

Deposit Behavior and Its Impact on Loan: A Case Study on Rajshahi Krishi Unnayan Bank (RAKUB), Bangladesh

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Deposit mobilization and loan distribution are the main products of any bank. Deposit behavior and its impact on loans are very important for any banking operation. The success of a bank depends on the positive deposit behavior and loan recovery situation. Rajshahi Krishi Unnayan Bank (RAKUB) is the largest rural development partner in the agriculture based Northwest region of Bangladesh. The present study examines the deposit behavior of the bank. The study also analyses the impact of deposits on loan disbursement activities of RAKUB. The study is basically analytical and interpretative in nature considering the objectives of the study. A two-variable regression model has been adopted to analyze and process the empirical data on deposits and loans of the study bank. The study reveals that there is a strong relationship between loans and deposits and the behavior of deposits affects lending a large extent. The value of the correlation coefficient indicates that the two variables, loans and deposits are highly positively correlated. The study shows that deposits are a major factor in bank fund management and it has a significant impact on loans and advances. Finally, RAKUB should cautiously maintain balance between loans and deposits for its survival in the competitive world of business.

Introduction

The deposit behavior, interest rates and loan recovery programs are critical in understanding the micro-economic functions of a country. The banks are showing different financial structures in deposit behavior

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according to their credit view. From a micro-economic perspective, banks have allocated incentives to change the prices of their loans and other advance distributions. Banks with large capital or large market share have taken initiatives to change high loan mark-ups and adjust the loan and interest rates in changing market conditions. Again, corporate loans are more competitive relative to consumer products in the bank assets. The interest rates of demand and savings deposits are very rigid in the case of bank liabilities. The financial structures and liabilities of banks' are influencing on interest rates and deposits. The deposit interest rates tend to be more rigid upwards when the adjustment for loans is occurring relatively symmetric (Ferre *et al.*, 2007). Zarruk (1989) showed that increases in bank capital can increase the intermediation margin while deposit instability reduces the margin. Madura and Zarruk (1992) revealed that increases in bank capital and deposit reduced borrowing and lending margins. Usually in a single words bank is the deposit mobilization institute and loans and advances is the main product of its.

There is a fundamental concept; banks are operating in the business of borrowing and lending money. From this concept, banks have been positioned as a market maker or dealer (Bryan and Stock, 2004). According to Ho and Saunders (1981), banks are dealers in loan and deposit markets. But the major difficulties in managing the process is that loans and deposits turn up stochastically and not in a predictable fashion. They show that a bank has charged an intermediation fee for the instant provision of loan and deposit accounts to its customers according to the market condition. In this case intermediation fee depends on management's risk aversion, the bank's market arrangement, the size of bank transactions, and the difference of interest rates. Several researches focused that intermediation margin are related with various types of ambiguity in banking activities (Bryan and Stock, 2004). Again, Wong (1997) examines the intermediation margin under interest rate risk and finds that are positively related to market power, bank working costs, and risk aversion. The revenues obtained from making a loan are dependent upon a rational process for prepayments by borrowers. The borrowers are prepaying their loans when decrease the level of interest rate. However, prepay realized if interest rates fall below the lending rates. These situations influence the depositor to withdraw funds due to lower level of interest rates. Again, the bank's cost of acquiring depends on savings and withdrawals of depositors. Angbazo (1997) has shown

empirically that banks with riskier loans and higher interest rate risk exposure enjoy higher intermediation margins. Allen (1988) has shown the impact of bank products upon the intermediation margin. The margin is dependent on monopoly power, a risk premium and multi-product diversification of market. From the above discussion, it is clear that deposit behavior and its impacts on lending are very important for any banking operation. The success of a bank depends on the positive deposit behavior and loan recovery situation.

Bangladesh is a developing country that majority peoples living under the poverty line. Bangladesh has been an agriculture based country from its very beginning. Most of the people depend on agriculture. The performance of this sector has a major impact on the overall economic development of the country. From British ruled to date, farmers of the country dominant in various ways. Therefore, in 1932 India-British govt. took a step forward the socio-economic development of the small and marginal farmers of Bengal to disburse agricultural loans. The government of Pakistan established a financial institution named “Agricultural development finance corporation” (ADFE) on account of disbursement of loans in the agricultural sector in 1952. Feeling the importance of agro-production and agro loan of the Pakistani Govt. established another bank namely “Pakistan Krishi (Agriculture) Bank” in 1957. After the Liberation war Bangladesh Govt. denoted the Pakistan Krishi Bank as Bangladesh Krishi Bank (BKB) in 1973 according to the presidential order 27. As Bangladesh grew as an agro-based country, the demand for agro-loan distribution of Agriculture Bank has been increased highly. It become very difficult to manage agro-loan in the Dhaka based head office of Krishi bank in the remote areas of the country. For this reason the Bangladesh government wanted to decentralize the Krishi Bank into the divisional areas. The people of the Northern areas of Bangladesh are lagging behind in all respects compared to the other parts of the country. That is why in 1986, according to the president’s ordinance no. 58, Rajshahi Krishi Unnayan Bank (RAKUB) was established. From March 15, 1987 RAKUB has started its official functions (Khan, 1995).

As the agriculture is main source of income to the people of Bangladesh, then their economic condition is not satisfactory. Therefore most of the people willing to go savings their money in any financial institutions including banks. The banks collect and accumulated their savings

through different deposit accounts (current, savings, fixed deposits and so on) to increase current assets. Loans and advance is the key asset for a bank and it tried to collect huge deposits from the clients. The goal of commercial bank and others including specialized banks of the Bangladesh have to collect deposit in a low rate of interest and to provide loan disbursements in a high rate of interest. Loan may be defined as money lent at interest or on profit. It is nothing but temporary parting with one's [an individual or an institution] resources in order to augment the purchasing power of the receiver of such facility with a promise to return the same with interest profit or otherwise as mutually agreed upon. The commercial banks and others specialized banks of the country often disburse there loans against the existing current deposit account of the client or loan receiver. The bank provides the sanctioned credit through the account. Usually banks do not sanctioned loan disbursement without any deposit account of that bank. The clients submit proposal to bank authority against his/her deposit account which have of that bank for receiving loan. So there is great effect by deposit behaviors on the loan disbursements in Bangladesh.

Movements in market interest rates, foreign exchange rates and purchasing power of parties (loan receivers) have potent effect on banks deposit behaviors and loan disbursement that is reflected through the margin of revenue of bank in Bangladesh. For example, if the interest rate rises so high, the purchasing power of loan receivers becomes costly that adversely affect the banks' amount of loan distributions. As a result, banks ability to disburse loan decrease than before. Besides, increase in interest rate lowers returns from earning assets and reduces the net worth that result in lower margin of profit. Again, if the interest rate falls, but not sharply, loan distribution becomes cheap that helps banks to boost up their fund collection. Therefore, banks ability to disburse loan increases. As a result banks can earn high margin of profit. On the other hand, if the interest rate rises against deposit reserve, the depositors willing to more deposit in banks. Then banks deposits will be higher than previous period. This situation also creates in Bangladesh, when foreign exchange rates will high against country's currency. The non residents Bangladeshis (NRB) sent more remittances in this period. As a specialized bank, above situations also influence the deposit behaviors and loan disbursements of RAKUB. The present study examines the deposit behavior of RAKUB. The study also analyses the impacts of deposit on loan disbursement activities of RAKUB.

Significance of the Study

Deposit behaviors effect on the loan disbursements which is important matter of Bangladesh perspective. The banks imposed different terms and conditions during the loan disbursements. The banks impose terms and conditions as to collateral security and equity of the loan receivers. The collaterals are either movable or immovable. Usually to keep mandatory liquidity position and deposit balance bank's imposed terms and condition on loan disbursements. The banks fall in deep trouble, if not recover the loan from the borrowers. To reduce risk bank took different collateral to the borrowers. Again bank must keep a given portion of deposit amount following the loan disbursement. Because the deposit holders of the bank might be retrieve their savings any time or a certain period from the bank. For this reason each banks are alert to collect much deposits then took decision on loan disbursements. In this sense we can say that bank is the holder of borrowing money while its loan disbursements decision is greatly depend on deposit collection. Bank's loan disbursements do not exceed its deposit. Besides, deposit behavior effect on loan disbursement by liquidity position and strategies, optimum liquidity and selection of good borrowers. The commercial and others banks of Bangladesh maintain their loan disbursements activities much and more basis on the deposit collection due to present world recession as well as reduce the bank's default risk. The study of deposit behaviors effect on the loan disbursements is very much important in Bangladesh perspective. To avert any business risk and financial risk banks must be emphasis on this study.

Method and Materials

Data Attainment: The study is basically analytical and interpretation in nature considering the objectives of the study. Secondary data from the Paba branch of RAKUB have been used in this study. For collecting secondary data various journals, books, periodicals and annual reports of the relevant organizations have been reviewed carefully. We decided to employ a quantitative descriptive method for analyzing the empirical data. Two-variable regression model has been adopted to analyze and process the empirical data on deposits and loan of the study bank.

The two-variable regression model is $Y=a+bx$ i.e;

Where,

Y= Dependent variable
X= Independent variable
a= Intercept term
b= Slope

Hypothesis:

Ho: There is no relationship between loan and deposit.

H₁: There is relationship between loan and deposit.

RAKUB: Rajshahi Krishi Unnayan Bank (RAKUB) is the largest rural development partner in the Northwest region of Bangladesh. It aims at the overall development of the farmers' livelihoods and the sectors of agriculture in this region. The main objectives of RAKUB are providing credit facilities for all kinds of agricultural and agro-based economic activities, earning a normal profit for meeting the operational expenses and extending counseling and advisory services to the borrowers and entrepreneurs (Khan, 1995). A seven-member board of directors is responsible for policy formulation and decision of the bank. The government has appointed all the directors of the board. An executive body comprised of the chairmen and two other directors including the managing director is taking emergency decisions for operational activities. The managing director is the chief executive of the bank. The bank is functioning in agriculture credit, financing agri-business and agro-based industries and poverty alleviation programs as well as commercial banking functions (Shekhar, 1991).

Branch Network:**Table- 1:** Region wise total branches of RAKUB (up to June 2006)

Region	Branches
Bogra North	20
Bogra South	14
Chapaynawabgong	16
Dinajpur North	15
Dinajpur South	17
Gaibandha	24
Joypurhat	15
Kurigram	19
Lamonirhat	17
Noagoan	27
Natore	20
Nilphamari	20
Pabna	22
Panchagang	18
Rajshahi	23
Rangpur	26
Sirajgong	22
Thakurgaon	22
Total	357

Employee Summary (up to June 2008):**Table- 2:** Authorized and Existing employees of RAKUB

Designation	Authorized	Exist
1. Managing Directors (MD)	01	01
2. Deputy Managing Directors (DMD)	01	01
3. General Manager (GM)	03	03
4. Deputy General Manager (DGM)	25	17
5. Assistant General Manager (AGM)	48	34
6. Senior Principal Officer (SPO)	120	92
7. Principal Officer (PO)	319	236
8. Senior Officer (SO)	594	470
9. Officer	897	780
Total Officer	2008	1634

Source: Personnel Department of RAKUB

Table-1 shows that there are 357 branches of RAKUB under 18 regions of the northern part of Bangladesh in 16 districts. The highest numbers of branches are situated in Noagoan region. On the other hand, the lowest numbers of branches are situated in Bogra south region. Table-2 reveals the authorized and existing employees of RAKUB. The authorized employees of bank are 2008. But the existing amounts of employees are 1634. The table shows that highest amount of vacant posts in Officer, Senior Officer and Principal Officer levels.

Like other organizations, RAKUB has own techniques to evaluate their employees' performance. On the basis of that they reward the employees through promotion or other benefits. Some employees of this bank are left here to other banks due to get extra benefits and salary opportunities. So create employee crisis in the bank which impact on deposit collection and loan disbursements procedure. For collection and maintenance the deposits, monitoring and supervision loans disbursements bank require sufficient manpower those are not shortage in RAKUB. Such due to manpower shortage hampering the observe and supervise the loan applicant before approving the loan, after approving and disbursing the loan supervise and monitor the cash inflow and outflow until the full repayment of the loan as well as retain the most creditworthy borrowers based on their past repayment history and make them repeat customers.

Results and Discussion

Table-3: Deposits Scenario of Paba Branch, RAKUB, 2005-2009

Name of Deposit	2005	2006	2007	2008	2009 (up to June)
Current Deposit	6844729	7673991	5873589	7480667	7337115
Sundry Deposit	950936	1081656	1044717	1357909	1863007
Saving Deposit	30907111	35379418	40282188	42274389	42927450
Short Term Deposit (STD)	6466606	9931764	20303978	22402543	61404552
Fixed Deposit Receipt (FDR)	4599616	3679829	3336294	2680679	3057064
Deposit Pension Scheme (DPS)	19800496	17984937	9895138	2397828	2687973
RAKUB Saving Scheme (RSS)	4402455	5842757	7232398	8669028	10301995
Total	73971952	81574353	87968303	87281245	129579198

Source: Annual report of RAKUB, Paba Branch, Rajshahi

Table-4: Loan and Advance Scenario of Paba Branch, RAKUB, 2005-2009

Name of Loan & Advance	2005	2006	2007	2008	2009
Rural Credit (RC)	280539	233008	601366	1339997	1599727
General Credit (GC)	426994	-----	9459	89075	331550
Commercial Loan	1904235	1891052	3849580	4436367	5626728
Loan against Provident Fund	1945576	2268692	2023965	2054438	1108577
Savings Over Deposit (SOD)	2589491	3179416	2676485	1618118	1108577
Current Credit (CC)	604445	918069	870445	-----	1690657
Specialized Social Investment (SSI)	419789	192025	57605	-----	826200
Total	8171069	8682262	10088506	10334195	11133379

Source: Annual report of RAKUB, Paba Branch, Rajshahi

Table-3 presents the deposits scenario of Paba Branch from 2005 to 2009. Several types' deposits are posing different conditions in year by year. The highest amounts of current deposit are shows in 2006, sundry deposit in 2009, saving deposit in 2009 and STD in 2009. Again, highest amounts of FDR are represents in 2005, DPS in 2005 and RSS in 2009. The highest amounts of deposits are collecting in 2009 a total of Tk. 129579198. Table-4 reveals the loan and advance scenario of Paba Branch from 2005 to 2009. Several types' loans are posing different conditions in year by year. The highest amounts of rural credit are shows in 2009, general credit in 2005, commercial loan in 2009 and loan against provident fund in 2006. On the other hand, highest amounts of SOD are distributes in 2006, CC in 2009 and SSI in 2009. The highest amounts of loan and advances are distributing in 2009 a total of Tk. 11133379.

Regression Analysis:

The modern interpretation of regression is quite different. Regression analysis is concerned with the study of the dependence of one variable, the dependent variable, on or more other variables, the explanatory variables, with a view to estimating and predicting the (population) mean or average values the former in terms of the known or fixed (in repeated sampling) values of the latter.

The two-variable regression model is $Y = a + bx$ i.e;

Where,

Y= Dependent variable, Loans
X= Independent variable, Deposits
a= Intercept term
b= Slope

From the above equation we can calculate a regression line which shows the deposit behavior and its impact on loan.

Table-5: Total Deposits and Loan Scenario of Paba Branch, RAKUB, 2005-2009

Year	Deposits (X)	Loan (Y)
2005	73971952	8171069
2006	81574353	8682262
2007	87968303	10088506
2008	87281245	10334195
2009	129579198	11133379

Table-5 shows the total deposit and loan distribution of Paba Branch from 2005 to 2009. From the table, we are analyzing the regression model.

Model Summary:

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
1	.824	.679	.572	799520.04183

A= All requested variables entered. B= Dependent variable, Loan.

Comments: Above model summary table shows that R-value is 0.824 that means the coefficient correlation are remaining between deposit and loan. R square value 0.679 means that independent variable explaining the dependent variable 67.90 percent.

Coefficients (A):

Model	Unstandardized	Coefficient	t	Significant
1 (Constant	5407089.101	1733125.871	3.120	.052
Deposit)	.046	.018	2.521	.086

Comments: From above Coefficients table shows that Intercept term and coefficient of Deposit value is is 5407089.101 and 0.046 respectively. The p-value is 0.052 and 0.086 both are accept at 10 percent level of significant.

ANOVA (B):

Model	Sum of Squares	df	Mean Square	F	Significance
Regression	4061798041837.431	1	4061798041837.431	6.354	.086
Residual	1917696891885.369	3	639232297295.123		
Total	5979494933722.800	4			

A= Predictors (Constant), Deposit. B= Dependent variable, Loan.
From ANOVA table F statistic is (0.086) less than less than 0.10 (say level of significance 10%). It also revealed that our model is about 91 per cent true which means loan disbursement is depend on deposit mobilization. By putting the value in the regression model, we get the following equation,

$$Y=5407089.101+0.046x$$

From the regression model following calculation we found intercept term 5407089.101 that means loan will be distributed this amounted after have no any deposits (zero deposit) of the bank. If Taka 1 deposit increases then loan will be distributed 4.6 per cent.

Hypothesis Testing and Interpretation

In the study, null hypothesis is there is no relationship between loan and deposit. On the other hand, alternative hypothesis is there is relationship

between loan and deposit. The null hypothesis of a study is reject, if F-Sig value less than the value at the level of significance 0.10 (10%). The ANOVA table shows that F significance value that is 0.086 which is less than level of significance 0.10. From the above result, the study accepts the alternative hypothesis that means there is relationship between loan and deposit. So the finding is statistically significant. Therefore it is vivid that there is a strong relationship between loan and deposit and the behavior of deposit affects the loan to a large extent. Moreover the value of the correlation coefficient means that two variables loan and deposit are highly positively correlated.

Conclusion

RAKUB is the nationalized agriculture bank of the country. The Paba branch, Rajshahi has some prospective sides that are definitely encouraging. These are, cost of fund is being reduced in recent years, loan disbursement position is excellent, bad debts amount is decreasing and profit generating is increasing. RAKUB has been established a training institute for the personnel training and human resource development under separate management. On the other hand, there are some problems also remaining in the Paba branch which creates disadvantage in progress. The problems are the loan providing position especially in agro-based industry is poor; deposit mobilization is low, lack of proper co-ordination among officials, modern banking facilities and communication network, amount of fixed deposit is high and major variability in loan disbursement. To recover the problems, the branch can take some initiatives, such as proper supervision to protect the misuse the fund and reducing cost, management audit should be followed and developed the Management Information System (MIS), loan should be disbursed after properly assessment, proper steps have been taken against bad debts and value of service should be increased. The study revealed that deposit is the major factor for bank fund management and it has a significant impact on loan and advances. Therefore, the bank should cautiously maintain a balance loan and deposit for its survival in the competitive world of business.

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