Effects of Macroeconomic Variables on Exchange Rates in Bangladesh

Farhana Akhter and Nushrat Faruqui

Abstract- The paper discusses about the experience of Bangladesh with different exchange rate regime, comparing the performance of previous and current exchange rate regime with selected south Asian countries and analyses and discusses how macroeconomic variables influenced exchange rate. For these analyses four major independent variables have been considered i.e. export amount, remittance, import amount and foreign currency reserve and independent variable is exchange rate. For evaluating the relationship and nature of relationship the researchers used correlation and regression analysis. The results showed that macroeconomic variables significantly influenced the exchange rate. The study concluded that after adopting the floating exchange rate regime Bangladesh experienced positive impacts on macroeconomic development of the country but to manage efficiently free floating exchange rate regime in developing countries like Bangladesh the central bank and the government may establish strict control over the foreign exchange business, to control inflation rate, to increase export, reduce trade deficit and increase foreign currency earnings.

Key Words- Macroeconomics, Exchange Rates, Variables

----

1. Introduction

Exchange rate plays an imperative role in international trade of the country. The exchange rate is an important macroeconomic variable used as parameter for determining international competitiveness and indicates the global position of economy of the country. The development of the country is closely related with its foreign exchange system. Exchange rate system consists of set of rules, arrangement and institutions under which nations effect payments among themselves. A nation's choice as to which currency regime to follow reflects nationals priorities about all facts of the economy, including inflation, unemployment , interest rate levels, trade balances and economic growth. The flexible rating system is currently being use in Bangladesh. The flexible exchange rate is largely determined by market mechanism i.e. use of forces of demand and supply. Bangladesh has been experienced the floating exchange rate regime since May, 2003.Modern analyst argued that flexible exchange rate are preferable to fixed exchange rates because flexible exchange rates offer many advantages i.e. adjustment of Balance of payment, Better performance, Better liquidity , Gains from free trade, Independence of policy etc. However, exchange rate policy is still a source of exasperating and appropriate choice is by no means clear. Economists do not provide clearly answers whether a country should allow its currency to float. According to Jhigan (2005), the variables that influence the exchange rate includes country's exports, imports and structural influences. If the country's export exceeds imports the demand for its currency rises and consequently it has a positive impact on the exchange rate.

- *Author: Farhana Akhter, Lecturer in Accounting, School of Business, Asian University of Bangladesh, Uttara, Dhaka, Bangladesh. E-mail: akhterf11@gmail.com*
- *Co-Author: Nushrat Faruqui, Lecturer in Finance, School of Business, Asian University of Bangladesh, Uttara, Dhaka, Bangladesh. E-mail: nfaruqui_7@yahoo.com*

On the other hand if imports exceed exports, the desire for foreign currency rises and hence, exchange rate of such country move up. Undoubtedly, any measure that tends to increase the volume of exports more than the rate of importation will definitely raise the value of the domestic currency Vis-a vis other foreign currencies. The key factor of the paper is the evaluation of exchange rate on the fundamental macroeconomic indicators of the economy. Four main factors have been identified to measure the impact on exchange rate i.e. export, Workers' remittance, import and foreign exchange reserve .Since exchange rate plays an important role to develop the economy of the country the study has been conducted in this area.

This paper is organized as follows : section one introduces the topic, section two and three provides objectives of the study and methodology of the study, section four provides literature review, section five and six explains the experience of Bangladesh with different exchange rate regime and Economic development of Bangladesh with Floating exchange rate regime, section seven discusses the results obtained from analysis, Section eight provides inferences and section nine concludes the paper.

2. Objectives of the study

1) To know about the impact of different exchange rate regimes on Bangladesh economy.
2) To get an idea about the Bangladesh's experience after adopting the floating exchange rate regime along with some neighboring country's experience.
3) To analyze the impact of exchange rate on the fundamental macroeconomic indicators of the economy i.e. Export, workers' remittance, Foreign reserve and import.

4) To seek out the inferences that should be taken by the Bangladesh Bank for effective management of the "floating exchange rate system".

4. Methodology of the Study

The research work has been done on the basis of secondary data. Secondary data comes from different published sources like research reports, websites of Bangladesh Bank, Bangladesh Bureau of Statistics, Export promotion Bureau, IMF and ADB and different literatures on exchange rate regime etc. For the analysis of the data and information quantitative research methodologies i.e. analytical statistical correlation and regression have been used. Statistical analysis correlation and regression have been calculated to understand the exchange rate's significance on the economic variables i.e. Export, Import, Workers' remittance and foreign currency reserve. Data entry was done in SPSS 16.0 data editor to conduct regression and correlation analysis.

3. Literature Review

A foreign currency exchange rate, or simply exchange rate, is the price of one country's currency in units of another currency or commodity (typically gold or silver). Exchange rate system is broadly divided in two categories (i) fixed exchange rate system and (ii) floating exchange rate system. Fixed exchange rate system is the rate, at which the currency is fixed or pegged, is frequently referred to as its par value. If the government does not interfere in the valuation its currency in any way, we classify the currency as floating or flexible. In Macro Economy the researchers consider Export Situation, Import Amount, Reserve Position, and Workers Remittance. The relationship of exchange rate with the inflation and interest rates has been first suggested in the International Fisher Effect (IFE) theory, an international version of Fisher Theory (Fisher, 1930). Fisher theory suggests that, in a global free market system, the real interest rate would equalize throughout the world due to arbitrage activities. Therefore, the difference of the expected inflations in the home and foreign countries would result in the difference of nominal interest rates between two countries. This in turn triggers changes in the exchange rate of the two currencies in such a way that foreign currency with relatively high interest rate tends to depreciate, because high nominal interest rate reflects high expected inflation (Madura, 2000).The basic policy variables of country is foreign exchange rate that ensured trade, business, long term funding, foreign direct investment, inflation, foreign exchange reserve, inward remittance etc.

Different countries adopt different exchange rate policies. Bangladesh, the focus of this paper, had a fixed exchange rate system in place since January, 3 1972. After

more than 31 years, the Central Bank of Bangladesh (Bangladesh Bank) changed it into a floating exchange rate system in June 2003. Bangladesh has been pursuing a floating exchange rate system since then. Dr. Mirza Azizul Islam, the former advisor, Ministry of Finance of the Caretaker Government of Bangladesh, presented a paper in January 2003, right before the shift from fixed to floating regime, explaining the overall performance of the fixed regime and the probable implications of the floating regime on Bangladesh economy. He suggested that the experiences of other countries in the region show that floating regime generates greater volatility in exchange rates and this sort of uncertainty is likely to affect adversely the overall trade and investment climate which is already afflicted by many unfavorable elements in Bangladesh (See Islam, 2003). Mussa (2000) proponents of free floating exchange rate regimes on the other hand believe that "a system of truly fixed exchange rate forces countries to keep their price levels in line, and therefore they are likely to bear the penalty of a trade deficit than their neighboring who follow floating exchange rate regimes and a more expansionist policy. Such penalty is supposed to be smaller under a floating exchange rate regime. Further, they advocate independence of the nations both [political and economic. According to them "all of the world's nations assert and express their sovereign authority by maintaining a distinct national money and protecting its use within their jurisdictions; money is like a flag; each country has to have its own".

Deverux & Engel (2003) emphasized that a flexible exchange rate gives room for the adjustment of relative price, when prices are sluggish. Islam & Biswas (2009) made an attempt to analyze the relationships between exchange rate and inflation and between exchange rate and GDP in Bangladesh. They find out that adoption of a successful free exchange rate regime is possible in least developed countries like Bangladesh, if the government maintain confidence in the currency, secure currency's strength and ensure its full convertibility. As long as this is backed by sufficient reserve of the foreign exchanges and stable political and economic condition of the country.

Liza Fahmida (2012) in her study, she identified that after adopting the floating exchange rate regime Bangladesh experiences positive impacts on macroeconomic development. She has considered three macroeconomic factors i.e. foreign reserve, workers' remittance and exports, proceeds to evaluate impact of exchange rate over them in this paper . This study concluded that there is significant growth in the fundamental economic variables on the long path of new exchange rate regime.

Danmola (2013) analyses the impact of exchange rate volatility on macroeconomic variables and with the help of correlation Matrix, Ordinary least square and Granger

causality test. The study shows the exchange rate volatility has a positive influence on Gross Domestic product, Foreign Direct Investment and Trade Openness, but with negative influence on the inflationary rate in the country.

4. Experience of Bangladesh with different exchange rate regime

Immediately after liberation, the Bangladesh currency was pegged with pound sterling but was brought at par with the Indian rupee. With in a short time, the value of taka experienced a rapid decline against foreign currencies and in May 1975, it was substantially devalued. In 1976, Bangladesh adopted a regime of managed float, which continued up to August 1979, when a currency-weighted basket method of exchange rate was introduced, the exchange rate management policy was again replaced in 1983 by the trade – weighted basket method and US the dollar was chosen was allowed to grow parallel to the official exchange rate. Up to 1990, multiple exchange rates were allowed under different names of export benefit schemes such as, Export Bonus schemes, XPL, XPB, EFAS, IECS and Home Remittance scheme. This led to a wide divergence between the official rate and the SEM rate. The situations also gradually gave rise to a number of conflicting regulations, poor risk management and various types of implicit and explicit government guarantees to the users of foreign exchange. This resulted in a number of macroeconomic imbalances prompting the government to adjust the official rate in phases and to liquidate its difference with the SEM. The two rates were finally unified in January 1992. The first step towards currency convertibility was taken on 17th July 1993 and this marked the beginning of a relatively open foreign exchange market in the country. Until then the Bangladesh Bank used to declare mid-rate along with the buying and selling rate for dollar applicable to authorized dealers. Until late in 2003, Bangladesh followed an exchange rate policy of occasionally adjusting the rate with an eye on maintaining export competitiveness, mainly with reference to the trend of Real Effective Exchange rate index based on a trade weighted basket of currencies acted as a sort of benchmark for the bank to set their own rates. To meet up the economic demand and to fulfill the IMF conditionality, on 29 May, 2003 Bangladesh Bank issued a circular stating- effective from 31st May, 2003, Bangladesh Bank floated its exchange rate and followed a fully market based exchange rate for Taka. Under this arrangement, exchange rate is determined on the basis of demand and supply of the respective currencies.

Immediately after the inception of floating exchange rate banks, economists, currency traders and businessmen have welcomed the deregulation of the exchange rate saying that the country's foreign trade and remittance would get a

boast up due to it and it would make the currency market more efficient and effective.

5. Economic development of Bangladesh with Floating Exchange rate regime:

To assess the economic development of Bangladesh after adopting floating exchange rate regime, some data comparison has been made among three neighboring countries in South Asia; those are India, Pakistan and Sri Lanka. Macro-economic factors of growth rate of GDP, current balance and inflation situations of Bangladesh are considered here in comparison to the neighboring countries.

6. Growth rate of GDP

As we know that Gross Domestic Product (GDP) is an important macro-economic factor for the fluctuations of exchange rate so we want to know percentage of growth rate of GDP of Bangladesh along with India, Pakistan and Sri Lanka before and after year 2003. According to graph Bangladesh was more or less in a similar situation before the adoption of floating exchange rate regime. Since 2003 with the new floating exchange rate system, there is also a positive trend of the GDP growth rate except 2009-2010. The global recession affect the overall growth of the country at that time.
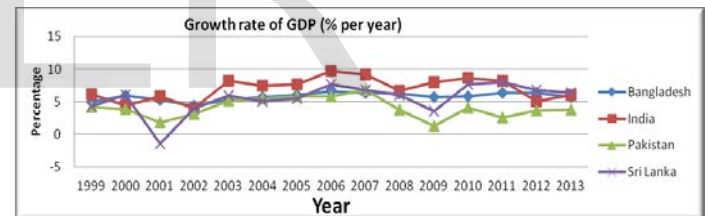

Figure 1: Growth rate of GDP of Bangladesh and selected South Asian Countries

Country	YEAR														
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Bangladesh	4.9	5.9	5.3	4.4	5.3	5.7	6.0	6.6	6.4	6.2	5.7	5.8	6.3	6.3	5.7
India	6.1	4.4	5.8	4.0	8.2	7.4	7.6	9.7	9.2	6.7	8.0	8.6	8.2	5.0	6.0
Pakistan	4.2	3.9	1.8	3.1	5.1	5.5	5.8	5.8	6.8	3.7	1.2	4.1	2.5	3.6	3.7
Sri Lanka	4.3	6.0	-1.5	4.0	5.9	5.0	5.5	7.7	6.8	6.0	3.5	7.6	8.0	6.8	6.4

Table 1: Growth rate of GDP (% per year)
Source: Asian Development Outlook-2001 and 20

6.1 Current Account Balance

While the surplus balance in the current account persuades the appreciation of the home currency on the other hand deficit balance in the current account influences depreciation of the home currency. To show the economic growth of Bangladesh after the adoption of floating

exchange rate regime (since 2003) here the graph presents that it has accomplishment in terms of containing current account balance is better than some of the neighboring countries like Sri Lanka, Pakistan, and India in all recent years excepting 2005.
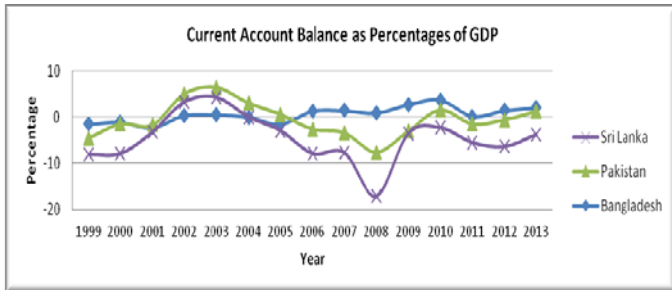

Figure 2: Current Account Balance of Bangladesh and Selected South Asian Countries

Country	YEAR														
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Bangla-desh	-1.5	-1.1	-2.3	0.4	0.5	0.0	-1.5	1.3	1.4	0.9	2.7	3.7	0.2	1.4	2.0
India	-1.1	-0.8	0.2	0.8	0.7	0.3	0.3	-1.2	-1.4	-2.4	-2.8	-3.0	-3.5	-5.0	-4.4
Pakistan	-3.0	-0.4	0.6	4.6	5.9	3.0	2.1	-3.9	-4.8	-8.5	-5.7	-2.2	-1.7	-2.0	-0.8
Sri Lanka	-3.6	-6.4	-1.5	-1.8	-2.2	-3.0	-3.5	-5.3	-4.3	-9.5	-0.5	-3.8	-4.0	-5.8	-5.0

Table No. 2: Current Account Balance as Percentages of GDP

Source: Asian Development Outlook-2013, ADB

6.2 Inflation Situation

Exchange rate regime and inflation are relevant because a change in the exchange rate is almost certain to cause a change in the domestic price of tradable and indirectly the price of non-tradable also. The international competitiveness of the economy is badly eroded by inflation. It generally encourages capital flight, exacerbates income distribution, gives rise to inequities in income distribution and aggravates poverty. The relevant data are presented in the following graph.
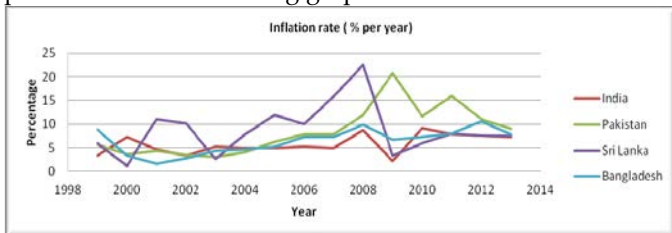

Figure 3: **Inflation in Bangladesh and Selected South Asian Countries**

Source: Asian Development Outlook-2005 and 2013, ADB

Country	YEAR														
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Bangla-	8.9	3.4	1.6	2.8	4.4	4.7	5.2	7.2	7.2	9.9	6.7	7.3	8.0	10.6	7.8
desh															
India	3.3	7.2	4.7	3.4	5.3	5.0	5.0	5.2	5.0	8.7	2.1	9.2	7.8	7.5	7.2
Pakistan	5.7	3.6	4.4	3.5	3.1	4.0	6.2	7.9	7.8	12.0	20.8	11.7	16.0	11.0	9.0
Sri Lanka	5.9	1.2	11	10.2	2.6	7.9	12	10	15.8	22.6	3.4	5.9	8.0	7.6	7.5

Table 3: Inflation in Bangladesh and Selected South Asian Countries

7. Result and Discussion

7.1 Correlation Analysis

Table 4 shows the relationship between the exchange rate and four variables i.e., export, remittance, reserve and import reflects quite positive in correlation. The correlation has been computed considering the data from 1999-2013.

	Exchange Rate	Export	Remittance	Total Reserve	Import
Exchange Rate	1				
Export	0.92275596	1			
Remittance	0.924770557	0.964732216	1		
Total Reserve	0.88146801	0.956264139	0.982205652	1	
Import	0.906088694	0.983593968	0.973024633	0.952129302	1

Table 4: Correlation Analysis

7.2 Regression Analysis

One regression analysis has been done with four independent variables (Total Export, Remittance, Total Reserve and Total Import) and a dependent variable which is exchange rate. The purpose of the quantitative analysis is to identify if there is any relationship between independent and dependent variables. (FY 1999 to FY 2013) 15 years data has been taken for the calculation. The regression model, exchange rate is dependent variable and Total Export Value, Remittance, Total Reserve, Total Import value are independent variable. The regression model is:

Variables Entered/Removed			
Model	Variables Entered	Variables Removed	Method
1	Reserve_Amount, Import_Amount, Export_Amount, Remittance_Amount[a]	.	Enter
a. All requested variables entered.			

Table 5: Regression Model

Interpretation of output summary

The regression model like that,

Here, Y= Exchange Rate

a= Constant

b_1, b_2, b_3 &b_4= Regression coefficient

$X_1 =$ Export Amount

$X_2 =$ Remittance Amount

$X_3 =$ Total Reserve Amount

$X_4 =$ Import Amount

From the co-efficient table, the values of a, b_1, b_2, b_3 & b_4 are found out & the regression model can be written as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$$
$$= 47.662 + .002X_1 + 0.004X_2 - 0.003X_3 - 0.001X_4$$

The relationship among the variables in relative term

The relationship among the variables in relative terms can be estimated with the help of coefficient of correlation, (r) which has been shown in table 6. Since the value of R is 0.960, it indicates that the relations between the dependent variable and independent variable are very strong.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.960ᵃ	.921	.890	$3.18870
a. Predictors: (Constant), Reserve_Amount, Import_Amount, Export_Amount, Remittance_Amount				

Table 6: Multiple Regression Analysis

7.3 Explanatory power of independent variables

The explanatory power of independents variables can be assessed with the help of coefficient of determination (r^2) which has been shown in table 6. It is also seen that the value of r^2 is .921 indicates that 91.8% of the variations in Exchange Rate can be explained by the variation of Export Amount, Import Amount, Total Reserve Amount and Remittance Amount. The low value of standard error of the estimate, 3.18870 indicated low scatter of data, it increases the strength of the conclusion of the relationship between the dependent and independent variables.

Coefficientsᵃ					
	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
1 (Constant)	47.662	2.161		22.057	.000
Export_Amount	.002	.001	1.299	2.402	.037
Remittance_Amount	.004	.001	1.935	2.982	.014
Total reserve_Amount	-.003	.001	-1.281	-2.396	.038
Import_Amount	-.001	.001	-1.032	-1.710	.118

Table 7: Coefficients
a. Dependent Variable: Exchange_Rate

The table 07 which deals with the coefficient analysis, the estimated value of Export Amount is .002 which implies that for 1% increase of Export Amount the exchange rate will increase 0.2% or tends to appreciate the Taka against Dollar. The estimated value of remittance is .004 which implies that for 1% increase of remittance amount the exchange rate will increase 0.4% or tends to appreciate the Taka against Dollar. It is found from this analysis these variables has positive impact on exchange rate.

The estimated value of total reserve and import are -0.003 and -0.001 which implies that for 1 % increase of reserve amount and import amount the exchange rate will decrease by 0.3% and 0.1% respectively or it can be said that increase demand for import and increase the foreign currency reserve causes the domestic currency to depreciate against the dollar. It is found from this analysis these variables has negative impact on exchange rate change.

ANOVAᵇ					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1192.366	4	298.091	29.317	.000ᵃ
Residual	101.678	10	10.168		
Total	1294.044	14			
a. Predictors: (Constant), Reserve_Amount, Import_Amount, Export_Amount, Remittance_Amount					
b. Dependent Variable: Exchange_Rate					

Table 8: Analysis of Variance

The analysis of variance explains further the relationship between the independent and dependent variables. As in the ANOVA table the value of F, 29.317(Table 8) is larger than the value of significance 0.00, the null hypothesis is rejected, It means, it is not true that there is no correlation between the dependent and independent variables. In other word, there is a correlation among the exchange rate and export, remittance, Total reserve and import.

8. Inferences

Generally speaking, Bangladesh pursues a managed floating rate regime. But floating exchange rate system requires respective response to fluctuations. To manage effectively the unmanageable free floating exchange rate regime in developing countries like Bangladesh, central bank may establish a stick control over the foreign exchange business. Bangladesh Bank needs to work on developing mechanism for inflation targeting policies, to control competitive exchange depreciation, ensuring efficiency in the financial system in order control exchange rate efficiently.

Following inferences have made by the researchers for effective management of the floating exchange system:

- Under the flexible exchange rate system there is a possibility of countries engaging in competitive depreciation of their currencies in order to capture

world market. So Bangladesh Bank should monitor the dealing with foreign currencies strictly.

- To reduce the supply of money and inflation in the economy, the central bank should take the tight monetary policy. Bangladesh Bank should not give the authority to the government to finance in such a way that will create inflation in the economy.

- It is argued that flexible rates will not work small open economies for example a country which trades extensively with others. Such economies may be depending upon imports to a large extent for many of it consumption goods. An adverse balance of payments, under flexible rates will lead to depreciation of the currency of the country. Having small economies country like Bangladesh, it is difficult of the country to run free market policy effectively. So, some steps may be taken by the Bangladesh Bank to increase export and foreign currency earnings.

- Bangladesh government should take effective policies to increase Foreign Direct Investment in the economy. The government of Bangladesh creates positive environment to increase foreign direct investment for examples increasing political stability of the country, providing tax holiday and reducing the crisis of gas and electricity to the industry sectors.

- Flexible exchange rate does not require central banks to hold foreign currency reserves, since there is no need to intervene in the foreign exchange market. But Bangladesh bank should ensure enough foreign currency reserve. Bangladesh Bank requires intervening in foreign exchange market because Bangladesh is least developed countries.

- Good governance, stable political condition of the country, infrastructural development will help to promote more investment from abroad in the country. That will bring the steady situation in foreign exchange market.

9. Conclusion

This study analyzes exchange rate policies of Bangladesh under a floating exchange rate regime that has positive effect on economic growth of Bangladesh. Many countries of the world devaluation its currency after adopting the floating exchange rate regime but the experienced of Bangladesh was quite smooth and stable. Most of the economists of Bangladesh have given a positive opinion on floating exchange rate system, they have thought that the floating exchange rate system will ensure to increase export, import substitution, and to decrease trade deficit of the country .From the study the researchers found that the trend of increase export and remittance have positive effect

on exchange rate and the trend of increase import and foreign currency reserve have negative effect on exchange rate. But not only these macro economic variables are responsible for appreciation or depreciation the currency but also other variables i.e. high inflation rate, trade deficit, low FDI ,interest rate are also responsible to appreciate or depreciate the currency. Generally speaking , Bangladesh pursues a managed floating rate regime, but to manage efficiently the unmanageable free floating exchange rate regime in least develop countries like Bangladesh, the central bank and the government of Bangladesh should take effective steps. That's why the study recommended some issues that should be taken by the government and central bank to manage the floating exchange rate regime effectively.

References

Jeff. Madura, International Financial Management, 8th Edition, p.p 98-111,174-177, Thomson south-western publisher

Cooper, Donald R. & Schindler, Pamela S. (2006) Business Research Methods, New Delhi.

Eiteman, Stonehill & Moffeit (2014-2015), Multinational Business Finance, Pearson Education.

Rasaq Akonji Danmola (March 2013), "The Impact of Exchange Rate Volatility on the Macro Economic Variables in Nigeria", European Scientific Journal, Vol.9, No.7, p.p 152-165.

Islam and Biswas (2009), "Exchange rate and its impacts on GDP and Inflation in Bangladesh" ASA University Review,.3, No. 2,p.p (65-82).

Vol Hossain, M. A., and Alauddin, M., (Fall 2005), "Trade Liberalization in Bangladesh: The Process and Its Impact on Macro Variables Particularly Export Expansion," The Journal of Developing Areas, Volume 39, Issue 1, 127-150.

Younus, S. and Chowdhury, M. I., (December 2006), "An Analysis of Bangladesh's Transition to Flexible Exchange Rate Regime," Working Paper Series.

Bubula, Andrea and Inci Otker-Robe (2002). "The Evolution of Exchange Rate Regimes since 1990: Evidence from De Facto Policies", IMF Working Paper 02/155.

Chowdhury, Mainul I. and Siddique, S. F. (2006) "Exchange Rate Pass-Through in Bangladesh", Working Paper No. 0607, Policy Analysis Unit, Research Department, Bangladesh Bank.

Rahman, Md. Habibur and S. Barua (2006) "Recent Experiences in the Foreign Exchange and Money Markets", Policy Note 0703, published in the Bangladesh Bank Quarterly, III (4).

Hossain, Akhter (1997), "The Real Exchange Rate, Production Structure, and Trade balance: The Case of Bangladesh", Indian Economic Review, 1997, vol. 32, issue 2, pages 155-177

http://www.bb.org.bd/pub/annual/anreport/ar1213/full_2012_2013.pdf (Access Date: February 22, 2014)
http://www.bb.org.bd/econdata/exchangerate.php (Access Date: February 22, 2014)
http://www.adb.org/publications/asian-development-outlook-2013-asias-energy-challenge (Access Date: February 22, 2014)
http://bankinfobd.com/exports/getExchangeRate (Access Date: February 22, 2014)

Appendix

Year	Dependant Variabl	Independent Variable			
	Exchange Rate (Per Dollar)	Export (in mil US$)	Remittance (in mil US$)	Total Reserve (in mil US$)	Import (in mil US$)
1999	48.06	5312.8	1705.74	1523	7205.4
2000	50.31	5752.2	1949.32	1602	7536.6
2001	53.96	6467.3	1882.1	1307	8401.5
2002	57.43	5985.89	2501.13	1583	7686
2003	57.9	6548.54	3061.97	2470	8691.8
2004	58.94	7602.99	3371.97	2,705	9812.9
2005	61.39	8654.52	3848.29	2,930	11832.1
2006	67.08	10526.6	4802.41	3,484	13271.7
2007	69.03	12177.6	5978.5	5,077	15441
2008	68.6	12685.4	7914.8	6,149	19481.4
2009	68.8	14170.7	9689.3	7,471	20291.4
2010	69.18	14763.8	10987.4	10,750	21388.2
2011	71.17	20313.8	11650.3	10,912	32398.4
2012	79.1	24301.9	12843.4	10,364	33309
2013	79.93	27017.4	14461.2	15,315	33576