An Empirical Analysis of Macroeconomic and Bank Specific Factors Ascertaining Bank Deposit: A Study on Bangladesh

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ABSTRACT

Bank working capital is largely determined by the level of bank deposits. As the primary source of funds for carrying out lending activities, deposits are the lifeblood of a banking firm. More savings encourages more investment which in turn ensures economic growth. This paper tries to find out relevant factors influencing volume of deposit mobilization by commercial banks. The study is based on the opinion of 200 sample professionals from 29 listed private commercial banks in Bangladesh. The result shows that Government monetary policy, bank size, diversified services, state of local and national economy dominates the collection of bank deposit by commercial banks. Probable implication from the findings is investment friendly government monetary policy that can lead towards improving bank-specific factors as enhancing bank size and ensuring diversified services for more deposit attraction.

Keywords: Deposit, Macroeconomic Factors, Bank Specific Factors, Private Commercial Bank
JEL Classifications: C38, D02, E5, G21

1. INTRODUCTION

Managing deposit is one of the leading functions to specify success or failure of commercial banks. Different factors affect how commercial banks behave and make deposit decisions. Banking organizations are compelled to develop new products and look for new consumers as a result of growing competition. Since the environment in which the banks operate is changing quickly, the improvements brought about by these developments represent remarkable challenges for the banks (Ayadi and Boujelbene, 2012). In Bangladesh, the banking industry dominates the country's financial sector, and because of how closely they are linked to one another, their stability might have a negative effect on both the financial system and the entire economy.

Despite extensive literature on saving behavior and only macroeconomic or microeconomic issues, studies on relevant variables that affect the amount of deposits at commercial banks

have not received their full attention (Haron and Azmi, 2006). In order to improve deposit management processes, it is becoming more and more crucial for commercial banks to ascertain both the bank specific and macroeconomic variables that affect them. In view of this, the study's use of the advanced technique known as Varimax Rotated factor Analysis allowed it to pinpoint several key variables determining deposit practices from 200 samples drawn from 29 commercial banks. This finding may close a study gap in this area in particular and assist the authorities in implementing effective measures to encourage deposit mobilization in Bangladesh.

2. LITERATURE REVIEW

Despite the abundance of studies on people's savings habits, little is known about the factors that influence bank deposits. Microeconomic and macroeconomic factors are typically

categorized as the determinants of bank deposits. While the macroeconomic factors that influence bank deposits are connected to the overall macroeconomic fundamentals of an economy, the microeconomic drivers are bank and individual-specific. Thus, the study intended to identify macroeconomic and bank specific variables influencing the bank deposit on the basis of opinions of expert, practitioners and professionals; and review of existing literatures which are as follows:

Ünvan and Yakubu (2020) examine the impact of bank-specific factors on the volume of bank deposits in Ghana for the period 2008-2017. The findings indicate that profitability, bank size, and liquidity are key drivers of bank deposits after controlling for macroeconomic factors. Inflation, which serves as a proxy for macroeconomic instability, negatively affects bank deposits significantly.

Gunasekara and Kumari (2018) look into the most relevant elements influencing deposit mobilization. The study finds a substantial and favorable correlation between deposit mobilization and deposit interest rates, as well as between these variables and security, branch expansion, services, technology, and awareness. Living area and deposit amounts are also substantially correlated, and demographic factors like income, gender, occupation, and level of education have a big impact on deposit mobilization.

Richard (2015) argue that in order to attract enough deposits, banks should offer a variety of deposit plans. Customers typically have different demands and wishes according on their gender, age, occupation, degree of income, type of necessity, tenure, size of business, and many other aspects, which causes a fluctuation when they deposit money in banks.

Maharana et al. (2015) carries out a study demonstrating how innovative banking services have an impact on deposit mobilization. As a result, computerized banking facilities like ATMs attract users to make larger deposits.

Samarasiri (2014) clarifies that bank image is one of the most important factors affecting deposit mobilization. Customers typically deposit money in institutions or banks with a good reputation since they always expect a secure location for their deposits.

Hondroyiannis (2004) employs the cointegration approach to estimate household behavior in Greece. He has offered empirical proof that changes in fertility, the old dependence ratio, the real interest rate, liquidity, and state finances have an impact on how long-term savings work.

Rosenzweig (2001) studies the saving behaviors of Thai households and discovers that farmers' levels of saving are impacted by inefficient savings facilities.

Murthy and Haresh (1991) explain how deposit mobilization is influenced by branch expansion. According to the study, areas with high income levels and lots of branches had higher deposits per branch.

Tun (2019) examines the impact of macroeconomic variables, such as the real interest rate, GDP per capita, money supply, and average exchange rate on the mobilization of deposits in the context of private commercial banks in Myanmar. This study includes a sample of 24 private commercial banks. Using quarterly data covering the period from the fiscal years 2013/14 to 2017/18, the link between deposits and macroeconomic conditions is explored. The analysis concludes that while money supply has a negative and minor influence on private bank deposits, real interest rates, GDP per capita, and exchange rates have positive and significant effects on deposit mobilization.

Cardenas and Ecsobar (1998) in a study of Colombian savers, discovers that increasing government spending has a negative impact on national savings, that saving and investment have a perfect correlation, and that saving generates growth. Additionally, this study shows that rising taxes, urbanization, and age reliance have a negative impact on savings.

Masson et al. (1998) examine the elements that influence private savings behavior in developed and emerging nations and discovered that demographic factors have a significant role in determining saving rates. In both groups of countries, savings were found to be positively correlated with variables like GDP growth, real interest rates, and changes in the terms of trade.

Yakubu and Abokor (2020) reveal that bank stability, banking sector efficiency, broad money supply, economic growth and inflation are significantly influence deposit growth in the long run. The results also demonstrate that, in the short term, only branch expansion and broad money supply are relevant for bank deposit mobilization.

Haron and Azmi (2006) utilizing cointegration techniques, examine the structural factors that influence the quantity of deposits at Malaysian commercial banks. According to the findings, factors including Islamic bank profit rates, interest rates on deposits, the base lending rate, the Kuala Lumpur Composite Index, the Consumer Price Index, the money supply, and the gross domestic product all have a considerable impact on deposits.

Athukorala and Sen (2003) find that factors including growth rate, real interest rate on bank deposits, spread of banking facilities, and inflation have a substantial positive association with savings, with the exception of changes in external trade.

Kiiza and Pederson (2001) presents evidence to demonstrate how factors including information availability, saving facility accessibility, household head's education level, and financial institution density could affect customers' decision to start saving with a financial institution in Uganda.

Loayza and Shankar (2000) use the cointegration approach to analyze the correlation between savings in India and variables such the real interest rate, per capita income, dependence ratio, financial development, government saving rate, and the percentage of GDP accounted for by agriculture (GDP). Real interest rates, per capita income, and the proportion of GDP devoted to agriculture

Table 1: Identification of factors influencing the level of bank deposit

Factors considered at present study	Mebratu (2023)	Banke and Yitayaw (2022)	Tafa and Worku (2022)	Ünvan and Yakubu (2020)	Tun (2019)	Kiiza and Pederson (2001)	Friedman and Schwartz (1963)	Cardenas and Ecsobar (1998)	Gunasekara and Kumari (2018)	Loayza and Shankar (2000)	Athukorala and Sen (2003)	Haron and Azmi (2006)	Hondroyiannis (2004)	Samarasiri (2014)	Murthy Samarasiri and Haresh (1991)	Maharana (2015)	Khan (2008)
Bank size	√														√		√
Interest rate	√		√	√	√	√			√	√	√	√	√				√
Quality of bank personnel																	√
Diversified services									√		√						√
Public confidence or goodwill							√		√					√			√
State of the national economy		√						√		√							√
Characteristics of local economy															√		√
Government policy								√					√				
Interest on Government security																	
Relative changes in population		√															√
Bank liquidity		√											√				
Bank's technology									√							√	
Online banking																√	
Quality of the service						√											
ATM and other service and utility charges																√	
Marketing strategy																	
Amount of equity capital invested		√															
Unemployment			√								√						
Inflation		√		√						√							
Deposit insurance																	
Money supply																	
Relationship with customers																	
Mechanism of pricing deposit										√	√						
Performance of capital market		√			√							√					
Gross Domestic Product		√									√						

Data have been compiled by the researcher

have been found to have a positive link with savings, but variables like financial development, inflation, and dependency ratio have an inverse relationship with savings.

Mebratu (2023) applies least square regression analysis to demonstrate that, aside from capital adequacy, all explanatory variables such as customer growth rate, branch expansion, profitability, life expectancy rate, and deposit interest rate affect non-public commercial banks' deposit growth in a favorable way, whereas GDP growth rate has a negative and significant impact on their deposit growth.

Using a quantitative method and an explanatory design, Banke and Yitayaw (2022) show that the loan-to-deposit ratio, capital adequacy, economic growth, inflation, population growth, and political stability have a negative and statistically significant effect on the mobilization of commercial bank deposits. On the other hand, the growth of private bank deposits is positively and statistically significantly impacted by the bank's profitability.

16 presently operating private commercial banks in Ethiopia are the focus of Tafa and Worku (2022). The regression analysis reveals that two macroeconomic factors, such as the unemployment rate and the economic growth rate, as well as three internal variables, including the profitability and number of bank branches, have a substantial impact on the total deposit of private commercial banks.

This paper thus seeks to address the literature gap by identifying the bank-specific factors and macroeconomic factors collectively to attract more deposit for commercial banks.

3. METHODOLOGY

3.1. Sample and Data
There are 62 Scheduled Commercial Banks operating in Bangladesh among which 29 Commercial Banks are listed on both Dhaka Stock Exchange and Chittagong Stock Exchange. The study is based on the opinion of 200 sample branch managers from 29 listed private commercial banks in Bangladesh. The primary data is collected on 5 point Likert Scale in order to identify the factors that influence the Deposit of selected sample commercial banks in Bangladesh.

3.2. The Reliability and Validity of Data
The validity of instrument to collect primary data has been tested through pilot survey i.e. Survey that is conducted with few executives of the target sample of the survey, in order to test and refine the survey instruments (questionnaire and instruction manual, data processing manual and programmes) before the main data collection across the full sample.

The reliability of the data has been tested by employing Cronbach's alpha. The alpha value of the present study is 0.924. This indicates the excellent level of consistency of data on five point Likert scale. The Kaiser-Meyer-Olkin is used to measure the Sampling Adequacy and The KMO value of the present study is 0.62 which represent a factor analysis is useful with the data.

Varimax Rotated Factor Analytical techniques have been employed for grouping the variables on the basis of their inherent relationship and finally ranking the group on the basis of their magnitudes.

3.3. Variable Identification
Existing literature and the opinion of the sample is considered to identify relevant factors to increase the level of bank deposit.

The present study has identified 25 factors influencing deposit activities of commercial banks.

4. RESULTS AND DISCUSSION

4.1. Identification of Determinants that Influence Bank deposit on Mean Scores Basis
Table. 1 identifies the relevant factors for increasing the level of bank deposits based on available research and the opinions of the sample. The study has identified the variables undertaken for the study as most significant and significant on the basis of mean score of opinions taken on 5 point Likert scale as shown in Table 2.

It is evident from the Table 2 that twenty variables have been found influencing the deposit of sample commercial banks significantly on mean score basis. The most important variables are Interest rate on deposit, Public confidence or goodwill, Quality of the service, Relationship with customers, Government monetary policy, Interest on Government security, Marketing strategy, Bank liquidity, Mechanism of pricing deposit, State of the national economy, Diversified services, Online banking facility,

Table 2: Mean scores of factors influencing bank deposit of commercial banks

Variables	Factor variables	Mean score
Most important		
X2	Interest rate on deposit	4.4800
X5	Public confidence or goodwill	4.4400
X14	Quality of the service	4.3800
X22	Relationship with customers	4.3800
X8	Government monetary policy	4.3600
X9	Interest on Government security	4.3400
X16	Marketing strategy	4.2600
X11	Bank liquidity	4.2800
X23	Mechanism of pricing deposit	4.2400
X6	State of the national economy	4.2200
X4	Diversified services	4.2000
X13	Online banking facility	4.1800
X21	Money supply	4.1800
X24	Performance of capital market	4.1800
X19	Inflation	4.1600
X15	ATM and other service and utility charges	4.1200
X7	Characteristics of local economy	4.1000
X25	Deposit insurance	4.1000
X3	Quality of bank personnel	4.0400
X12	Bank's technology (manual/computerized)	4.0000
Least important		
X20	Gross domestic product	3.9000
X17	Amount of equity capital invested	3.8800
X1	Bank size	3.8800
X18	Unemployment	3.7200
X10	Relative changes in population	3.5400

Source: Survey instruments, Data have been compiled by the researcher

Money supply, Performance of capital market, Inflation, Bank's technology (manual/computerized), Characteristics of local economy, Deposit insurance, Quality of bank personnel, ATM and other service & utility charges. The least important variables are Gross Domestic Product Amount of equity capital invested, Bank size, Relative changes in population and Unemployment.

4.2. Analysis of Correlation Matrix of Factors Influencing the Deposit of Sample Commercial Banks

The study has measured zero-order correlation coefficients of 25 variables (Table 3) by employing SPSS (Version-23).

From the perusal of the zero-order correlation matrix of 25 variables, it has been found that some variables have emerged as most significant factors which ultimately form different orthogonal factors. In this case, the variable X1 (Bank size) is highly correlated with X3 (Quality of bank personnel), X4 (Diversified services), X6 (State of the national economy), X8 (Government monetary policy), X11 (Bank liquidity), X17 (Equity capital) and X22 (Relationship with customers) at 1% level of significance. This implies that these variables are expected to form a strong group.

The variable X2 (Interest rate on deposit) is highly correlated with X3 (Quality of bank personnel), X4 (Diversified services), X5 (Public confidence), X6 (State of the national economy), X7 (Characteristics of local economy), X8 (Government monetary policy), X9 (Interest rate on govt. security), X10 (Change in population), X11 (Bank liquidity), X12 (Bank's technology), X13 (Online banking facility), X14 (Quality of the service), X16 (Marketing strategy), X17 (Equity capital), X18 (Unemployment), X22 (Relationship with customers), X23 (Mechanism of pricing deposits) and X24 (Performance of capital market) at 1% level of significance. This implies that these variables are expected to form an important group.

The variable X3 (Quality of bank personnel) is highly correlated with X5 (Public confidence), X12 (Bank's technology), X13 (Online banking facility), X14 (Quality of the service), X17 (Equity capital), X18 (Unemployment), X22 (Relationship with customers), X23 (Mechanism of pricing deposits), X24 (Performance of capital market) and X25 (Deposit insurance) at 1% level of significance. This implies that these variables are expected to form another strong group.

The variable X4 (Diversified services) is immensely correlated with X6 (State of the national economy), X8 (Government monetary policy), X9 (Interest rate on govt. security), X11 (Bank liquidity), X13 (Online banking facility), X14 (Quality of the service), X16 (Marketing strategy), X17 (Equity capital), X20 (Gross domestic product), X21 (Money supply), X23 (Mechanism of pricing deposits) and X22 (Relationship with customers) at 1% level of significance. This signifies that these variables are expected to form an additional strong group.

The variable X5 (Public confidence) is highly correlated with X9 (Interest rate on govt. security), X11 (Bank liquidity), X12 (Bank's technology), X13 (Online banking facility), X14 (Quality of the service), X16 (Marketing strategy), X20 (Gross domestic

product), X22 (Relationship with customers), X23 (Mechanism of pricing deposits), X24 (Performance of capital market) and X25 (Deposit insurance) at 1% level of significance. This denotes that these variables are expected to form another key group.

The variable X6 (State of the national economy) is highly correlated with X7 (Characteristics of local economy), X8 (Government monetary policy), X9 (Interest rate on govt. security), X11 (Bank liquidity), X16 (Marketing strategy), X22 (Relationship with customers), X24 (Performance of capital market) and X25 (Deposit insurance) at 1% level of significance. This specifies that these variables are expected to form another main group.

The variable X7 (Characteristics of local economy) is highly correlated with X8 (Government monetary policy), X11 (Bank liquidity), X16 (Marketing strategy), X19 (Inflation) and X21 (Money supply) at 1% level of significance. This represents that these variables are expected to form another important group.

The variable X8 (Government monetary policy) is highly correlated with X9 (Interest rate on govt. security), X11 (Bank liquidity), X19 (Inflation) and X22 (Relationship with customers) at 1% level of significance. This implies that these variables are expected to form another strong group.

The variable X9 (Interest rate on govt. security) is highly correlated with X11 (Bank liquidity), X16 (Marketing strategy) and X15 (Service and utility charges) at 1% level of significance. This implies that these variables are expected to form another strong group.

The variable X10 (Change in population) is highly correlated with X11 (Bank liquidity), X12 (Bank's technology), X13 (Online banking facility), X16 (Marketing strategy), X17 (Equity capital), X18 (Unemployment), X19 (Inflation), X21 (Money supply), X23 (Mechanism of pricing deposits), X24 (Performance of capital market) and X25 (Deposit insurance) at 1% level of significance. This represents that these variables are expected to form another important group.

The variable X11 (Bank liquidity) is highly correlated with X12 (Bank's technology), X13 (Online banking facility), X14 (Quality of the service), X15 (Service and utility charges), X16 (Marketing strategy), X17 (Equity capital), X22 (Relationship with customers), X23 (Mechanism of pricing deposits), X24 (Performance of capital market) and X25 (Deposit insurance) at 1% level of significance. This specifies that these variables are expected to form another main group.

The variable X12 (Bank's technology) is highly correlated with X13 (Online banking facility), X14 (Quality of the service), X15 (Service and utility charges), X16 (Marketing strategy), X17 (Equity capital), X18 (Unemployment), X20 (Gross domestic product), X21 (Money supply), X23 (Mechanism of pricing deposits), X24 (Performance of capital market) and X25 (Deposit insurance) at 1% level of significance. This represents that these variables are expected to form another important group.

Table 3: Analysis of correlation matrix of factors influencing the deposit of sample commercial banks

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13
X1	1.00												
X2	−0.08	1.00											
X3	−0.28*	0.34*	1.00										
X4	0.53*	0.06*	−0.01	1.00									
X5	−0.07	0.29*	0.41*	0.20**	1.00								
X6	0.41*	0.31*	0.06	0.41*	0.17**	1.00							
X7	−0.09	0.31*	−0.07	−0.04	0.16***	0.50*	1.00						
X8	0.38*	0.24*	−0.18**	0.24*	0.19**	0.37*	0.26*	1.00					
X9	0.17**	0.43*	0.09	0.33*	0.26*	0.43*	0.23**	0.26*	1.00				
X10	−0.06	0.29*	0.18**	0.14***	0.21**	0.02	0.13	−0.19**	0.02	1.00			
X11	0.24*	0.43*	0.16***	0.48*	0.44*	0.47*	0.36*	0.31*	0.66*	0.34*	1.00		
X12	−0.22**	0.40*	0.66*	0.14***	0.46*	−0.08	−0.11	−0.15***	0.05	0.47*	0.26*	1.00	
X13	0.00	0.43*	0.32*	0.35*	0.37*	0.16***	0.10	0.08	0.18**	0.47*	0.51*	0.76*	1.00
X14	−0.17*	0.26*	0.39*	0.34*	0.43*	0.04	0.11	0.08	0.02	0.23	0.41*	0.51*	0.53*
X15	0.16***	0.14***	−0.04	0.11	−0.19**	−0.11	−0.08	0.06	−0.30*	0.07	−0.25*	0.26*	0.31*
X16	0.18**	0.28*	0.18**	0.48**	0.25*	0.32*	0.31*	0.06	0.47*	0.36*	0.71*	0.36*	0.58*
X17	0.24*	0.39*	0.25*	0.35*	0.02	0.21**	0.02	−0.03	0.26*	0.48*	0.40*	0.48*	0.58*
X18	0.08	0.31*	0.43*	0.23**	0.21**	−0.07	−0.12	−0.25*	−0.12	0.38*	0.12	0.67*	0.59*
X19	0.13***	0.14***	0.17**	0.15**	0.14***	−0.04	−0.24*	−0.39*	−0.08	0.41*	0.08	0.18**	0.08
X20	0.17**	0.06	0.14***	0.39*	0.28*	−0.14***	−0.14***	−0.22**	−0.09	0.16***	0.10	0.33*	0.43*
X21	0.30	0.17**	0.09	0.26*	0.22**	0.24*	−0.23*	0.18**	0.21**	0.30*	0.15***	0.43*	0.39*
X22	0.38*	0.26*	0.39*	0.34*	0.32*	0.08	0.06	0.29*	0.02	0.11	0.32*	0.23**	0.14***
X23	0.18**	0.25*	0.33*	0.34*	0.30*	0.05	0.05	0.21**	−0.06	0.38*	0.36*	0.31*	0.31*
X24	0.11	0.36*	0.41*	0.16**	0.32*	0.18***	0.18***	0.22**	0.10	0.32*	0.40*	0.26*	0.27*
X25	0.06	0.21**	0.32*	0.17**	0.33*	0.15***	0.15***	−0.05	0.01	0.31*	0.26*	0.23*	0.24*

	X14	X15	X16	X17	X18	X19	X20	X21	X22	X23	X24	X25
X14	1.00											
X15	0.14***	1.00										
X16	0.36*	−0.14***	1.00									
X17	0.01	0.17*	0.64*	1.00								
X18	0.41*	0.40*	0.30*	0.46*	1.00							
X19	0.16***	0.00	0.17**	0.23*	0.31*	1.00						
X20	0.40*	0.27*	0.37*	0.22**	0.68*	0.33*	1.00					
X21	−0.03	0.14***	0.26*	0.42*	0.31*	0.12	0.14***	1.00				
X22	0.41*	0.06	0.18	0.21**	0.41*	0.16***	0.35*	0.13	1.00			
X23	0.43*	−0.04	0.33*	0.30*	0.37*	0.29*	0.30*	0.35*	0.72*	1.00		
X24	0.25*	−0.19*	0.31*	0.33*	0.12	0.33*	−0.01	0.12	0.44*	0.63*	1.00	
X25	0.29*	−0.11	0.29*	0.19**	0.13	0.50*	0.15***	0.14***	0.22**	0.55*	0.73*	1.00

Data have been compiled by the researcher, Level of Significance: *1% level of significance, **5% level of significance, *** 10% level of significance

The variable X13 (Online banking facility) is highly correlated with X14 (Quality of the service), X15 (Service and utility charges), X16 (Marketing strategy), X17 (Equity capital), X18 (Unemployment), X20 (Gross domestic product), X21 (Money supply), X23 (Mechanism of pricing deposits), X24 (Performance of capital market) and X25 (Deposit insurance) at 1% level of significance. This represents that these variables are expected to form another important group.

The variable X14 (Quality of the service) is highly correlated with X16 (Marketing strategy), X18 (Unemployment), X20 (Gross domestic product), X22 (Relationship with customers), X23 (Mechanism of pricing deposits), X24 (Performance of capital market) and X25 (Deposit insurance) at 1% level of significance. This represents that these variables are expected to form another significant group.

The variable X15 (Service and utility charges) is highly correlated with X17 (Equity capital), X18 (Unemployment), X20 (Gross domestic product) and X24 (Performance of capital market) at 1% level of significance. This represents that these variables are expected to form another important group.

The variable X16 (Marketing strategy) is highly correlated with X17 (Equity capital), X18 (Unemployment), X20 (Gross domestic product), X21 (Money supply), X23 (Mechanism of pricing deposits), X24 (Performance of capital market) and X25 (Deposit insurance) at 1% level of significance. This implies that these variables are expected to form another strong group.

The variable X17 (Equity capital) is highly correlated with X18 (Unemployment), X19 (Inflation), X21 (Money supply), X23 (Mechanism of pricing deposits) and X24 (Performance of capital market) at 1% level of significance. This represents that these variables are expected to form another important group.

The variable X18 (Unemployment) is highly correlated with X19 (Inflation), X20 (Gross domestic product), X21 (Money supply), X22 (Relationship with customers) and X23 (Mechanism of pricing deposits) at 1% level of significance. This implies that these variables are expected to form another strong group.

The variable X19 (Inflation) is highly correlated with X20 (Gross domestic product), X23 (Mechanism of pricing deposits), X24 (Performance of capital market) and X25 (Deposit insurance) at 1% level of significance. These variables are expected to form another strong group.

The variable X20 (Gross domestic product) is highly correlated with X22 (Relationship with customers) and X23 (Mechanism of pricing deposits) at 1% level of significance. This represents that these variables are expected to form another important group.

The variable X21 (Money supply) is highly correlated with X23 (Mechanism of pricing deposits) and X24 (Performance of capital market) at 1% level of significance. This implies that these variables are expected to form another strong group.

The variable X23 (Mechanism of pricing deposits) is highly correlated with X24 (Performance of capital market) and X25 (Deposit insurance) at 1% level of significance. This implies that these variables are expected to form another strong group.

The variable X24 (Performance of capital market) is highly correlated with X25 (Deposit insurance) at 1% level of significance. This implies that these variables are expected to form another strong group.

The correlation matrix has shown that variables under study have formed several groups on the basis of relationship underlying between variables. The underlying relationship between variables is going to contribute to the formation of principal components.

4.3. Principal Component Analysis
The correlation matrix of all 25 variables has been further subjected to principal component analysis. The Eigen values, the percentage of total variance, and rotated sum of squared loadings have been shown in Table 4.

The factor matrix as obtained in the principal component analysis has also been further subjected to Varimax Rotation. An examination of Eigen values has led to the retention of seven factors. These factors have accounted for 15.462%, 12.869%, 12.699%, 10.296%, 9.359%, 7.983% and 7.646% of variation. This implies that the total variance accounted for by all seven factors is 76.315% and the remaining variance is explained by other factors.

4.3.1. Analysis of factors
The seven factors found from rotated factor matrix are orthogonal. Researcher has picked up variable with factor loading of 0.50 and above to have a particular factor.

Based on Table. 5, Factor-1 explains 15.462% of the total variations existing in the variable set. This factor has significant factor loadings on these variables which have formed this major cluster. It includes Amount of equity capital invested, Online banking facility, Banks' Technology, Relative changes in population, Interest rate on deposit, Money Supply, ATM and other services and Utility charges and marketing strategy. This factor provides a basis for conceptualization of a dimension, which may be identified as Market and ICT Factor.

Factor-2 accounts for 12.869% of all differences in the variable set as seen in Table 6. Factor-2 explains 12.869% of the total variations existing in the variable set. This factor has ranging from moderate to high factor loadings on these variables which have formed a second important cluster. It includes Quality of the service, Public confidence or goodwill, Gross Domestic Product, Quality of bank personnel and Unemployment. This factor provides a basis for constellation of a dimension, which may be identified as Quality Competence Factor.

Upon examination of Table 7, Factor-3 can be seen to account for 12.669% of all variances found in the variable set. On the variables that made up this third significant cluster, this factor had factor loadings that range from moderate to high. It is concerned with

Table 4: Principal component analysis

Component	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.976	27.905	27.905	6.976	27.905	27.905	3.865	15.462	15.462
2	3.343	13.370	41.275	3.343	13.370	41.275	3.217	12.869	28.331
3	2.285	9.142	50.416	2.285	9.142	50.416	3.175	12.699	41.030
4	2.046	8.185	58.601	2.046	8.185	58.601	2.574	10.296	51.326
5	1.713	6.852	65.453	1.713	6.852	65.453	2.340	9.359	60.685
6	1.409	5.637	71.090	1.409	5.637	71.090	1.996	7.983	68.668
7	1.306	5.224	76.315	1.306	5.224	76.315	1.912	7.646	76.315
8	0.997	3.986	80.301						
9	0.827	3.307	83.607						
10	0.746	2.984	86.592						
11	0.646	2.584	89.176						
12	0.551	2.205	91.381						
13	0.392	1.568	92.949						
14	0.330	1.320	94.269						
15	0.286	1.144	95.414						
16	0.232	0.926	96.340						
17	0.187	0.750	97.090						
18	0.146	0.583	97.673						
19	0.136	0.544	98.217						
20	0.119	0.474	98.692						
21	0.100	0.398	99.090						
22	0.078	0.310	99.400						
23	0.072	0.287	99.688						
24	0.048	0.194	99.881						
25	0.030	0.119	100.000						

Extraction Method: Principal Component Analysis, Data have been compiled by the researcher

Table 5: Factor 1: Market and ICT factor

	Variables	Factor loading
X17	Amount of equity capital invested	0.822
X13	Online banking facility	0.745
X12	Banks' technology	0.681
X10	Relative changes in population	0.621
X2	Interest rate on deposit	0.561
X16	Marketing STRATEGY	0.515
X15	ATM and other services and Utility charges	0.568
X21	Money supply	0.566
	Variance accounted for	15.462%

Source: Survey instruments, Data have been compiled by the researcher

Table 6: Factor 2: Factor of quality competence

	Variables	Factor loading
X14	Quality of the service	0.830
X20	Gross Domestic Product	0.662
X5	Public confidence or goodwill	0.572
X18	Unemployment	0.572
X3	Quality of bank personnel	0.576
	Variance accounted for	12.869%

Source: Survey instruments, Data have been compiled by the researcher

Table 7: Factor 3: Strategic factor

	Variables	Factor loading
X24	Performance of capital market	0.863
X25	Deposit Insurance	0.779
X23	Mechanism of pricing deposit	0.753
X22	Relationship with customers	0.563
X19	Inflation	0.583
	Variance accounted for	12.669%

Source: Survey instruments, Data have been compiled by the researcher

Table 8: Factor 4: Bank specific factor

	Variables	Factor loading
X1	Bank size	0.878
X4	Diversified services	0.746
	Variance accounted for	10.296%

Source: Survey instruments, Data have been compiled by the researcher

Performance of capital market, Deposit Insurance, Mechanism of pricing deposit, Inflation and Relationship with customers. This provides a basis for conceptualization of a dimension, which may be identified as Strategic Factor.

Factor-4 accounts for 10.296% of the total variations found in the variable set, as seen in Table 8. These variables, which have formed this fourth significant cluster, have factor loadings on them that range from moderate to high. It includes Bank size and Diversified Services that provides a basis for conceptualization of a dimension, which may be identified as Bank specific Factor.

Table 9 shows Factor-5, which accounts for 9.359% of all variations found in the variable set. On the variables that make up this fifth cluster, this factor has factor loadings that range from moderate to high. It is concerned with Bank Liquidity and Interest on Govt. Security. This provides a basis for conceptualization of a dimension, which may be identified as Moderating Factor.

Table 9: Factor 5: Moderating factor

	Variables	Factor loading
X9	Interest on Government Security	0.766
X11	Bank Liquidity	0.641
	Variance accounted for	9.359%

Source: Survey instruments, Data have been compiled by the researcher

Table 10: Factor 6: Macroeconomic factor

	Variables	Factor loading
X7	Characteristics of local economy	0.829
X6	State of the national economy	0.641
	Variance accounted for	7.983%

Source: Survey instruments, Data have been compiled by the researcher

Table 11: Factor 7: Monetary policy factor

	Variables	Factor loading
X8	Government monetary policy	0.824
	Variance accounted for	7.646%

Source: Survey instruments, Data have been compiled by the researcher

Table 12: Ranking of factors

	Factor	Weighted Score	Ranking
1	Market and ICT factor	2.655496667	VII
2	Factor of quality competence	2.642352	VI
3	Strategic factor	2.977036	V
4	Bank specific factor	3.26992	II
5	Moderating factor	3.03396	IV
6	Macroeconomic factor	3.05196	III
7	Monetary policy factor	3.59264	I

Source: Survey instruments, Data have been compiled by the researcher

Table 11 demonstrates that Factor-7 accounts for 7.646% of all variations found in the variable set. These variables, which have created this seventh cluster, have substantial factor loadings for this factor. It is focused on the Government monetary policy and also provides a basis for conceptualization of a dimension, which may be identified as Monetary Policy Factor.

Factor-7 explains 7.646% of the total variations existing in the variable set. This factor has high factor loadings on these variables which have formed this seventh cluster. It is concerned with Government monetary policy and also provides a basis for conceptualization of a dimension, which may be identified as Monetary Policy Factor.

4.4. Ranking of Factors

Finally, the ranking obtained on the basis of factor-wise weighted scores are shown in the following Table 12.

The first and most important factor is Monetary Policy Factor which includes the Government monetary policy. It implies that strongly Government monetary policy influences the deposit of sample commercial banks. The second important factor is Bank specific Factor that includes Bank size and Diversified Services. This specifies that size of the bank and specialization of services influence the deposit activities of commercial banks. The third important factor is Macroeconomic Factor. This factor includes variables such as Characteristics of local economy and State of the national economy. These variables reflect the influence of local and national economy on the deposit of commercial banks.

The fourth important factor is Moderating Factor which includes variable such as Interest on Government Security and Bank Liquidity. It represents the considerable impact of interest on Government Security and liquidity position of commercial banks on their deposit. The fifth important factor is Strategic Factor which includes variable such as Performance of capital market, Deposit Insurance, Mechanism of pricing deposit, Relationship with customers and Inflation. It reflects that the strategic decisions

of commercial banks regarding capital market, inflation, deposit insurance, deposit pricing or dealing their customers influence their level of deposit. The sixth important factor is Quality Competence which includes variable such as Quality of the service, Gross Domestic Product, Public confidence or goodwill, Quality of bank personnel and Unemployment. This reflects the situation of deposit of the commercial banks. The seventh important factor is Market and ICT Factor which includes variable such as Amount of equity capital invested, Online banking facility, Banks' Technology, Money Supply, Interest rate on deposit, Marketing Strategy, ATM and other services & Utility charges, Relative changes in population. This implies that deposit activities of commercial banks are influenced by different market, information and communication related activities.

5. CONCLUSION AND RECOMMENDATIONS

As one of the key activity of commercial bank it is necessary to identify the main factors that plays important role to attract more bank deposit. The present study is performed on the listed commercial banks in Bangladesh to find out bank specific and macroeconomic factors that can help them to collect more bank deposit.

The study has identified three important factors as most important determinants of Deposit of Commercial Banks. They are Monetary Policy Factor, Bank specific Factor and Macroeconomic Factor.

a. The first ranking factor is "Monetary Policy Factor" constituted by Government monetary policy. It implies Government monetary policy strongly influences the deposit of sample commercial banks

b. The second most important ranking factor is "Bank specific Factor" includes variables such as Bank size and Diversified Services

c. The third important ranking factor is "Macroeconomic Factor" supported by variables such as Characteristics of local economy and State of the national economy.

The study suggests that investment friendly monetary policy should be formed by government and instead of capital city the savings and investment opportunities should be decentralized to different localities around the nation. It also suggests that banks should focus on expanding their banking activities with more diversified services.

The study highlights some appealing areas for further research

efforts. First, only listed banks are considered. Unlisted banks may be included to better figure out the factors influencing the volume of bank deposit. Finally, further research may significantly compare the factors that work to collect more deposit at different Asian countries.

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