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The Impact of Agent Banking on Financial Performance of Commercial Banks in Bangladesh

Md. Mahbub Alam[1], Dipti Bhowmik[2],Diponkar Bhowmik[3]
[1.] *MSS Student, Department of Economics, MawlanaBhashani Science & Technology University, Tangail, Bangladesh.*
[2.] *Lecturer, Department of Economics, MawlanaBhashani Science & Technology University, Tangail, Bangladesh.*
[3.] *MBA Student, Institute of Business Administration, Jahangirnagar University, Savar, Dhaka,Bangladesh.*

Abstract: *Agent banking is receiving much attention all over the world owing to its associated benefits. The adoption of agent banking in Bangladesh is mainly geared to improve on market share by attracting and retaining their customers, improving their financial performance and create variety of services. This study aims to investigate the impact of agent banking on the financial performance of commercial banks in Bangladesh. Financial performance of commercial banks that is measured by Return on Equity (ROE).This study is quantitative in nature and to get the result 19 commercial banks in Bangladesh has been taken as sample of the study. Secondary data has been used which is collected from balance sheets and income statements of the sample banks and also from the central bank of Bangladesh, covering the period of 2016-2019.The multiple regression model are used to analyze data on financial performance. The study finds that the number of agents and volume of deposits have a positive and significant impact onthe financial performance whereas the volume of withdrawals and volume of loan disbursement negatively impact on the financial performance of commercial banks in Bangladesh although the volume of loan disbursement is statistically insignificant. Therefore, the study recommends that Commercial banks in Bangladesh should invest more resources towards increasing their number of agents to increase financial performance and develop deposit mobilization and loan disbursement strategies through agent banking to ensure that their clients use agency-banking services.*
Key Words:*Agent Banking, Financial Performance, Commercial Banks.*

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I. Introduction

Developing countries including Bangladesh are increasingly embracing branchless banking as a means of delivering banking services to many unreached people especially low-income households. Globally, it is estimated that near to 400 million people currently don't have a bank account in a formal way (Cetorelli& Goldberg, 2012). The Bangladesh Bureau of Statistic Report (2013) indicates that more than 6 million adults rural Bangladeshi are either under-banked or unbanked. This is partly because of the high cost of maintaining the bank branches and the low nature of business transactions in rural Bangladesh. In order to avoid such financial fragility and vulnerability, agent banking is one of the most promising, secured, and quick services that the Bangladeshi bank can offer to the people. Ultimately, banks have adopted branchless banking such as automatic teller machines (ATMs), point-of-sale (POS) devices, internet banking, and mobile banking among others (Burgessy& Wong, 2005, Laukkanen&Pasanen, 2007). This has the effect of reducing banking costs. Indeed early experiences have shown that branchless banking through agencies can significantly alleviate set-up and delivery costs, providing cash-in/cash-out operations only or a broader range of financial services to customers who usually feel easier banking at their local merchants than at traditional bank branches (Lozano &Mandrile, 2009).Bangladesh Bank, the central bank of Bangladesh, issued a specific set of guidelines, forms and set of regulations (Bangladesh Bank, 2013) for introducing agent banking for interested Banks. Agent banking is the form of banking that includes the limited scale of banking and financial service through persons or agents under a valid agency agreement across the country, especially in remote areas. It is a retail outlet contracted by a financial institution or a mobile network operator to process bank clients' transactions (Mbugua & Omagwa, 2017). Agents banking may include pharmacies, supermarkets, convenience stores, lottery outlets, and post offices (CGAP, 2010).The trend of agent banking is apparent in many nations all over the world, such as in Australia where post offices operate as bank agents, France utilizing corner stores, Brazil where lottery outlets are used to offer financial services pioneering the mobile financial services, Nigeria, South Africa and the Philippines (Siedek, 2008).

Although the central bank issued an agent banking guideline in 2013, full-fledged agent, banking operation started in Bangladesh in 2016. It start with 10 banks. Now 19 commercial banks operate agent banking activities while 21 commercial banks have taken licenses of agent banking from Bangladesh Bank. The main objective of introducing and promoting agent banking is the centralized financial inclusion of the whole Bangladeshi population. Moreover, the huge unbanked, un-served rural people will be benefited by the banking service and added financial security. The agent banking system has allowed the banks to expand their businesses and accelerate financial inclusion using intermediaries as agents. A variety of banking services is being provided to the customers through an agent of a bank and this method is gaining popularity among the people for its accessibility and cost-effective banking services. Since agent banking can be offered without opening a full-fledged bank branch, this mode of banking is cost-effective and also can be available in remote areas. In Bangladesh, many agency services are provided by the linkage of various organizations such as Bkash, Ukash, Mcash, Surecash, Rocket, OK, etc. In the agent banking model of Bangladesh, the commercial bank recruits or nominates an agent, a third party owner of an outlet, who conducts banking transactions such as cash deposits, withdrawals, and fund transfer, small value loan disbursement and recovery of loans, paying bills under the government's social safety net programs, and account inquiries on behalf of the concerned bank (Hasan, 2019, Ivatory& Layman, 2008, Mosoti&Mwaura 2014, Vutsengwa&Ngugi, 2013). Agent bankingmakes it possible for the customer of the bank to have access to the banking services within reach and at the very comfort of the neighborhood. The agency gives customers a chance to ease the accessibility of financial products and related services at the places and within reach by the customer. Such an opportunity eliminates barriers like accessibility and timeliness of service delivery.

There are many aspects of the financial performance that can be analyzed. Aburime (2009) observed that profit is the essential prerequisite of a competitive banking institution. It is not only a result but also a necessity for successful banking in a period of growing competition on financial markets; hence the basic aim of every bank is maximizing profits. The banks need to explore other services other than money transfer to improve their performance through agent bankingwhich includes: secure operating systems capable of carrying out real-time transactions, generating an audit trail, and protecting data confidentiality and integrity. Financial performance is a conclusion drawn from the financial analysis of a firm. Financial analysis is that the choice, evaluation, and interpretation of financial data, along-side other pertinent information, to assist in investment and financial decision-making(Bizimana& Mulyungi, 2018). It is used internally to determine issues like employee performance, the efficiency of operations, and credit policies, and externally to evaluate potential investments and therefore the credit-worthiness of borrowers, among other things (Drake, 2006).Financial performance is a subjective measure of how well a firm uses its assets from its primary mode of business to generate revenue (Greenwood &Jovanovic, 2014). This term is additionally a general measure of the firm's overall financial health over a given period and may be used to compare similar firms across an equivalent industry or to match industries or sectors in aggregation (Hales, 2015). According to Drago (1990), the financial performance of commercial banks refers to growth in sales, increased return on investment (ROI), and increased return on sales (ROS), increased return on equity (ROE), and increased earnings per share. Further analysis of financial performance uses methodologies such as financial ratio analysis, benchmarking, measuring performance against budget, or a combination of these (Barnet et al, 2016).

Agent banking has the potential to both contribute to increased financial inclusion in Bangladesh, also on function as a payment channel for development organizations. As such, it's a channel worth exploring by any development organization that creates bulk disbursements or promotes financial inclusion. Since 2013, there are significant improvements within the banking sector with the introduction of agent bankingin Bangladesh, an innovative delivery channel that seeks to bring access to financial services much closer to entrepreneurs. This study sought to find out the impact of agent bankingin improving the financial performance of commercial banks in Bangladesh.

1.1 Statement of the Problem

The banking sector has become an important contributor in the Bangladesh economy. This sector contributes to the target on creating employment opportunities. However there are some problems that may encounter while accessing the banking services like, long distance to access banking halls, high transaction and operational costs and congestion in the banking halls. Agency banking is a new concept that has been added a new dimension to banking transactions by making it more convenient, which has eliminated long distance to access banking halls to transact. The transactions cost of agent banking is far less to process than transactions at an automated teller machine (ATM) or branch, banks can make a profit handling even small money transfers and payments (Booz, 2013). The adoption of agent bankingis mainly geared to improve on market share by attracting and retaining their customers, improving their financial performance, and create a variety of services. However, the extent to which agent bankingare often used as a tool to deepen the financial sector remains largely unknown. Also, the true benefits of the agent banking model to customers, the banks, and the bank agents also remain largely unstudied. Although customers have benefited a lot through agency banking, it is not clear whether the financial performance of commercial banks has improved or not as a result of adopting agency banking. This study, therefore sought to address the research question: What is the impact of agent banking on the improvement of the financial performance of commercial banks in Bangladesh?

1.2 Objectives of the study

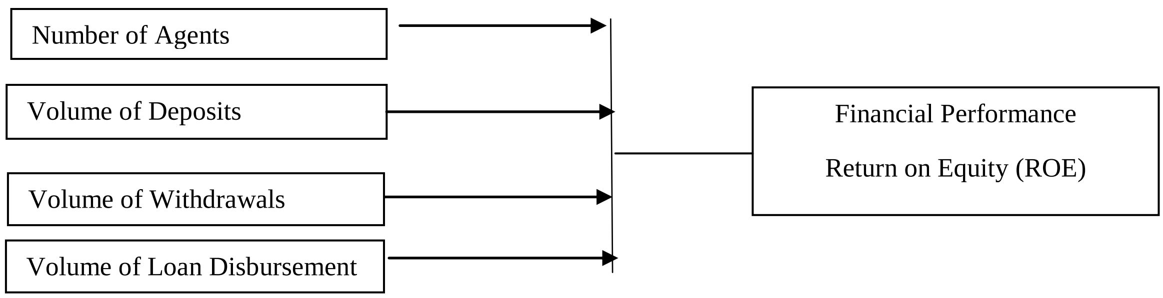
The main objective of this study is to investigate the impact of agent banking on the financial performance of commercial banks in Bangladesh.

The specific objectives are as following:

i. To establish the influence of agent banking on the accessibility of the financial performance of commercial banks in Bangladesh.
ii. To find out the impact of agent banking deposits on the financial performance of commercial banks.
iii. To identify the impact of withdrawals through agents on the financial performance of commercial banks.
iv. To determine the impact of loan disbursement through agents on the financial performance of commercial banks.

II. Conceptual Framework of the Study

Independent Variables **Dependent Variable**



III. Research Methodology

3.1 Data and Sampling

This study is quantitative in nature and total population of this study is 59 scheduled commercial banksin Bangladesh.To get the result 19 commercial banks in Bangladesh has been taken as sample of the study(Appendix I). The sample is purposely selected to represent commercial banks that are adopted agent banking in 2013 when the central bank of Bangladesh introduce the agent banking model. Normally, we consider ROA and ROE to determine the financial performance of commercial bank. Here, Return on Equity (ROE) has been used as financial performance indicator and it is explained by different explanatory variables like number of agents, volume of deposits, volume of withdrawals, and volume of loan distribution.The study is based on secondary data which are collected from balance sheets and income statements of the sample banks and also from the central bank of Bangladesh (Bangladesh Bank)covering the period of 4 years from 2016 to 2019.

3.2 Model Specification

The multiple regression model is adopted to measure the impact of agent banking on the financial performance of selected commercial banks in Bangladesh.The model is given following:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \varepsilon_{it}$$

Where Y is the Financial performance measured by using Return on equity (ROE), X_1 is the natural log of the number of agents, X_2 is the natural log of the volume of deposits, X_3 is the natural log of the volume of withdrawals, and X_4 is the natural log of the volume of loan disbursement, and β_0 is constant, β_1, β_2,β_3, & β_4,are regression coefficients, and ε is the error term, i is the individual bank and t is the period.

Thus, the collected panel data is analyzed using descriptive statistics, correlations, multiple linear regression analysis and inferential statistics. Mean values and standard deviations are used to analyze the general trends of the data from 2016 to 2019based on the sample of 19commercial banks in Bangladesh and a correlation matrix is also used to examine the relationship between the dependent variable and explanatory variables.

IV. Result and Discussion

4.1 Descriptive Statistics

Descriptive analysis is conducted to determine the statistical properties of the variables.Table1 gives a summary of measures of the central tendency which include the mean that measures how closely knit the variables are. It also measures of spread and variations such as the standard deviation. All the series are transformed into a natural log-form to give a more precise interpretation. It expresses that most of the variables have changed noticeably over the period of time.

Table 1: Descriptive Statistics of the variables

	N	Minimum	Maximum	Mean	Std. Deviation
Return on Equity (Ratio)	76	-3.860	9.433	3.241	2.447
Number of Agents (Ln)	76	9.354	11.477	10.724	0.652
Volume of Deposits (Ln)	76	19.541	22.261	20.336	0.891
Volume of withdrawals (Ln)	76	16.812	20.913	19.421	0.875
Volume of Loan Disbursement (Ln)	76	12.459	15.878	14.880	0.722

Source: Author's estimate

The series depicts minimum values of the return on equity, number of agents (Ln), volume of deposits (Ln), volume of withdrawals (Ln), volume of loan disbursement (Ln), are approximately -3.860, 9.354, 19.541, 16.812, and 12.459 while their maximum values are 9.433, 11.477, 22.261, 20.913 and 15.878 respectively. The mean values are 3.241 for return on equity, 10.724 number of agents (Ln), 20.336 for volume of deposits (Ln), 19.421 for volume of withdrawals (Ln), and 14.880 for volume of loan disbursement (Ln). The table indicates that the mean values of all the variables are in between the range of minimum and maximum values. The standard deviation of the return on equity, number of agents (ln), volume of deposits (ln), volume of withdrawals (ln), volume of loan disbursement (Ln), are approximately 2.447, 0.652, 0.891, 0.875, and 0.722 respectively. The study also highlights that ROE has the highest standard deviation of 2.447 and the number of agents (Ln) has the least of 0.652.

4.2 Correlation Analysis

The study is used Pearson correlation to analyze the strength of the relationship between financial performance of commercial banks as measured by ROE and number of agents, volume of deposits, volume of withdrawals, and volume of loan disbursement. Pearson product-moment correlation coefficient is a measures of the strength and direction of a linear relationship between two variables and is denoted by "r". It attempts to draw a line of best fit through the data of two variables, and therefore, the Pearson correlation coefficient, r, indicates how far away all these data points are to this line of best fit. The results of an analysis of the correlation are as provided inTable 2.

Table 2: Correlation Matrix

	Return on Equity	Number of Agents	Volume of Deposits	Volume of withdrawals	Volume of loan disbursement
Return on Equity (ROE)	1				
Number of Agents	0.182	1			
Volume of Deposits	.334*	0.235	1		
Volume of withdrawals	-0.143	-0.074	0.287	1	
Volume of loan disbursement	-0.054	0.183	0.014	-0.171	1

Source: Author's estimate

The findings on theTable 2 show that financial performance (ROE) is positively correlated with the agent number and volume of deposits as indicated by the correlation coefficient of 0.182 and .334 respectively. The findings also show that the financial performance of commercial banks has a negative correlation with volume of withdrawals and volume of loan disbursement. This is depicted by correlations coefficients of -0.143, and -0.054 respectively. The highest correlation (0.334) is between ROE and volume of deposits. The weakest correlation (0.014) is between the volume of deposits and volume of loan disbursement. In addition, the independent variables are not highly correlated suggesting that the problems related to multi-collinearity are not bound to emerge.

4.3 Regression Analysis

In addition to descriptive statistics and correlation analysis, the study is also conducted, multiple regression model. . The study is applied the statistical package for social sciences (SPSS) to code, enter and compute the measurements of the multiple regressions. The model summary are presented in the Table 3.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.841[a]	0.680	0.601	.732

a. Predictors: (Constant), Volume of loan disbursement, Volume of withdrawals, Volume of Deposits, Number of Agents,

Source: Author's estimate

Table 3 shows a model summary of regression analysis between dependent variable financial performance of Commercial banks and explanatory variables including number of agents, volume of deposits, volume of withdrawals, and volume of loan disbursement. The Coefficient of Determination R^2 is 0.680 means that about 68 percent of the variation of return on equity is explained by the explanatory variables number of agents, volume of deposits, volume of withdrawals, and volume of loan disbursement. Therefore, 32% is explained by other factors outside the model and the error term. The positivity and significance of all values of R show that model summary is significant and thus gives logical support to the study model.

The study further test the significance of the model by use of ANOVA technique and results are shown in Table 4.The results from Table 4 show that the model is statistically significance since the p-value is 0.004 which is less than 0.05 at 95% confidence level thus the model is statistical significance in predicting how number of agents, volume of deposits, volume of withdrawals, and volume of loan disbursement influence the financial performance of Commercial bank in Bangladesh. Since the calculated value of F is greater than the critical (4.623 >2.440) this shows that the overall model is statistically significant at the 5% level and conclude that the number of agents, volume of deposits, volume of withdrawals, and volume of loan disbursement exert a significant impact on the financial performance of commercial banks in Bangladesh.

Table 4: Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	39.231	4	11.724	4.623	.004[b]
	Residual	26.445	70	3.236		
	Total	65.676	74	14.960		

a. Dependent Variable: ROE

b. Predictors: (Constant), Volume of loan disbursement, Volume of withdrawals, Volume of Deposits, Number of Agents,

Source: Author's estimate

Another output from the multiple regression analysis is the table of regression coefficient. It is interpreted as the proportion of the variance in the dependent variable that is predictable from the explanatory variables. The results are as shown in the Table 5.

Table 5: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.132	7.411		1.367	0.134
	Number of Agents	0.364	0.175	0.355	2.080	0.042
	Volume of Deposits	0.533	0.219	0.493	2.434	0.028
	Volume of withdrawals	-0.391	0.178	0.257	-2.197	0.042
	Volume of loan disbursement	-0.097	0.125	-0.941	-0.776	0.543

a. Dependent Variable: ROE

Source: Author's estimate

From the findings onTable 5, the following regression equation is obtained

$$Y = 10.132 + 0.364X_1 + 0.533X_2 - 0.391X_3 - 0.097X_4 + \varepsilon$$

From the above regression equation, it is revealed that holding number of agents, volume of deposits, volume of withdrawals and volume of loan disbursement, to a constant zero, financial performance (ROE) will be 10.132. The findings in Table 5 indicate that the number of agents has a positive and statistically significant effect on the financial performance of commercial banks in Bangladesh. The coefficient of the number of agents is 0.364 that is positive and statistically significant implying that holding other explanatory variables constant, a unit increase in the number of agents leads to on average increase financial performance of commercial bank by approximately 0.364 units since the number of agents ensures that commercial banks reach all customers. For these reasons, the total number of accounts also increases. Therefore, the number of agents show significant contribution to financial performance in commercial banks in Bangladesh.A similar result is also observed in previous studies like of Karangwa & Mulyungi, (2018); Ndambuki, (2016); Seda, (2016) which shows that number of agent has positive impact on financial performance in commercial banks in Kenya.

The results also show that the volume of deposits positively and significantly influences of the financial performance of Commercial banks in Bangladesh. This means that a unit increase in volume of deposits leads to increase 0.533 units in the financial performance of commercial banks holding other explanatory variables constant. This may happen as the deposit mobilized by the agent banks is eventually used by the mother bank for investment, i.e., converting it into interest-earning assets (e.g., loans and advances) and thus improve the financial performance of commercial banks. Therefore, an increasing amount of deposits positively affects the financial performance of the Commercial bank in Bangladesh. This finding agrees with the result of previous studies by Ndambuki, (2016); Ogetange, (2014); Seda, (2016); Karangwa & Mulyungi, (2018)which shows that the volume of deposit is positively contributed to the financial performance in commercial banks in Kenya.

The study reveals that the volume of withdrawals has a negative impact with the financial performance of commercial banks in Bangladesh. This means that a unit increase in volume of withdrawal leads to decrease in the financial performance of commercial banks by 0.391 units since commercial banks charge fees and commissions on customer cash withdrawal which takes up a smaller portion of the banks income, a further decision of this income stream to determine the income through agency gives an even smaller proportion. Increase in cash withdrawals reduces the firm’s liquidity and may reduce the firm’s ability to lend thus decrease financial performance that affects ROE.This result is consistent with the findings of Karangwa & Mulyungi, (2018); Ndambuki, (2016); Seda, (2016)which shows that the volume of withdrawals is negatively contributed to the financial performance in commercial banks in Kenya.

Further, the study finds that the volume of loan disbursement through agent do not have any significant impact on the financial performance of commercial banks in Bangladesh as the estimated coefficients for the volume of loan disbursement are not statistically significant.One possible reason for such insignificant relationship in loan disbursement is very little amount due to the initial stage of agent operation in Bangladesh and a few of the banks are using agent banking window because the source of deposit collection from rural clients and utilize the fund for investment in urban areas. But the ratio of loan repayment is better in rural areas than in urban ones.

V. Conclusion

Agent banking is one of the prominent nonconventional banking windows offering financial services, through a specified as well as defined channel, outside bank branches. It has been getting very popular in different countries across the world, especially to the remote areas where banking service is unavailable due to the geographical barrier of the locality has been becoming a powerful channel for spreading the coverage of financial inclusion by reaching the financially excluded segments of the population, even in the remotest part of a locality. The main objective of this study is to find out the impact of agent bankingon the financial performance of commercial banks in Bangladesh. The study is focused on number of agents, volume of deposits, withdrawals, and loan disbursement as the independent variables and financial performance of commercial banks measured by using the return on equity (ROE) as the dependent variable. Secondary data has been taken from 19 listed commercial banks in Bangladesh over the period of 2016-2019. Descriptive statistics, correlation and multiple regression model have been used to describe the data.

The findings of the descriptive statistics show that the average financial performance (ROE) of the sample commercial banks is 3.241 and the average number of agents is determined by using the Natural log (Ln) 10.724 respectively. The study reveals that the average volume of deposits is 20.336 whereas the average volume of withdrawals is 19.421 and the average volume of loan disbursement is 14.880 respectively. The results on correlation analysis show that there is a positive correlation between the financial performance of commercial banks and the number of agents as well as volume of deposits while a negative correlation between ROE and withdrawals as well as loan disbursement.

The study also shows that the variability in the dependent variable ROE is explained by about 68 % of the independent variables. The estimated regression results show that number of agents, volume of deposits and volume of withdrawals have significant impact on the financial performance of commercial banks in

Bangladesh. Hence, the study concludes that financial performance of commercial bank in Bangladesh (ROE) is positively affected by number of agents and volume of deposits while it is negatively affected by volume of withdrawals and volume of loan disbursement.

5.1 Policy Implication

The study results have some policy implications on the effect of agent bankingon the financial performance of commercial banks in Bangladesh. The policy implication is based on regression analysis that is given below:

1. Commercial banks should invest more resources towards increasing their number of agents to increase the financial performance of commercial banks especially in rural areas. Banks should also be cautious in selecting agents and implement the central bank guidelines in this regard. In this case, Bangladesh bank can organize more trainings and seminars in order to educate the stakeholders of the agent banking regarding the rules and regulations, security measures and other requirements of agent banking.
2. Commercial banks should develop deposit mobilization and loan disbursement strategies through agent bankingto ensure that their clients use agency-banking services. Strict supervision and monitoring should be in place to ensure proper balance between deposit mobilization and loan disbursement of the agent banking so that the rural clients of agent banking units are not missing out on its benefits. Because this imbalance created by banks would adversely affect the rural economy in the long run. Bangladesh Bank as the regulatory authority of the banking sector should be vigilant in this regard.
3. Commercial banks should encourage their customers to withdraw money from agents so that they can earn more income in terms of fees and commissions from withdrawals

5.2 Limitations and Suggestion for Further Studies

This study is concentrated on the effect of agent bankingon the financial performance of commercial banks in Bangladesh.The financial performance of commercial banks is affected by a number of other variables such as liquidity levels, market share, degree of diversification among other variables, other than agent bankingas the study requires to examine. There is a need to examine all the variables with each other to determine the actual effect of each when analyzing with the rest of the variables. The findings are also limited to the time period between 2016 and 2019 which is considered by the study. Further studies should be conducted on the influence of agent bankingon financial inclusion and the overall economic development of Bangladesh. It has been argued that improved financial inclusion promoted the economic growth of the nation but not much has been done in the context of Bangladesh. The study recommends that a study should be done on the challenges facing the adoption of agency banks by commercial banks in Bangladesh.

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Appendices

Appendix 1

List of sampled commercial banks

Name of Banks
Dutch-Bangla Bank Limited (DBBL)
Bank Asia Ltd. (BAL)
Al-ArafahIslami Bank (AAIB)
Social Islami Bank limited (SIBL)
Modhumoti Bank Limited (MBL)
Mutual Trust Bank Limited (MTBL)
NRB commercial Bank Ltd. (NRBCB)
Standard Bank Ltd. (SBL)
NRB Bank Ltd. (NRBBL)
Agrani Bank Ltd. (ABL)
Midland Bank Ltd. (MBL)
First Security Islami Bank Ltd. (FSIBL)
The City Bank Ltd. (TCBL)
Islami Bank Bangladesh Ltd.(IBBL)
The Premier Bank Limited (TPBL)
United commercial Bank Ltd. (UCBL)
AB Bank Ltd. (ABBL)
Brac Bank Ltd. (BBL)
Eastern Bank Ltd. (EBL)

Source: Bangladesh Bank

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