collated at the national level with emphasis on regional variations. However, the sample design was based on requirements for arriving at national level estimates. The regional data will be used mainly for comparison rather than for estimation purposes. The content, methodology and the timing of the study will be identical in all the four regions.

(ii) Supply Side Study

The supply side study will be organized along institutional lines and not territorially. Retail outlets of each important credit agency will be selected for a study of their viability as well as for a case study of their loans. The selected institutions themselves will be studied to provide a background to the study of their retail credit outlets. The refinance institutions for agricultural including the Bangladesh Bank and international agencies which influence the agricultural credit operations of the primary financing institutions, will be studied.

(iii) Historical Review: Evolution of Agricultural Credit Policy and Institutions

This study will be based mainly on available literature on the subject. However, some knowledgeable persons may be interviewed to fill in the gaps in the available information.

B. Management

(i) Demand Side Study

It was proposed that the implementing agency for the four regional projects comprising the demand side study will be the Department of Agricultural Economics of the Bangladesh Agricultural Research Institute at Joydebpur, in association with the regional research centres of BARI which will facilitate the management of regional sub-projects. The Department had a nucleus of trained professional staff with experience of field surveys. A Division of Agricultural Credit Studies was proposed to be organized under it in due course. Meanwhile, the additional staff required for the proposed four

regional sub-projects will work under the Director of the Department of Agricultural Economics. The additional staff, barring field investigators, can be expected to be absorbed in the Division of Agricultural Credit Studies as and when it was organized.

(ii) Supply Side Study

It was proposed to appoint a few skilled professionals with an academic background and practical knowledge of banking, accountancy and agricultural credit for the supply side study. The selected institutions will be expected to provide adequate background material. It was proposed to involve the Agricultural Finance Department of the Bangladesh Agricultural University at Mymensingh for this work; however, the appointment of suitable persons from the available source will be considered. The supply side study will comprise a separate project.

(iii) Historical Review Study

It was proposed to entrust the study to a suitably qualified and experienced person who may be appointed for a short period by the BARC under its Agricultural Economics and Social Sciences Wing.

C. Co-ordination

It was proposed to constitute a high level Coordination Committee with overall responsibility for: (1) the conduct, guidance, supervision and direction of the component projects; (2) arrangements for data processing; and (3) production of a General Report embodying the Main Findings and Recommendations emerging from all the component projects.

The Member-Director (AESS), BARC and the Director-General, BARI, may be the joint Convenors of this Committee. The composition of the Committee may be as under:

1. Chairman, BARC; Chairman
2. Member-Director (AESS), BARC
3. Director-General, BARI
4. Member from each of the Research Institutes under BARC
5. Member from BAU
6. Member from each important credit/refinance agency such as the Bangladesh Bank, BKB, Sonali Bank, Grameen Bank, BRDB, ESBL
7. Member from each of the important international agency involved in agricultural credit and banking such as the IADS, USAID, World Bank, IMF and the ADB
8. Member from any other specialized field as may be considered appropriate.

Time Frame for the Study

The large volume of data collected under the study will provide material for analysis for a fairly long period of time. However, the time-frame for the main activities of the study was expected to be as under:

- a) Field Work - about 18 months.
- b) Completion of Data Processing - 6 months after completion of field work, assuming availability of a main frame computer.
- c) Preparation of Reports - 12 months.

A three-year time-frame for the study was proposed on the above basis.

A time-frame of 6 months was proposed for completing the historical review study including the preparation of an annotated bibliography.

Expected Outputs and Their Timing

In principle, it was proposed to release data on important features of the agricultural credit situation as soon as they became available after they were scrutinized, processed, edited and tabulated, at least for limited circulation initially. They would be supplemented/followed by analytical reports, recommendations, etc. The outputs over the 3 year period of the study were expected to be as under:

First 18 Months:

- 1) Report on Historical Review Study.
- 2) Publication of Data on Savings, Investment and Indebtedness of Selected Households.

Next 12 Months:

- 3) Supply Side Reports on Important Institutions.
- 4) Publication of Data on Savings, Investment and Indebtedness, Collected during the second round or end of survey year.

Next 6 Months:

- 5) General Report of the Coordination Committee on Major findings of the Study, together with its Recommendations.
- 6) Regional Reports on Demand Side Study Based on Data for each of the four Regions.

STAFF AND EQUIPMENT(i) Demand Side Studya) Staff

Altogether 3600 households will be selected for intensive investigation from 300 mauzas at the rate of 12 households per mauza. All the households in the selected mauzas will be listed first and a sample of 12 households will then be selected.

The field work will be divided in three periods of about 6 months each for collection of data at different points of time. During a six-month period a field investigator can list all households in about 10 mauzas (an average of about 200 households per mauza) and canvass two questionnaires devised for intensive investigation among 120 households selected from these 10 mauzas.

On the above basis, the number of field investigators needed will be 30 for 300 mauzas. However, it was proposed to appoint 8 field investigators per region plus one leave reserve, that is, a total of 9 per region or 36 for the country. It was also proposed to appoint 1 Scientific Officer and 2 Research Assistants per region for scrutiny of the filled-in questionnaires. Further, two Senior Scientific Officers will be appointed in charge of two regions each, mainly for supervising the field work and guiding the field investigators. One Principal Scientific Officer was proposed to be appointed and posted in the Dhaka region for coordination and liaison. After the field work the professional staff will be engaged in tabulating the data and drafting reports. The field investigators will be discharged after 18 months. The entire complement of staff will be exclusively for the proposed study and work on it on a full-time basis.

b) Equipment

It was proposed to provide two reconditioned cars, one for the Rajshahi Division and another for the rest of the country, to permit senior officers to visit selected mauzas, regional headquarters, etc. The field investigators will be provided with a bicycle whereas one motor-cycle will be provided for each region.

The office equipment proposed to be provided included a micro-computer with software, an automatic duplicating machine, an electric typewriter and a photocopy machine. A few other small items and furniture for regional offices will also be provided.

Summary of Staff and Equipment Needed for Demand Side Study

The staff proposed to be appointed and equipment proposed to be provided for all the four regional projects combined, would be as under:

<u>Staff</u>	<u>Number</u>	<u>Equipment</u>	<u>Number</u>
P.S.O.	1	Reconditioned Cars	2
		Small Pocket Calculators	36
S.S.O.s	2	Bicycles	36
		Desk Calculators	3
S.O.s	4	Motor Cycles	4
		Pocket Calculators	10
Research Assistant	8	Microcomputers	10
		Almirahs	15
Field Investigators	36	Duplicating Machine	1
		Cushion Chairs	8
Accountant	1	Electric Typewriter	1
		Wooden Chairs	15

<u>Staff</u>	<u>Number</u>	<u>Equipment</u>	<u>Number</u>
Clerk-cum-Typist	1	Photocopy Machine	1
		Secretariat Tables	7
Drivers	2	Wooden racks	7
		Wooden tables	8

(ii) Supply Side of the Study

It was proposed to appoint about 10 skilled professionals for a period of two-three years for the supply side study, each of whom will be assigned a specified institution or institutions for study. Some supporting staff/equipment may also be provided to them.

(iii) Historical Review Study

An experienced professional from the field of credit and banking will be appointed for a period of six months, with one research assistant and some supporting facilities, for preparing a report on the Evolution of Agricultural Credit Policy and Institutions in Bangladesh and an annotated bibliography on the subject.

Cost of the Study(i) Demand Side

The total cost of the demand side study over a 3-year period was estimated at Tk. 50 lakhs.

(ii) Supply Side

The total cost of the supply side study was estimated at about Tk. 25 lakhs.

(iii) Historical Review

The cost of the historical review study was estimated at about Tk. 1 lakh.

Total Cost

The total cost of the study over a 3-year period will be about Tk. 76 lakhs.

ANNEX 'A'

PLAN AND DESIGN OF THE STUDY
OF
IMPACT OF AGRICULTURAL CREDIT OF RURAL FINANCIAL MARKET, AGRICULTURAL
PRODUCTIVITY, ASSETS FORMATION AND MOBILIZATION OF SAVINGS

Introduction

The plan and design of the proposed study on the demand side of credit is presented below in section I. The sample of households to be selected will be the minimum needed for yielding reliable national level estimates. Regional data will be used mainly for comparison to bring out intra and inter regional variations. The study of the supply side of credit will be geared to unravelling the operational mechanism of retailing credit to millions of small farmers, rather than to producing statistical data. The viability of retail outlets such as bank branches with particular reference to their savings mobilization efforts will be studied in depth. The content of the proposed enquiry on the supply side of credit is outlined in section II.

SECTION I
STUDY OF THE DEMAND SIDE OF CREDIT

Plan and Design of Demand Side Study of Selected Households

The Report on Bangladesh Pilot Agricultural Census, 1982 released in September, 1983 by the Bangladesh Bureau of Statistics, demonstrated that in the agricultural sector a relatively small sample of households, properly selected, can yield reliable estimates for the country in respect of their economic activities and characteristics. The size of the sample for the Pilot Census was only 2060 farms and it was found to be adequate for yielding reliable national level estimates for area under crops, etc., within small margins of error. For instance, the coefficients of variation (CVs) ranged from 2 per cent to 7 per cent for seven out of nine items include in the questionnaire, assuming a self-weighting sample design.

Sample Design for the Proposed Study of Selected Households

A two-stage stratified sample design, with mauzas as the first-stage unit and households as the second-stage unit, is proposed. The number of mauzas to be selected may be 300 with probability proportional to population as measured by the number of 1981 households at the rate of 5 mauzas per district from each of the 60 out of 64 districts in the country, leaving out the 4 districts of the Chittagong Hills Tracts.

Definitions of Terms Used Above

These are given in the Appendix to this Section.

Importance of Covering Non-cultivators under the Proposed Study

In the rural economy cultivators and non-cultivators transact business with each other resulting in the payment/receipt of wages, interest, rent and in the transfer of assets by sale/purchase of land, livestock, borrowing/lending of money, etc. Thus, inclusion of non-cultivators in the sample may provide matching estimates for the same items as it were on the two sides of a balance-sheet and thereby provide an internal check on the data. The data on landless agricultural labourers, artisans, money-lenders, etc. comprising non-cultivators would, of course, be important in themselves for an understanding of the impact of credit. Further, a survey of non-cultivator households if carried out separately will cost much more than what it would cost to include out separately will cost much more than what it would cost to include them in the sample for the proposed study. For all these reasons it was considered desirable to include non-cultivator households in the sample.

Comparison Between Actual and Survey Sample Ratios Between
Cultivator/Non-cultivator Households

According to the Agricultural Census of 1977 landless agricultural labour households accounted for 29 per cent of the total rural households. According to the Pilot Agricultural Census, 1982 the unweighted proportion of non-farm households to total was 37 per cent. From these data it can be inferred that about one-third to two-fifths of the rural households may be non-cultivators as defined (Appendix) for the proposed survey. Keeping this in view it was proposed that out of 12 households to be selected per mauza two thirds may be cultivators and one-third non-cultivators.

The selection of small/medium/large (S/M/L) cultivators in the ratio of 3:3:2, respectively, was not based strictly on the ratios among these classes for the country as a whole. According to the 1977 Agricultural Census the ratios between S:M:L cultivators was 50:41:9=100 (or 4.0:3:3:0.7=8). According to the unweighted data of the Pilot Agricultural Census, 1982 the ratio was 67:28:5 (or 5.4:2.2:0.4). However, the selection of S:M:L in the ratio

of 3:3:2 for the proposed quick study was indicated by the following considerations. First it was considered desirable to select at least 2 large out of a total 8 cultivators from each mauza, because any abnormality reported by a solitary cultivator selected from this class was liable to distort the average for the whole group. Second, in arriving at the decision to select an equal number of medium and small cultivators, namely, 3 each per mauza, it was thought necessary to give a good representation to the medium cultivators in the sample as they probably represented the main clientele of the institutional credit agencies. Finally, it was not considered necessary to select more than 3 small cultivators from each mauza because of their homogeneous character and the selection of 2 agricultural labour households from the group of non-cultivators.

The distribution of the area of holdings of S:M:L cultivators was in the ratio of 32:49:19 according to 1977 Agricultural Census; and according to the unweighted data of the Pilot Agricultural Census, 1982 it was 29:47:24. These ratios accorded well with the ratio of 37.5:37.5:25 between S:M:L for the proposed study. The area of holding, it may be noted, was more important than the number of holdings in respect of credit related activities.

Overall Size and Quality of Sample

To sum up, the total number of mauzas proposed to be selected was 300 at the rate of 5 per district from 60 out of 64 districts in the country. The total number of households proposed to be selected was 12 per mauza, 60 per district, about 900 per division and 3600 for the country; they will comprise cultivators and non-cultivators in the ratio of 8:4, 40:20, 600:300 and 2400:1200, respectively; the number of S:M:L cultivators selected will be 3:3;2 15:15:10, 337:337:225 and 900:900:600, respectively; the number of agricultural labour, artisan and other non-cultivator households selected will be 2:1:1, 10:5:5, 150:75:75 and 600:300:300, respectively.

The above sample would compare favourably with that of the Pilot Agricultural Census, 1982, which covered 2,060 cultivator households in 216 mauzas distributed over 33 unions. The recommendation of the Pilot Census on sample design was: "about 10 to 15 sample farms on the average per mauza would be sufficient and that resources could be best spent on increasing the number of sample mauzas rather than increasing the sample size of farms within mauzas". The proposed sample design was in consonance with this recommendation. It was therefore, expected to yield fairly reliable estimates for the country in respect of characteristics such as use of improved

technology, savings mobilization, assets formation and the level of indebtedness in the agricultural sector. The sample size for District/Division was not designed to yield estimates but would nevertheless be large enough to justify comparisons between Districts/Divisions in terms of variations from national averages. The study, therefore, will permit a fairly reliable assessment being made of inter and intra-regional variations.

Year of Study

The proposed study will cover a period of one year, beginning from April 1985 if possible, or October 1985 if necessary. A reference year beginning from July would be inconvenient. Field work cannot be carried out during the monsoon season because of the preoccupation of the farmers, difficulty of transport and communications, etc. The year of study will be a moving year for the purpose of Demand Schedule No. 1, Inventory of Assets and Liabilities, in the sense that the values will be recorded as on the date of interview and not as on a fixed date such as 1 April or 1 October. The reason is: if a fixed date was made the point of reference transactions between that fixed date and the date of interview will have also to be recorded and eliminated to arrive at dependable values on the fixed date. This procedure would increase the errors in reporting. It was, therefore, felt that if the dates of the two interviews were broadly separated by a 12-month period, the main objective of the study will be served.

DEMAND SIDE QUESTIONNAIRE

The number of questionnaires designed for the demand side study, referred to here as Demand Schedules, was three as under:

- Demand Schedule No. 0 - Listing Schedule

It will be canvassed among all the households of each selected mauza, for drawing a sample of 8 cultivators and 4 non-cultivators. The Listing Schedule will elicit information on the operational holding and the sources of income of all households with a view to classifying them according to design. A question on money-lending activity will also be included in this schedule to determine the number of non-formal financial intermediaries operating in the rural areas and the volume of their operations.

- Demand Schedule No. 1 - Inventory of Assets and Liabilities

This schedule will be canvassed twice among cultivators and non-cultivators selected for intensive investigation. The position of assets and liabilities will be ascertained on the dates of interview which will be separated approximately by a twelve-month period. The First Round will commence immediately after the beginning, and Second Round immediately after the end, of the year of study (April-March or October-September). The data would indicate the size and pattern on distribution of assets of different classes of cultivators and non-cultivators; the level of

indebtedness among them according to credit agency; and, the change in their assets and debts over a twelve-month period covered by the study. The extent to which the trends in savings mobilization, assets formation and indebtedness revealed by schedule 1 were attributable to credit would be indicated by Demand Schedule No. 2, designed to record investment/disinvestment, borrowing/repayment, etc. during the year of study as indicated below.

- Demand Schedule No. 2 - Receipts and Expenditure
During the Survey Year

This schedule will also be canvassed twice among selected households. The year will be divided into two six-monthly periods. (April-September and October-March; or October-March and April-September). This schedule will be canvassed for only one six-month period at a time, as the respondents were likely to be able to recollect their receipts/expenditure over the past six-months more accurately than over the entire past year. The First Round will begin immediately after the end of the first six-month period and the Second Round immediately after the end of the year, coinciding with the Second Round of canvassing Schedule No. 1 on assets and liabilities.

The questions on the Expenditure side of Schedule No. 2 will encompass expenditure on farm and non-farm business; on creation, acquisition and purchase of physical and financial assets together with that on their repair and maintenance; on repayment of loans; and, on loss of assets-an involuntary expenditure-due to natural causes or due to wear and tear. The questions on farm business expenditure were designed to record

expenditure according to crop/nature of farm operation/labour-materials used, in cash and in kind. The overhead current farm expenditure, such as cost of maintenance of plough cattle which could not be attributed to individual crops, will also be ascertained. The extent to which each item of expenditure was financed by borrowing will be ascertained, to bring out the role of credit in financing the purchase of farm inputs. The schedule was not designed to record day to day household expenditure. However, capital expenditure on the household such as that on residential building, durable consumer goods, large expenditure incurred in lump sums such as that on marriage, etc., will be recorded.

The questions on the Receipts side were designed to record receipts from the sale of produce of farm and non-farm business. The gross value of the produce, regardless of how it was disposed of, will be ascertained. Receipts from sale of assets, physical and financial, representing disinvestment by the household during the survey year; receipts from rent, wages, interest and remittances; and, receipts from borrowing in cash or in kind according to credit agency, security, rate of interest, purpose of borrowing, etc, will also be ascertained. The schedule will contain some questions eliciting the opinion of the respondents on savings mobilization, credit availability and credit requirements, reasons for defaults, etc.

The schedule was intended to serve mainly two purposes. First, it would yield data on the adoption of improved technology such as the use of improved seed, fertilizer, pesticide and irrigation together with the extent to which such expenditure was financed by borrowing. It will, therefore, help establish the degree of correlation between the adoption of improved technology and the use of credit among different classes of cultivators. Secondly, the schedule was designed to yield data on net and gross capital formation in physical and financial assets and net borrowing/repayment during the survey year. The two schedule was designed to yield data on net and gross capital formation in physical and financial assets and net borrowing/repayment during the survey year. The two schedules were also designed to provide an internal check on each other, in as much as it would be possible to juxtapere the changes in assets and in indebtedness recorded in schedule 1 over the survey year and those derived from expenditure/receipts recorded in schedule 2.

Concluding Remarks - Demand Side Questionnaires

The questions comprising the three Demand Schedule were first drafted in step by step detail. They will be fitted into an appropriate format including pre-coding of questions, assigning code number to, and providing code number columns for the answers, etc. The demand questionnaires, when finalized will be supplemented by an explanatory note, a chart of code numbers and a note on arrangements proposed for pre-testing them and for training of field staff.

APPENDIX TO SECTION I, ANNEX A - DEMAND SIDE STUDYSOME DEFINITIONSDefinitions of Mauza, Household and of Different Types of Household

A mauza is a territorial unit with defined boundaries. Every mauza has been assigned a Jurisdiction List (J.L.) number in the revenue records as also a Geographical (Geo) Number. According to the 1981 census there were 55,612 populated rural mauzas in the country: the number of urban and unpopulated mauzas was as 2772 and 1788, respectively. A village had no well-defined boundary. It was, therefore, not suitable for being selected as the unit of sampling. There were 35,650 villages in the country as on 31 March, 1981. A household meant a group of persons normally living together, maintaining family or family-like relations and taking meals from the same kitchen or khana. A household may have more than one house; and a house may have more than one household. A cultivator household was a household having an operational holding of area 0.05 acre (5 decimals) or above. All land which was used wholly or partly for agricultural production and was operated by a household (alone or jointly with other households, with or without the assistance of others), regardless of title, size or location, constituted an operational holding. A non cultivator household was a household having no cultivated land or having an operational holding of less than 0.05 acre. A small, a medium and a large cultivator household was a household, in each case, having an operational holding of: more than 0.04 acre but under 2.5 acres, 2.5 acres and above but under 7.5 acres and of 7.5 acres and above, respectively. A agricultural labour household was a household whose members performed agricultural work in

other households for wages in cash or kind and whose main source of income was from agricultural labour. An artisan household was a household of skilled workers or handicraftsmen whose main source of income was derived from one or more of the following occupations:

- (i) Weavers, knitters, carpet makers, etc.;
- (ii) Dress makers, upholsterers, etc.;
- (iii) Shoe-makers and other leather workers;
- (iv) Blacksmiths, goldsmiths, coppersmiths and other metal workers;
- (v) Carpenters, painters, etc.;
- (vi) Stone carvers, brick layers, plasterers, glazers, cement finishers, etc.;
- (vii) Printers (paper and textile), engravers, block makers, etc.;
- (viii) Potters, glass and ceramic workers, etc.;
- (ix) Basketry and mat weavers, bamboo and cane workers, and related workers, etc.;
- (x) Makers of musical instruments, toys, sports goods, etc.

A household, the main source of income of which was other than that from agriculture and allied activities, wage employment as agricultural labour, or cottage industry, fell in the category of other non-cultivator household.

Overlap Between Classification Based on Operational Holding and Source of Income

An agricultural labour household, an artisan household or a household of other non-cultivator such as a moneylender, having an operational holding, exceeding 0.04 acre will be initially classified as a cultivator household for sampling purposes. Later, at the stage of tabulating the data, a further sub-division of cultivator households according to principal sources of income will be made, if and to the extent necessary. One of the reasons for defining cultivators/non-cultivators on the basis of their operational holding was that earlier studies had used this basis for defining them. A departure therefrom would render estimates of the proposed and the earlier studies non-comparable. Classification based on source of income also posed the problem of accuracy. It was more difficult to elicit information about incomes than about land. Hence classification based on operational holding was preferred over that based on sources of income, when the number of households involved was large. For example, in the proposed survey about 50,000 households would be enumerated in 300 mauzas for drawing a sample of 3600 households.

SECTION IITHE SUPPLY SIDE OF CREDITScope of Enquiry

The loan policies and procedures followed by agencies supplying credit to farmers had an important bearing on the end use of credit. The enquiry on the supply side of credit was, therefore, proposed to be centred round case studies of loans made by credit agencies supplemented by a study of the viability of and savings mobilization by outlets of the agencies. A brief review of each lending/refinance agency as a whole was also proposed to be made to provide a background to its loan policies and procedures and its overall approach.

Credit Agencies to be Covered by the Enquiry

The credit agencies to be studied under the proposed enquiry will include each of the six commercial banks engaged in financing agriculture the Bangladesh Krishi Bank (BKB), the Union Central Cooperative Association (UCCAS) and the Krishi Samabay Samities (KSS) affiliated to them, Bangladesh Samabay Bank Ltd. (BSBL) and the Central Cooperative Banks (CCBs) and KSSs affiliated to them, the Grameen Bank, private money lenders and any other important institutional agency in the field of agricultural credit. It was also proposed to study the refinance agencies, namely, the Bangladesh Bank and some of the donor agencies such as the World Bank, the Asian Development Bank, IFAD, USAID and other international agencies engaged in providing assistance in the field of agricultural credit, inasmuch as these agencies influenced the savings mobilization efforts, loan policies and procedures of credit institutions engaged in financing agriculture. The present role of the refinance agencies and the scope for a coordinated approach among them would be the main object of the study.

Selection of Retail Credit Outlets

The number of field level outlets of each lending agency selected for study will be kept to the minimum, subject to ensuring representation to outlets of varying size and age, locational and operational characteristics, etc. A sample of about three mauzas in the area of operation of each of these outlets would then be selected. Altogether about 10 to 15 loan cases in these three mauzas will be studied, with particular reference to issues referred to below in sub-section A. Issues to be covered in the study of savings mobilization by and viability of selected outlets; in the overall review of each lending agency; and in the study of reference/international agencies, are referred to in sub-sections B.C and D, respectively.

A. Issues to be Covered by Case Study of Loans

a) History of a Loan

Amount, purpose and month/year in which loan disbursed; analysis of adequacy and time-lines of loan in relation to the crop/purpose for which given, reasons for inadequate, excessive, untimely loans.

b) Repayment Record

Repayment of principal and payment of interest by month/year, analysis of adequacy and timeliness of repayment, reasons for defaults, if any; analysis of source of funds for repayment to check fictitious repayment by book adjustment or other means.

c) Medium Term Loans for Shallow Tubewells

In the case of medium term loans for irrigation equipment, expected incremental income and size of annual instalment of repayment fixed, to be juxtaposed with the actual benefits being derived by the borrower, identifying reasons for shortfall, if any, in incremental income in relation to that anticipated; availability or otherwise of short-term crop production loans to borrowers of STW loans, the effect of non-availability of ST loans on incremental income, the reasons for non-availability; area and crops irrigated in relation to potential; sale of water, common or joint ownership of STW and its implications.

d) Medium Term Cattle Purchase Loans

In the case of cattle purchase and other specialized type of loans, detailed analysis on above lines.

e) Loans in Kind

Whether loan sanctioned in kind and, if so, whether amount so sanctioned actually disbursed in kind, or not disbursed at all or disbursed in cash, in the absence of linkage with input supply agency. Possible approaches to establishing such linkages, overall assessment of policy of sanctioning loans in kind and suggestions.

f) Misuse of Loans

Whether the borrower used the loan for the intended purpose; if not, was it due to over or under financing, untimely disbursement of loan or for any other reason.

g) Benami Loans

Whether the borrower was merely acting as the front man for some other intermediary who actually appropriated the entire loan, mechanism of benami loans, nature of collusion with the functionaries of financing agency, arrangements for repayment, the repayment performance of benami loans.

h) Loan Procedure and Documentation

Formalities undergone by the borrower from the point of contact with agency through receipt of loan money; the type of documents he was required to produce to establish his title to property, nature of security demanded, number and type of bank forms he was required to fill in, number of trips he had to make to revenue offices, bank branch, etc.; the cost involved and the time taken at each stage, etc.; differences in procedure, cost, time, etc. as between borrowing for the first time and on subsequent occasions.

j) Indebtedness of Borrower to Agencies other than that Under Study

Loans taken by the selected borrower or by members of his household from agencies other than that under study, including details such as: name of such agencies, amount borrowed from and outstanding against each such agency, security provided, month/year of borrowing, reason for borrowing from more than one agency, effect of such borrowing on his repaying capacity, reasons for failure on part of lending agency to detect such borrowing, etc.

k) Any other Important Features of the Loan not Covered Above

l) Loans by Non-Formal Agencies

Study on lines similar to those indicated above with suitable identifications.

Concluding Remarks

Assessment of quality of the appraisal supervision, recovery of loan by the credit agency; positive effect of the loan on borrower in terms of adoption of improved technology and assets formation, if any; or whether the loan just added to the burden of his debt without benefitting him in any way.

B. Issues to be Covered in the Study of Savings Mobilization by and Viability of Selected Credit Outlets

Viability may be judged by three criteria, namely: (i) Profitability; (ii) Liquidity; (iii) Security of Funds of Creditors/Depositors. Savings mobilization may be studied under liquidity.

i) Profitability

It was a function of margin between cost of and return on funds on the one hand and the volume of funds employed on the other. Minimum turnover of funds required on existing margin to meet cost of establishment. After turnover had passed required minimum, additional establishment costs as per cent of funds employed. Analysis of profit/loss of past 3 years in light of above, identifying scope for improving profitability. Basic socio-economic data about area of operation of selected outlets.

ii) Liquidity

It was the ability to meet the demands of creditors/depositors on due dates. Defaults or delayed repayments by borrowers needed to be compensated by buildup of capital/reserves and by mobilization of deposits, to maintain liquidity. Defaults to head office in the case of bank branches and to higher financing agencies in other cases signified failure to build up liquidity. Analysis of actual position of selected outlet in light of above; future prospects. Detailed study and analysis of savings mobilization efforts, their adequacy, scope for improvement etc.

iii) Security

Funds placed by creditors/depositors at disposal of the selected outlet may be deemed to be secure, if realizable value of assets (loans as well as other investments) exceeded outside liabilities, that is, borrowing and deposits. Determination of realizable value of assets involved assessment of realizability of each loan. Loans secured against mortgage of land may be deemed to be realizable, unless otherwise indicated by inadequate value or erosion of mortgaged property, disputed title, etc. Loans overdue for more than three years should be carefully evaluated but not necessarily treated as doubtful, bad or unrealizable, unless the security was not dependable. The credit agency itself should evaluate realizability of loans of its selected outlets, as a study of this nature may not handle such a task.

iv) Concluding Remarks

Overall position and prospects of selected outlets, suggestions.

C. Issues to be Covered in the Overall Assessment of Selected Credit Institutions

Brief history, role envisaged by its charter, sources of funds, uses of funds, profit/loss, viability, important features of loan policy/procedure, recovery/repayment record, distribution of branches according to: loan/deposit ratio, profit/loss position, volume of loans disbursed/outstanding, location according to h.q. of country, division, district, upazilla, union, and rural population served per branch in each district. Institution itself should prepare a paper on above lines which can then be discussed and revised if necessary.

D. Issues to be Covered in the Study of Refinance Institutions

The Bangladesh Bank, the Ministry of Finance and each of the international agencies selected for study will have to be considered separately in the light of its role and involvement in the sphere of agricultural credit. The scope of study in each case, therefore, will have to be determined after a preliminary dialogue with the agency concerned. Broadly, the objective would be to assess the role and impact of each refinance agency on the agricultural credit situation in the country and, to examine the need and the scope for a coordinated approach among them.

Concluding Remarks - Study of Supply Side of Credit

Skilled professionals will have to be engaged for this study, with qualifications/experience in banking/accountancy/business administration. They will have to undergo training/familiarization, if necessary. One individual with some supporting staff may have to be engaged for each important institution, according to the institution assigned to him.

An overall assessment of the supply side of credit will have to be made, on the basis of reports on individual institutions.

ANNEX BANNOTATED BIBLIOGRAPHYOFSELECTED DOCUMENTS ON AGRICULTURAL CREDIT RESEARCH AND A
SUPPLEMENTARY LIST OF SOME OTHER DOCUMENTSIntroduction

The study of agricultural credit has many dimensions. The literature on the subject is vast.

In Bangladesh, institutions as well as individuals had published a number of studies. The institutional studies (including studies by Committees, etc., backed by financial resources of institutions) had looked at the issues largely from the point of the formal agencies supplying credit - their problems, difficulties, performance, efficiency and so on. The studies by individuals, however, had paid attention to the non-formal rural credit market and the user of credit - what happened to him under different environments and why - representing the demand side of credit.

The major lacuna in both the types of studies was that none of them was comprehensive. The institutional studies did not address themselves to some of the major issues. The individual studies were highly area-specific and issue-specific. A clear picture of the agricultural credit situation for the country as a whole did not emerge from either.

Limitations of the Bibliography

An annotated as well as a general bibliography is presented below in Section A and B, respectively. Both are illustrative

rather than comprehensive. They referred to some important studies in the field of agricultural credit policy and in that of methodology and techniques of organizing field studies of agricultural households.

Classification and Source of Documents

In the annotated bibliography documents had been classified according to the country of origin namely, Bangladesh, India and Rest of the World. Some publications of the World Bank had been listed separately. In the general bibliography, a chronological classification had been adopted. Lists of studies on the subject compiled by others had been reproduced in two appendices.

Section A: Annotated Bibliography of Some Important Documents on Agricultural Credit

Bangladesh:

1. Bangladesh Agricultural Credit Review (In three Volumes), A Joint Review by the Government of Bangladesh and the World Bank, August, 1983.

VOLUME I MAIN REPORT

VOLUME II NRC WORKING PAPERS

VOLUME III STATISTICAL APPENDIX

The Review covered a large number of policy issues as viewed from the point of the lending agencies, as for example, interest rate policy, lending procedures, etc. It failed to come to grips with the fundamental issue of mobilizing resources for canalization into agricultural credit.

2. Bangladesh Bank - Agricultural Credit Study Project - Phase II Report, March, 1978, and Draft Final Report, August 15, 1979, Robert W, Nathan Associates, Inc. Washington, D.C., U.S.A.

The study attempted an evaluation of the BKB, the commercial banks, the UCCA-KSS system and the BSBL-CCB-KSS system from the point of their suitability as channels of IDA credit. The study was completed in a short time and did not go into the methodological problems of comparability of the data presented to the Study Team by different institutions. Consequently, it was mostly an impressionistic study. The draft final report presented some project profits for IDA financing.

3. Project Manual - A manual for financing agricultural credit projects in Bangladesh, 1978, Bangladesh Krishi Bank, prepared by the Technical Assistance Mission, Asian Development Bank.

The manual aimed at providing comprehensive guidelines for financing capital investment expenditure in agriculture through area development projects, taking into account the

economic/financial analysis of such projects as well as the banking aspects.

4. Rural Finance Project, U.S. Agency for International Development, Washington, D.C. May, 1983.

The Project incorporated a Rural Financial Reform Plan which addressed the major issues in the sector except that of institutional reform. It assumed financial reform will lead to increased flow of credit to farmers, but ignored organizational constraints.

5. Report on Bangladesh Pilot Agricultural Census, 1982, September, 1983, Bangladesh Bureau of Statistics.

This was an important Report for those interested in organizing studies of rural agricultural households in Bangladesh because it provided guidelines for determining the sample size and the sample design for such studies.

Other Bibliographies

6. An Analytical Review of Non-Formal Rural Credit Studies in Bangladesh, Md. Chulam Hussain, Agricultural Development Council, Inc./Ford Foundation, February, 1983.

The review summarized the findings of 28 studies conducted during the period 1947-1982 in Bangladesh. It also referred to some studies of the earlier period. This

review was by far the most comprehensive annotated bibliography on the subject of agricultural credit in Bangladesh. It did not cover the studies referred to above. The review incorporated a table giving the names and description of 28 studies covered by it, which is reproduced as Appendix I to this Annex B.

7. A select Bibliography on Agricultural Economics and Rural Development with Special Reference to Bangladesh, Supplement II, Carl E. Pray and Chirita B. Abdullah, BARC, March 1980.

The above publication contained a short list of 15 studies on Rural Credit, Investment, Savings, among other topics. The studies pertained to the period 1978-79. They were not included in the list prepared by Md. Ghulam Hussain. They are reproduced as Appendix II to this Annex B after excluding two studies included in the annotated bibliography.

8. Development of Cooperatives in Indo-Bangladesh Sub-Continent, A Chronology of Events-1975 to 1977, by S.A. Sardar, Bangladesh Samobaya Bank Ltd., November, 1977.

This document, although not strictly a bibliography and though restricted in its scope to cooperatives, was important because until the 1950s institutional agricultural credit was synonymous with the cooperatives. Many important publications of the first half of this century were landmarks

in the history of institutionalization of agricultural credit. They had been rightly referred to as "events" by the author. Examples were: (1) The Famine Commission of India, 1901, which recommended the formation of agricultural banks; (2) Report of Sir Fredrick Nicholson and that of the Sir Edward Law Committee, which led to the enactment of the Cooperative Societies Act, 1904; (3) Report of the Committee on Cooperation in India, 1915, known as the Maclagan Committee Report, which was regarded as the Bible for Cooperatives and which led to the establishment of Provincial Cooperative Banks; and (4) Review of Cooperatives in East Pakistan by I.L.O. Asian Field Mission comprising Dr. A.H. Bullendaux and Mr. R.K. Harper, 1955-56, which led to the acceptance of the principle of Government (including Central Bank) assistance to Cooperatives.

Some Comparative Studies of Cooperatives and Other Agencies Engaged in Agricultural Credit

9. Performance of Institutional Agencies Engaged in Providing Agricultural Credit, UNDP Technical Assistance Mission, Ministry of L.G.R.D. and Cooperatives, Government of Bangladesh, November, 1979.

The study comprised the first attempt to organize the data on BSBL co-operatives and other agencies on a comparable basis. It concluded that the performance of cooperatives was superior to that of the BKB or the commercial banks on the basis of criteria such as loan recovery, reserves for bad debts, net worth, establishment costs, etc.

10. BSBL and Cooperatives:

- VOLUME I: ROLE AND PERFORMANCE OF BSBL/COOPERATIVES
 VOLUME II: RECOMMENDATIONS
 VOLUME III: PLAN OF OPERATION FOR UNIFYING/STRENGTHENING COOPERATIVES, UNDP Technical Assistance Mission, Ministry of L.G.R.D. and Cooperatives, Government of Bangladesh, July-August, 1983.

The study updated the comparison of the earlier study and made a plea for unifying the BSBL and the BRDB cooperatives as a means of strengthening their viability.

India

1. All-India Rural Credit Survey - Report of the Committee of Direction, Reserve Bank of India, Bombay

- VOLUME I THE SURVEY REPORT
 PART I RURAL FAMILIES 1956
 PART II CREDIT AGENCIES 1957
 VOLUME II THE GENERAL REPORT 1955
 VOLUME III THE TECHNICAL REPORT 1957

The survey comprised a comprehensive enquiry into all aspects of rural credit - supply, demand, historical, institutional and non-formal. Its recommendations provided the conceptual basis for Central Bank intervention in the rural financial market. Its methodology was a land-mark for studies in agricultural credit in developing countries.

2. All-India Rural Debt and Investment Survey, 1961-62
Reserve Bank of India Bulletin.
 - i) Tangible Wealth, Capital Expenditure and Capital Formation of Rural Households, June, 1965.
 - ii) Outstanding Loans, Borrowing and Repayments of Rural Households, September, 1965.
 - iii) Current Resources of Rural households.

3. All-India Debt and Investment Survey, 1971-72,
Statistical Tables, All-India, Reserve Bank at India.

The above two publications presented the results of decennial follow-up surveys of rural debt and investment in India, the first survey being the All-India Rural Credit Survey of 1951-52. The results of the 1981-82 survey were due to be published shortly.

4. Report of the Committee to Review Arrangements for Institutional Credit For Agricultural and Rural Development (CRAFICARD), Reserve Bank of India, January, 1981.

The above report was the second land-mark in the history of development of institutional credit for agriculture in India. It recommended the organization of a separate bank, independent of the Reserve Bank of India, for refinancing agriculture. The National Bank for Agricultural and Rural Development (NABARD) was accordingly established in 1982, incorporating the erstwhile Agricultural Refinance and

Development Corporation of India (ARDC) and the Agricultural Credit Department of the Reserve Bank of India.

Rest of the World/World Bank

11. Economic Analysis of Agricultural Projects, Second Edition, J. Price Gittinger, EDI Series in Economic Development, Johns Hopkins University Press, 1982

The book's first edition was published over ten years ago. It became a standard reference book among economists the world over engaged in cost/benefit analysis of agricultural projects. Mr. Jittinger of the Economic Development Institute of the World Bank has painstakingly revised, enlarged and updated the first edition.

SECTION B: General Bibliography of Studies on Agricultural Credit.

Appendix I and II comprise a list of 28 and 13 studies, culled from documents 6 and 7, respectively, under Section A: Annotated Bibliography.

In addition, the following recent documents may be referred to.

Bangladesh

1. Effects of Flood (1984), Bangladesh Academy for Rural Development, Kotbari, Comilla, October, 1984. The study provided the most recent information on sources of credit for farm and non-farm families.

2. Loan Manual for Agricultural Term Financing, Final Report, (part II), K.R. Subrahmanyam, Credit Expert under IDA Credit No. 1147-BD, Bangladesh Bank, July, 1984.

This manual was based on the Manual for Agricultural Credit Projects, item 3, under Section A: Annotated Bibliography.

3. Rural Finance Experimental Project, Sociological Report, May, 1982, Bangladesh Bank/U.S. Agency for International Development.

Rest of the world/World Bank

4. Rural Financial Markets in Developing Countries, J.D. Von Pischke, Dale W. Adams, and Gordon Donald. The Johns Hopkins University Press, 1983.
5. The Political Economy of Specialized Farm Credit Institutions in Low-Income Countries, J.D. Von Pischke, Peter J. Heffernan, and Dale W. Adams, Staff Working Paper, World Bank.

AN ANALYTICAL REVIEW OF NON-FORMAL
RURAL CREDIT STUDIES IN BANGLADESH

MD. GHULAM HUSSEIN

APPENDIX I TO ANNEX B

A. PRE-LIBERATION STUDIES (1947-1971) LIST OF STUDIES

Study No.	Study Year	Author	Study Name	Author Area	Sample	Remarks
1	1956	Socio-Economic Survey Board, Dhaka University.	Rural Credit & Unemployment in East Pakistan.	i) Narayanganj Sub-Division ii) Rangpur " iii) Rajbari " iv) Feni "	1295 1020 290 539 <hr/> 3144	Little access to IN credit market
2	1960	Agricultural Census Organisation, Ministry of Food & Agriculture, GOP.	Pakistan Census of Agriculture, Vol. 1. Final Report East Pakistan, October, 1962.	Bangladesh (the then East Pakistan).	61,39,480	- do -
3	1964	Mirza Shahjahan	Agricultural Finance in East Pakistan	i) Dhaka-Chittagong Division ii) Rajshahi " iii) Khulna "	894 726 618 <hr/> 2238	ADBP loanees Better access to IN credit market.
4	1965	Registrar of Co-Operative Society East Pakistan.	Agricultural Credit in East Pakistan, 1967.	Bangladesh (selected areas)	1200 (about)	Better access to IN credit market.
5	1967	Hossain, M.A.	A Study of Utilization of Agricultural Credit in some areas of a Rural Dev. Project (Gouripur Thana) in East Pakistan.	Gouripur, Mymensingh.	50	Little access to IN credit market.
6	1967	Haque, M.N.	An Analysis of the Effectiveness (Adequacy) of Agricultural Credit Provided by the ADBP to some Case Studies.	Two Unions: Brahmanbaria and Narayanpur of Comilla District.	50	ADBP Loanees Better access to IN credit market.

ANNEX 'B'
APPENDIX I-2

Study No.	Study Year	Author	Study Name	Author Area	Sample	Remarks
7	1968	Bashar, H.A	An Analysis of the Present Credit Structure in some Selected Area of Mymensingh District Master Thesis, May 1969, BAU, Mymensingh.	i) Panghagra, Mymensingh ii) Kazir Simla, Mymensingh.	25 25	Little access to IN credit market.
8	1968	Khan, A.A	Rural Credit in Gazipur Village, Comilla.	Gazipur-Comilla	41	-do-
9	1969	Kutubi, A.F.M.	A Study of Utilization and Repayment of Agricultural Credit Provided by a Village Co-operative Society, in KTCCA, Comilla.	Daulatpur KSS	31	Better access IN credit market.
10	1969-70	Asaduzzaman and M. Hossain	Some aspects of Agricultural Credit in Two Irrigated Area in Bangladesh.	i) Thakurgaon Dinajpur. ii) Phulpur, Mymensingh.	207 150 <hr/> 357	-do-
11	1971	Azad, M.H	An Analysis of the Effects of land Tenure System on the Availability and the Use of Credit in Selected Areas of Mymensingh District.	i) Boyra-Mymensingh ii) Sutiakhali, Mymensingh.	25 25 <hr/> 50	Little access to IN credit market.
<u>B. Post-Liberation Studies</u>						
12	1972	Rahman N.M.	An Economic Study of Capital Formation in Two Villages of Mymensingh District.	i) Shimla ii) Dhitua	25 25 <hr/> 50	Better access to IN credit market.
13	1973	Rahman M.N.	An Analysis of Supervised Credit Utilization by Co-operative Members and Repayment thereon in an Area of Mymensingh District.	Niguary-Union	50	Little access to IN Credit market.

ANNEX 'B'
APPENDIX I-3

Study No.	Study Year	Author	Study Name	Author Area	Sample	Remarks
14	1973	Mutalib, H.A.	An Economic Study of Small Farm Credit Under TIP in Some Selected Areas of Mymensingh District.	Five Villages of Mymensingh District.	25	Better access to IN credit market.
15	1974	Alamgir, Mahiuddin.	Famine 1974: Political Economy of Mass Starvation: A Statistical Annexe	i) 4-Famine Village ii) 4-Non-Famine villages	869 <u>905</u> 1774	4-Famine Villages 4-Non-Famine Village
16	1974	Islam, Nurul	An Analysis of the Role of Credit in Capital Formation in Agriculture in some area of Mymensingh District.	i) 3 Traditional village ii) 3 Progressive villages.	75 <u>75</u> 150	Little access to IN credit market.
17	1974-1975	Rahman, Atiqur	Usury Capital and Credit Relations in Bangladesh Agricultural: Some Implications for Capital Formation & Capitalist Growth. BIDS Journal, Vol.VII, No.2 Spring, 1979.	i) Phulpur, Mymensingh ii) Comilla, Kotowali Thana.	187 102 <u>239</u>	Little access to IN credit market. Better access to IN credit market.
18	1975-1976	Quasem, Alam & J.C. Shah.	Rural Credit in Bangladesh: a case study at Patuakhali. Farm Economy, Vol.1, No.1 1978.	Two Swanirvar Villages: i) Mdandapura ii) Bhalgachia	250 <u>256</u> 506	-do-
19	1976	Alam, M.F & Momen, H.A.	Financing Agriculture in Bangladesh. An Economic Analysis of the Credit Institutions.	Five Districts	548	-do-
20	1976-1977	Hossain.M.M.	Agricultural Credit and Alternative Sources of Income of Farmers in BRRI Project Area 1976-77. Bank Parikrama, Vol.VI, Sept. & Dec., 1981, No. 3 and 4.	II Selected village	96	Better access to IN credit market.

Study No.	Study Year	Author	Study Name	Author Area	Sample	Remarks
21	1979-80	De:lasson, Aksel	A Socio-Economic Study of the Hasanpur Village, Noakhali, Bangladesh, CDR Project Papers A 82.3.	1 Village of District under Chagalniyya P.S.	317	Little access to IN credit market.
22	1979-80	Rahman, H.Z.	Report from Raipur 1980. BIDS-CDR Joint Noakhali Development Study, Feni, Noakhali.	1 Village of Noakhali District under Raipur P.S.	364	Better access to IN credit market.
23	1980	Ahmed M.F.	Some Aspects of Agricultural Credit in Bangladesh Bureau Research, University of Dhaka, 1980.	Five Villages Bangladesh	68	Better access to IN credit market.
24	1981-82	Rural Finance Experimental Project, Bangladesh Bank.	Special Anthropological Survey.	4 villages of Faridpur and Jessore Districts.	420	- do-
25	1981-82	- do -	Baseline Survey II	Covering five Geographically divided regions & newly opened Bank outlets therein.	1214	-do-
26	1981-82	- do -	Survey on Non-Institutional Credit	Covering 7 villages	168	Better access to IN credit market.
27	1981-82	- do -	Borrowers Financial Survey.	Covering 39 Bank outlets under RFEP Programme.	4009	-do-
28	1981-82	-do-	Social Anthropological Survey of the Borrowers.	Covering some Bank outlets of RFEP Programme.	840	-do-

IN- Institutional sources of credit.

APPENDIX II TO ANNEX B

A SELECT BIBLIOGRAPHY ON AGRICULTURAL ECONOMICS
AND RURAL DEVELOPMENT WITH SPECIAL REFERENCE TO
BANGLADESH.

Supplement II

CARL E. PRAY AND CHITRITA B. ABDULLAH

Bangladesh Agricultural Research Council,
March, 1980.

Rural credit, investment, savings

General

ADAMS, Dale W., "Small Farmer Credit Programmes and Interest Rate Policies in Low Income Countries", Occasional Paper No.496, AERS, Ohio State University, April 28, 1978.

Bangladesh studies

ALAM, M.F. and MOMEN, M.A., "Financing Agriculture in Bangladesh - An Economic Analysis of the Credit Institutions", Bangladesh Agricultural University, Mymensingh, 1978.

ALAMGIR, M. "Financing of the Rural Poor: Experience in Group lending to Small Farmers and Landless Labourers", Planning Commission, n.d. (mineo).

BANGLADESH BANK, Research and Project Division, Agricultural Credit Department, "Area Development Project II, Rishikol-Pakri-Mohonpur (Rajshahi)", Dhaka, 1976.

BANGLADESH GOVERNMENT, Ministry of Agriculture and Forests, "Report of the Committee on Introduction of Credit Pass Book", Dhaka, December, 1978.

CHOUDHURY, Md. Omar, "Critical Rates of Interest for Institutional Lending to Agricultural Sector In Bangladesh", Paper presented at International Workshop on Providing Financial Services to the Rural Poor", Dhaka, October 1978.

CHURCH, Philip E. and ADAMS, Gary D. "Experimental Approaches to the Rural Credit in Bangladesh", Paper presented at International Workshop on Providing Financial Services to the Rural Poor, Dhaka, October 1978 (USAID).

ELLAS, S.M., "Strategies for Rural Financing", Farm Economy, Vol. 1, No. 1, Bangladesh Agricultural Economists' Association, Conference 1978.

HOSSAIN, Md. Amir, ed., "Proceedings of the Seminar on Agricultural Credit Distribution and Relization", Graduate Training Institute, Bangladesh Agricultural University, Mymensingh, September, 1979.

ISLAM, Rizwanul, "Export of Manpower from Bangladesh to the Middle East Countries: The Impact of Remittance Money on Husehold Expenditure", Draft for Discussion, NFRHRD, Dhaka, December, 1979.

QUASEM, Md. Abul et al, "Rural Credit in Bangladesh - A Case Study at Patuakhali", Farm Economy, Vol. 1, No. 1, Bangladesh Agricultural Economists Association, Conference 1978.

RAHIM, A.M.A., "Agricultural Credit Organization and Policies: An Analysis", The Journal of Social Studies, No. 2, Dhaka, 1979.

RASHID, Mohammad Haroon, "Rural Credit Market in the less Developed Countries - A Case Study of Bangladesh", Project Proposal, Boston University, July 1978 (mineo).

SOLAIMAN, M., "Loan Default by Managing Committee Members", BARD, Comilla, 1978.

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A DISCUSSION PAPER ON PLAN AND DESIGN OF
STUDY OF IMPACT OF AGRICULTURAL CREDIT

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A DISCUSSION PAPER ON PLAN AND DESIGN OF STUDY
OF
IMPACT OF AGRICULTURAL CREDIT ON RURAL FINANCIAL MARKET, AGRICULTURAL
PRODUCTIVITY, ASSETS FORMATION AND MOBILIZATION OF SAVINGS

Objective and Scope of Study

The proposed study had been conceived of at a time when institutional agricultural credit was expanding very rapidly. In 1975-76, the volume of loans disbursed by institutional agencies in Bangladesh for financing on-farm activities was mere Tk. 378.4 million; the annual disbursements increased to an impressive Tk. 2,940.3 million in 1981-82 showing a growth of 112.8 per cent annum over the six-year period. During the next two years the volume of loans disbursed to farmers rose even more spectacularly, reaching Tk. 10,086.9 million in 1983-84. The annual growth rate for this two-year period was 121.5 per cent over a vastly expanded base. For 1984-85 the target was Tk. 11,150 million, but loan disbursements were running ahead of target. For instance, for the transplanted Aman paddy (1984) the two leading banks were reported to have disbursed Tk. 290 crores against a target Tk. 160 crores.

For the size of the Bangladesh economy and its banking and credit system the additional credit provided to the agricultural sector was quite significant. For instance, outstanding agricultural loans of formal credit agencies on October 31, 1984 exceeded Tk. 20,000 million; they formed 18.2 per cent of the value of agricultural production in 1983-84. Similarly, in November, 1984, the proportion of outstanding agricultural to total bank credit was about 26 per cent.

The impact of credit delivered to the farmers in the magnitude referred to above can be expected to be significant. If the credit was productively used it could be expected to accelerate the pace of adoption of modern farm technology - improved seeds, fertilizers, irrigation equipment, etc. - leading to an increase in productivity, incomes, employment, assets formation and savings in the agricultural sector and in the deposits of rural bank branches. If credit was diverted for non-productive purposes the negative impact too could be severe. It could lead to an increased burden of debt and annual repayments on farmers, increased defaults to and the potential agencies and, increased money supply which cannot but add to the inflationary pressures on the economy, especially insofar as the unproductive defaults of the BKB running into hundreds of crores of taka were being refinanced by the Bangladesh Bank out of created money. A side-effect of the massive institutional intervention in the field of agricultural credit could be on the structure of the rural financial market, altering the relative shares of formal and non-formal credit agencies.

The scope and objectives of the proposed study had been defined against the above background and may be summed up as under:

- a) To study the extent to which credit was being used for the purpose for which it was given, together with the modus operandi of its diversion by unauthorized intermediaries.
- b) To study the inter-relationship between the use of credit and the adoption of improved technology such as use of HYV seeds, fertilizers, irrigation equipment, etc.
- c) To study the impact of adoption of improved technology on the productivity, incomes, assets formation and savings of users of credit.

- d) To study in detail the borrowing and repayments of beneficiaries of credit over a period of time, with a view to determining the pattern of indebtedness and defaults among different classes of farmers according to credit agency.
- e) To study the position of credit agencies, that is, their operational methods, the quality of their loans, mobilization of savings by them in the form of deposits, etc., and the economic viability of their retail outlets. The adequacy of savings mobilized by different agencies in relation to their actual and targetted credit activities, together with the scope and methods of augmenting their deposits, will also be studied.
- f) To study all of the foregoing aspects of the agricultural credit situation separately for the four major regions of the country with emphasis on highlighting and explaining regional variations and disparities.

Plan and Design of Study

The plan and design of the proposed study was presented in the document: A Comprehensive Long Term Cooperative Project to Strengthen Research in Agricultural Credit. It included the contents of questionnaires, covering the rural households as well as the credit agencies representing the demand and the supply side of credit, respectively. Discussion of the rationale of this plan is the subject-matter of this paper.

The study had been conceived of as having mainly three components, namely: (1) Historical Review of Evaluation of Agricultural Credit Policy and Institutions in Bangladesh; (2) Enquiry into the Credit Related Activities of Selected Rural Households representing the Demand Side of Credit and

(3) Case Studies of Retail Outlets of Credit Agencies, together with that of those of their loans, comprising the supply side of credit. The historical review did not involve any major methodological issues. This paper deals with the plan and design of the study of the rural households and the credit agencies.

I. DEMAND SIDE STUDY OF SELECTED HOUSEHOLDS

(i) Some General Considerations

1. The study of credit related activities of rural households was proposed to be carried out by means of a sample of selected households, considering that there were over 10 million rural households which could not be individually studied.
2. The study was proposed to be organized separately for each of the four divisions of the country, with identical scope, content and timing. The emphasis will be on studying inter-relationships rather than on producing statistical estimates.
3. In view of the above the sample size was not designed to yield estimates for each region or for administrative units within each region.
4. Nevertheless, a sample size which was adequate to yield reliable estimates at least for the country as a whole, by combining the regional data, was chosen because of the total absence of almost any reliable data on rural indebtedness and its distribution among different classes of cultivators according to credit agency and other related aspects, which would be of considerable interest to planners, policy-makers and research workers.

5. The minimum sample size which would yield reliable estimates for the country was ascertained first. The sample design was then worked out to ensure an even distribution of units of sampling, namely, districts, mauzas and households, among the four regions of the country.

(ii) Sample Size

Experience of the Pilot Agricultural Census, 1982

The Pilot Agricultural Census, 1982 conducted by the Bangladesh Bureau of Statistics did pioneering work in ascertaining sample size which would yield reliable estimates of economic characteristics of agricultural households.

According to the Report of the Pilot Census, the coefficients of variation, with a self-weighting sample design of about the same size as that used for the Pilot Census, would have ranged from 2.8 per cent (gross cropped area) to 6.6 per cent (total fertilized area of KVV rice), in respect of seven out of nine variables included in the questionnaire. The Pilot Census was based on a sample size of about 2060 farms, drawn from 206 mauzas in 33 unions. The Report concluded that:

"On the basis of the statistical analysis of the long questionnaire it was possible to an appropriate sampling design for the full census. First of all it was seen that a self weighting design or at least a design with a smaller range of Mauza weights would be more efficient. Secondly, many of the sample items such as "KVV rice", "Fertilized areas" and other improved agricultural practices plus items like "cottage industries" seem to be relatively highly clustered. This points to the need to concentrate on reducing "between" mauza variance as the dominant source of variation as compared to the "within" mauza variance. This would suggest that possibly about ten to fifteen sample farms on the average per mauza would be sufficient and that resources could be best spent on increasing the number of sample mauzas rather than increasing the sample size of farms within mauzas.

If a self weighting design as described is used, the sample of mauzas could be selected via the computer. Since there is a high correlation between "number of households" and "number of farms" in a mauza, the number of 1981 households per mauza could be used as an indicator of mauza size in terms of expected number of farms. Using this measure of size, mauzas could be selected with probability proportional to size and the within mauza sampling fraction could be calculated so as to make the sample self-weighting. Thus, the computer output would contain both the list of selected mauzas and the correct sampling fraction to be applied for sampling farms within each mauza".

It can be inferred from the above experience of the Pilot Census and the guidelines recommend by it that a sample of about 3,000 households, properly designed, would be adequate for the proposed study. Administratively and financially also a sample size of about 3,000 households, distributed among four regions, would be manageable.

iii) Sample Design

Type of Farming Regions

In designing the distribution of the above sample size, consideration was first given to dividing the country into type-of-farming regions. Such an exercise, it was found, would not be easy, especially in view of the changing cropping patterns of recent years. Moreover, it was noted, administrative boundaries were important in the matter of credit organization, input supply, etc. The best approach in the circumstances, it appeared, would be to adopt each of the newly formed districts as the basis for selecting the sample mauzas and households.

Districts

Out of 64 districts, four districts of the Chittagong Hills Tract, it was thought, may be excluded from the scope of the present study. It was, therefore, proposed that a sample of mauzas may be selected from each of the remaining 60 districts, thereby giving a wide geographical spread to the sample, equal representation to all the four major divisions of the country and flexibility in grouping districts later into type-of-farming regions, if desired.

Mauzas

The number of mauzas to be selected, it was decided, should be five from each of the 60 districts, that is, 300 mauzas in all for the country against 206 selected for the Pilot Census. The advice of the Pilot Census, it may be recalled, was that resources could be best spent on increasing the number of sample mauzas.

It was assumed that the selection of mauzas will be possible directly from the computer of the BBS, as no published list of mauzas according to population or number of households was yet available. The method of selection of mauzas will ensure that small, medium and big mauzas will get due representation in the sample.

Households

The selection of households raised several issues. The first was: whether or not to include non-cultivators in the sample of households; the second was: the method of stratification to be followed for selecting the households; and the third was the ratio to be adopted among different groups and classes of households in the sample selected. The overall number of households to be selected per selected mauza was not a problem. A sample size of 3,000 households would require that about 10 households be selected per mauza which would be in consonance with the advice of the Pilot Census that 10 to 15 households per mauza would be quite adequate.

There was widespread interaction between cultivators and non-cultivators, through wage-labour, money-lending, etc. in the rural areas. It was, therefore, thought that non-cultivators should be represented to an appropriate extent in the sample, for a proper study of the credit-related activities of the cultivator households. Moreover, by including non-cultivators in the sample it would be possible to cast estimates for rural Bangladesh as a whole, which may be of great value.

Available data indicated that non-cultivators accounted for about 40 per cent of the rural households. It was, therefore, thought that at least about one-third of the households in the sample should be those of non-cultivators.

The overall size of sample per selected mauza, in the above context, would be 12 or 15, depending upon whether four or five non-cultivators were included in the sample. The smaller number, namely, 12, it was thought would be quite adequate as it would result in a sample size of 3600 households for the country of which 2400 would be cultivators. The constraints of time, cost, etc., also indicated that the sample size should be kept within manageable proportions, subject to technical requirements.

Thus, it was decided to select 12 households per selected mauza of whom four would be non-cultivators and eight cultivators.

The next issue, namely, stratification of households for selecting the sample was very important because the greater the degree of stratification, the lower the degree of error in the estimates, for a given sample size. Apart from statistical considerations, stratification was very important from the point of analyzing the impact of credit on different classes of cultivators.

Cultivators were usually classified into three classes, namely, small, medium and large.

Methods

- i) The Agricultural Censuses of 1977 and 1982 (Pilot) adopted a classification based on area of operational holding including area leased in but excluding area leased out. Cultivators having operational holdings above 0.04 acres but less than 2.5 acres; those having 2.5 acres and above but less than 7.5 acres; and those with holdings above 7.5 acres were classified as small, medium and large respectively. The other methods of classifying cultivators used relative size of their holdings and not absolute size as under method (i).

- ii) All cultivators were arranged in order of size of their holding. They were then divided into equal groups, namely, small, medium and large. The cut-off points in terms of the size of holding for each class of cultivators would vary from mauza to mauza, under this method.

- iii) All cultivators were arranged in order of size of their holdings. The total area of operational holdings of all cultivators was ascertained. This total was divided by three. Cultivators were then divided into into three classes so that the total area of operational holdings of each class was the same. This method provided a self-weighting sample design in terms of area of operational holding. The cut-off point in terms of area for each class of cultivators would vary from mauza to mauza under this method also.

Under all three methods the number of cultivators in each class would vary from mauza to mauza, depending upon the total number of cultivators in a mauza, etc.

For the purpose of the proposed study, method (i) was found to be advantageous on balance. Since the Agricultural Censuses had classified cultivators according to absolute size of their operational holding for the whole country, it would be desirable for all studies of agricultural households to use the same classification to facilitate comparison. Some limitations of method (i) are referred to in the ensuing paragraph.

The main problem posed by stratification based on holding size was that of making the sample self-weighting. For instance, the distribution of small:medium:large cultivators in the country according to holding-size referred to under this method was 4: 3.3: 0.7 = 8, according to 1977 Agricultural Census and 5.4: 2.2: 0.4 = 8 according to the unweighted data of the Pilot Agricultural Census, 1982. In order to make the sample as nearly self-weighting as possible the distribution of selected cultivators in each mauza will have to be in the ratio of 4:3:1 or 5:2:1 S:M:L. However, the distribution envisaged for the proposed study was 3:3:2 S:M:L: on account of several practical considerations. Firstly, if only one large cultivator was selected per mauza any abnormality reported by him was liable to distort the average for the whole group. It was, therefore, considered advisable to select at least two large cultivators from each mauza. Secondly, giving a representation to small cultivators in the sample in proportion to their weight in the population was not considered necessary for three reasons, namely: (i) the small cultivators constituted a fairly homogeneous group and therefore, a sample of, say, three per mauza could yield

a reliable average; (ii) further, two households of agriculturral labourers were proposed to be selected from the group of non-cultivators as stated later and at least half of them were expected to be small cultivators also, the other half being landless; as a result, the weightage given to small cultivators in the sample as a whole would be quite satisfactory; and finally (iii) in determining the weightage given to each class in the sample, the area cultivated by them had also to be kept in view besides their numerical strength especially in a study of credit-related activities which are based on area of holdings. For all these reasons it was considered that three small cultivators in the sample of eight per mauza would be both adequate and appropriate.

The above pattern of selection would leave a residue of three to be selected from the class of medium cultivators (having holdings of 2.5 acres to 7.5 acres) giving them about the same representation in the sample as their weight in the population. Institutional credit, the subject matter of the proposed study, catered mainly to this class of cultivators. The above result, therefore, was considered quite satisfactory.

The proposed sample of 3:3:2 S.M.L: per mauza would not, of course be self-weighting because the actual ratio between S:M:L: was probably closer to 5:2:1. However, the sample ratio of 3:3:2 would be nearly self-weighting in terms of area cultivated by each class which was in the ratio of 2.6: 3.9: 1.5 (1977 Census) and 2.3: 3.8: 1.9 (Pilot Agricultural Census 1982, unweighted data), S:M:L.

The averages obtained for each class of cultivators for the country, after applying the mauza fraction, can be expected to be close to that of a self-weighting sample such as that under method (iii) referred to above. The sample characteristics would thus approximate to those recommended by the Pilot Agricultural Census, 1982.

Having decided to opt for holding size (method (i)) as the criterion for stratifying cultivators for the reasons referred to above, the reasons as to why methods (ii) and (iii) were not preferred may be recapitulated, namely: (a) they would not permit comparison with other studies which have generally preferred method (i); (b) they classified cultivators according to relative size of their holdings whereas planners/administrators found it convenient to identify classes based on a clear-cut absolute size of holding for the whole country; and (c) classification based on relative size would add more steps to the sampling procedure, such as: re-arrangement of households in every mauza after ascertaining their holding size in descending or ascending order, dividing them into strata, etc. In the result the sampling may have to be done at a level above that of the field-investigator which would add considerably to the time and the cost of the study.

Non-cultivators

The bulk of the non-cultivators in rural areas were agricultural labourers; about half of the agricultural labourers were landless and the rest, small cultivators whose principal source of income was wage labour. The other classes of non-cultivators comprised craftsmen or artisans and those engaged in services and trade. It was proposed to select two agricultural labour, one artisan and one other households to make up the sample of four non-cultivators to be selected per mauza.

Concluding Remarks - Plan and Design of Demand Side Study

Some Clarifications:

i) Why not select only borrowing households?

Although the subject-matter of the proposed study was impact of agricultural credit, it would not be possible to study or measure this impact except by comparing the level of inputs, cropping patterns, yields, etc. of those who availed of credit for financing agricultural production with those who did not. The sampling method proposed was expected to give due representation to borrowers and non-borrowers in proportion to their actual distribution among rural households.

ii) Why not select households at random and then stratify them?

Mainly for two reasons, first, the sampling procedure would more complicated than under the method proposed here with concomitant implications on time and cost of study. Second, the sample size of cultivator households per mauza being small at eight only, due representation to all three classes in proportion to their actual distribution may not be obtained for units smaller than country, that is, for regions and districts. The method proposed here therefore was preferred, especially because it would also be nearly self-weighting and the quality of estimates it would yield would be comparable to those of a completely self-weighting sample.

iii) Why not select households from 300 Unions
instead of 300 Mauzas?

The time and cost of listing about 3000 households per Union for selecting 12 households would be much greater than that for listing about 200 households per mauza.

The contents of the questionnaires and the analysis of data based on them would form the subject matter of a separate paper. The discussion of the demand side of the proposed study in this paper was, therefore, confined to its plan and design.

II. SUPPLY SIDE STUDY OF CREDIT AGENCIES

The rural financial market seemed to have undergone a radical change as a result of the massive intervention by the formal (or institutional) credit agencies over the past few years. The informal credit agencies comprising the professional moneylenders as well as relatives, friends, etc. were dominant in this market since time immemorial. They now probably accounted for a much smaller proportion of the credit provided in it than before. The proposed demand side study of rural households would throw more light on this aspect not only for the country as a whole but also in different parts of the country and in different situations. For instance, a recent study indicated that informal credit played a greater role in the more distant and inaccessible villages than in those which had reached a high degree of monetization and commercialization on account of their proximity and accessibility to centres of trade, finance, etc.

Recent studies also showed that whereas a part of informal credit was interest-free, the bulk of it carried high rates of interest as compared to those payable under formal credit. The two types of credit, formal and informal, catered to different types of needs. The informal credit continued to be confined to emergency loans for unavoidable expenditure, either or current consumption or on ceremonial occasions such as marriages, medical treatment, education, etc. Formal credit was available, at least formally, only for financing expenditure on consumption or purchase of durable consumer goods, it was not in quantities large enough to bring down substantially the interest rates charged in the informal credit sector. However, the inter-action between the formal and the informal rural financial markets was an aspect on which the proposed study may be expected to throw more light.

To sum up, the most important feature of the current state of the rural financial market seemed to be its enormous expansion resulting from infusion of vast quantities of credit by the formal agencies. Substantial progress was made in recent years in expending the flow of credit to agriculture.

Against the above background the issues, as viewed from the supply side of credit, were:

- i) the quality and the realizability of the loans made by formal credit agencies in the recent phase of rapid expansion;
- ii) the methods of financing, or the sources of funds used by, the formal credit agencies for expanding their agricultural credit operations;
- iii) the ability of the formal credit agencies, or the prospects of their being able, to sustain the expanded flow of credit to agriculture without depending unduly on the Bangladesh Bank, etc., that is, their existing and potential ability to mobilize savings in the form of deposits and to use them for lending to agriculture.

Quality and Realizability of Loans

A study of the quality and realizability of loans of institutional agencies involved a study of the loan policy, procedure and documentation adopted by each agency and actually applied at the field level, together with a study of individual loan cases. The number of retail outlets of institutional agencies and of the loans made by them was so large, and the nature of the proposed enquiry into them was so complex, that such a study had to be in the nature of case studies of selected outlets of credit agencies and of their loans. A study based on a statistically adequate sample size which would permit estimates for the whole country was not practicable as there were nearly 3,200 rural branches of banks besides several thousands of cooperatives which together had nearly 40 to 50 lakhs of outstanding loan cases.

It was, therefore, thought that even if about 50 retail outlets of institutional credit agencies could be studied in depth, including about 10 loan cases per selected outlet, a great deal of light can be thrown on the quality and the realizability of loans of institutional agencies. Simultaneously, it was thought that a few outlets of informal credit agencies represented by professional, private moneylenders and others, should also be selected and studied to facilitate a comparison between the modus operandi of formal and informal credit agencies.

The study of sources of funds of credit agencies, their capacity to mobilize savings in the form of deposits and to use the savings so mobilized for financing agriculture, involved macro as well as micro studies. The overall position in regard to sources and uses of funds at the national level was already known generally in respect of each institutional agency engaged in financing agriculture, although there were some gaps in the available information. The rationale of the specific issues proposed to be studied is referred to in the ensuing paragraphs.

Viability of Retail Credit Outlets

The rural branches of banks numbering 3199 were clustered in about 1,000 centres, each centre serving about 85 villages or about 10,000 rural families. It was not possible for these branches to establish a banker-customer relationship with thousand of cultivators in the area of each of them. Union Agricultural Credit Committees (UACCs) had been set up for identifying individual borrowers and recommending loans for them. Under this system, unauthorized diversion of loans and other malpractices had been reported. It would appear that the UACC was not a satisfactory substitute for a bank branch. These were about 2,000 rural households and 1,500 farm families at the union level.

A union-level bank branch was unthinkable five years ago when an average rural bank branch commanded a loan business of only about Tk. 15 lakhs each whereas a loan business of about Tk. 30 lakhs to 40 lakhs was needed for economic viability. In 1984, the average loan business commanded by a rural bank branch per union exceeded Tk. 45 lakhs. It would, therefore,

appear that the expanded credit operations of rural branches of banks held out the prospects of making them viable at the union-level.

In view of the above, a study of the viability of existing bank branches and that of the scope for taking down these branches closer to the borrowers formed an essential part of the proposed supply side study, in addition to the study of loan policy, procedure and documentation.

Mobilization of Savings and Using them for Lending to Farmers:

The financial reform plans advocated by many donor agencies accorded high priority to the mobilization of savings by credit agencies for lending to agriculture, as a sin qua non for non-inflationary expansion in agricultural credit. The policy and the approach, stated in general terms, was unexceptionable. It emphasized increased efforts:

- (1) to mobilize rural savings;
- (2) to provide a safe and convenient way to hold funds;
- (3) to streamline promotion strategies and innovate savings campaigns;
- (4) to review savings restrictions; and
- (5) to intensify institutional advertising.

The above prescription could be applied to any developing country. Unfortunately, it ignored the obstacles in the way of applying it under the Bangladesh situation. These were formidable. The prescription, therefore, was in danger of being reduced to a platitude or an earnest of good intentions,

unless the obstacles were cleared first. A study of these obstacles and of ways in which they could be overcome, therefore, had been incorporated in the plan and design of the supply side study. The obstacles limited the scope for mobilizing rural savings and of utilizing them for financing agriculture, as illustrated below:

Five commercial banks, through their network of 1501 rural branches, had mobilized deposits of Tk. 658.71 crores on June 30, 1984; however, they utilized only 288.90 crores (43.86 per cent of these deposits) for financing agriculture. At the same time, they had borrowed Tk. 119.08 crores from the Bangladesh Bank for financing agriculture, while they had diverted a major portion of the deposits of their rural branches for financing trade, etc. The phenomenon was explained by the fact that the opportunity cost of lending to agriculture was high characterized by a large number of small loans, high cost of administering them and high cost of bad debts, as compared to large loans against readily marketable security to trade, etc. Thus the savings mobilized as deposits even in rural areas tended to gravitate towards financing of trade. Of late, the situation was taking a favourable turn for agriculture because the banks were flush with funds and there was a recession in trade. However, this could be a passing phenomenon. The relatively high opportunity cost of lending to agriculture was a long-term, structural problem. Unless ways were found to reduce this cost, advice to banks to increase efforts to mobilize more rural savings may not lead to financing of agriculture on a self-sustaining basis.

To sum up, the key issue facing the commercial banks was that of the high opportunity cost of lending to agriculture. If they were to be enthused to mobilize rural savings and then to use them for financing agriculture, ways had to be found to reduce this cost. The proposed study of the supply side of credit had taken due note of this issue.

The second type of difficulty was that of mobilizing rural savings itself and was illustrated by the BKB and the cooperatives. They were specialized rather than general banking institutions, although the BKB provided wider banking and credit facilities than the cooperatives. For instance, the average deposits of the six commercial banks amounted to Tk. 47.03 lakhs per rural branch on 30 June, 1984 whereas those of the rural branches of the BKB (for which precise data were not available) were estimated at only 20% of those of the commercial banks. Moreover, the bulk of the deposits mobilized by the BKB had been diverted by it to finance commercial enterprises whereas it depended almost entirely on refinance from Bangladesh Bank for financing farmers.

To sum up, the specialized credit agencies like the BKB, Cooperatives, etc., were at a double disadvantage. First, they were not in a position to attract as much rural savings as the commercial banks. Second, deposits mobilized by them were prone to be diverted to finance commercial enterprises, because of the high opportunity cost of lending to agriculture.

Conventional advice to the BKB to increase efforts to mobilize rural savings was not likely to succeed in making it self reliant in the matter of resources because of the

limitations placed on it by its specialized character; and to the extent that it succeeded, the additional savings mobilized by it were prone to be diverted to finance commercial enterprises rather than farmers.

The handicaps on mobilization of savings and on their use for financing agriculture, imposed by the high opportunity cost of lending to agriculture and by the specialized character of some of the credit agencies, may be overcome altogether in the foreseeable future. This fact or limitation had to be recognized so that a realistic goal can be set for the formal credit system in the matter of mobilizing resources and using them for financing agriculture. At the same time, ways had to be found to mitigate the rigour of operation of these handicaps. For instance if the branches of banks, both commercial and the specialized, penetrated deep in the rural areas, these handicaps may be considerably reduced for two reasons. First, in the interior, the opportunities for financing trade, etc., would be limited as compared to those near the urban centres. Second, instead of many branches operating at the same centre the specialized agencies would stand a better chance of mobilizing rural savings than at present, if they opened branches at the union level.

These were the issues which deserved close study on the supply side of credit in relation to mobilization of rural savings and utilizing them for lending to agriculture. The plan and design of the proposed study encompassed these issues. The performance of some of the existing bank branches in the interior will be a valuable guide in indicating whether or not they could mobilize adequate deposits and

use them for financing agriculture. The factors influencing the performance of different types of branches in the matter of savings mobilization and their utilization can be expected to give some clues as regards the strategy to overcome these handicaps.

Concluding Remarks: Supply Side Study of Credit Agencies

The study will be confined to a few selected outlets of credit agencies so, however, that all agencies and all significant types of outlets were covered. The quality and realizability of loans made by these outlets will be studied, together with the economic viability of the outlets, their savings mobilization efforts and the potential in this regard.

The study will be carried out by a few skilled, trained professionals. The study will be based on guidelines and not on pre-set questionnaires. Each credit agency will be studied separately.

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A FRAME-WORK FOR ANALYSIS
OF
DATA COLLECTED UNDER THE PROPOSED STUDY OF IMPACT OF AGRICULTURAL CREDIT
ON
RURAL FINANCIAL MARKET, AGRICULTURAL PRODUCTIVITY, ASSETS FORMATION AND
MOBILIZATION OF SAVINGS

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FRAME-WORK FOR ANALYSIS OF DATA COLLECTED UNDER THE PROPOSED STUDY OF
IMPACT OF AGRICULTURAL CREDIT ON RURAL FINANCIAL MARKET, AGRICULTURAL
PRODUCTIVITY, ASSETS FORMATION AND MOBILIZATION OF SAVINGS.

Introduction:

The scope of analysis of the vast mass of data collected under the proposed study from rural households and credit agencies would be practically unlimited. However, an attempt was made to define this scope for the purpose of the main reports of the study, in the light of the objectives of the study and the limitations of time and cost, to facilitate the preparation of a scheme of tabulating the data. The nature of the data collected may itself indicate the need for pursuing types of analyses not envisaged at this stage. The frame-work presented below was, therefore, a tentative one.

1. FRAME-WORK FOR ANALYSIS OF DATA COLLECTED FROM RURAL HOUSEHOLDS
COMPRISING THE DEMAND SIDE OF CREDIT.

The Overall Approach

An extensive field study was proposed to be conducted on the demand side of credit by canvassing two questionnaires among 3600 selected rural households in 300 selected mauzas spread over 60 districts. An additional questionnaire will be canvassed among all the households of the 300 selected mauzas for the purpose of selecting 12 households from each mauza, 8 of whom will be cultivators and 4 non-cultivators. The cultivators of each mauza will be stratified into three groups, namely, the small, the medium and the large based on holding size and from these groups 3, 3 and 2 cultivators, respectively, will be selected for intensive investigation. The non-cultivators also will be classified into three occupational groups, namely, the agricultural labourers, the artisans and others, and 2:1:1 non-cultivators will be selected from these three groups, respectively. Two questionnaires will be canvassed among the selected rural households, namely: 1 - Receipts and Expenditure During the Year of Study; and 2 - Assets and Liabilities at the Beginning and at the End of the Year of Study. The

first questionnaire will be canvassed twice, namely, at the end of the first and the second six-month period comprising the year of the study. The second questionnaire will also be canvassed twice, namely, immediately after the beginning and the end of the year of study.

The data to be collected from the rural households through the field-study may be conceived of as falling in three broad categories for the purpose of constructing an analytical frame-work in the light of the objectives of the study. These were: 1. Credit Transactions. 2. Impact of Credit on Farm Operations. 3. Impact of Credit on Assets Formation and Savings.

1. Credit Transactions, comprised borrowings and repayment during a period which would modify debt, if any, outstanding at the beginning of the period. The starting point of analysis, therefore, will be the outstanding debt of rural households at the beginning of the year of study.
2. Impact of Credit on Current Farm Operations, especially the extent of adoption of modern farm technology by users and non-users of credit, the results in terms of production and income, etc. A wealth of data on the characteristics of farm businesses and on some general features of the rural economy, which will become available from the study, will be analyzed in detail as indicated in the ensuing paragraphs.
3. Impact of Credit on Assets Formation and Savings, comprised the third major area of the proposed analytical frame-work. The size and pattern of assets of rural families, gross and net capital formation, and net investment/disinvestment by rural households over the year of study, pattern of savings, and rural-urban flow of funds on capital account, are some of the indicators of the economic health or well-being of the rural households which will be analyzed, with particular reference to the role of credit.

A detailed analytical frame-work for the demand side of credit is presented below, in the form of a synopsis of the report of the study,

divided into sixteen chapters with appropriate headings.

A. GENERAL FEATURES OF INDEBTEDNESS, BORROWING AND REPAYMENT..

Chapter 1: Outstanding Debt: (At beginning and end of year of study)

a) Total Amount: (Principal and Interest): Its distribution according to:

- Credit Agency
- Security
- Rate of Interest
- Age

for different classes of cultivators/non-cultivators.

National estimates with regional variations; unweighted data will be presented for each of the 60 districts.

The study will reveal characteristics of rural indebtedness about which very little was known at present. The overall volume of debt of rural households and its distribution among different classes of cultivators and non-cultivators, according to the credit agencies to which it was owed; according to its age which will indicate as to how far the debt had become an immobile burden; according to its cost to the households as reflected in the rates of interest at which the debt was contracted; and, finally according to the nature of security against which it was contracted, were some of the features of rural indebtedness which will be brought out by the study, for the country as a whole as well as for different regions of the country. The data will serve as a bench-mark for reference for future studies, apart from being of interest and significance in themselves.

b) Incidence of Debt:

- Per Household
- Per Indebted Household
- Per Acre
- Per Cent of Value of Owned Land
- Per Cent of Value of All Assets.

The analysis will bring out the incidence of rural indebtedness in the country among different classes of cultivators/non-cultivators according to credit agency, age, etc.

The analysis will also bring out the change in the volume and incidence of indebtedness of rural households over the year covered by the study.

Chapter 2: Defaults: (At beginning and end of year of study)

Defaults constituted a part of outstanding debt. The extent and distribution of defaults among different classes of cultivators, the share of principal and interest in them, etc., will be analyzed on the same lines as outstanding debt. The incidence of defaults in relation to demand during the year will be analyzed in a separate chapter on repayments during the year of study.

Chapter 3: Borrowings During the Year:

An analysis of volume and incidence of borrowings by rural households during the twelve month period covered by the study will be on the same lines as for outstanding debt. In addition, the purpose/period of borrowing will also be analyzed according to credit agency for different classes of cultivators/non-cultivators.

The analysis will try to bring out the extent to which the same individual borrowed from more than one agency; whether defaulters borrowed from different agencies; whether different members of the same household borrowed to circumvent disqualification, etc.

Chapter 4: Repayments During the Year:

The questionnaire will elicit information about the amount fallen due for repayment during the year of study as well as the amount repaid during the year, in respect of each loan, separately for principal and interest. Thus, repayment would be assessed in relation to demand during the year. The performance of different classes of cultivators in this regard will be analyzed according to credit agency, and according to purpose/period of loan.

In the case of borrowers who had contracted more than one loan, an attempt would be made to study the priorities assigned by them in repaying loans according to credit agency, and as between new and old (overdue) loans.

The data on repayment will also be analyzed in terms of the overall burden of debt-servicing, separately for principal and interest, carried by different classes of cultivators/non-cultivators in relation to their income. Analysis would indicate as to how far the debt-servicing burden was within the repaying capacity of borrowers of different classes. The realizability of loans will be assessed with reference to the assets or the value of security offered by the borrowers.

Conceptual Issues: The collection and analysis of data on repayments raised certain conceptual issues. For instance, in order to assess the demand in respect of each loan contracted, the amount outstanding at the beginning of the year of study will have to be correctly assessed, separately in respect of principal and interest, together with the method of calculating interest adopted by the credit agency. Further, the concept of repaying capacity will have to be defined. For instance, if the incremental income resulting from the use of credit was taken as a measure of repaying capacity, the concept of incremental income itself will have to be defined for different types of loans such as those for working capital, replacement of or acquisition of new productive assets, etc.

As regards loans for consumption, which did not generate any additional income, repaying capacity will have to be related to the overall income of the household. The foregoing difficulties notwithstanding, useful light would be thrown on debt-servicing burden carried by rural households of different categories.

Chapter 5: Proportion of Households Involved in Credit Transactions:

The analysis of data on the amount of indebtedness, borrowings, repayment and defaults, for different categories of households according to credit agency, will be supplemented by data relating to the proportion of households involved. For instance, what proportion of households were indebted to and borrowed from formal and informal credit agencies, what proportion of families defaulted among different classes of cultivators, and so on.

Chapter 6: Regional Variations:

The analysis of data on the credit situation, on the lines indicated above, will be pursued in some detail to highlight regional variations, with reference to national averages. An attempt will be made to explain the variations.

Chapter 7: Credit Requirements:

The analysis of the credit situation will conclude with an assessment of credit requirements of rural households, as perceived by them, not only in terms of amount but also, will reference to the purpose for which credit was needed, the rate of interest which they were prepared to pay and the proportion of households of different categories indicating their credit needs of different types.

B. IMPACT OF CREDIT ON CURRENT FARM OPERATIONS

Chapter 8: Impact of Credit on Adoption of Modern Technology:

The selected households will be classified according to the amounts borrowed by them during the year of study per acre (say, nil, Tk. 1-100,

Tk. 101-200, and so on). The average amount borrowed per acre for different purposes, by each group of borrower, will be worked out.

The expenditure per acre actually incurred for different purposes by each group for different purposes,

will be juxtaposed against the average amount borrowed per acre for the same purpose. The degree of co-relation between borrowing and the adoption of modern technology will be assessed on the basis of the above comparison. The analysis will be done separately for different classes of cultivators.

Tables showing frequency distribution of households according to expenditure incurred on technological inputs will be constructed as under:

Distribution of Number of Households According to Size of Borrowing and Expenditure on HYV Seeds, Fertilizers, Pesticides and Irrigation Equipment Per Acre.

Amount Borrowed Per Acre for HYV Seeds, Fertilizers, Pesticides and Irrigation Equipment.	Average Expenditure Incurred by the Group Per Acre on HYV Seeds, Fertilizers, Pesticides and Irrigation Equipment.	(Amount in Taka)					
		Less than	51-100	101-200	201-300	301-400 more than 1,000.
Amount	Proportion of Households Borrowing for above purposes to total Households.						
Nil							
1-100							
101-200							
201-300							
.....							
more than 1,000							

The foregoing analyses should bring out fairly clearly the degree of co-relation between credit and use of improved technology.

The degree of co-relation observed may be diluted by the fact that a portion of borrowings may be intercepted by intermediaries and not actually received by the borrowers. Thus, if the data showed a significant relationship between borrowings and the use of improved technology despite the above leakage, the degree of correlation can be expected to increase in future, in proportion to the ability of the credit system to plug the leakages.

Chapter 9: Impact of Use of Improved Technology on Farm Production:

Input/Output ratio will be worked out for each crop, indicating the Value of All Inputs as proportion of the Value of Gross Produce. Cultivator households will be grouped according to combined expenditure per acre on HYV Seeds, Fertilizers, Pesticides and Irrigation Equipment, say nil, less than 100, 101 to 200, 201 to 300 and so on. The average input/output ratio and the value of gross produce per acre will be presented for each group (based on the intensity of use of modern technology). The data will indicate, broadly, the degree of co-relation between use of improved technology and agricultural production, rate of return on investment, etc.

Chapter 10: Economic Analysis of Farm Businesses:

The data on expenditure and receipts during a twelve-month period, according to crop, will throw light on many aspects of the farm business in which the credit agencies would be interested. They comprised, among others:

- Quantity and Value of Gross Produce Per Acre, According to Crop.
- Net Income Per Acre, According to Crop.
- Proportion of Gross Produce Sold, that is, Marketable Surplus, indicative of the Degree of Commercialization of the Farm Business.
- Proportion of Expenditure on the Farm Business in Cash and in Kind, indicative of the Degree of Monetization of the Farm Business.
- Cash flow of the Selected Households over a Twelve-Month Period, Excluding Expenditure on day to day Family Living, according to Month.

- Crop Rotations or Cropping Systems actually adopted by Farmers in different Regions;
- Area actually Irrigated by Shallow Tubewells;
- Dosage of Fertilizer, etc., actually applied by Farmers, according to crop;

The foregoing data would be available for different classes of cultivators and for different regions.

National estimates in respect of the foregoing economic indicators would also be possible in view of the size of the sample selected. Further, it would be possible to assess the degree of monetization and commercialization of the agricultural economy, according to district, which can be a valuable bench-mark for economic planning especially for development of roads, tele-communications, bank branches, etc.

Chapter 11: Analysis of Some General Features Rural Economy:

Several important features of the rural economy having a bearing on credit will be revealed through the study. These included:

- The prevailing scales of value of agricultural land per acre in different parts of the country;
- The extent to which land was mortgaged out with possession;
- The extent of tenancy of different types;
- The amounts paid out and received by rural households in the form of rent per acre in cash and kind, according to region or district.
- The amounts paid out and received in the form of wages to agricultural labour, per day in cash and in kind;
- The annual income and general economic condition of agricultural labourers, both landless and those with land, as well as of other categories of rural families.
- The amounts received by rural families in the form of remittances from outside.
- The amounts paid out and received in the form of interest, in cash and in kind.

- The data on factor payments, namely, rent, wages, interest and net income (profit), would permit estimates of national income (GDP) originating in rural areas, per capita as well as total, which could serve as a bench-mark to measure the growth of the rural economy over a period of time .

C. ASSETS FORMATION AND SAVINGS

Chapter 12: Size and Pattern of Distribution of Assets of Rural Households:

The study would elicit information from the selected households as regards the value of all types of physical and financial assets, other than current assets (stocks), held by them at the beginning and at the end of the year. Data on stocks of consumable commodities such as harvested crops, food, fodder, clothes, building materials, cash, etc. would not be collected, because of inherent difficulties in eliciting reliable information in regard to them. The increase or decrease in the assets of rural households due to a change, over the year of study, in the value of stocks of consumable commodities held by them would not be reflected in our data. Subject to this limitation, it is proposed to analyze the data on assets to bring out:

- Gross tangible wealth of rural households of Bangladesh and its distribution among different classes of cultivators/non-cultivators as well as among different regions of the country.
- The pattern of distribution of assets of different classes of rural households, cultivators and non-cultivators, among items such as land, livestock, machinery and implements, residential and farm houses, gold and jewellery, financial investments such as bank deposits, etc.
- The relationship between (non-current) assets and liabilities (mainly debt) of rural households, according to categories. (An estimate of Net tangible wealth of rural households in Bangladesh cannot be arrived at as the difference

between their (non-current) assets and liabilities. For instance, the liabilities of rural households to other rural households would not represent a charge on their assets. Only their liabilities to the urban sector would need to be excluded from their assets in order to arrive at an estimate of the net tangible wealth of rural households. However, a classification of liabilities according to the sector to which they were owed, rural or urban, would be difficult).

- Rate of Assets Formation Over the Year of Study, among Different Classes, for Country and according to Region.
- Pattern of Distribution of Increase/Decrease in Assets, that is, of Investment/Disinvestment over the Year according to type of asset.

Chapter 13: Capital Formation in Agriculture-Gross and Net:

The study will elicit information on expenditure incurred by rural households on acquisition of capital assets for the farm business, including that on repairs and maintenance of such assets. The data would thus yield estimates of gross and net capital expenditure in agriculture.

In arriving at estimates of capital formation in agriculture, certain adjustments would have to be made in the data on capital expenditure. The concept of capital formation and its measurement may be referred to in this context.

The following quotation from a U.N. Paper¹ makes clear how capital formation might be measured:

"Capital formation may be measured at any of several stages in the process, e.g., the accumulation of funds, expenditure of the funds or the production of capital goods....

"Fixed capital formation of enterprises is defined as the expenditures for machinery, equipment, buildings, and other construction and works.... Measured in this fashion capital formation is related to

1. Concepts and Definitions of Capital Formation, Statistical Office of the UNITED Nations, July, 1953.

increases in productive capacity of enterprises as defined, in general, by their accounting classification of expenditures between capital and current accounts...."

In the enterprise sector, fixed capital formation has been divided into four categories by U.N. Paper cited.¹ Accordingly, in our study detailed information would be collected on individual items of capital expenditure leading to fixed capital formation in agriculture as under: (i) farm houses, cattle-sheds, etc.; (ii) land development such as bunding, levelling and laying out field-channels; (iii) transport equipment such as carts, trailers, trucks, etc.; and (iv) pump-sets, power-tillers, tractors, paddy-husking machines, threshers, other farm machinery, indigenous implements, etc., corresponding to the four categories suggested in the UN Paper.

The adjustments to be made in the data on capital investment expenditure in agriculture, in order to arrive at estimates of capital formation in agriculture, would be as under:

- First, expenditure on the purchase of land and livestock will have to be excluded in arriving at an estimate of net capital formation in agriculture, as such expenditure did not create any new asset; it merely represented transfer of assets among rural households.

- Second, the sum total of expenditure on the items leading to fixed capital formation in agriculture, excluding that on their repairs and maintenance, would represent only gross and not net capital formation inasmuch as depreciation of assets over the year would not be deducted. Consequently, the data on expenditure can be used only for indicating gross capital formation in agriculture.

- Third, net fixed capital formation in agriculture would be reflected in the increase in the value of assets (representing such fixed capital) over the year of the study. The requisite data would be available from the study, which would elicit information on the value of all assets owned by the selected rural households excluding stocks of consumable commodities, at the beginning and at the end of

1. These are: non-residential buildings, other construction and works, transport equipment, and machinery and other equipment.

the year in terms of their estimated market value. Thus, depreciation as well as price changes would get reflected in the change in the value of owned assets over the year of study.

Apart from casting estimates for gross and net fixed capital formation in agriculture for the country during the year of study, capital formation among different classes of cultivators and in different regions will also be analyzed. The share of different items comprising such capital formation will be brought out to indicate the directions in which capital formation in agriculture was taking place.

Chapter 14: Savings

The concept of savings was much more difficult to define and measure than the concept of capital formation. The only way to measure savings of a household, as distinct from a business enterprise, was to have estimates of its total receipts and its total expenditure on current consumption account. The difference between the two would represent savings of the household and these savings may either be utilized directly for capital formation by the household or be lent by it to others for current consumption or capital uses.

It would not, however, be practicable to elicit information on the total expenditure of selected rural households on current consumption with any degree of accuracy unless such expenditure was recorded at frequent intervals of, say, a week or a fortnight or even a month. However, under the proposed study, expenditure will be recorded only twice, each covering a six-month period, in order to keep down the cost of study, the time required for checking and processing of data, etc. Consequently, only large or standardized items of expenditure which can be remembered readily after a six-month period would be recorded. Current consumption expenditure on day to day living would not be recorded.

Further, it was obviously not possible by a mere itemization of certain expenditures to arrive at a measure of savings. The capital formation account also cannot throw any light on the extent of savings

of any particular class or group of individuals. Capital formation by any set of individuals need not necessarily result through the savings of those individuals. Capital formation by any individual or group may be financed by the individual's or group's own savings or by borrowings from others or by subsidies or other types of transfers.

Thus on the side of savings, all that can be done is to indicate the volume of owned resources of households which were available for use in given directions. These directions may be either capital formation in farm or non-farm business or in the household sector such as in residential buildings, or they may represent lendings to others either by way of financial investment such as buying a security or share, or making a deposit, or by direct lending of funds to borrowers, or again they may represent repayment of old debts. The compilation of totals of funds used in these different directions would indicate resources which were not used by the householder for his own current production or consumption needs. They would, of course, not be net savings because there would be no indication as to whether the particular use of owned resources in these directions was not compensated for by acts of borrowing or disinvestment for current production and consumption purposes.

Definition of Gross Savings:

As it would not be possible for us to arrive at any idea of net savings and not even possible to indicate any pattern of use of net savings, the only way in which we can use the data of the study for throwing some light on the pattern of savings would be to work on a gross savings concept. Gross savings may be defined as the owned resources used for expenditure on direct capital formation, on acquisition of a capital asset, or for lending or for repayment of old debts. Within such a definition, total gross savings could be computed and the pattern of use of gross savings could be indicated. Obviously, in considering gross savings, the reasoning which led us to omit some types of capital expenditure from capital formation would not hold good. For example, in the computation of gross savings, expenditure on purchase of land would be taken into account;

for, we are in this case working on the basis of an individual's use of his own resources on current production or consumption account. Similarly, the expenditure on livestock purchase may equally be included in the gross savings account.

To sum up, using the data on deployment of owned resources by selected households for purposes other than current consumption or working capital, the study would attempt to bring out the pattern of savings of rural households. The data used would differ from those on the pattern of distribution of assets of rural households. The assets would represent cumulative expenditure incurred over a period of years from owned resources or from borrowed funds whereas the data referred to above would indicate expenditure incurred during a twelve-month period out of owned resources in specified directions. The difference between the two patterns, however, would bring out the changing preferences of, or opportunities available to, rural households in the matter of deploying their surplus funds.

Chapter 15: Net Investment/Disinvestment Over the Year Covered by the Study.

The data collected under the study would enable us to measure the change in the value of assets owned and liabilities owed by each rural family selected for study, leaving aside changes in the value of stocks of commodities or in the amount held as cash. Thus, the data would indicate whether a family's net worth improved or deteriorated over the year, subject to the limitation that changes in inventories and cash balances would not be reflected in our data. Normally, inventories and cash balances would be depleted if the year was an adverse one and augmented in a good year. It should, therefore, be possible for us to indicate the direction in which adjustments would be needed on account of omission of data on stocks, depending upon the character of agricultural year in different parts of the country. Thus, it would be possible on the whole to indicate with the help of the data collected under the study, whether

or not the economic condition of different classes of rural households in different regions of the country improved or deteriorated over the year of the study. The data would also enable us to indicate the type of assets/liabilities which were mainly responsible for changes in net worth observed, and the extent to which the changes were in physical quantities or in valuation due to price variation.

Purpose of Disinvestment and Sale of Assets

One of the sources from which cash would accrue to rural households during the year of the study would be liquidation of their financial investments and/or sale of their physical assets. The transactions representing such disinvestment or sale could have significance according to the nature and purpose of each transaction, which would be recorded in our study. At one extreme such transactions may represent a process of pauperization of the households as, for instance, when mortgaged land was foreclosed by the creditor due to the inability of the borrower to service the debt; or, when land or other assets were sold or disinvested for meeting current consumption needs particularly in the wake of large-scale natural calamities such as floods. At the other extreme, sale or disinvestment may represent a normal process of encashment of a matured investment as, for instance, withdrawal of fixed deposit on maturity, or sale of livestock raised by the borrower for commercial purposes. In either case, a study of transactions involving disinvestment of financial assets and/or sale of physical assets would throw light on the dynamics of the rural economic activities, especially those related to credit.

It should be noted that when a household is forced to disinvest or sell its assets for meeting current expenditure it is a reflection on the credit-worthiness of the household, inasmuch as it would not normally dispose of its assets for meeting current expenditure if it could raise a loan for the purpose. The study would thus reveal the proportion and type of households which found themselves non-creditworthy and, therefore, were compelled to part with their assets for survival. The data could be

of significance in considering ways and means of providing credit to, and thereby preventing the process of pauperization of, the most vulnerable sections of rural society.

Families which reported sale of assets under duress alongside a deterioration in their net worth, measured as indicated in an earlier paragraph, could be marked as the worst affected by the economic developments of the year. The classes and regions to which such families belonged would be identified in our study, thus revealing the extent and distribution of the most vulnerable areas and classes in rural Bangladesh.

Data on sale of surplus livestock raised for commercial purposes would indicate the proportion and the type of households engaged in raising livestock, together with the number of livestock offered by them for sale on the market. The significance of these data would go beyond illuminating the character of the country's livestock economy. The data on livestock sold can be directly compared with those on the volume of credit disbursed by institutional agencies for the purchase of livestock. Obviously, if the credit volume exceeded the value of livestock offered for sale by producers, a presumption that the credit was not being used for the intended purpose would arise. Considering all these aspects, our study would analyze in some detail the transactions of rural households involving disinvestment or sale of assets.

Chapter 16: Rural-Urban Flow of Funds.

The data collected under the study would reveal capital flows from rural households to urban areas and from urban areas to rural households. However, capital flows from urban into rural areas outside the household sector, such as those on account of direct investment by government in the rural areas, would not be reflected in the data collected under the study.

Lending to rural households by institutional agencies and remittances received by rural households from outside would represent,

in the main, capital flows from urban areas to rural households. The reverse flows of capital from the rural households to urban areas would be represented by deposits of rural households with bank branches and post offices and investments by rural households in financial securities such as government bonds, insurance premia, etc.

The net flow of capital into or out of the rural household sector, as revealed by the data that would be collected under the study, and the regional variations in the rural-urban flow of funds, would be of considerable significance. They would indicate the extent to which the rural households were net borrowers from or net lenders to urban areas, for the country as a whole as well as for different regions of country. The data would be useful in planning savings mobilization efforts in the rural areas.

Concluding Remarks:

It is proposed to bring out a separate Report on the Demand Side of Agricultural Credit represented by the Rural Households selected for the study. A separate Report on Credit Agencies, representing the Supply Side of credit will also be prepared, based on the data collected from selected outlets of such agencies and a case-study of their loans. The main findings and conclusions of the study will be presented in these two Reports. The recommendations of the study, based on these two Reports and all other relevant factors, will be contained in a comprehensive but brief General Report on the study. A Technical Report containing detailed Statistical Tables and explaining the methodology and conduct of the study will also be presented.

The analytical frame-work for the data collected from the Credit Agencies representing the Supply Side of Credit is outlined in Section 11 which follows.

II. FRAME-WORK FOR ANALYSIS OF DATA COLLECTED FROM CREDIT
AGENCIES COMPRISING THE SUPPLY SIDE OF CREDIT.

Introduction:

The main objectives of our study of agencies supplying credit to farmers and other rural households were: (1) to analyze the operational features of each agency including their legal and policy frame-work for financing rural households, their organizational pattern including the distribution of their retail credit outlets, their loan policies and procedures and, the nature of the relationship with their clientele; (2) to assess the financial viability of their retail credit outlets as well as of their overall operations, as judged by three criteria, namely, profitability, liquidity and realizability of their loans; and (3) to examine their role in mobilizing savings encompassing their performance, efforts, potential and problems in this field.

The historical, institutional and legal basis for each agency had its own distinctive characteristics. The general features and importance of different agencies, therefore, will be reviewed at the outset. This review will be followed by an in-depth analysis of the performance of each agency in the three major areas referred to above which defined the scope and objectives of our study.

The following credit agencies would be covered by our study:

Formal or Institutional:

1. B.K.B.
2. Commercial Banks.
3. BRDB Cooperatives.
4. BSBL Cooperatives.
5. Garmeen Bank.
6. Other Institutional Agencies/Projects.
7. Government (direct lending to farmers).

Informal or Private:

1. Professional moneylenders.
2. Traders-cum-moneylenders.
3. Landlords-cum-moneylenders.
4. Relatives, etc.

Refinance Agencies:

1. Bangladesh Bank.
2. Government (indirect lending or financing)
3. International agencies.

The detailed analytical frame-work proposed is set out below.

Chapter 1: Relative Importance of Different Credit Agencies:

In order to provide a background to the in-depth study of each credit agency with particular reference to its operational features, financial viability and savings mobilization efforts, the data collected on the demand side of our study from the rural households on credit agencies from which they borrowed, will be analyzed in detail at this stage. The relative importance of different credit agencies, formal and informal for different regions of the country, will be highlighted by these data. In addition, the data would also reveal the characteristic features of the loan policy, procedure and operations of each agency such as:

- purposes for which loans were disbursed;
- security on which loans were disbursed;
- the rates of interest at which loans were disbursed;
- the distribution of the loans disbursed by each agency according to size;
- the distribution of loans disbursed, according to classes of cultivators/non-cultivators financed;
- the record of loan recovery, principal and interest, of each agency; and
- the regional variations in the characteristics referred to above.

The data collected directly from the credit agencies in respect of their overall operations as well as their retail outlets and case studies of their loans, will be analyzed against the above background, as indicated below.

Chapter 2: Operational Features of Credit Agencies:

The following operational features of each credit agency will be studied in depth:

- Procedure for identifying borrowers and the factors determining the access of borrowers to the credit window of each agency;
- The consequences of the procedures followed by different credit agencies for determining access to them on the extent of their coverage of rural families, the quality of their loans and diversion of loans by intermediaries.
- Loan appraisal procedures followed by different credit agencies to determine the eligibility of borrowers for loans, that is, criteria prescribed and followed, with particular reference to financing of defaulters; methods of determining the loan amount in relation to the purpose of loan and the value of security offered by the borrowers; methods of valuation of land and other securities adopted by different agencies; role of sureties and recommendations of extension workers and local leaders such as the Union Agricultural Credit Committees in determining loan eligibility and amount; and methods adopted to check double or multiple financing of the same borrowers or households by different agencies.
- Criteria adopted by different agencies for sanctioning loans to eligible borrowers with particular reference to the nature and extent of security demanded, loan documentation required,

powers of loans sanction delegated to functionaries of different ranks, and the terms and conditions prescribed in the loan sanction documents as regards repayment period of loans, rates of interest and ensuring the use of loans for the purposes for which they were granted.

- Loan disbursement procedures adopted by different agencies, with particular reference to safeguards provided to ensure that: the loans reached the borrowers and there were no illegal deductions by intermediaries; seasonality in relation to the crop for which loans were given was observed; book-adjustments involving repayment of previous loans out of the amount of fresh loans were not resorted to and proper receipts were taken from the borrowers on account of the amount of loans disbursed.

- Disbursement of loans in kind, especially for fertilizers will be studied in depth to ascertain the nature of linkages between the credit and the input supply agencies, the extent to which loans in kind were disbursed in cash or withdrawn on account of the inadequacy of such linkages, and the practical difficulties encountered in establishing such linkages.

- Grain or commodity loans, which were also loans in kind, had to be repaid in kind. They will be studied separately, against the background of the data collected on the subject from the rural households comprising the demand side of our study.

- Loans against usufructuary mortgages are in a class by themselves, inasmuch as the borrowers transferred the

possession of their land to the creditors, in lieu of payment of interest. Such loans were reported to be quite widespread. The data collected from the demand side of our study will throw light on the extent of prevalence of such loans; by interviewing the creditors and their borrowing clientele, their significance will be explained.

- Time-lag between approach to credit agency and disbursement of loans, with particular reference to the effect of the time-lag on the seasonality of loans, the causes of excessive time-lags and the consequences thereof, will be assessed through case-studies of loans.
- Cost of loan appraisal, documentation, sanction and disbursement to the borrowers, other than that included in the rate of interest, will be assessed on the basis of case studies of loans, with particular reference to the number of times borrowers were required to visit the outlets of credit agencies and government offices, and the type and number of documents they were required to furnish.
- Machinery for Recovery of Loans, its adequacy and cost as proportion of amount of loans, will be studied and commented upon.
- Machinery for Evaluation of Loans, from the operational as well as the cost/benefit angle, will be studied and commented upto.
- Quality of Maintenance of Accounts, will be examined and commented upon, highlighting any special features relevant to the interpretation of figures based on accounting system.
- Quality of Reporting System, that is, the system of preparation and submission of periodical reports and statements, will be examined and commented upon, with particular reference to their relevance and

adequacy as a tool for management, whether the work-load and cost imposed by the system on the institution was commensurate with its usefulness, etc.

- Organization and Strategy for Savings Mobilization, with particular reference to the orientation of staff, their adequacy, the methods adopted, the problems, difficulties and the competition encountered, the degree of success achieved, etc., will be examined and commented upon.

- Concluding Remarks on the Operational Features of Credit Agencies, will attempt to sum up the operational efficiency and the quality of management of each agency. This summary will provide the background for analyzing the financial viability of credit agencies, which will be the subject matter for Chapter 3 of the analytical frame-work on the supply side of credit.

CHAPTER 3. FINANCIAL VIABILITY OF CREDIT AGENCIES FINANCING FARMERS.

The criteria for judging the financial viability of a banking and credit institution, namely, profitability, liquidity and realizability of its loans and investments, provide a measure of its financial strength and weaknesses. The important issues which will be looked into for evaluating the financial viability of agencies dispensing credit to farmers under each of the above three criteria, are referred to in the ensuing paragraphs.

Profitability:

The profit/loss reflected in the balance sheet of a banking and credit institution would be analyzed in our study from at least four important angles, namely:

- trends in profit/loss from 1971-72;
- liquidity of profits, that is, (a) the proportion of profit entering the cash-flow stream; and (b) not entering it, represented by dues receivable but not actually received;
- realizability of profit not entering the cash flow, that is, the quality of dues deemed to be income yet to be realized; and
- the profitability of retail outlets/branches of the credit agency as distinct from its overall profitability, to determine the quality of retail outlets, the circumstances under which they were viable or otherwise and so on, with particular reference to the extent to which these outlets borrowed from or lent to their head offices and, the reasonableness of the cost of and return on funds borrowed from/lent to head office.

Liquidity:

The ability of a banking and credit institution to honour its commitments as and when they arose connotes its liquidity. Such commitments exist on the current as well as the capital accounts. The payment of interest on loans and deposits and the payment of salaries and other establishment costs represented commitments on revenue amount. Repayment of maring loans and deposits represented commitments on capital account.

An inadequate cash flow on current amount would oblige an institution to finance its current expenditure out of its long-term liabilities to its share-holders, depositors or creditors. Consequently, the resources available to it to honour its commitments on the capital account would be reduced to a corresponding extent.

Maintenance of liquidity of a banking and credit institution at optimum level is essentially the art of managing its funds in such a way that they earn maximum interest without getting blocked. A prudent management would first ensure that its establishment costs and interest payments did not exceed its interest income from loans and investments actually entering its cash flow. It would also see to it that the estimated withdrawals of deposits and repayments of loans did not exceed expected recoveries of its loans in cash, during any given period. Temporary shortfalls in liquidity can be tided over by fresh borrowing either in the form of call deposits or short-term loans against the security of long-term investments. However, structural shortfalls cannot be overcome in this way, leading to defaults in repayment of loans to creditors. The ultimate failure was the failure to repay the claims of depositors when due. Such failure leads to the loss of public confidence and a run on the banking institution, eventually forcing it into liquidation.

Our study of credit agencies would endeavour to bring out the standard of management of funds observed by each credit agency and its liquidity position on current as well as capital accounts. The performance of retail outlets will be examined separately from that of the institution as a whole.

Realizability of Assets:

The net worth of an institution is represented by the excess of its realizable assets over its liabilities. The liabilities to share-holders is not taken into account in judging the solvency of a banking and a credit institution vis-a-vis their creditors and depositors. The credit-worthiness of an institution depends upon its net worth.

The task of determining the realizability of the assets of a banking and credit institution, comprising mainly loans and advances, is beset with many difficulties. The realizability of defaulted loans is often, and erroneously, judged by the age of default. In the case of loans to farmers secured against land, which is a tangible and an almost indestructible asset, it would be highly misleading to classify all loans overdue for more than a specified period such as 3 years or 5 years, as bad. Experience has also demonstrated that repayments on account of principal and payments on account of interest continued to flow in long after a loan had become overdue for more than 3 to 5 years. Thus, the only reliable measure of determining the realizability of agricultural loans would be the extent to which they were covered by tangible security, especially land.

Our study would attempt to estimate the realizability of loans of different credit agencies. Insofar as their retail outlets selected for our study were concerned, the estimates would be made by those entrusted with the task of studying each institution on the supply side of credit. However, the active cooperation and help of each institution would be needed for estimating the realizability of all its assets.

Concluding Remarks.

The financial viability of each credit agency would be assessed on the basis of its profitability, liquidity and the realizability of its assets, analyzed in the manner indicated above. The analysis can be expected to yield valuable clues as regards steps necessary to strengthen the financial viability of each credit agency.

Mobilization of Savings:

A banking institution has been defined as one which accepted deposits from the public for the purpose of lending. Although such an institution may raise funds in other ways such as borrowing from the country's central bank to meet seasonal shortages of funds or by issuing bonds/debentures, mobilization of the savings of the community in the

form of deposits for the purpose of lending, was the hall-mark of a banking institution.

Deposits provided the much needed liquidity to banks because the amount of deposits withdrawn on any given date or during any given period constituted a very small proportion of the total deposits. The bulk of the deposits could thus be used by the banks for the purpose of lending. In order to protect the interests of the depositors, the central bank usually required that a certain proportion of its deposits be maintained in "liquid" assets, usually defined as securities issued or guaranteed by government, by every banking institution.

Deposits played a more crucial role in sustaining the liquidity of institutions lending to farmers than that of those lending to trade, etc., because of the phenomenon of delayed repayments characteristic of lending to agriculture in under-developed countries. The temporary defaults can be held by the lending institutions with the help of their deposit resources only, as borrowed resources had to be repaid in full on due dates and owned resources (share-capital and reserves) were generally too small for this purpose. For instance if an institution had a 40 percent rate of default and it could mobilize enough deposits to cover these defaults, it could also raise the remaining 60 percent from re-finance agencies such as the central bank, without fear of default to such agencies. Thus mobilization of savings in the form of deposits to the extent necessary to cover defaults likely to arise from a given lending programme, would enable that institution to carry out the entire lending programme by borrowing the balance of the required resources.

In Bangladesh the formal credit agencies, with the exception of the commercial banks, were unable to raise deposits even to the extent of covering their defaults. The central bank and the government had to carry the defaults of those agencies.

Our study would focus attention on the deposit mobilization efforts of these formal credit agencies and ascertain the scope for intensifying them. A non-inflationary expansion in their lending programmes

would be possible only to the extent that they mobilized deposits at least to the extent of the defaults likely to arise out of the expanded lending programme.

The commercial banks had adequate deposit resources to cover their defaults arising from financing farmers. However, in view of the high opportunity cost of lending to agriculture, it was doubtful if they would be interested in committing a higher proportion of their deposit resources for financing agriculture than at present.

Our study would examine the attitude of the rural branches of commercial banks towards deposit mobilization and lending the deposits so mobilized for financing farmers. One of the objectives of the enquiry would be to ascertain the scope for additional deposit mobilization by bank branches in rural areas, especially in unbanked centres upto the level of Union headquarters, and the type of institutions which could successfully exploit the available potential.

Concluding Remarks:

Our study would attempt to bring out the present position regarding deposit mobilization in rural areas by formal credit agencies, the constraints operating on their efforts in this direction and the appropriate strategy for mobilizing savings from rural areas, commensurate with potentialities.

Chapter 4: ROLE OF REFINANCE AGENCIES

The Bangladesh Bank (BB), the Government of Bangladesh (GOB), international agencies such as the World Bank (IBRD/IDAO, the Asian Development Bank (ADB), the International Fund for Agricultural Development (IFAD), the United States Agency for International Development (USAID) and several others are assisting credit agencies engaged in financing farmers.

Among these the BB/GOB play a crucial role because of the statutory authority they enjoyed over credit agencies in the matter

of enforcing banking and credit policies. Some of the international agencies also shaped policies by stipulating conditions tied to their aid.

It is thus extremely important first to document the role played by each of the agencies referred to above in terms of funds provided and policies prescribed by them, and then to analyze the impact of their roles, to determine the degree of coordination among them and to draw appropriate conclusions from the data and the analysis.

Our study would attempt such documentation and analysis and discuss important conclusions emerging therefrom.

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ORGANIZATION OF AND SCOPE FOR RESEARCH IN AGRICULTURAL CREDIT:

Agricultural Credit Problems and Policies in Historical Perspective:

i) The Colonial Period Characterized by Predominance of Private Moneylender

The problem of agricultural credit during the colonial period (upto about 1950) was viewed as one of its high cost to the borrower. The private moneylenders were almost the only source of credit in the rural areas. They lent money mainly for emergency needs or for meeting unavoidable expenditure on social occasions. They were insulated from any serious competition because the organized banking sector had not penetrated the rural hinterland. The competition as between private moneylenders was limited. They were themselves persons of small means, trained to use their small capital in the business of moneylending, often combined with trading and/or land ownership. Some of them were non-professional, who lent money to friends and relatives without charging any formal interest on loans. In the circumstances, the rates of interest charged by the professional moneylenders were high. They lent money with a view to earning a high return on their small capital rather than for its quick turnover. When the borrowers were unable to service the loans their land was expropriated.

To rescue peasants from the moneylenders was seen as the fundamental problem of agricultural credit in the sub-continent, until the end of the first half of this century. The role of agricultural credit policy was seen as that of restraining the moneylenders.

ii) The Post Colonial Period and the Rationale of Institutional Intervention:

Independence heralded a more activist role by governments of the sub-continent in agricultural credit policy and operations. The focus shifted from restraining the moneylenders to providing credit to the farmers for productive purposes through institutional agricultural credit agencies supported by the government.

The rationale of institutional intervention in the field of agricultural credit was derived from the need to provide capital to farmers for financing expenditure on the purchase of inputs which could raise agricultural productivity. The resources of the private moneylenders were too meagre for catering to the vast needs of agriculture. They confined their activities mainly to financing expenditure which institutional agencies were not equipped to finance. The moneylenders could earn a relatively high return by financing borrowers who had little choice but to approach them to meet emergent or unavoidable expenditure on family living. Thus, the institutional agencies began operating side by side with the non-formal, each in its own sphere, without offering any serious competition to each other. However, with the passage of time, as the pressure of population on land increased, institutional intervention gathered rapid momentum with the support of the central banking authorities and the government. The almost desperate need to raise agricultural production to keep pace with the growing population, so as to avoid famines and mass starvation, was the motivating factor behind state assistance to institutional agencies for rapidly expanding the availability of credit to farmers.

The character and the scale of institutional intervention brought in its wake a host of new problems. These are referred to below.

The Supply Side Problems:

The most important problem faced by credit agencies was that of resources. Budgetary revenues of governments were already under strain due to burgeoning plans of economic development. The vast sums required for agricultural credit operations, therefore, could be raised mainly from two other sources, namely, savings of the community mobilized by credit agencies and central bank refinance.

In the 1950s the idea of commercial banks entering the field of rural credit had not taken roots. The emphasis was on setting up specialized institutions in the field of agricultural credit supported by the government and the central banking authority.

Thus, the central banks of India, Pakistan, etc, departed from their traditional, orthodox role of refinancing short-dated (upto 90 days generally) trade bills of commercial banks, and embarked on refinancing agricultural loans of specialized institutions for a period of upto 15 months. In

Bangladesh, after independence in 1971, the Bangladesh Bank continued this policy. The specialized agricultural credit institutions selected for central bank refinance were at first the cooperatives in all the sub-continental countries. They could mobilize only a limited amount of internal resources by way of share-capital and deposits and, they depended heavily on central bank refinance. However, their internal resources were not adequate even to absorb the temporary defaults from farmers. The central banks, therefore, insisted that the governments should provide enough liquidity to the specialized agricultural credit institutions to enable them to at least absorb temporary defaults from farmers, so that there were no defaults to the central banks. A system of government guarantee to the central bank on behalf of the cooperatives was introduced in Pakistan, whereas in India the government contributed to the share-capital of cooperative credit institutions. The objective in both cases was to prevent defaults to the central bank.

The governments, with their strained finances, could provide a limited amount of liquidity to enable the specialized institutions to remain solvent vis-a-vis the central banks. But the limited ability of the governments to provide liquidity, also limited the scale of operations of the specialized institutions. The problem of resources had not been solved by the induction of the central banks in agricultural credit. For instance, the Bangladesh Bank was financing the Bangladesh Krishi Bank (BKB), a specialized and the largest agricultural credit agency, without regard to its liquidity and repaying capacity. It was carrying huge arrears from the BKB.

Meanwhile, to ease the problem of resources for the growing needs of agricultural credit, the nationalized commercial banks were inducted in the field of agricultural credit in the 1970s soon after independence. They were prevailed upon to open a large number of rural branches in 1977. The dependence of these banks on refinance from the Bangladesh Bank was much less than that of the BKB or the cooperatives. Moreover, the share of agricultural credit to total bank credit steadily increased and stood at about 26 per cent towards the end of 1984. Thus, government policy of inducting the commercial banks in the sphere of agricultural credit had succeeded in canalizing a substantial proportion of bank deposits in financing farmers. This was a solid achievement which needed to be carefully nursed and consolidated.

At the same time, the banks faced many difficult problems in financing agriculture. These may be summed up as under:

- a) The whole question of viability of rural branches of commercial banks and the BKB, which were working at a loss, needed a systematic study and evaluation.
- b) The question of loan appraisal, which involved an assessment of the credit requirements as well as of the creditworthiness of lakhs of borrowers, needed to be closely studied.
- c) Loan documentation and loan sanction raised problems of incomplete and unreliable land records as well as the time-consuming procedures involved in verifying land ownership.
- d) In regard to disbursement, there were two major problems, namely:
 - i) inadequate linkages with input-supply agencies; and
 - ii) diversion of loans by unauthorized middlemen;
- e) Loan supervision, which was almost totally absent, raised the problem of linkages between the agricultural credit and agricultural extension agencies.
- f) Loan recovery, which was very poor, raised legal and other questions. Moreover, the cost of recovering loans from millions of small farmers was so high that it raised a still larger question, namely, the need or otherwise for government support in the loan recovery process.
- g) Finally, loan evaluation, that is, whether the credit served any useful purpose, whether it led to an increased use of fertilizers, etc., whether it led to an increase in production; whether it provided any relief to the farmers; or whether credit proved to be counter-productive because it was diverted, misused, was too little or too much, given at the wrong time, etc., so that instead of benefitting the borrowers it merely added to the burden of debt on farmers.

In addition to the above issues, different institutions had their own specific problems.

All these supply-side problems had a direct bearing on the operation of institutional credit as affecting and seen from the point of the ultimate consumer of credit, that is, the farmer. The demand side problems are referred to below.

Demand Side Problems

The demand-side problems of rural credit had received wider recognition and publicity than those of the supply-side, as they could be easily articulated in terms of the hardships faced by individual aspirants for institutional loans. The most common problems were: access to the credit agency was difficult without some influence; loans were denied; loans were inadequate; loans were not available on time; loans in kind could not be converted into inputs for lack of availability of supplies with the authorized dealers; loan documentation was too cumbersome; too many trips had to be made to bank branches to complete formalities; illegal gratification was demanded; the effect of natural calamities on repaying capacity was not taken into account in enforcing recovery and, therefore, rescheduling of loans was not done even when justified; there was no flexibility in the amount and purpose of loans; etc. These were real problems facing the borrowers under institutional credit arrangements.

The organizational set-up for research needed under the aegis of the BARC and the kind of research studies and projects in the field of agricultural credit which could be taken up, are referred to in the ensuing section against the above background.

II

Organization of and Scope for Research in Agricultural Credit

Organization of Research:

The question of organization of research in agricultural credit was related to that of the scope of research; and both were dependent on the financial and man-power resources which could be committed for the purpose. Nevertheless, a national level research set-up in this field under the guidance and supervision of the BARC could be conceived of as having some basic, minimum infra-structural facilities to start with, which could be developed over time according to availability of funds for specific projects/activities.

The basic infra-structure and later a larger research organization could perhaps best be developed around the nucleus of two national level experts, one each on the demand and the supply side of credit. First, an agricultural credit expert was needed who could look at problems from the point of the consumers of credit, with knowledge of agronomy, farm budgeting, cost-benefit analysis, etc., in addition to that of agricultural credit operations at the grass-roots level. He would also need some knowledge of sampling techniques for surveys, drawing up questionnaires, organizing field studies, training of field workers and, of tabulation and analysis of a large mass of data. Next, an agricultural banking expert was also needed who could study problems of resource mobilization, management of funds, loan policy, procedure and documentation, development of branches, etc. A general knowledge of banking, accountancy, role of central banking authority and, specialized knowledge of managing or supervising agricultural credit operations acquired through work in any financing institution would be essential. Some legal knowledge of statutes governing banks, the central bank, land tenure and tenancy, etc, would be an added advantage.

The two senior national level experts, one each in agricultural credit and in agricultural banking, would have to work through the agricultural and crop research institutes under BARC as well as establish and maintain close liason with financing and other institutions including:

- a) the Bangladesh Bank and other financing institutions;
- b) Bangladesh Bureau of Statistics;
- c) Directorate of Agricultural Marketing, etc.

B. Scope for Research:

In defining the scope for research it may be convenient to make a distinction between: (i) research aimed at building up a data base for use by policy-makers, research workers, etc., as a point of departure for further analytical studies, without prejudice to the scope for drawing conclusions and making recommendations for immediate use and application; and (ii) research aimed at solving specific problems, that is, policy or action oriented research. There was need for both. The relative emphasis given to each depended upon the availability of resources. Under a severe resource constraint, problem-solving, policy-oriented research would naturally claim higher priority than research aimed at building up a data base. However, care should be taken to ensure that the needs of research which may yield results of benefits after a time-lag were not overlooked. A proper balance between the two types of research had to be struck.

Some Illustrations of Areas of Research:

A few possible research projects under each of the two categories are referred to below by way of illustration.

i) Research in Agricultural Credit Aimed at Building Up a Data Base: Illustrations of A Few Possible Projects:

The ensuing illustrations are no more than a list of possible studies or projects.

Demand-Side:

- a) A nation-wide sample survey of rural indebtedness and assets formation in rural areas.
- b) A nation-wide sample survey, to study the relationship between agricultural credit and use of fertilizers/pesticides/improved seeds.
- c) A nation-wide sample survey of capacity utilization and the cost-benefit aspect of shallow and deep tubewells and of low-lift pumps, in respect of borrowers of loans for these purposes.
- d) A nation-wide sample survey of defaults or overdues to institutional agencies according to size of holding, and an assessment of their realizability according to age of defaults, security, recovery procedures and machinery, etc.

e) Supply-side

A study of the scope for internal resource-mobilization by lending

institutions, with particular reference to the BKB/Cooperatives, the potentialities of mobilizing deposits by them from the rural areas and how best they could be tapped and developed, the role of government/Bangladesh Bank in strengthening the capital structure of these institutions, etc.

- f) A sample survey of the staffing pattern, cost structure and viability of the retail outlets of institutional agencies engaged in dispensing agricultural credit, to determine the cost-effectiveness of different agencies, so as to help in the search for a low-cost but efficient rural credit and banking system.
 - g) A study of the intensity of agricultural credit operations of institutional agencies, in terms of the proportion of farm families financed, loans per acre of land cultivated, etc., according to region/district/upazilla, to determine regional disparities, if any, and the causes responsible therefor.
 - i) A compilation of loan policies, procedures and loan documentation systems of different institutional agencies and a study of their operation in the field, with reference to their relevance to the timeliness, adequacy and real cost (besides interest), to the borrowers.
- ii) Problem-Solving or Policy-Oriented Research in Agricultural Credit: Illustrations of a Few Possible Projects:

Demand Side:

- i) A sample survey of impact of floods on the economy of farms of different sizes, in different areas, with a view to recommending suitable agricultural credit policies for rehabilitating flood-affected farmers.
- ii) A sample survey of all cultivating households in selected villages to determine the gap between their credit requirements and actual credit availability, identifying reasons for non-availability of credit and recommending remedial measures to close the gap.
- iii) A sample survey of medium-term loans for cattle purchase with a view to assessing the benefits to borrowers and the stimulation provided by such loans to cattle breeding activity.

Supply-Side:

- i) A sample survey of seasonality in loan disbursement and recovery by selected rural credit outlets of institutional agencies according to the crop financed, in different regions, with a view to determining the timeliness in loan disbursement and the relationship between timeliness and the utilization of the loan for the intended purpose, repayment performance, etc.
- ii) A sample survey of procedures for identifying, sanctioning and disbursing loans to farmers, with a view to determining: (i) if all those who needed a loan could apply for one without difficulty; (ii) the time-lag between loan application, loan sanction and loan disbursement; (iii) the number of trips required to be made by a borrower to the bank branch for getting a loan and their cost; (iv) loan documentation requirements and the difficulties involved in satisfying them.

Resume:

The studies identified above are purely illustrative in character and were intended to serve mainly as a basis for discussion. Detailed profiles of specific projects will have to be prepared in the light of the BARC's perception of priorities. A project portfolio can then be presented to donor agencies for financial assistance.

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