Consistency between Deposits and Advances of Commercial Banks for Changing in CPI: Bangladesh Perspective

Rana-Al-Mosharrafa*

Abstract

In this study consumer price index (CPI) is used to get the link between deposits and advances which will reflect the amount of inflation. A rising CPI is an indicator of inflation, which leads to reduce purchasing power for investors. This research study has been designed in such a way that it helps to analyze the trend of advances in Bangladesh along with its factors like deposits and CPI both in nominal term and in real term. The broad objective of this study is to ascertain a correlation between deposits and advances of commercial banks in Bangladesh. The study utilized secondary data. Multiple regressions analysis, Pearson's correlation and time-series analysis were done as analyzing tool. Trend equations have been tested throughout the period of 2007 to 2015. The rate of deposit was the highest in 2011 and lowest in 2015 considering the base year 2007. Again the rate of advances was the highest in 2011 and lowest in 2013. The inflation in Bangladesh affects both deposits and advances of banks. Therefore, these variables are interlinked and this study incorporates to find out the consistency among them. We also try to give some suggestions in this regard.

Keywords: Deposit, Advance, Commercial bank, Consumer Price Index (CPI), Inflation, Nominal value, Real value.

Introduction

In the development process of a country, the financial sector plays a vital role. In this process commercial banks are responsible for accumulating customers' deposits in a safe and liquid form and lending the earnings to worthy commercial, industrial, governmental and nonprofit institutions. As Mishikin (2004) demonstrates, a commercial bank's liability financed by current, saving, and fixed deposits and equity (contributed by shareholders) represents its sources of funds; while asset composed of investments, loans and advances represents its use of funds. The main sources of funds of commercial banks are from saving deposits and fixed deposits. As a result, the performance of commercial banks is related to its ability to attract individual depositors. Mishkin (2000) also explained that with inflation lenders or depositors who pay a fixed rate of interest on loans or deposits will lose purchasing power from their interest earnings while their borrowers become benefited.

The major part of the financial sector in Bangladesh is contributed by the banks. The financial systems in Bangladesh consist of Bangladesh Bank, scheduled banks, non-bank financial institutions, microfinance institutions, insurance companies, co-operatives, credit rating agency,

*Senior Lecturer, Department of Business Administration, Prime University

stock exchange etc. Bangladesh has mixed banking systems comprising of sate owned, private and foreign commercial banks. At present there are 6 state owned commercial banks (Sonali bank, Agrani bank, Janata bank, Rupali bank, BASIC bank and BDBL), 2 specialized banks (Krishi bank and RAKUB), 48 private commercial banks, 9 foreign banks and 3 Development Financial Institutions as of December 31, 2015.

According to Kutan *et al.* (2010) banks serve as intermediaries by accepting commercial and individual deposits and transferring them in the form of loans or investments. The main focus of every financial system is to mobilize financial resources from the surplus sector and lend the deficit outlets to facilitate business transactions and economic development based on the monetary and fiscal policy of the nation. Deposit mobilization is defined as the process of encouraging customers to deposit cash with the bank or luring new clients to come and open accounts with the bank (Edwards and Magendzo 2006).

The main desirability for getting the deposit from the surplus sector is interest payment, which must be rational and acceptable to the owner of the money. Conversely, the attraction for granting credit facility by the bank is interest payment for the use of credit by the borrowers in consideration for parting with liquidity by the lenders. Therefore, interest rate dictates both the level of deposit and the amount of credit being offered by the banks. Inflation remains a threat to all economies in the world from the developing nations to the super powers. This has led to development of ways and policies to control inflation (Brealey *et al*., 2001). To retain the real value of cash assets depositors expect higher returns on their deposits. To cover the premium of inflation when depositors and lenders seek to get higher returns, the rates of interest therefore rise in tandem. This raises the cost of loans which in turn generates the risk of default.

The key financial variable that affects the decisions of consumers, business firms, financial institutions, professional investors and policy makers is the rate of interest. If interest rates are not adjusted for changes in inflation, the real rate of return decreases. Expected price changes have a bearing on the purchasing power and thus on the level of consumption also. Timely forecasts of inflation rates can therefore provide values to financial market participants.

Inflation not only decreases the growth rate but also induces the uncertainty in economy. The association between inflation and economic growth is non-linear. For each one percent point increase in inflation, in USA, annual growth rate has reduced by 0.223% (Smyth, 1992). Rise in inflation occurs when there exists excess money supply growth (M2) in the economy. The money supply growth initially affects the real GDP and then strikes the inflation. The main cause of high interest rate is high inflation, through the expected inflation premium. High rates of inflation can have adverse consequences either for an economy's long-run rate of real growth or for its long-run level of real activity. Keeping this view in mind the present study is accomplished to ascertain a correlation between deposits and advances of the commercial banks in Bangladesh by using the consumer price index (CPI) as an indicator of inflation. This will signify the security of the banking system and hence to the economy of the country.

Literature Review

Many of the social scientists opined about the theories of commercial bank's deposits and advances, theories of inflation using consumer price index (CPI) and review of empirical studies related to the topic of this research. Even though deposits have been growing, they have remained relatively short term in nature and financial intermediation is growing slowly, thus depriving the economy of the much needed long term capital for capital expenditure and retooling (Mverecha, 2011). In a modern economy, inflation is one aspect that every country and government has to contend with. It is one of the most dreaded and misunderstood economic phenomena (Saxena and Singh, 2015). A study was performed by Opati (2009) on fundamental relationship between inflation and exchange rates where he recognized that an increase in inflation leads to the depreciation of the local currency.

In Bangladesh the commercial banks are vulnerable to many forms of risks which have generated occasional systemic crises. These include: i) liquidity risk, where many depositors request to withdraw in excess of available funds, ii) credit risk i.e. the possibility that those who owe money to the bank will not repay it and iii) interest rate risk i.e. the chance to reduce spread of the bank, if rising interest rates force it to pay relatively more on its deposits than it receives on its loans.
In monetary economics, the quantity theory of money is the theory that money supply has a direct, proportional relationship with the price level (Fisher, 1911). Keynes (1924) argued that an increase or decrease in money supply only affects the demand for goods and services indirectly and hence the level of income. For example, an increase in money supply leads to a fall in the rate of interest which in turn causes private investment to fall and ultimately results in a decline in the level of national income. By using a disequilibrium framework Taner (1998) carried out a study to investigate the effects of inflation uncertainty on credit markets. He displayed how inflation uncertainty increases the risks associated with the portfolios of firms and banks. Therefore, the removal of inflation uncertainty will decrease the risk around the contracts of credit and will ensure efficiency and growth of investment in a country.

The banks take the funds from the depositors and use them in lending activities (Chaplin *et al*., 2000). Banks play the role of financial intermediaries (Allen and Santomero, 1998). Das and Das (2002) observed that the method of calculating the interest amount can substantially affect the interest paid. Depositors should bear in mind the interest rate computation over and above the quoted nominal rates. Since 89% of the customers are depositors, a high degree of transparency is desirable in regard to effective rates offered to customers. Decline in deposit supply reduced loan supply (Staharn and Loutskina, 2008). The amount of bank lending declines with inflation (Boyd and Champ, 2006). Even the expectation of inflation, has a strong adverse impact on long-term lending. Mundell (1965) and Tobin (1965) predict a positive relationship between the rate of inflation and the rate of capital accumulation, which in turn, implies a positive relationship with the rate of economic growth. They argued that an increase in the rate of inflation which is calculated by using CPI or indexation increases capital accumulation and thereby, stimulates a higher rate of economic growth. This study is performed to describe the contribution of CPI by measuring inflation to increase deposits. If deposits increase Bank can attain more investment opportunities.

Conceptual Elucidation of Inflation on Deposits and Advances

Milton (1992) famously proclaimed that inflation is always and everywhere a financial trend. Lending has become quite costly as lenders tend to increase interest rate as compensation for the decrease in the purchasing power of money they will be repaid in the future. As inflation rate rises, purchasing power parity decreases and people have less money to consume. The nominal rate is the reported percentage rate without taking inflation into account. Economic measures like GDP (Gross Domestic Product) quoted as "nominal GDP," that refers to the annual rate of economic growth without inflation being factored in. Inflation could cause a posted (nominal) GDP rate to go negative in real terms.

Banks take Inflation as an important factor because they typically deal in nominal financial instruments, that is, instruments denominated in fixed dollar amounts. Suppose, when a bank makes a loan, it accepts nominal financial instruments (notes, mortgages, commercial paper and other financial securities) as evidence of the debtor's obligation to the bank. When a bank borrows, it issues nominal financial instruments (deposit liabilities, acceptances and debentures) to creditors as evidence of its obligation.

If the realized rate of inflation exceeds the anticipated rate, the price level rises unexpectedly. The unexpected increase in the price level causes a proportional reduction in the exchange value of both nominal financial assets and liabilities in terms of real goods. As banks are typically net creditors in nominal instruments, bank owners lose wealth when unanticipated inflation occurs. After adjustment for the rate of inflation, the real rate of interest on deposits becomes much lower than the nominal one. Depositors thus continue to supply loanable funds at lower costs in real terms to banks. Any effort to reduce the deposit rate may adversely affect deposit mobilization by the banks.

The CPI is a good measure of inflation as experienced by consumers in their day-to-day living expenses and is often referred to as the cost-of-living index. CPI represents a number that is the most widely used measure of inflation, but CPI itself does not tell us what the current inflation rate is. The Bureau Statistics evaluates prices and generates the current CPI. A rising CPI is an indicator of inflation, which leads to reduced purchasing power for investors. As prices of goods and services rise, investor's dollar will purchase less. In order to combat inflation, the central bank will increase short-term interest rates thereby making it more costly for businesses and consumers to borrow money.

The following figures show the trend of deposits and advances both in nominal terms and in real terms during the period of 2007 to 2015 in Bangladesh (Appendix-1). The real values were inflation deducted and the analysis was more or less similar to the analysis of inflation adjusted data. In both cases deposits and advances were the highest in 2015 (Figure 1).

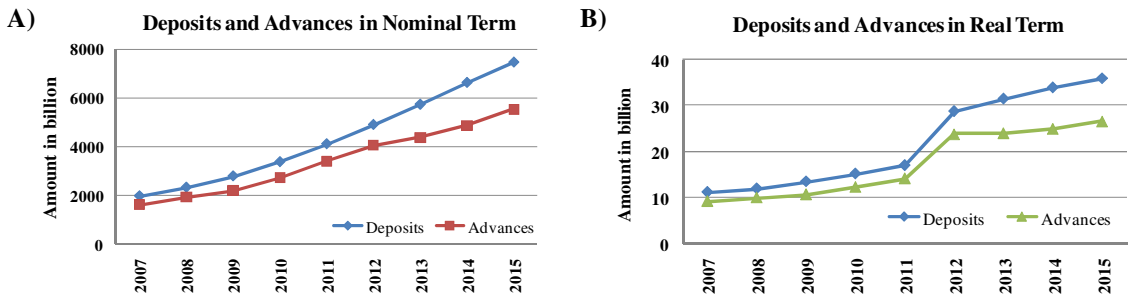

Figure 1: Graphical representation of deposits and advances in A) nominal term and B) real term

Forms of Deposits and Sectorwise Advances of Scheduled Banks in 2015

In 2015, the maximum amount of advance was allocated to the trade sector (1961.3 billion Tk.) which was 36% of the total allocation of that year. Again, agriculture, forestry and fishing, industry, working capital financing, construction, transport and communication sector were allocated 7%, 17%, 18%, 8% and 1% respectively (Figure 2A).

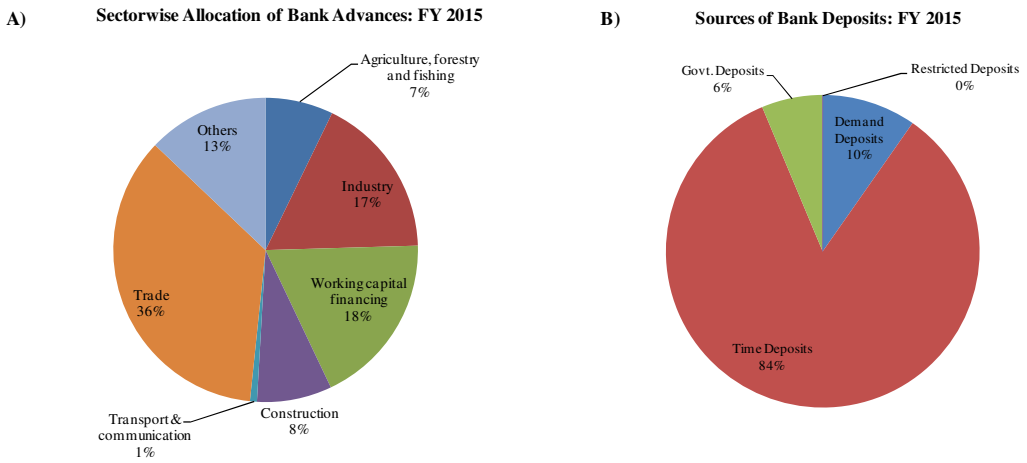

Figure 2: Pie chart for A) sector wise allocation of bank advances and B) different sources of bank deposits for the financial year of 2015

Banks collect maximum amount of deposits from time deposits which is 84% of total deposits of that year. On the other hand, from demand deposits, government deposits, restricted deposits and others were collected 10%, 6% respectively (Figure 2B).

Credit/Deposit Ratio

At the end of June 2015 advance/deposit ratio of the scheduled banks, excluding the specialized banks was 0.77 whereas it was 0.76 at the end of June 2014. Increasing credit to deposit ratio in FY15 indicates credit growth is higher than the deposit growth.

Growth Rate of Banks' Deposits and Advances

Commercial banks' total deposits increased from Tk. 1970.1 billion to Tk. 7463.4 billion and advance increased from 1614.2 billion to 5533.4 billion during the period of 2007-2015. Table 1 depicts the growth rate of bank deposits and advances over the base year (2007) and the highest growth was in the year 2011 for deposits and advances, 18% and 20% respectively. In 2015 deposit growth rate was lowest (11%) over that of the year 2014. In case of advance, lowest growth was in 2013 (7%). After that it was increasing and observed at 12% in 2015. Average deposit and advance growth rate during the period of 2007 to 2015 was 15.31% and 14.17% respectively. It is notified that average deposit growth rate was 1.14% higher than that of advance throughout this period. The growth rates of bank deposits and advances have been calculated according to the procedure of Mosharrafa (2013).

Table 1: Bank deposits and advances with growth rate from the period of 2007-2015

Year	Deposits (Tk. In billions)	Growth over previous year	Deposit growth over base year (2007)	Average deposit growth rate	Advances (Tk. In billions)	Growth over previous year	Advances growth over base year (2007)	Average advance growth rate
2007	1970.1	-	-		1614.2	-	-	
2008	2317.3	15%	18%		1926.2	16%	19%	
2009	2786.8	17%	41%		2198.4	12%	36%	
2010	3368.7	17%	71%		2720.6	19%	69%	
2011	4104.8	18%	108%	15.31%	3409.3	20%	111%	14.17%
2012	4900.4	16%	149%		4056.6	16%	151%	
2013	5729.7	14%	191%		4372	7%	171%	
2014	6625.7	14%	236%		4882.2	10%	202%	
2015	7463.4	11%	279%		5533.4	12%	243%	

Hypothesis of the Study

On the basis of extensive literature review, following hypotheses have been formulated for the study:

H_0: Bank Deposits and CPI do not have significant impact on Advances of Commercial Banks.

H_1: Bank Deposits and CPI have significant impact on Advances of Commercial Banks.

It is imperative to test this hypothesis in the context of the succeeding methodology.

Methodology

Mugenda and Mugenda (1999) emphasized that, the accuracy of data largely depends on the data collection instruments in terms of validity and reliability. Validity was achieved by having objective data. Reliability, on the other hand, was achieved by selecting a measure of the degree to which research instruments yield consistent results. For the purpose of testing the study hypothesis determination of i) commercial bank's deposits ii) CPI and iii) commercial bank's advances was done. The CPI measures the price of a 'basket' of goods and services at regular intervals and records the price as an index number. When two CPI index numbers are compared, the change in the total cost of the basket from one point in time to another has been shown. This comparison shows the size of the change in household spending for that time period as a percentage – often called the inflation rate. To examine the aforesaid factors on bank advances, accumulated data of the banking sector were extracted for the period of 2007-2015, as this time period is defensible and data are available in the websites of Bangladesh Bank and the Bureau of Statistics.

All the commercial banks operating in Bangladesh were considered as population in this study. The number of population was 49 including 9 foreign commercial banks. This study was carried out on the basis of secondary data collected from the official web sites of Bangladesh Bank, articles and research papers from reputed journals to verify the relationship between deposits and advances for the period of 2007 to 2015. Moreover, official websites of ministry of finance and bureau of statistics have also been visited to get the required information.

Descriptive statistics was used to summarize the data. This involved the use of histograms and line graphs to show the trends in deposits and advances in nominal term and real term over the study period. Data was analyzed using the Statistical Package for Social Sciences (SPSS) and Microsoft Excel. The methodology involved estimating an econometric model as well as simple, statistical indicators like correlation and time series analysis. To investigate the impact of deposit amount and CPI on advances of commercial Bank, a regression analysis was employed to establish the relationship between the variables.

Model Specification

The primary model showing the relationship between deposits and advances of commercial banks of Bangladesh is specified as:
AD = f (De, CPI)
where, AD = Advances
De = Deposits
CPI = Consumer Price Index
To determine the consistency of the impact of changes in consumer price index on commercial bank's deposits and advances, the regression function is carried out as:
$Y = \alpha + \beta 1(X1) + \beta 2(X2) + \ldots + \beta t\,(Xt) + e$
where,
Y represents the dependent variable i.e. advances of commercial banks.
α is the constant of the regression formula.
β1 is the regression coefficient of the first independent variable.
X1 is the first independent variable, deposit.
β2 is the regression coefficient of the last independent variable.
X2 is the last independent variable, CPI.
e is the stochastic error term that captures the impact of all other variables not included in the model.

Results and Discussion

Data have been analyzed in accordance with the research design. To find a valid relationship among variables by regressing time series data have long been on the assumption that all time series data are stationary. Data for the period of 2007-2015 were analyzed to look into the relationship of the commercial bank's deposits and advances in accordance with the changes in CPI in Bangladesh. Initially the secondary data has been analyzed by editing, coding and collecting.

Regression Analysis

Regression analysis was done according to the method of Mosharrafa (2015) and Anwar and Deepty (2009).

Model Summary (b)

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Durbin-Watson
1	0.995[a]	0.991	0.987	155.87146	1.060

a. Predictors: (Constant), CPI, De
b. Dependent variable: AD

In the above model summary dependent variable is advance of commercial banks and independent variable is deposits (De) and CPI. From the results of the SPSS regression model, it has been observed that R was 0.995 which indicates that the strength of the relationship was strong. The coefficient of determination (R^2) was 0.991 which means that 99.1 percent of the model was explained and the remaining was explained by unknown factors which were not included in the regression model. So we reject null hypothesis and the relationship among the variables was there. Durbin-Watson test value was 1.060 which was less than 2 meaning that the relationship among the observations does not exist.

Coefficients (a)

	Unstandardized Coefficients		Standardized Coefficients		
Model	**B**	**Std. Error**	**Beta**	**t**	**Sig.**
1					
(Constant)	217.307	503.107		0.432	0.681
Deposit,	0.709	0.028	0.995	25.048	0.000
CPI	0.516	2.434	0.008	0.212	0.839

a. Dependent variable: AD
Model: Growth of Advances (AD) = 217.307+0.709 (Deposits) +0.516 (CPI)

Interpretation

Constant was 217.307 which means that when the CPI was zero still advances were 217.307, the *B1* was 0.709 which indicates that with one unit increase in CPI the Advances were increased by 0.709 and vice versa, and the *B2* was 0.516 which indicates that with one unit increase in deposits the advances increased by 0.516 and vice versa.

Pearson's Correlation

Correlation analysis was carried out according to the method of Anwar and Deepty (2009) to find out the relationship between the variables of deposits, advances and CPI.

Table 2: Correlation matrix

		Advance	Deposits	CPI
Advances	Pearson Correlation	1.000	0.995	0.008
	Sig. (1-tailed)	-	0.000	0.492
Deposits	Pearson Correlation	0.995	1.000	0.000
	Sig. (1-tailed)	0.000	-	0.499
CPI	Pearson Correlation	0.008	0.000	1.000
	Sig. (1-tailed)	0.492	0.499	-

Table 2 shows that the variables of deposits and advances are highly correlated with one another, as evident from the correlation matrix with r-value of 0.995. There exists a significant relationship at 0.01 levels. CPI, on the other hand, is showing a low level of association with deposits and advances. From this analysis it can be concluded that commercial bank's deposits have significant impact on its advances. So null hypothesis is rejected and alternative hypothesis is accepted.

From the time series analysis we get the equations for deposits and advances as follows:
$Y_D = 4362.99 + 705.27_t$
where, Y = Deposits (in Billion Tk.), t = Time (Year)
Again, $Y_A = 3412.54 + 503.80_t$
where, Y = Advances (in Billion Tk.), t = Time (Year)
This means that on an average, the banks provided advances of Tk. 4362.99 billion per year. The inter year variation in advances provided by the bank was measured in terms of billion Tk. 705.27. There was rising trend in advances during the period of 2007 to 2015 considering the base year 2011 and sustained positive trend of business during the period.
In case of deposits, the banks collected deposits on an average of Tk. 3412.54 billion per year. The inter year variation in deposits collected by the bank was measured in terms of billion Tk. 503.80. There was also rising trend in deposits during the study period considering the base year 2011 and sustained positive trend.

Concluding Remarks

Findings

By the use of various statistical tools based on amount of deposits and advances of commercial banks in Bangladesh during the period of 2007 to 2015 the findings of our study are as follows:

1. Based on the data throughout the period, deposit was the lowest in 2007 which gradually increased up to 2015 and the same happened in case of advances. So, the result for both deposits and advances are very much consistent to each other.
2. By analyzing the trend for both deposits and advances during the period, the rate of deposit was the highest in 2011 and lowest in 2015 considering the base year 2007. Again the rate of advances was the highest in 2011 and lowest in 2013.
3. As the correlation matrix with r-value of 0.995, there exists a high degree of correlation between deposits and advances, i.e. deposits of commercial banks have a significant impact on its advances.
4. From the results of the SPSS regression model, it has been observed that *B1* value was 0.709 which indicates that the advances increased by 0.709 with the increase in CPI by one unit. On the other hand, *B2* value of 0.516 indicates that the advances increased by 0.516 with the increase in deposits by one unit. Here the strength of the relationship between the variables was very strong.
5. The real value which is inflation deducted, is more or less similar to the analysis of inflation adjusted data. In both cases deposits and advances were the highest in 2015.
6. It is detected that in both nominal and real term, there exists a high degree of positive relationship between deposits and advances. So, the difference between nominal and real term of coefficient of correlation is not statistically significant.

Recommendations

1. The study recommends that as there exists a positive relationship between deposits and advances, banks should increase their deposit interest rates to mobilize deposits which in turn enhance advances. Consequently commercial banks can increase their profitability.
2. The monetary authorities should give more concentration to minimize the gap between deposits rate and lending rate of commercial banks so that people can be motivated to deposit their savings to the bank. This will generate needed loanable funds for investment by the bank.
3. Financial expansion will encourage increasing in deposits. When the size of deposit is increased, enough loanable funds in banks will be available for both the private and public sector which will enhance economic growth and hence increase GDP of Bangladesh.
4. Policy makers of Bangladesh should take position to get the benefit from the study through insights from the research to inform policy formulation to improve productivity.
5. The process of adjusting payments to compensate for inflation can be carried out by using the CPI which is termed as indexation.

Conclusion

Under the latest principle of liberalization the banks are passing through the competitions of fixing and should take necessary steps about fixing their deposit and lending rates towards their overall performance and goals. A study in this area will be of great importance to all the stakeholders in the financial sector due to the rapid growth being viewed in different financial sectors. For the convenience of making inferences here, the findings of various statistical tools are considered. So, based on these findings it can be concluded that, there is a significant relationship between deposit and advances. It is clearly a satisfactory situation for the banking sector and for the overall economy as a whole. People are more likely to get advances from the bank to maintain their purchasing power and meet their expenses for increasing the rate of inflation in the country. So inflation and supply of advances are positively correlated in a given economic scenario. Greater care is required for the improvement of this sector. The central bank being at the core of financial regulation in the country should establish monetary as well as fiscal policies that help to curb inflation. Such policies will help in maintaining low rates of inflation that are acceptable and contribute to the balanced growth of economy.

Reference

Allen, F. and Santomero, A. M. (1998). "The Theory of Financial Intermediation". *Journal of Banking and Finance*, Vol. 21, pp- 1461-1485.

Anwar, G.M.J. and Deepty, S.T. (2009). "Bank Governance Effectiveness Towards Regulatory Compliance: Evidence From Private Commercial Banks of Bangladesh". *Conference paper, Conference of Global Business and Management Forum*, University of Dhaka, Bangladesh.

Boyd, J.H. and Champ, C. (2006). "Inflation, Banking, and Economic Growth". *Working paper, Federal Reserve Bank of Cleveland*, USA.

Brealey, R. A., Myers, S. C. and Fred, A. (2001). "Principles of Corporate Finance", 5th Ed, *The McGraw Hill Companies, Inc.*, New York.

Chaplin, G., Emblow, A. and Michael, I. (2000). "Banking System Liquidity: Developments and Issues". *Financial Stability Report (Bank of England),* December Issue, pp- 93- 112.

Das, A. and Das, P. (2002). "Rate of Interest on Term Deposits-A Micro Level Study". *Working paper of the Workshop of the Division of Theoretical Statistics and MATHEMATICS, Indian Statistical Institute*, New Delhi.

Edwards, S. and Magendzo, I.W. (2006). "Strict Dollarization and Economic Performance: An Empirical Investigation". *Journal of Money, Credit and Banking,* Vol. 38(1), pp- 269-282.

Fisher, I. (1911). "The Purchasing Power of Money". *The Macmillan Co.* New York.

Keynes, J. M. (1924). "The Theory of Money and the Foreign Exchanges". *In: A Tract on Monetary Reform*, London: Macmillan.

Kutan, A.M., Rengifo, E.W. and Ozsoz, E. (2010). "Evaluating the Effects of Deposit Dollarization in Bank Profitability". *Discussion paper, Fordham University, Dealy Hall Bronx,* New York.

Mishkin, F.S. (2000). "Financial Stability and the Macro Economy". *Economics working paper 09*, Department of Economics, Central bank of Iceland.

Mishikin, F.S. (2004). The Economics of Money, Banking and Financial Markets". 7th Ed, *Pearson Addison Wesley, Upper Saddle River* NJ.

Milton, F. (1992). "Money Mischief: Episodes in Monetary History". *A Harvest Book, Harcourt Brace & Co.* San Diego, pp- 262.

Mosharrafa, R.A. (2013). "Credit Assessment Practice of A Commercial Bank in Bangladesh". *International Journal of Economics, Finance and Management Sciences*, Vol. 1(6), pp- 382-387.

Mosharrafa, R.A. (2015). The Credit Rate of Deposit Money Banks and Money Supply Against the GDP Growth: A Case of Bangladesh". *Prime University Journal*, Vol. 9(1), pp- 50-55.

Mugenda, M.O. and Mugenda, A. (1999). "Research Methods: Quantitative and Qualitative Approaches". *Africa Center for Technology Studies (ACTS) Press*, Nairobi Kenya.

Mundell, R.A. (1965). "Growth, Stability & Inflationary Finance". *The Journal of Political Economy*, Vol. 73(2), pp- 97-109.

Mverecha, D. (2011). "Liquidity Challenges and Way Forward". *Bankers Association of Zimbabwe Publication*.

Opati, D. J. (2009). A Study on Casual Relationship Between Inflation and Exchange Rates in Kenya". *MBA thesis*, University of Nairobi, School of Business.

Saxena, S. and Singh, A. (2015). "Determinants of Inflation in India: and Economic Analysis". *Scholedge International Journal of Management and Development*, Vol. 2(8), 1-15.

Staharn, P. and Loutskina, E. (2008). "Securitization and the Declining Impact of Bank Financial Condition on Loan Supply: Evidence from Mortgage Acceptance Rates". *Conference Paper, Financial Cycles, Liquidity, and Securitization Conference*, IMF Washington, DC, USA.

Smyth, D.J. (1992). "Inflation & the Growth Rate in the United State's Natural Output". *Applied Economics*, Vol. 24(6), pp- 567-570.

Taner, M.Y. (1998). "Effects of Inflation Uncertainty on Credit Markets: A Disequilibrium Approach". *Working paper* with Verghese, A.

Tobin, J. (1965). "Money and Economic Growth". *Econometrica*, Vol. 33(4), pp- 671-684.

Appendix

Appendix-1

Year	CPI of 2007-2015 (Base: FY 96 = 100)	Deposit in Nominal term (Amount in billion)	Advance in nominal term (Amount in billion)	Deposit in real term (Amount in billion)	Advance in real term (Amount in billion)
2007	176.04	1970.1	1614.2	11.19	9.17
2008	193.54	2317.3	1926.2	11.97	9.95
2009	206.43	2786.8	2198.4	13.50	10.65
2010	221.53	3368.7	2720.6	15.21	12.28
2011	241.02	4104.8	3409.3	17.03	14.15
2012	170.19	4900.4	4056.6	28.79	23.84
2013	181.73	5729.7	4372	31.53	24.06
2014	195.08	6625.7	4882.2	33.96	25.03
2015	207.58	7463.4	5533.4	35.95	26.66

Source: Statistics Department, Bangladesh Bank