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Rural Finance Project

Agricultural Credit Department  
Bangladesh Bank

Saving Mobilization in Rural Bangladesh

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## Saving Mobilization in Rural Bangladesh

Introduction: This paper reviews some of the findings of the Bangladesh Bank/USAID Rural Finance Project with respect to saving mobilization. This introductory section reviews concepts and definitions. This is followed by a description of two complementary models for analysis of rural saving: what we will call the economist's and the banker's model. The major findings of the RFP are then discussed. Finally, the policy implications are reviewed.

Saving means that disposable income of an economic unit withheld from consumption, or alternatively the increase in net assets of the economic unit. It is conventional wisdom that saving levels in Bangladesh are extremely low. Saving by domestic sources is 2-3% of GDP; saving by national sources (i.e. all Bangladeshi) is rather higher at another 5-6% of GDP due to the large earnings and homeward remittances of Bangladeshi overseas. However, more than half of gross fixed capital formation is financed by foreign assistance - either low interest loans or grants. With there being every likelihood that remittances will grow more slowly than GDP in future years and the inevitable uncertainty as to the long term levels of foreign assistance, the importance of raising domestic saving is obvious. The fact that talk of greater saving for Bangladesh has become commonplace does not reduce the urgency of the need. More rapid growth will require higher investment levels and these must be financed by greater domestic saving.

Of the two components of domestic saving, private and Government, the available data is not completely clear but suggests that Government saving (revenues less consumption expenditure less subsidies) is 0 to -1% of GDP, hence the private sector's contribution is 3-4% of GDP or 5-7% of disposable income.

Available evidence from the Household Expenditure Savings and from the RFP surveys shows rural households save more than urban households at comparable income levels. Information on saving from different sources is not always consistent; in particular, cross-section analysis of household expenditures indicates more saving by rural households than suggested by the national accounts. The anthropologists on the RFP found that rural households saved a quite substantial part of their income.

It is important to distinguish between saving and asset management by the household. Asset management describes how the household divides its resources among alternative assets. If a branch bank is established in an area previously unserved there are two extreme effects: (a) The households may save more due to the desirability of owning bank deposits which may pay high interest rates; (b) The households may rearrange their existing assets putting some assets into bank deposits and reducing other forms of holding assets. The rural household has a number of asset forms that can be readily shifted: Rice or paddy inventories; gold or jewelry; cash hoards within the household; bank deposits; loans to others. Certain real property assets such as land or agricultural equipment are less fungible. The purchase of assets from saving out of current income will also be influenced by the availability of banking services. Even if the rate of saving is not changed, with the option of owning bank deposits, there may be a significant shift in the household's asset portfolio away from real property as increments to assets are placed in the bank.

By mobilization of saving we mean the increase in the household asset portfolio that is kept in bank deposits. This seminar deals with the issues involved in increasing saving mobilization. Before turning to the analysis of how to do so, it is useful to review why this is perceived as such an important aspect of development. Growth

takes place from two effects: (1) Saving and the accumulation of capital through investment and (2) the proper choice of investments to be made. If investment choices are poorly made, then little increase in output is achieved, the returns to savers are low and the willingness to save may be consequently reduced. Poor investment choices hurt growth directly through the inefficient use of capital and indirectly through discouraging saving. The typical picture of a rural society without financial intermediation is that most people have low return projects to carry out and so save little to finance these. The farmer who has a good idea requiring a lot of capital cannot find the funds. Of course the informal markets provide some intermediation - say within the village, but cannot readily reach further.

If the households savings are mobilized by the banking system and invested by those who borrow from the banking system this helps the economy only on two conditions: (1) The investment projects supported by the banks are better - yield a higher return to capital - than those which are financed outside the banking system by the farmer himself; (2) The improvement in the quality of projects is sufficient to cover the costs of the banking system's operations (administrative costs and loan losses). Put another way, the farmer may invest directly in his farming operations and earn, on the average, a return of 10%. If the bank can find a project which earns a return of 20% then the farmer can be induced to deposit his money in the bank receiving, say 12% (so he is better off) and the bank has 8% to cover its costs. If, however, the investment financed by the bank earns a return of only 10% then the economy has lost - the resources used in paying the costs of the bank have simply been frittered away for no purpose.

How can one know if the bank's loans generate a sufficiently high return to justify the expenses of intermediation? The first point is obvious but of great importance: The banking system must be viable - i.e. cover its costs and borrowers must repay the loans. If these conditions are not met then the financial system is hindering rather than helping. It may be argued that repayment is not

a necessary condition for having the financial system assist development. That is, of course, correct: farmers may all make excellent investments but fail to repay. While not a necessary condition, repayment is a sufficient condition. If repayment regularly takes place then the investments financed are earning an adequate return (so long as the viability condition is also met). In the absence of repayment the assessment of loans quality is impossible. The funds will not necessarily be used for productive purposes if the borrower believes he does not have to repay. One can be quite sure loan concepts will often be consumed in the absence of repayment.

The second point is not so obvious: The market valuations of inputs and outputs may not reflect the true value. For example, if the Government chooses to subsidize the urban rice price, the returns to rice farmers could be understated using market prices.

After many years of tickering with prices there is now widespread acceptance among development economists that while price manipulation may be a convenient instrument of intervention, it is impossible to compute with any degree of confidence the consequences of such manipulations. Consequently it is better to move towards pricing without subsidy and let the investment, saving choices be market determined. Once computed price corrections are used to justify investments one enters into an imaginary world and contact with the real economic scene is soon lost. The best way to correct a price distortion is to remove the distortion, not to compute the answers and try to manipulate policy to offset the distortion.

The above argument was made to reach one vital point: Mobilization of saving is good for Bangladesh only if the financial sector is viable and recovers the loans it makes. If it does not then the banking system is wasting resources rather than creating them. All of the discussion during the seminar on saving mobilization presupposes that the system is able to identify good borrowers and collect the loans made to them. There is no escape from the dilemma -

if the banks cannot do this then saving mobilization is an error and no measures should be taken to encourage it. The discussion in this paper will assume that the financial system is making good loans. Note it is not important to the saving mobilization issue whether the good loans are in urban or rural areas. In principle the financial system will direct the resources to the best loans regardless of where the saving mobilization takes place. Indeed the greater the geographic extent of intermediation the better.

The financial system in many developing countries has successfully mobilized saving but has then used the resources to finance Government current expenditures or low returns projects undertaken for vague objectives of prestige or belief in externalities that the market will not take into account. Such misplaced beliefs are one of the major sources of poverty in the developing world. As the seminar deals with how to mobilize saving it is vital to keep in mind the need for proper use of the funds so mobilized.

The power of financial intermediation is very great: If a country fails to provide proper intermediation economic growth can only rise marginally above the traditional level; greater investment financed by foreign assistance will help to achieve this. The investments must meet the test of viability with reasonable accounting rules. Otherwise degraded quality investments will lead to slow growth or stagnation.

The volume of rural deposits has increased very rapidly during the few years. In real terms this growth of rural deposits has averaged 10% per annum. Currently there are signs that this growth rate of real deposits is declining. This may be due to the decline in economic activity taking place in rural areas, lower jute prices, the net withdrawal of credit that has taken place etc. This point will be taken up again below. It is likely that after a period of considerable success in mobilization of saving by the financial

system we are now in a period of much slower growth, probably negative in real terms. One important objective of these deliberations is to consider how the financial system can return to rapid expansion of deposits.

Some may argue that the high liquidity level of the banking system indicates that further increases in deposits are not needed, at least in the near future. For example, lowering the deposit interest rates is meant to slow down the growth of deposit mobilization as well as to improve the bank's spread between costs and earnings. Although increasing deposits is sound in the long run, it is argued currently that with the limited demand for loans and the depressed state of demand, there should be no drive for an increase of deposits which would lead to an even higher level of insufficient aggregate demand.

However, saving mobilization in rural areas requires a sustained, protracted effort, not one which is adjusted in the short term. How it is feasible to link together the short term need for less deposit growth with the long term need for more rural saving mobilization is one of the dilemmas of policy briefly discussed below.

#### Two models of saving mobilization

##### 1) The economist's model

The economist's model is based on the assumption that each individual has a set of preferences which are considered fixed and which govern the decisions made as to how much saving will be done, and how available assets will be managed. The main variables which influence the level of saving and asset distribution would be :

- i) The income, family size, and wealth of the household.
- ii) The age distribution within the household.

- iii) The real interest rate (nominal less expected inflation less transactions costs) earned on bank deposits.
- iv) The environmental risks.
- v) The relative returns on different assets.

It is assumed that the household manages its affairs in a rational manner. Practical issues of dealing with the banking system or of managing different types of objectives are assumed away.

## 2) The banker's model

The banker's model is based on a view of the depositor as one who must be persuaded or induced to use the bank's services. The household is perceived as able to change its preferences given the efforts at persuasion made by bank staff. In addition to the interest rates the depositor is attracted by the types of saving products that are available. The banks compete by intangibles such as the quality of service. Whereas the economist's model tries to describe the total volume of saving and asset distribution in the economy, the banker's view is focussed on attracting to his particular institution as much as possible of the deposits.

However the banker's view should be seen as more than fighting for a larger share of a fixed pie. Better saving products and protracted campaigns to influence and instruct may have substantial impact on saving and asset distribution.

In Bangladesh one can see this same split in the articulation of objectives: The branch banker trying to meet a target or goal prescribed for him by his head office will use his energy and time to attract large depositors. To the extent he is successful his targets are reached in the most efficient way. However, competing among banks for large deposits, which would be in the banking system

anyway, does not contribute to the overall national saving mobilization. On the other hand, the economist's view that manipulation of interest rates will be the main determinant of saving mobilization is insufficient to encompass behavioral change.

Some results from the Rural Finance Project

The work of the Rural Finance Project has followed both of these models and from this has emerged a number of conclusions which are of direct relevance to the main problem of encouraging saving mobilization :

- 1) Real interest rates influence the asset composition - higher real interest rates draw assets from other uses. Whether real interest rates influence saving is much less certain.

There are certain ironical aspects of this interest rate impact due to the existence of curb markets (non-institutional markets) prevalent in rural credit. Reduced interest rates tend to lower bank deposits and encourage the growth of the curb market. The money lender who has decided to invest in fixed deposits now finds the bank a less attractive place to park his funds. Reducing deposit interest rates will influence the curb market immediately, even though the demand for loans from the formal market may be reduced due to inadequate aggregate demand. Most Branch managers were unequivocal that over the past few years, through 1985, there was a reduction in curb market volume and a shift of assets held by money lenders from loans to others into bank deposits. Thus if the rural banks reduce lending, the liquidity will lead to pressure to reduce deposit rates, drawing funds out of the banks and into money lending. The curb market will partially replace the formal market. But the curb market loan volume will be more for family emergencies and less for productive investment.

- 2) Transactions costs strongly influence the perceived real return to having a bank account. By transactions costs is meant these costs incurred by the depositor in having and operating a bank account. The most important of these costs is the time that it takes for the depositor to travel back and forth from his residence to the branch. The greater this distance the less attractive the deposit activity. They are two responses that rural households make to the distance to the branch: The household simply does not open an account since it is considered too expensive to use it. Another response found in the RFP survey work is a reduction in the frequency of use of the account. There are many deposits where there is little activity, with very long periods between transactions. The use and travel patterns of rural households are too complex to permit meaningful quantitative relationships to be given; but the evidence is clear that the branch has an area from which customers are drawn and this represents the maximum transactions costs that households are prepared to pay. From our survey the rural branches typically serve customers within a ten mile radius.
  
- 3) The factor that is most critical for rural households in Bangladesh is the risk element. Apart from the major natural disasters that regularly strike the nation, there are a multitude of micro-climate effects: a local flood, heavy winds, hailstones, pests or fungus diseases.

These outbreaks may cause substantial crop loss in a small area. Although these minor problems may not make the headlines the impact on the farmer may be more serious. The household's response to these risks is to set aside resources to permit overcoming these difficulties should one be struck by such misfortunes. In this environment rural household saving is driven first by the need to build up liquid resources to the minimum level required for protection against crop loss. We distinguish here between the very poor households who have limited income

and whose risk is of a different sort (illness, changes in food prices) and farm households who may experience crop loss or drop in the price. To manage the possibility of crop loss the preliminary RFP evidence suggests a strong pressure to build up saving when these are reduced below a certain level. After experiencing a disaster the household will attempt to recover to an acceptable asset level. Saving then is determined by the recent production history of the household.

What Keynes called the precautionary motive for saving is, in my view, the most important factor driving the small Bangladesh farmer. Once the farmer reaches a liquid asset level corresponding to his needs, the saving may diversify into less liquid forms. This drive for saving is not connected with the interest rate at all, and the importance of this reason for not consuming means that a large part of rural saving does not seem to be strongly influenced by the interest rate. Indeed, if a saving account is used for this form of saving there may be a perverse effect: The farmer is saving towards a target; the higher the interest rate the easier it is for him to reach the target level. Once this precautionary liquid reserve is in hand the farmer may now be more willing to consider the return to alternative investments, including most particularly investing in his own farm.

- 4) One modern characteristic of banking is the growing ability of banks to provide risk management for their customers. Although most of the discussion of risks in bank management has to do with lending and production operations once one sees the rural bank deposit as directly connected with the production risk (as argued in the previous paragraph) then it opens up for the banks in rural Bangladesh a number of possibilities for linking saving, insurance, and important family requirements. These ideas received an initial development during the RFP in the

form of proposals for contract saving. The view taken in this paper is slightly broader. If I have a specific target for my family e.g. to send my son to secondary school, then to achieve that goal a specific expenditure pattern is implied. Sensibly I will try to save to meet these specific future expenditures. At present I am able to use a savings account or possibly a sequence of fixed deposits, reinvesting the interest. However, I am subject to certain production risks (low prices, crop loss). There is nothing I can do about this; if I am pessimistic about the risks then I will save more whenever I am able. There is no way I can "buy" protection against production risks. If the bank were able to offer me a lower interest rate but guarantee the ultimate payment I receive, this might prove a type of deposit that would be very attractive to me. The bank unlike the individual has the possibility of spreading this risk among many deposits.

The development of methods of saving which permit households to buy protection against risk by receiving lower interest rates would in our view find a very positive response in rural Bangladesh. Once it is recognized that a major motive for much rural saving is risk protection then by designing saving instruments linked to this need all may benefit: the banks may be able to collect considerable amounts of deposits for very low interest rates and also, by proper balancing of risks, serve the needs of the Bangladesh farmers.

5. It is useful to keep in mind the deposit structure of a typical rural bank:

Deposit Characteristics of a Branch

(June 30, 1985)

Median deposits (thousand Taka) 3298

Median number of accounts 1643

Median account size (Taka) 1920

Distribution of deposits:

|                       | <u>Percent of<br/>value of<br/>deposits</u> | <u>Average<br/>size<br/>(Taka)</u> | <u>Percent of<br/>number of<br/>deposits</u> |
|-----------------------|---|------------------------------------|--|
| Saving (checking)     | 32.3%                                       | 1420                               | 57.1%  |
| Saving (non-checking) | 12.9%                                       | 1120                               | 26.6%  |
| Current               | 19.0%                                       | 4960                               | 8.9%   |
| Fixed                 | 26.2%                                       | 17850                              | 3.4%   |
| Others                | 9.6%  | -                                  | 4.0%   |

The typical rural branch has 3.3 million Taka of deposits and 1643 deposit accounts. (Medians are quoted as means are deceptive due to extreme values). The typical account has 1920 Taka. Rural branches have mostly saving accounts (45% by value, 83% by number) which are rather small, 1000-1500 Taka average size. Only 8.9% of all deposits are current accounts by number (19% by value). These accounts average about 5000 Taka. There are a few fixed deposit accounts (3.4% by number) but these contain a substantial share of funds (26.2%) and average 18000 Taka.

Saving mobilization has two aspects:

- a) Increasing the number of small saving accounts
- b) Competing for current and fixed deposits.

From the national viewpoint active saving mobilization through greater current and fixed deposits is of little interest. These depositors are going to use the banking system and the volume and level of the deposits will be determined by the growth of the economy and to a lesser extent interest rates. Higher interest rates on fixed deposits will draw more funds into these categories and help the bank to balance its short and long term assets and liabilities. However, in Bangladesh the possibility of a bank run seems remote; the Government would support a bank which found itself embarrassed by deposit withdrawals. While the higher rates for fixed deposits may only shift the structure of deposits not increase it, in rural Bangladesh the size of the smaller fixed deposits is such that these may easily be cash hoards or money earned from asset disposal. The interest rate increase may have drawn substantial funds into the banks in fixed deposits.

In rural Bangladesh what is essential is to build up the saving accounts. These accounts are readily shifted into cash hoards. Mobilization of saving depends critically upon expanding both the number and size of these small accounts.

6. Who owns these deposit accounts? In rural areas more than 96% are owned by households. Less than 1% are owned by Government organizations. Groups, businesses, and cooperatives account for some .1% each. Business establishments have largely current accounts, while households, groups, and cooperatives own largely saving accounts. Fixed deposits are largely held by households (97%).

We see from this that it is the ordinary households who have most of the accounts. A typical branch has about 20 business accounts and a 1-5 Government accounts. The lack of business accounts relative to household accounts is rather surprising.

7. The size distribution of the deposit accounts is as follows:

Size distribution of rural deposits

| <u>Size class</u> | <u>Current</u> | <u>Saving (checking)</u> | <u>Saving (non-checking)</u> | <u>Fixed</u> | <u>Total</u> |
|-------------------|----------------|--------------------------|------------------------------|--------------|--------------|
| 1 - 100           | 46%            | 54%                      | 57%                          | 0            | 53%          |
| 101 - 500         | 27%            | 79%                      | 24%                          | 1%           | 21%          |
| 500 - 1000        | 7%             | 5%                       | 5%                           | 6%           | 5%           |
| 1000 - 2000       | 6%             | 6%                       | 4%                           | 6%           | 5%           |
| 2000 - 3000       | 2%             | 2%                       | 2%                           | 9%           | 2%           |
| 3000 - 5000       | 3%             | 3%                       | 2%                           | 14%          | 3%           |
| 5000 - 10000      | 3%             | 4%                       | 2%                           | 28%          | 4%           |
| 10000 - 20000     | 2%             | 3%                       | 1%                           | 18%          | 3%           |
| 20000 - 30000     | 1%             | 1%                       | 1%                           | 5%           | 1%           |
| 30000 +           | 2%             | 2%                       | 1%                           | 13%          | 2%           |

The size distributions has no real surprises. The current accounts and saving accounts are dominated by a large number of very small accounts (less than 500 Taka) followed by a declining number by size class. The reason for these very small accounts is not clear. Such accounts have very little utility to the holder and show very limited activity. It is striking that 80% of all rural deposits are less than 1000 Taka in size. The fixed deposits are much larger, the median deposit is of the order of 7500 Taka.

8. The establishment of branches is the main mechanism for the growth of deposits. Regression analysis has shown the very strong explanatory effect of branch number and deposits. To understand how this functions the development of deposits as a function of age was studied.

|                                   | <u>Mean Deposits at a Branch</u> |          |          |          |          |          |          |           | greater<br>than<br>10 |
|-----------------------------------|----------------------------------|----------|----------|----------|----------|----------|----------|-----------|-----------------------|
|                                   | Branch age in years              |          |          |          |          |          |          |           |                       |
|                                   | <u>3</u>                         | <u>4</u> | <u>5</u> | <u>6</u> | <u>7</u> | <u>8</u> | <u>9</u> | <u>10</u> |                       |
| Total deposits<br>(thousand Taka) | 486                              | 5100     | 1303     | 1299     | 5613     | 3761     | 4355     | 4038      | 9783                  |
| Number of accounts                | 436                              | 718      | 1369     | 1123     | 1432     | 1521     | 1901     | 1819      | 4041                  |
| Account size (Taka)               | 1110                             | 7100     | 950      | 1160     | 3920     | 2470     | 2290     | 2220      | 2420                  |

The data in the 4th and 7th years contained two branches with large current accounts; correcting for this effect we see that the number of accounts rose steadily through the life of the branch. The rate of increase of the number of accounts is 16% per annum; the average account size increases at the rate of 9% per annum. (Since these are all observed at the same time the rate of increase in value terms is real). Fixed deposits however be have differently, with growth arising largely from the increase in the account size. The current and saving accounts grow in number but not in value.

We conclude that deposit growth arises from penetration of the branch into an area with a steady growth of current and saving accounts in number, with account size increasing with inflation. One can go further; with the size distribution previously given for accounts, there are many accounts started but which do not increase. Other accounts are increasing in size rapidly so, on the

average, these categories grow with the inflation rate. Fixed deposits grow in average account size but not in numbers. This suggests that there has been a strong impulse to fixed deposit growth through the increase in real interest rates. Again the size distribution of fixed deposits does not show the large number of small accounts associated with the other type of deposits.

A strategy for increasing deposits is to focus on the small accounts which are not increasing. These depositors represent a large number of persons who could be reached by the branches through competitions for the greatest increase in deposits, or regularity of deposit etc. The data suggest that the growth of account numbers takes place relatively easily, but that a large number of such accounts stagnate.

9. The profitability of branch banks is negatively related to the level of deposits. Branch banks which are the most profitable depend upon borrowing from their head offices. This indicates why special programs are needed to mobilize branches which are judged on their profitability. They are not going to spend much effort increasing deposits.
10. The final point to be made about saving mobilization is the views expressed by the Branch Managers and Regional Managers. The most important policies the rural managers reported were to train staff, recognize good performance and raise bonuses for generating new deposits. The managers also reported the development of new account types, targeting on particular groups of potential depositors, targeting on particular groups of potential depositors, interest rates, linking lending to deposit level, or national deposit insurance schemes were perceived as of limited usefulness in deposit mobilization.

### Policy Implications

The policy implications of the above are :

1. The increase of bank deposits in the rural areas is a legitimate objective of policy only when one is confident that financial intermediation is working well. In the absence of proper intermediation, financial policy should concentrate first on improving loanee selection and loan recovery; efforts to achieve more rapid saving mobilization should wait until the quality of the intermediation is assured. In the present situation in Bangladesh the priority does not seem to rest with more rapid growth of deposits. The banking system cannot do everything at once, so priorities must be established. This point is reinforced by the current high liquidity level of the banking system which removes the urgency of mobilizing more saving in the financial system.
2. The Branch bank network clearly contributes to mobilization of saving in rural areas. The mechanisms by which this works have been described. The slow down in branch formation in recent years is now manifest in slower deposit growth. Bangladesh's rural areas certainly need more banks.

However, what is needed is competition among banks, resulting in the establishment of new rural branches, believing that it is possible to make profits in rural banking. At present no one in the banking system believes it is financially sound to lend to farmers without either a high subsidy level or an accounting policy which does not classify loans as non-performing, thus generating book profits. The branch banking network needs to expand, but only when the intermediation problem can be solved. At present more rapid growth of the rural branch networks will serve to mobilize resources for use by the urban areas and by Government for its recurrent expenditures. The present passive policy towards new branches taken by the monetary authorities seems appropriate.

3. The interest rate impact on rural bank deposits is rather involved. The RFP evidence on the impact of real interest rates on deposit growth indicates that higher interest rates lead to greater deposits. The data is difficult to interpret for a number of reasons :

(a) Technically, the real interest rate is defined as the nominal rate less the expected inflation rate less any taxes paid on the interest earnings less the transactions costs incurred by the depositor. This formal definition is useful only when combined with some view as to how the rural depositor determines the expected inflation rate; after all one is trying to explain behavior. Economists believe, for very good reasons, that for most persons there is little money illusion - depositors are well aware of the losses incurred by inflation eroding the purchasing power of their income or financial assets. Empirical work often tries to define expected inflation by that definition which maximizes the response of deposits to the interest rate. Knowledge of depositor perceived transaction costs is very limited. Hence the real interest rate is hardly well defined. The usual approximation is that the expected rate is the current rate or some combination of recent rates. Modern rational expectations theories assert essentially that the actual is the mean of the expected. However, that is hardly a plausible hypothesis for Bangladesh.

The rural households do not have simplistic views about inflation. The most important rural price is that for rice; the rice price influences both the nominal income of most farmers and the cost of living index. Farmers understand very well the seasonal variations of rice prices and speculation in "rice futures" through buying and selling paddy is widespread. Furthermore, many other agricultural prices are linked to rice prices.

Taken together these points throw doubt on our ability to define the "real interest rate" other than to use the actual inflation as the expected and assuming that transactions costs change slowly compared to the inflation rate. Neither is convincing or satisfactory. We conclude one reasons everyone has difficulty with the interest rate effect is that the concept is not operational, i.e. we cannot measure it in an objective, acceptable way.

- (b) The inflation rates compiled for rural areas may be unreliable. The appropriateness of a particular inflation rate in the definition of the real interest rate is suspect; the quality of the raw recorded prices may be unsatisfactory, including some prices under official control which may not reflect the typical purchase price; and the weighting may not be appropriate for the class of depositors.

Widespread doubt is expressed in Bangladesh about the relevance of existing price indexes. Without taking a position on the ultimate measurement of inflation, if Bangladeshi believe the price indexes underestimate inflation one cannot use the indexes to model their behavior.

- (c) The real interest rates found by using rural consumer price indexes can be computed for six different districts. There is not much variability for cross-section analysis over districts, the common approach to estimating deposit functions in Bangladesh.
- (d) The most appropriate concept to use for determining the influence of the interest rate on the volume of deposits is the relative return on different investments. The farmer tends to move his assets into the bank if he

the bank provides a higher rate of return than self-financed investments, speculating on paddy prices etc. Otherwise the farmer makes the real investment. Making such comparisons are very difficult in the economic analysis, yet this is the fundamental choice that the farmer is making. If the interest rate structure moves higher then the farmer is more interested in holding assets as bank accounts; he is also less interested in direct investment through borrowing. This effect of the relative returns tends to damp out the impact of price changes: If the rice price increases the real interest rate declines as inflation has increased, hence tending to reduce deposits; at the same time the real income is higher so deposits grow. Thus the relationship between real interest rates and deposits is influenced by this difference.

- (c) Current Bangladesh Bank policy is to maintain positive real interest rates for fixed deposits of one year or more. As the inflation rate has not varied much in recent years there has been little reason to adjust deposit rates. There is, however, a case for a somewhat different policy:
- i) The Bangladesh Bank to adjust deposit rates every quarter;
  - ii) The Bangladesh Bank to announce the central rate on each deposit type it controls and a band within which the banks are free to set the rate. The band on the one year fixed deposit would be kept narrow initially; all other deposits would have gradually widening bands.
  - iii) The gradual relaxation of control over interest rates would proceed by first shifting to control of a single deposit rate and then gradually relaxing that control as the banks learn to set their own rates.

4. The RFP gave considerable emphasis to the development of new saving instruments which would meet the needs of the rural population. Emphasis is given in this paper to the need to provide deposit types which permit individual households to buy risk protection as part of a program to meet specific life financial needs. Development of such products will take time but provides the greatest potential for increasing saving mobilization in rural areas. The introduction of such products also requires Bangladesh Bank to be permissive with respect to the terms offered. Competition among banks to offer imaginative deposit schemes and to spread risk will provide the most efficient way to encourage greater deposit growth. This is a new area for Bangladesh banks but in my opinion it is in this direction that the most important progress can be made in the next five years.
5. The RFP recommended a trial be made for a mobile banking facility. Preliminary economic analysis indicated that this was likely to be quite profitable. It remains to carry out such a trial. We would hope that one or more of the banks would initiate action on this proposal.
6. Finally, a comment on the question of reconciliation of the need to increase saving with the need for reduced liquidity in the banking system. The desirable objective is to increase the private sector's demand for loans. The problem is that industrial loan demand is weak due to poor domestic market expectations and very limited export potential in the immediate future. Industrial lending is also difficult as the DFIs engaged in providing these loans are tied up in loan recovery and many industrial entrepreneurs are in difficulty meeting existing obligations.

Rural lending is also declining: One temptation is expand the Government deficit and thus increase aggregate demand. This is difficult to do quickly due to the long delays in project implementation. To increase Government expenditures by greater subsidies would be short-sighted and introduce additional distortions in the pricing system. The potential for expansion of credit to agriculture is enormous, both for crop loans and for irrigation equipment. This type of increased lending is the most useful solution to the liquidity position of the banks.

Saving mobilization would best follow along the lines of developing new products and new banking techniques. At this time there is no justification for using interest rates, doubtful at best, or rapid branch expansion as instruments to expand saving mobilization.

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## Saving Mobilization in Rural Bangladesh

Introduction: This paper reviews some of the findings of the Bangladesh Bank/USAID Rural Finance Project with respect to saving mobilization. This introductory section reviews concepts and definitions. This is followed by a description of two complementary models for analysis of rural saving: what we will call the economist's and the banker's model. The major findings of the RFP are then discussed. Finally, the policy implications are reviewed.

Saving means that disposable income of an economic unit withheld from consumption, or alternatively the increase in net assets of the economic unit. It is conventional wisdom that saving levels in Bangladesh are extremely low. Saving by domestic sources is 2-3% of GDP; saving by national sources (i.e. all Bangladeshi) is rather higher at another 5-6% of GDP due to the large earnings and homeward remittances of Bangladeshi overseas. However, more than half of gross fixed capital formation is financed by foreign assistance - either low interest loans or grants. With there being every likelihood that remittances will grow more slowly than GDP in future years and the inevitable uncertainty as to the long term levels of foreign assistance, the importance of raising domestic saving is obvious. The fact that talk of greater saving for Bangladesh has become commonplace does not reduce the urgency of the need. More rapid growth will require higher investment levels and these must be financed by greater domestic saving.

Of the two components of domestic saving, private and Government, the available data is not completely clear but suggests that Government saving (revenues less consumption expenditure less subsidies) is 0 to -1% of GDP, hence the private sector's contribution is 3-4% of GDP or 5-7% of disposable income.

Available evidence from the Household Expenditure Savings and from the RFP surveys shows rural households save more than urban households at comparable income levels. Information on saving from different sources is not always consistent; in particular, cross-section analysis of household expenditures indicates more saving by rural households than suggested by the national accounts. The anthropologists on the RFP found that rural households saved a quite substantial part of their income.

It is important to distinguish between saving and asset management by the household. Asset management describes how the household divides its resources among alternative assets. If a branch bank is established in an area previously unserved there are two extreme effects: (a) The households may save more due to the desirability of owning bank deposits which may pay high interest rates; (b) The households may rearrange their existing assets putting some assets into bank deposits and reducing other forms of holding assets. The rural household has a number of asset forms that can be readily shifted: Rice or paddy inventories; gold or jewelry; cash hoards within the household; bank deposits; loans to others. Certain real property assets such as land or agricultural equipment are less fungible. The purchase of assets from saving out of current income will also be influenced by the availability of banking services. Even if the rate of saving is not changed, with the option of owning bank deposits, there may be a significant shift in the household's asset portfolio away from real property as increments to assets are placed in the bank.

By mobilization of saving we mean the increase in the household asset portfolio that is kept in bank deposits. This seminar deals with the issues involved in increasing saving mobilization. Before turning to the analysis of how to do so, it is useful to review why this is perceived as such an important aspect of development. Growth

takes place from two effects: (1) Saving and the accumulation of capital through investment and (2) the proper choice of investments to be made. If investment choices are poorly made, then little increase in output is achieved, the returns to savers are low and the willingness to save may be consequently reduced. Poor investment choices hurt growth directly through the inefficient use of capital and indirectly through discouraging saving. The typical picture of a rural society without financial intermediation is that most people have low return projects to carry out and so save little to finance these. The farmer who has a good idea requiring a lot of capital cannot find the funds. Of course the informal markets provide some intermediation - say within the village, but cannot readily reach further.

If the households savings are mobilized by the banking system and invested by those who borrow from the banking system this helps the economy only on two conditions: (1) The investment projects supported by the banks are better - yield a higher return to capital - than those which are financed outside the banking system by the farmer himself; (2) The improvement in the quality of projects is sufficient to cover the costs of the banking system's operations (administrative costs and loan losses). Put another way, the farmer may invest directly in his farming operations and earn, on the average, a return of 10%. If the bank can find a project which earns a return of 20% then the farmer can be induced to deposit his money in the bank receiving, say 12% (so he is better off) and the bank has 8% to cover its costs. If, however, the investment financed by the bank earns a return of only 10% then the economy has lost - the resources used in paying the costs of the bank have simply been frittered away for no purpose.

How can one know if the bank's loans generate a sufficiently high return to justify the expenses of intermediation? The first point is obvious but of great importance: The banking system must be viable - i.e. cover its costs and borrowers must repay the loans. If these conditions are not met then the financial system is hindering rather than helping. It may be argued that repayment is not

a necessary condition for having the financial system assist development. That is, of course, correct: farmers may all make excellent investments but fail to repay. While not a necessary condition, repayment is a sufficient condition. If repayment regularly takes place then the investments financed are earning an adequate return (so long as the viability condition is also met). In the absence of repayment the assessment of loans quality is impossible. The funds will not necessarily be used for productive purposes if the borrower believes he does not have to repay. One can be quite sure loan receipts will often be consumed in the absence of repayment.

The second point is not so obvious: The market valuations of inputs and outputs may not reflect the true value. For example, if the Government chooses to subsidize the urban rice price, the returns to rice farmers could be understated using market prices.

After many years of tickering with prices there is now widespread acceptance among development economists that while price manipulation may be a convenient instrument of intervention, it is impossible to compute with any degree of confidence the consequences of such manipulations. Consequently it is better to move towards pricing without subsidy and let the investment, saving choices be market determined. Once computed price corrections are used to justify investments one enters into an imaginary world and contact with the real economic scene is soon lost. The best way to correct a price distortion is to remove the distortion, not to compute the answers and try to manipulate policy to offset the distortion.

The above argument was made to reach one vital point: Mobilization of saving is good for Bangladesh only if the financial sector is viable and recovers the loans it makes. If it does not then the banking system is wasting resources rather than creating them. All of the discussion during the seminar on saving mobilization presupposes that the system is able to identify good borrowers and collect the loans made to them. There is no escape from the dilemma-

if the banks cannot do this then saving mobilization is an error and no measures should be taken to encourage it. The discussion in this paper will assume that the financial system is making good loans. Note it is not important to the saving mobilization issue whether the good loans are in urban or rural areas. In principle the financial system will direct the resources to the best loans regardless of where the saving mobilization takes place. Indeed the greater the geographic extent of intermediation the better.

The financial system in many developing countries has successfully mobilized saving but has then used the resources to finance Government current expenditures or low returns projects undertaken for vague objectives of prestige or belief in externalities that the market will not take into account. Such misplaced beliefs are one of the major sources of poverty in the developing world. As the seminar deals with how to mobilize saving it is vital to keep in mind the need for proper use of the funds so mobilized.

The power of financial intermediation is very great: If a country fails to provide proper intermediation economic growth can only rise marginally above the traditional level; greater investment financed by foreign assistance will help to achieve this. The investments must meet the test of viability with reasonable accounting rules. Otherwise degraded quality investments will lead to slow growth or stagnation.

The volume of rural deposits has increased very rapidly during the few years. In real terms this growth of rural deposits has averaged 10% per annum. Currently there are signs that this growth rate of real deposits is declining. This may be due to the decline in economic activity taking place in rural areas, lower jute prices, the net withdrawal of credit that has taken place etc. This point will be taken up again below. It is likely that after a period of considerable success in mobilization of saving by the financial

system we are now in a period of much slower growth, probably negative in real terms. One important objective of these deliberations is to consider how the financial system can return to rapid expansion of deposits.

Some may argue that the high liquidity level of the banking system indicates that further increases in deposits are not needed, at least in the near future. For example, lowering the deposit interest rates is meant to slow down the growth of deposit mobilization as well as to improve the bank's spread between costs and earnings. Although increasing deposits is sound in the long run, it is argued currently that with the limited demand for loans and the depressed state of demand, there should be no drive for an increase of deposits which would lead to an even higher level of insufficient aggregate demand.

However, saving mobilization in rural areas requires a sustained, protracted effort, not one which is adjusted in the short term. How it is feasible to link together the short term need for less deposit growth with the long term need for more rural saving mobilization is one of the dilemmas of policy briefly discussed below.

#### Two models of saving mobilization

##### 1) The economist's model

The economist's model is based on the assumption that each individual has a set of preferences which are considered fixed and which govern the decisions made as to how much saving will be done, and how available assets will be managed. The main variables which influence the level of saving and asset distribution would be :

- i) The income, family size, and wealth of the household.
- ii) The age distribution within the household.

- iii) The real interest rate (nominal less expected inflation less transactions costs) earned on bank deposits.
- iv) The environmental risks.
- v) The relative returns on different assets.

It is assumed that the household manages its affairs in a rational manner. Practical issues of dealing with the banking system or of managing different types of objectives are assumed away.

## 2) The banker's model

The banker's model is based on a view of the depositor as one who must be persuaded or induced to use the bank's services. The household is perceived as able to change its preferences given the efforts at persuasion made by bank staff. In addition to the interest rates the depositor is attracted by the types of saving products that are available. The banks compete by intangibles such as the quality of service. Whereas the economist's model tries to describe the total volume of saving and asset distribution in the economy, the banker's view is focussed on attracting to his particular institution as much as possible of the deposits.

However the banker's view should be seen as more than fighting for a larger share of a fixed pie. Better saving products and protracted campaigns to influence and instruct may have substantial impact on saving and asset distribution.

In Bangladesh one can see this same split in the articulation of objectives: The branch banker trying to meet a target or goal prescribed for him by his head office will use his energy and time to attract large depositors. To the extent he is successful his targets are reached in the most efficient way. However, competing among banks for large deposits, which would be in the banking system

anyway, does not contribute to the overall national saving mobilization. On the other hand, the economist's view that manipulation of interest rates will be the main determinant of saving mobilization is insufficient to encompass behavioral change.

Some results from the Rural Finance Project

The work of the Rural Finance Project has followed both of these models and from this has emerged a number of conclusions which are of direct relevance to the main problem of encouraging saving mobilization :

- 1) Real interest rates influence the asset composition - higher real interest rates draw assets from other uses. Whether real interest rates influence saving is much less certain.

There are certain ironical aspects of this interest rate impact due to the existence of curb markets (non-institutional markets) prevalent in rural credit. Reduced interest rates tend to lower bank deposits and encourage the growth of the curb market. The money lender who has decided to invest in fixed deposits now finds the bank a less attractive place to park his funds. Reducing deposit interest rates will influence the curb market immediately, even though the demand for loans from the formal market may be reduced due to inadequate aggregate demand. Most Branch managers were unequivocal that over the past few years, through 1985, there was a reduction in curb market volume and a shift of assets held by money lenders from loans to others into bank deposits. Thus if the rural banks reduce lending, the liquidity will lead to pressure to reduce deposit rates, drawing funds out of the banks and into money lending. The curb market will partially replace the formal market. But the curb market loan volume will be more for family emergencies and less for productive investment.

- 2) Transactions costs strongly influence the perceived real return to having a bank account. By transactions costs is meant these costs incurred by the depositor in having and operating a bank account. The most important of these costs is the time that it takes for the depositor to travel back and forth from his residence to the branch. The greater this distance the less attractive the deposit activity. They are two responses that rural households make to the distance to the branch: The household simply does not open an account since it is considered too expensive to use it. Another response found in the RFP survey work is a reduction in the frequency of use of the account. There are many deposits where there is little activity, with very long periods between transactions. The use and travel patterns of rural households are too complex to permit meaningful quantitative relationships to be given; but the evidence is clear that the branch has an area from which customers are drawn and this represents the maximum transactions costs that households are prepared to pay. From our survey the rural branches typically serve customers within a ten mile radius.
- 3) The factor that is most critical for rural households in Bangladesh is the risk element. Apart from the major natural disasters that regularly strike the nation, there are a multitude of micro-climate effects: a local flood, heavy winds, hailstones, pests or fungus diseases.

These outbreaks may cause substantial crop loss in a small area. Although these minor problems may not make the headlines the impact on the farmer may be more serious. The household's response to these risks is to set aside resources to permit overcoming these difficulties should one be struck by such misfortunes. In this environment rural household saving is driven first by the need to build up liquid resources to the minimum level required for protection against crop loss. We distinguish here between the very poor households who have limited income

and whose risk is of a different sort (illness, changes in food prices) and farm households who may experience crop loss or drop in the price. To manage the possibility of crop loss the preliminary RFP evidence suggests a strong pressure to build up saving when these are reduced below a certain level. After experiencing a disaster the household will attempt to recover to an acceptable asset level. Saving then is determined by the recent production history of the household.

What Keynes called the precautionary motive for saving is, in my view, the most important factor driving the small Bangladesh farmer. Once the farmer reaches a liquid asset level corresponding to his needs, the saving may diversify into less liquid forms. This drive for saving is not connected with the interest rate at all, and the importance of this reason for not consuming means that a large part of rural saving does not seem to be strongly influenced by the interest rate. Indeed, if a saving account is used for this form of saving there may be a perverse effect: The farmer is saving towards a target; the higher the interest rate the easier it is for him to reach the target level. Once this precautionary liquid reserve is in hand the farmer may now be more willing to consider the return to alternative investments, including most particularly investing in his own farm.

- 4) One modern characteristic of banking is the growing ability of banks to provide risk management for their customers. Although most of the discussion of risks in bank management has to do with lending and production operations once one sees the rural bank deposit as directly connected with the production risk (as argued in the previous paragraph) then it opens up for the banks in rural Bangladesh a number of possibilities for linking saving, insurance, and important family requirements. These ideas received an initial development during the RFP in the

form of proposals for contract saving. The view taken in this paper is slightly broader. If I have a specific target for my family e.g. to send my son to secondary school, then to achieve that goal a specific expenditure pattern is implied. Sensibly I will try to save to meet these specific future expenditures. At present I am able to use a savings account or possibly a sequence of fixed deposits, reinvesting the interest. However, I am subject to certain production risks (low prices, crop loss) There is nothing I can do about this; if I am pessimistic about the risks then I will save more whenever I am able. There is no way I can "buy" protection against production risks. If the bank were able to offer me a lower interest rate but guarantee the ultimate payment I receive, this might prove a type of deposit that would be very attractive to me. The bank unlike the individual has the possibility of spreading this risk among many deposits.

The development of methods of saving which permit households to buy protection against risk by receiving lower interest rates would in our view find a very positive response in rural Bangladesh. Once it is recognized that a major motive for much rural saving is risk protection then by designing saving instruments linked to this need all may benefit: the banks may be able to collect considerable amounts of deposits for very low interest rates and also, by proper balancing of risks, serve the needs of the Bangladesh farmers.

5. It is useful to keep in mind the deposit structure of a typical rural bank:

Deposit Characteristics of a Branch

(June 30, 1985)

Median deposits (thousand Taka) 3298

Median number of accounts 1643

Median account size (Taka) 1920

Distribution of deposits:

|                       | <u>Percent of<br/>value of<br/>deposits</u> | <u>Average<br/>size<br/>(Taka)</u> | <u>Percent of<br/>number of<br/>deposits</u> |
|-----------------------|---|------------------------------------|--|
| Saving (checking)     | 32.3%                                       | 1420                               | 57.1%  |
| Saving (non-checking) | 12.9%                                       | 1120                               | 26.6%  |
| Current               | 19.0%                                       | 4960                               | 8.9%   |
| Fixed                 | 26.2%                                       | 17850                              | 3.4%   |
| Others                | 9.6%  | -                                  | 4.0%   |

The typical rural branch has 3.3 million Taka of deposits and 1643 deposit accounts. (Medians are quoted as means are deceptive due to extreme values). The typical account has 1920 Taka. Rural branches have mostly saving accounts (45% by value, 83% by number) which are rather small, 1000-1500 Taka average size. Only 8.9% of all deposits are current accounts by number (19% by value). These accounts average about 5000 Taka. There are a few fixed deposit accounts (3.4% by number) but these contain a substantial share of funds (26.2%) and average 18000 Taka.

Saving mobilization has two aspects:

- a) Increasing the number of small saving accounts
- b) Competing for current and fixed deposits.

From the national viewpoint active saving mobilization through greater current and fixed deposits is of little interest. These depositors are going to use the banking system and the volume and level of the deposits will be determined by the growth of the economy and to a lesser extent interest rates. Higher interest rates on fixed deposits will draw more funds into these categories and help the bank to balance its short and long term assets and liabilities. However, in Bangladesh the possibility of a bank run seems remote; the Government would support a bank which found itself embarrassed by deposit withdrawals. While the higher rates for fixed deposits may only shift the structure of deposits not increase it, in rural Bangladesh the size of the smaller fixed deposits is such that these may easily be cash hoards or money earned from asset disposal. The interest rate increase may have drawn substantial funds into the banks in fixed deposits.

In rural Bangladesh what is essential is to build up the saving accounts. These accounts are readily shifted into cash hoards. Mobilization of saving depends critically upon expanding both the number and size of these small accounts.

6. Who owns these deposit accounts? In rural areas more than 96% are owned by households. Less than 1% are owned by Government organizations. Groups, businesses, and cooperatives account for some .1% each. Business establishments have largely current accounts, while households, groups, and cooperatives own largely saving accounts. Fixed deposits are largely held by households (97%).

We see from this that it is the ordinary households who have most of the accounts. A typical branch has about 20 business accounts and a 1-5 Government accounts. The lack of business accounts relative to household accounts is rather surprising.

7. The size distribution of the deposit accounts is as follows:

Size distribution of rural deposits

| <u>Size class</u> | <u>Current</u> | <u>Saving (checking)</u> | <u>Saving (non-checking)</u> | <u>Fixed</u> | <u>Total</u> |
|-------------------|----------------|--------------------------|------------------------------|--------------|--------------|
| 1 - 100           | 46%            | 54%                      | 57%                          | 0            | 53%          |
| 101 - 500         | 27%            | 79%                      | 24%                          | 1%           | 21%          |
| 500 - 1000        | 7%             | 5%                       | 5%                           | 6%           | 5%           |
| 1000 - 2000       | 6%             | 6%                       | 4%                           | 6%           | 5%           |
| 2000 - 3000       | 2%             | 2%                       | 2%                           | 9%           | 2%           |
| 3000 - 5000       | 3%             | 3%                       | 2%                           | 14%          | 3%           |
| 5000 - 10000      | 3%             | 4%                       | 2%                           | 28%          | 4%           |
| 10000 - 20000     | 2%             | 3%                       | 1%                           | 18%          | 3%           |
| 20000 - 30000     | 1%             | 1%                       | 1%                           | 5%           | 1%           |
| 30000 +           | 2%             | 2%                       | 1%                           | 13%          | 2%           |

The size distributions has no real surprises. The current accounts and saving accounts are dominated by a large number of very small accounts (less than 500 Taka) followed by a declining number by size class. The reason for these very small accounts is not clear. Such accounts have very little utility to the holder and show very limited activity. It is striking that 80% of all rural deposits are less than 1000 Taka in size. The fixed deposits are much larger, the median deposit is of the order of 7500 Taka.

8. The establishment of branches is the main mechanism for the growth of deposits. Regression analysis has shown the very strong explanatory effect of branch number and deposits. To understand how this functions the development of deposits as a function of age was studied.

|                                   | <u>Mean Deposits at a Branch</u> |          |          |          |          |          |          |           | greater<br>than<br>10 |
|-----------------------------------|----------------------------------|----------|----------|----------|----------|----------|----------|-----------|-----------------------|
|                                   | Branch age in years              |          |          |          |          |          |          |           |                       |
|                                   | <u>3</u>                         | <u>4</u> | <u>5</u> | <u>6</u> | <u>7</u> | <u>8</u> | <u>9</u> | <u>10</u> |                       |
| Total deposits<br>(thousand Taka) | 486                              | 5100     | 1303     | 1299     | 5613     | 3761     | 4355     | 4038      | 9783                  |
| Number of accounts                | 436                              | 718      | 1369     | 1123     | 1432     | 1521     | 1901     | 1819      | 4041                  |
| Account size (Taka)               | 1110                             | 7100     | 950      | 1160     | 3920     | 2470     | 2290     | 2220      | 2420                  |

The data in the 4th and 7th years contained two branches with large current accounts; correcting for this effect we see that the number of accounts rose steadily through the life of the branch. The rate of increase of the number of accounts is 16% per annum; the average account size increases at the rate of 9% per annum. (Since these are all observed at the same time the rate of increase in value terms is real). Fixed deposits however be have differently, with growth arising largely from the increase in the account size. The current and saving accounts grow in number but not in value.

We conclude that deposit growth arises from penetration of the branch into an area with a steady growth of current and saving accounts in number, with account size increasing with inflation. One can go further; with the size distribution previously given for accounts, there are many accounts started but which do not increase. Other accounts are increasing in size rapidly so, on the

average, these categories grow with the inflation rate. Fixed deposits grow in average account size but not in numbers. This suggests that there has been a strong impulse to fixed deposit growth through the increase in real interest rates. Again the size distribution of fixed deposits does not show the large number of small accounts associated with the other type of deposits.

A strategy for increasing deposits is to focus on the small accounts which are not increasing. These depositors represent a large number of persons who could be reached by the branches through competitions for the greatest increase in deposits, or regularity of deposit etc. The data suggest that the growth of account numbers takes place relatively easily, but that a large number of such accounts stagnate.

9. The profitability of branch banks is negatively related to the level of deposits. Branch banks which are the most profitable depend upon borrowing from their head offices. This indicates why special programs are needed to mobilize branches which are judged on their profitability. They are not going to spend much effort increasing deposits.
10. The final point to be made about saving mobilization is the views expressed by the Branch Managers and Regional Managers. The most important policies the rural managers reported were to train staff, recognize good performance and raise bonuses for generating new deposits. The managers also reported the development of new account types, targeting on particular groups of potential depositors, targeting on particular groups of potential depositors, interest rates, linking lending to deposit level, or national deposit insurance schemes were perceived as of limited usefulness in deposit mobilization.

### Policy Implications

The policy implications of the above are :

1. The increase of bank deposits in the rural areas is a legitimate objective of policy only when one is confident that financial intermediation is working well. In the absence of proper intermediation, financial policy should concentrate first on improving loanee selection and loan recovery; efforts to achieve more rapid saving mobilization should wait until the quality of the intermediation is assured. In the present situation in Bangladesh the priority does not seem to rest with more rapid growth of deposits. The banking system cannot do everything at once, so priorities must be established. This point is reinforced by the current high liquidity level of the banking system which removes the urgency of mobilizing more saving in the financial system.
2. The Branch bank network clearly contributes to mobilization of saving in rural areas. The mechanisms by which this works have been described. The slow down in branch formation in recent years is now manifest in slower deposit growth. Bangladesh's rural areas certainly need more banks.

However, what is needed is competition among banks, resulting in the establishment of new rural branches, believing that it is possible to make profits in rural banking. At present no one in the banking system believes it is financially sound to lend to farmers without either a high subsidy level or an accounting policy which does not classify loans as non-performing, thus generating book profits. The branch banking network needs to expand, but only when the intermediation problem can be solved. At present more rapid growth of the rural branch networks will serve to mobilize resources for use by the urban areas and by Government for its recurrent expenditures. The present passive policy towards new branches taken by the monetary authorities seems appropriate.

3. The interest rate impact on rural bank deposits is rather involved. The RFP evidence on the impact of real interest rates on deposit growth indicates that higher interest rates lead to greater deposits. The data is difficult to interpret for a number of reasons :

(a) Technically, the real interest rate is defined as the nominal rate less the expected inflation rate less any taxes paid on the interest earnings less the transactions costs incurred by the depositor. This formal definition is useful only when combined with some view as to how the rural depositor determines the expected inflation rate; after all one is trying to explain behavior. Economists believe, for very good reasons, that for most persons there is little money illusion - depositors are well aware of the losses incurred by inflation eroding the purchasing power of their income or financial assets. Empirical work often tries to define expected inflation by that definition which maximizes the response of deposits to the interest rate. Knowledge of depositor perceived transaction costs is very limited. Hence the real interest rate is hardly well defined. The usual approximation is that the expected rate is the current rate or some combination of recent rates. Modern rational expectations theories assert essentially that the actual is the mean of the expected. However, that is hardly a plausible hypothesis for Bangladesh.

The rural households do not have simplistic views about inflation. The most important rural price is that for rice; the rice price influences both the nominal income of most farmers and the cost of living index. Farmers understand very well the seasonal variations of rice prices and speculation in "rice futures" through buying and selling paddy is widespread. Furthermore, many other agricultural prices are linked to rice prices.

Taken together these points throw doubt on our ability to define the "real interest rate" other than to use the actual inflation as the expected and assuming that transactions costs change slowly compared to the inflation rate. Neither is convincing or satisfactory. We conclude one reason everyone has difficulty with the interest rate effect is that the concept is not operational, i.e. we cannot measure it in an objective, acceptable way.

- (b) The inflation rates compiled for rural areas may be unreliable. The appropriateness of a particular inflation rate in the definition of the real interest rate is suspect; the quality of the raw recorded prices may be unsatisfactory, including some prices under official control which may not reflect the typical purchase price and the weighting may not be appropriate for the class of depositors.

Widespread doubt is expressed in Bangladesh about the relevance of existing price indexes. Without taking a position on the ultimate measurement of inflation, if Bangladeshis believe the price indexes underestimate inflation one cannot use the indexes to model their behavior.

- (c) The real interest rates found by using rural consumer price indexes can be computed for six different districts. There is not much variability for cross-section analysis over districts, the common approach to estimating deposit functions in Bangladesh.
- (d) The most appropriate concept to use for determining the influence of the interest rate on the volume of deposits is the relative return on different investments. The farmer tends to move his assets into the bank if the

the bank provides a higher rate of return than self financed investments, speculating on paddy prices etc. Otherwise the farmer makes the real investment. Making such comparisons are very difficult in the economic analysis, yet this is the fundamental choice that the farmer is making. If the interest rate structure moves higher then the farmer is more interested in holding assets as bank accounts; he is also less interested in direct investment through borrowing. This effect of the relative returns tends to damp out the impact of price changes: If the rice price increases the real interest rate declines as inflation has increased, hence tending to reduce deposits; at the same time the real income is higher so deposits grow. Thus the relationship between real interest rates and deposits is influenced by this difference.

(c) Current Bangladesh Bank policy is to maintain positive real interest rates for fixed deposits of one year or more. As the inflation rate has not varied much in recent years there has been little reason to adjust deposit rates. There is, however, a case for a somewhat different policy:

- i) The Bangladesh Bank to adjust deposit rates every quarter;
- ii) The Bangladesh Bank to announce the central rate on each deposit type it controls and a band within which the banks are free to set the rate. The band on the one year fixed deposit would be kept narrow initially; all other deposits would have gradually widening bands.
- iii) The gradual relaxation of control over interest rates would proceed by first shifting to control of a single deposit rate and then gradually relaxing that control as the banks learn to set their own rates.

4. The RFP gave considerable emphasis to the development of new saving instruments which would meet the needs of the rural population. Emphasis is given in this paper to the need to provide deposit types which permit individual households to buy risk protection as part of a program to meet specific life financial needs. Development of such products will take time but provides the greatest potential for increasing saving mobilization in rural areas. The introduction of such products also requires Bangladesh Bank to be permissive with respect to the terms offered. Competition among banks to offer imaginative deposit schemes and to spread risk will provide the most efficient way to encourage greater deposit growth. This is a new area for Bangladesh banks but in my opinion it is in this direction that the most important progress can be made in the next five years.
5. The RFP recommended a trial be made for a mobile banking facility. Preliminary economic analysis indicated that this was likely to be quite profitable. It remains to carry out such a trial. We would hope that one or more of the banks would initiate action on this proposal.
6. Finally, a comment the question of reconciliation of the need to increase saving with the need for reduced liquidity in the banking system. The desirable objective is to increase the private sector's demand for loans. The problem is that industrial loan demand is weak due to poor domestic market expectations and very limited export potential in the immediate future. Industrial lending is also difficult as the DFIs engaged in providing these loans are tied up in loan recovery and many industrial entrepreneurs are in difficulty meeting existing obligations.

Rural lending is also declining: One temptation is expand the Government deficit and thus increase aggregate demand. This is difficult to do quickly due to the long delays in project implementation. To increase Government expenditures by greater subsidies would be short-sighted and introduce additional distortions in the pricing system. The potential for expansion of credit to agriculture is enormous, both for crop loans and for irrigation equipment. This type of increased lending is the most useful solution to the liquidity position of the banks.

Saving mobilization would best follow along the lines of developing new products and new banking techniques. At this time there is no justification for using interest rates, doubtful at best, or rapid branch expansion as instruments to expand saving mobilization.