

**EVOLUTION OF EXCHANGE RATE REGIME:  
IMPACT ON MACRO ECONOMY OF BANGLADESH**

by

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degree of Professional Master in Banking and Finance

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## **ABSTRACT**

Bangladesh had two different exchange rate regimes- a fixed exchange rate system from January 1972-May 2003 and a floating exchange rate regime since June 2003. After adopting the floating exchange rate regime Bangladesh experienced positive impacts on macro economic development. The variables of the macroeconomic factors have been considered as foreign reserve, workers' remittances and export proceeds to evaluate the impact of exchange rate over them in this paper. But the ongoing challenges for the country are the depreciating trend in local currency in a highly inflationary economy. The objective of the paper is to evaluate the macroeconomic performance over the regimes and to analyze present currency situation of Bangladesh.

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## LIST OF ABBREVIATIONS

AD	Authorized Dealers
ADB	Asian Development Bank
BB	Bangladesh Bank
FDI	Foreign Direct Investment
FPI	Foreign Portfolio Investment
FX	Foreign Exchange
FY	Financial Year
GDP	Gross Domestic Product
IMF	International Monetary Fund
LC	Letter of Credit
NEER	Net Effective Exchange Rate
OANDA	Website of exchange rates information.
REER	Real Effective Exchange Rate
USD	Us Dollar

## Chapter 1

### INTRODUCTION

At the preamble of the Bangladesh Bank order, 1972, it is stated that “Whereas it is necessary to establish a central bank in Bangladesh to manage the monetary and credit system of Bangladesh with a view to stabilizing domestic monetary value and maintaining a competitive external par value of the Bangladesh Taka toward fostering growth and development of country’s productive resources in the national interest.” To maintain a competitive external par value of the Bangladesh Taka, as per Foreign Exchange Regulation Act, 1947, Bangladesh Bank as a central bank of the country, regulates the foreign exchange on behalf of the government

#### 1.1 Rationale:

Exchange rate indicates the global position of economy of the country. The country’s economic development is closely related with it’s foreign exchange system. Foreign exchange rate is a vital component for the country’s economic activities too. Bangladesh has been experienced the floating exchange rate regime since May 2003 and passed a number of Pons and cons in the overall economy. Due to the utmost importance of the exchange rate in the economy, the study has been conducted in this area.

#### 1.2 Scope:

This paper covers the comparison of the fixed and floating exchange regime of Bangladesh. The key factor of this paper is the evaluation of the impact of exchange rate on the fundamental macroeconomic indicators of the economy. Three main fundamental factors have been identified to measure their impact with exchange rate. Those are export, workers remittance and foreign exchange reserve. The empirical data of 2000 to 2012 has been used to justify the whole thing. To get an idea about the Bangladesh’s position, some neighboring country’s experience also been compared here.

#### 1.2 Objectives of the study

1. To evaluate the exchange rate regimes in Bangladesh economy: Fixed and Floating
2. To evaluate the floating arrangement's performance in three macro economic variables: Export, Workers Remittance and Foreign Reserve.
3. To understand the reason for currency depreciation



## **1.4 Methodology**

To obtain the objectives of the study, secondary data have collected. The sources of data are Bangladesh Bank, Board of Investment, Export Promotion Bureau, Websites of IMF, ADB, OANDA and other related links. Statistical analysis correlation has been calculated to understand the exchange rate's significance on the economic variables of Export, Workers Remittance and Foreign Reserve .

## **1.5. Limitations**

There were some limitations to conduct the study. Being, sensitive, new one, problems were faced to relate with various components and linking with them. And for its very nature, primary data was not available. Since the exchange rate regime is a vast area, it was also challenging to prepare this report within a limited time.

## **1.6. Organization**

There are six chapters in this report. Chapter I is the introduction that divided into six sub sections. Literature Review is in Chapter 2. Exchange Rate Evaluation in Bangladesh has been covered in Chapter 3. Chapter 4 covers Performance of Floating Exchange Rate System On Macro Economy of Bangladesh. Present exchange rate situation is describing in Chapter 5. The last chapter covers recommendation and conclusion.

## Chapter 2

### LITERATURE REVIEW

The basic policy variables of a country is foreign exchange rate that ensured trade, business, long term funding, foreign direct investment, inflation, foreign exchange reserve, inward remittance etc. Various economists opined that the policy of the exchange rate system had a crucial impact on 1990's economic catastrophe. Nevertheless, it is yet to be proved either theoretically or empirically regarding the role of exchange rate on the indicators of macroeconomic variables.

Whatever the case may be, 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).

Bangladesh pursued a 'fixed exchange rate' regime upto 1979. After that, from 1979 to mid-2003, it followed a managed floating exchange rate system. Repeated depression of the home money, for maintaining a steady real exchange rate as well as keeping away from overvaluation of the local taka, were the prime factors for taking new system of the foreign exchange system. From May, 2003, Bangladesh took almost a new policy known as 'clean floating' exchange rate policy by creating fully convertible current account. But capital account convertibility is not yet done. The main reasons for all the policies that Bangladesh took were due to improve export situation, decrease import liability with the aim of improving balance of trade. The evidences in favor of the above mentioned opinion have been placed below.

Islam( 2003) told that the regulators of the monetary policy decides the exchange rate policy of the country in order to obtain two basic goals. The first one is "domestic target" that covers preventing inflation rate of inflation, the growth of credit both in Government and Private levels, and also the growth in liquidity and M2. The second reason is "external target" which considers foreign exchange reserve hike, declining current account balance, prevent exchange rate volatility in the country's interbank foreign exchange market as well as balance the exchange rate flow with neighboring countries like India, Bhutan, Sri Lanka, Pakistan etc.

Hossain (2005) referreing Rahman and Bayes that Bangladesh took floating exchange rate system due to: (i) global competitiveness; (ii) improve export dimensions ;(iii) eliminate subsidy from export; (iv) reduce import pressure; (v) increase the substitutes products for export. Aziz (2003) showed that according to the statements of the finance ministers for

last decades, the prime causes of devaluation of taka in our country (i) rise in export;(ii) reduce import;(iii) improve local newborn industries; (iv) promote the inward remittances through pursue wage earners, and (v) increase foreign exchange reserve.

As per the “Financial Sector Review(2006)’ of the central bank of the country, the major reasons of exchange rate policy covers: (i) export promotion; (ii) encourage inward remittances;(iii) keeping the price level stable, and (iv) preserve a variable account situation externally. As a result, all the publications and write-ups have illustrated both directly or indirectly the export-growth and import reduction as the key reasons of the exchange rate policy of the country.

Prior to adopting floating exchange rate regime, Islam (2003) argued that the economic and institutional prerequisites of a floating exchange rate regime are not met in Bangladesh. Some recent studies have tried to explain the behavior of nominal exchange rates of Bangladesh after its transition to the floating rate regime. By doing a correlation analysis, Rahman and Barua (2006) explore the possible explanation of the exchange rate movement. They found that there is a strong correlation (-0.40) between depreciation and export-import gap as a share of reserves; L/C openings for imports also have a positive correlation (0.45) with volatility of the exchange rate, which implies that the higher the L/C openings the more volatile is the exchange rate. They conclude that high seasonal demand for foreign currency because of increased import bills, systematic withdrawal of excess liquidity by Bangladesh Bank, relatively faster expansion of credit and higher interest rates on various national savings instruments are the reasons behind the interest rate hike in the money market and depreciation of the nominal exchange rate.

William Miles, 2006 discussed about the effect of exchange rate system (both fixed and floating) on the long term growth in the economy. The effect of fixed rate, pegged rate and floating rate has been discussed here briefly on the basis of several literature reviews and the finding is that fixed and intermediate regimes have a clear, significantly negative impact on growth (holds only for emerging markets not for industrial nations.) In this paper, the author has given an approach to determine if exchange rate regime itself truly extracts an independent effect on growth. Results here indicate that the effect of fixed exchange rates on growth in emerging markets is not direct, but rather contingent on the existence of macroeconomic imbalances and other distortions in place in the domestic economy. These results seem to conform more closely with exchange rate theory, which posits mostly positive, and few negative channels for pegged currencies to impact growth over the long run.

Asad Karim Khan, June 2009 examines whether the floating exchange rate regime has any impact on the value of Bangladesh taka i.e does it make any lose on the value of the currency. He shows that regime change has no statistically significant impact on the value of Bangladesh currency once foreign exchange reserve is incorporated in the regression model.

Younus and Chowdhury (2006) made an attempt to analyse Bangladesh's transition to floating regime and its impact on macroeconomic variables. They find that output growth in Bangladesh performed well in the intermediate and floating exchange rate regimes. Inflation is lower in the intermediate regime despite higher money supply and exchange rate depreciation. They also find that currency depreciation boosted export growth in the floating regime. Chowdhury and Siddique (2006) have analysed the exchange rate pass through to domestic inflation in Bangladesh.

The experiences of some countries in the region which implemented major changes in their exchange rate regimes in recent years can provide useful lessons for Bangladesh. I have tried to focus the comparison among different economic indicators between Bangladesh and some of the South Asian Countries (Afghanistan, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka) all of which adopted independently floating exchange rate regimes.

Trade and financial policy measures are very important for the country's economy and out of that consideration, Bangladesh has taken a new exchange rate policy according to the obligations of IMF (article number: VIII), as on 24<sup>th</sup> March, 1994 introducing current account fully convertible. At the same time, Bangladesh was under pressure since it is the member of IMF. As a result, Bangladesh took floating exchange rate system in current account on 31<sup>st</sup> May, 2003. After that, IMF agreed Poverty Reduction and Growth Facility (PRGF) for our country with a new exchange rate system i.e, floating exchange rate system.

However, Younus et al (2006) showed that free floating exchange rate system can arrange the prevention of overvaluation of local currency as it might make the export unattractive in the international world as well as alternative items of importable goods became difficult to bit with import goods. He illustrated that the prime goal of free floating system of exchange rate is supposed to avoid the main misalignment of exchange rate, specially, to stop unpredictable appreciation of real rate of exchange that might affect the demand of the total export of the country. The illustrations also included the encouragement of the export situation and decline the shortfall of the current account, control inflationary situation, and increase the position of inward remittances.

Since the independence of the country, Bangladesh is following an dynamic exchange rate system that has been replicated in the nominal exchange rate that were declared by the central bank of the country time to time. Islam (2003) stated 89 modifications in the exchange rate of Bangladesh currency with USdollar since 1983 and among them, 83 were depression. Aziz (2003) illustrated 41 depreciation in nine years (1991-2000). Younus et al (2006) showed that 130 times depreciation took place between 1972 to 2002 in Bangladesh Taka that also reduce balance of payment deficit. So, this paper, correctly identifies the exchange rate as the main important thing for economic changes of the country.

After independence, Bangladesh fixed its Taka's value with British Pound Sterling on 3<sup>rd</sup> 1972. Since 1972 to 1990 the Taka was overvalued. So there was a huge deficit in Balance of payment that hurt the economy badly. From 1990 the gap began to narrow down. The exchange rate regime worked quite well in terms of balance of payment, inflation, export and remittance. So there were some debate about incipience of this floating and criticism also rose about competence and preparation of Bangladesh Bank. But Bangladesh Bank performed well in managing the 'new born'. But there is some volatility in the market in recent past. Bangladesh Bank, as a central bank of the country intervened prudently to curve the volatility and market became stable though Taka remains undervalued.

The experiences of South East and South Asian countries showed that they had to intervene in the market for smooth moving. The experience supports the Mr. Kindleberger beliefs that "market work well on the whole" but occasionally "will be overwhelmed and

need help” from a lender of the last resort. (The Economist, July 19<sup>th</sup> 2003). So the regulator should be watchful about the market’s behavior and intervene when needed without hesitations. In the developing country these kind of intervention should be proactive rather than reactive.

Naeem and Rasheed analyzed another important issue of whether stock prices and exchange rates are related or not has received considerable attention after the East Asian crises. They said that during the crises the countries affected saw turmoil in both currency and stock markets. If stock prices and exchange rates are related and the causation runs from exchange rates to stock prices then crises in the stock markets can be prevented by controlling the exchange rates. Moreover, developing countries can exploit such a link to attract/stimulate foreign portfolio investment in their own countries. Similarly, if the causation runs from stock prices to exchange rates then authorities can focus on domestic economic policies to stabilize the stock market. If the two markets/prices are related then investors can use this information to predict the behavior of one market using the information on other market. They also claimed that most of the empirical literature that has examined the stock prices-exchange rate relationship has focused on examining this relationship for the developed countries with very little attention on the developing countries.

This paper will assess whether the exchange rate regime change indeed has created any significant impact on the economy of the nation as well as the comparative analysis with the neighboring countries situation.

There are some potentialities as well as difficulties in market based system, so in this study there are some recommendations for the regulator and for the market players. To manage the floating exchange rate, full automation as well as transparency is essential in banking sector. As the capital account of our economy is not convertible there is little scope of capital flight. If the inception of floating exchange rate is the beginning to liberalize capital account immediately that won’t be a wise decision.

## Chapter 3

### Exchange Rate Evolution in Bangladesh

#### Introduction:

The world economy experienced some sort of fixed and flexible exchange rate. Before 1875 there was Bimetallism of exchange rate and then the Gold Standard (1875-1914). During Interwar period (1914-1944) the classical Gold Standard broken down and in July 1944 representatives of 44 countries succeeded to establish the 'Bretton Woods' system. Again the oil shock in the early 1970s and the dampen of demand broken down this system and world economy shifted to flexible exchange rate.

Bangladesh has been experienced two major exchange rate regimes since the country's Independence from 16<sup>th</sup> December 1971. A Fixed Exchange Rate Regime from 1972 to 1979 and a Floating Exchange Rate Regime since May 2003. Among the time frame from 1971 to 2003, there were different exchange rate arrangements in terms of the currency mechanism, like: Pegged to Pound Sterling (£):1972-1979; Pegged to a basket of major trading partners' currencies (£ as the intervening currencies):1980-1982; Pegged to a basket of major trading partners' currencies (US\$ as the intervening currencies):1983-1999; Adjusted Pegged System:2000-2003; Floating Exchange Rate System: May 30, 2003-Present. All the policies of exchange rate system Bangladesh implemented, with the objectives of accelerating exports, reducing import pressure and improve the balance of trade.

After independence, Bangladesh fixed its Taka's value with British Pound Sterling on 3<sup>rd</sup> 1972. Since 1972 to 1990 the Taka was overvalued. So there was a huge deficit in Balance of payment that hurt the economy badly. From 1990 the gap began to narrow down. The exchange rate regime worked quite well in terms of balance of payment, inflation, export and remittance.

#### 3.1 Factors Affecting Exchange Rate:

Under Floating Exchange Rate Arrangements Exchange Rate is primarily determined by demand for foreign currency and Supply of foreign currency where demand and supply of foreign currency is also affected by some other sensitive factors.

According to Jeff. Madura, (International Financial Management) theoretically demand for foreign currency is determined by several factors like, import payments, service payments which includes income payments, debt service payments, foreign investment (outward) and foreign investment (outward).

The supply of foreign currency is composed of export Receipt, service receipts which includes income receipts, debt service receipts, foreign aid (inward) and foreign Investment (inward). Besides those some other factors affect the exchange rate movements. The factors are a) Purchasing Power parity; b) Interest rate parity; c) Relative income differential; d) Government Control; e) Expectations etc.

### 3.2 Performance of previous and current FX-Regime in Bangladesh

To evaluate the performance of Bangladesh considering the two different exchange rate regimes, some data comparison have been made among three neighboring countries in South Asia. Those are India, Pakistan and Sri Lanka.

#### 3.2.1 Growth rate of GDP

Comparing the percentage of growth rate with major neighboring Countries, the following table shows that 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.

Table 3.1: Growth rate of GDP (% per year)

Country	Y E A R										
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bangladesh	5.3	4.4	5.3	5.7	6.0	6.6	6.4	6.2	5.7	5.8	6.3
India	5.8	4.0	8.2	7.4	7.6	9.7	9.2	6.7	8.0	8.6	8.2
Pakistan	1.8	3.1	5.1	5.5	5.8	5.8	6.8	3.7	1.2	4.1	2.5
Sri Lanka	-1.5	4.0	5.9	5.0	5.5	7.7	6.8	6.0	3.5	7.6	8.0

Source: Asian Development Outlook-2004 and 2011, ADB

#### 3.2.2 Current Account Balance

In comparison to other major South Asian countries, the table no.-2 shows that Bangladesh's achievement in terms of containing current account balance is better after the adoption of floating exchange rate regime (since 2003). It has done consistently better than some of the neighboring countries like Sri Lanka, Pakistan, and India in all recent years excepting 2005.

Table No.3.2 Current Account Balance as Percentages of GDP

Country	Y E A R												
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bangladesh	-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
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
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
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

Source: Asian Development Outlook-2011, ADB

### 3.2.3 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 table no.-3.

Table 3.3: Inflation in Bangladesh and Selected South Asian Countries

Country	Y		E		A		R						
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bangladesh	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
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
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
Sri Lanka	5.9	1.2	11.0	10.2	2.6	-	-	10.0	15.8	22.6	3.4	5.9	8.0

Source: Asian Development Outlook-2011, ADB

It is showing that there is an increasing trend of inflation since the adaptation of floating exchange rate regime. Data on inflation rates represent period averages. Except for India, which reports the wholesale price index, inflation rates presented are based on consumer price indexes. The higher inflationary situation take place due oil and food price hike in the international market as well as several natural disaster like, Sidor, flood etc.

### 3.3 Justification of Floating Exchange Rate:

From the above mentioned data analysis, it can be said the previous regime performed quite well in certain criteria. The major reasons behind the adoption of new exchange rate system is mainly the government's commitment to the liberalization of the country's economy and to take the appropriate steps to create suitable environment of the economy for entering into capital account convertibility regime. Rather than this, there was IMF's 'conditionalities' to enter into new floating exchange rate regime.

### 3.4 The Transition from Fixed to Float:

To meet up the economic demand and to fulfill the IMF conditionality, on 29 May, 2003 Bangladesh Bank issued a circular stating- effective from 31<sup>st</sup> 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.

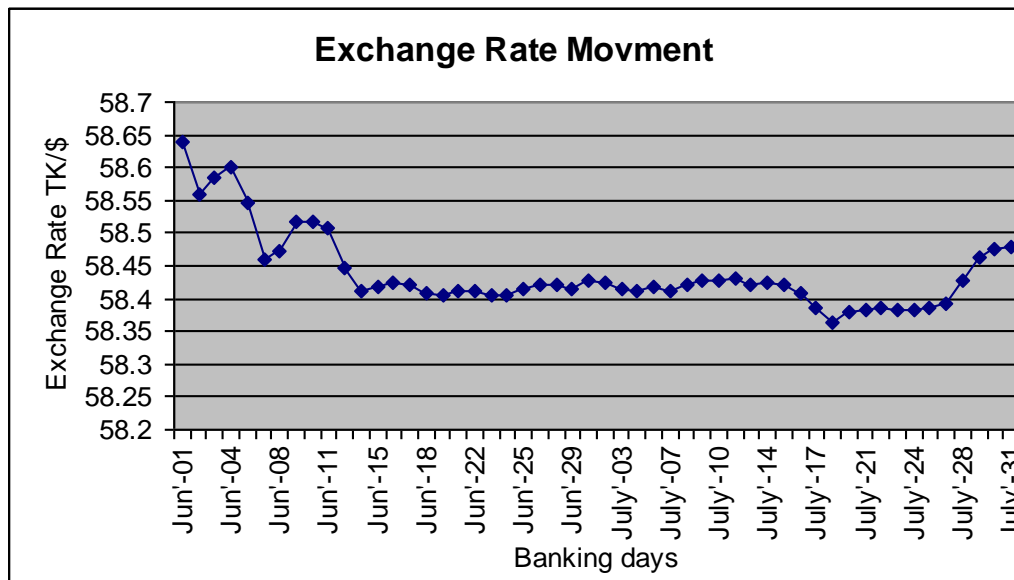
Immediately after the inception of floating exchange rate banks, economists, currency traders and businessmen have welcomed the deregulation of the exchange rate saying that



the country's foreign trade and remittance would get a boost up due to it and it would make the currency market more efficient and effective.

Since the introduction there is no unusual raise of exchange rate till mid 2004. Most of the time Taka maintains appreciating position during this period and Bangladesh Bank show a tremendous performance managing the 'new born' exchange rate system. During mid 2004, Taka faced significant volatility against USD and it continued up to August 2004. After that period, the volatility of exchange rate of Taka against USD eased but resulting to appreciated USD till mid January 2005. In recent times, Taka has depreciated significantly against USD in the inter-bank market. This has happened as because of price hike in oil price and scrap vessel in the international market created a surge on import settlements.

Figure3.4: Exchange Rate Movement immediately after inception of Floating

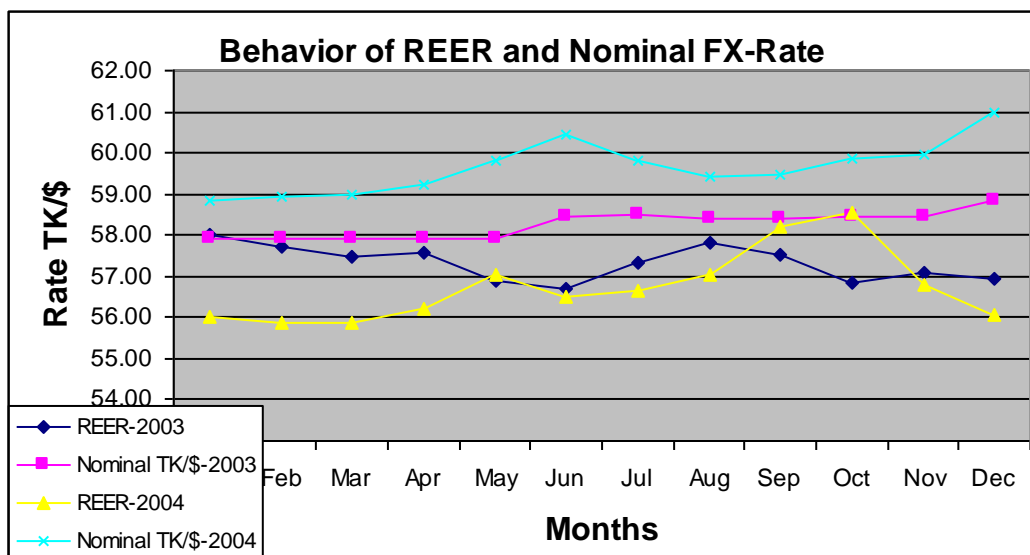


Source: Bangladesh Bank Unpublished Data

**Behavior of Real Effective Exchange Rate (REER) and Nominal Exchange Rate:**

REER is considered as a guiding FX-rate to the policy maker as well as the market participants and it also shows the international competitiveness of countries goods and services. The policy makers are always tried to keep the Nominal Exchange Rate near to the REER. Before 1990 Taka was overvalued (see table no-01,02 and 03.) that distorted our international competitiveness and that was the causes of prolonged Balance of Payment crisis.

Figure3.5: Comparison of month end Real Effective Exchange Rate (REER) and Nominal Exchange Rate between 2003-2004.



Source: Bangladesh Bank Unpublished Data

After 1990, Taka remained undervalued. The gap between Nominal Exchange Rate and REER were widened over the period.

Before inception of floating exchange rate Taka was almost running on a free float for the last 12-15 month as rates were decided according to demand-supply situation and liquidity in market. Bangladesh Bank was also not virtually selling any dollar that time. This means the market has already factored in floating exchange rate. Moreover, before inception Bangladesh Bank took some measures for strengthening regulation, such as, keeping close observation of Authorized Dealer's (AD's) daily activities; especially on 'Open Position', gave pressure for reconciliation of NOSTRO account balance, encourage every bank to set up dealing room and pressurized to make payment in due time etc. So we can obviously say that way to the floating exchange rate was prepared.

## Chapter 4

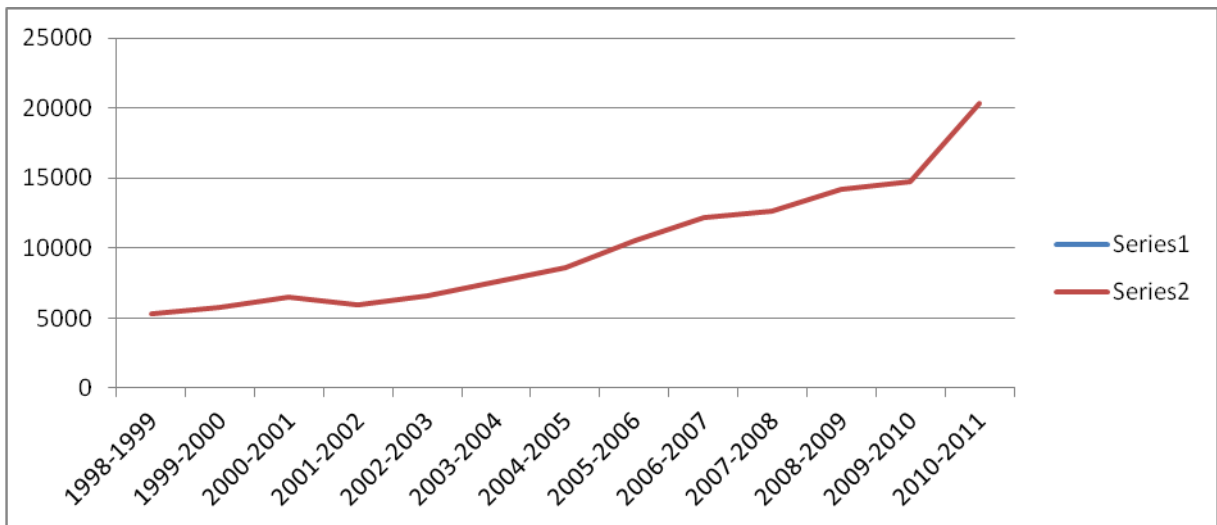
### Performance of Floating Exchange Rate System On Macro Economy of Bangladesh

Introduction of floating exchange rate was debatable issue and also there were some criticisms about the competence of Bangladesh Bank's from some corner. But Bangladesh Bank performed a tremendous performance. There was no volatility; no speculation in price and market behaves rationally. If we consider the market statistics, we find that macro economic variables have positive performances over the period of time. Three major variables have been considered for evaluating the impact of exchange rate with them. The variables are Export, Workers Remittances and Foreign reserve.

#### 4.1 The Export Situation:

The export trend from 1998 to 2011 shows an increasing trend. It is shown here that there is upward trend of export after 2003, i.e., after adopting the floating exchange rate regime, the export has a robust growth in the economy.

Figure:4.1: The Export Volume in US\$



Source: Bangladesh Bank Quarterly, January-March 2011

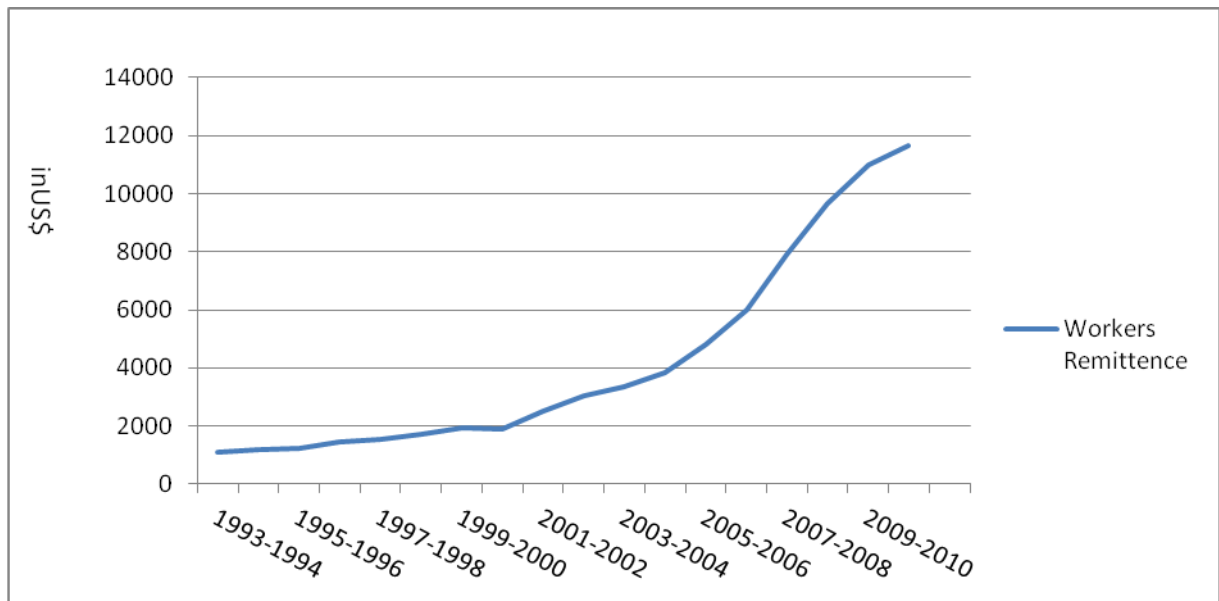
During the global recession, the export trend of Bangladesh was not that much affected mostly for the RMG sector. In the FY 09 and FY 10, the export volume increased significantly.

#### 4.2 Enhancement of Workers Remittance:

The Inward remittances from Bangladeshi nationals working abroad remained strong in FY10 even in the face of global economic slowdown and continued to play an important role in strengthening the current account. Receipts on this sector increased by 13.4 percent to USD 10987.40 million in FY10 from USD 9689.26 million in FY09. The underlying reason was that Bangladesh Bank has simplified the approval policy of drawing arrangements between foreign exchange houses and domestic banks. As a result, 40 banks

have been allowed for establishing 885 drawing arrangements with 300 exchange houses all over the world for collecting remittances, (of which approximately 650 drawing arrangements with 250 exchange houses are operative now).\

Figure-4.2: The Workers Remittance



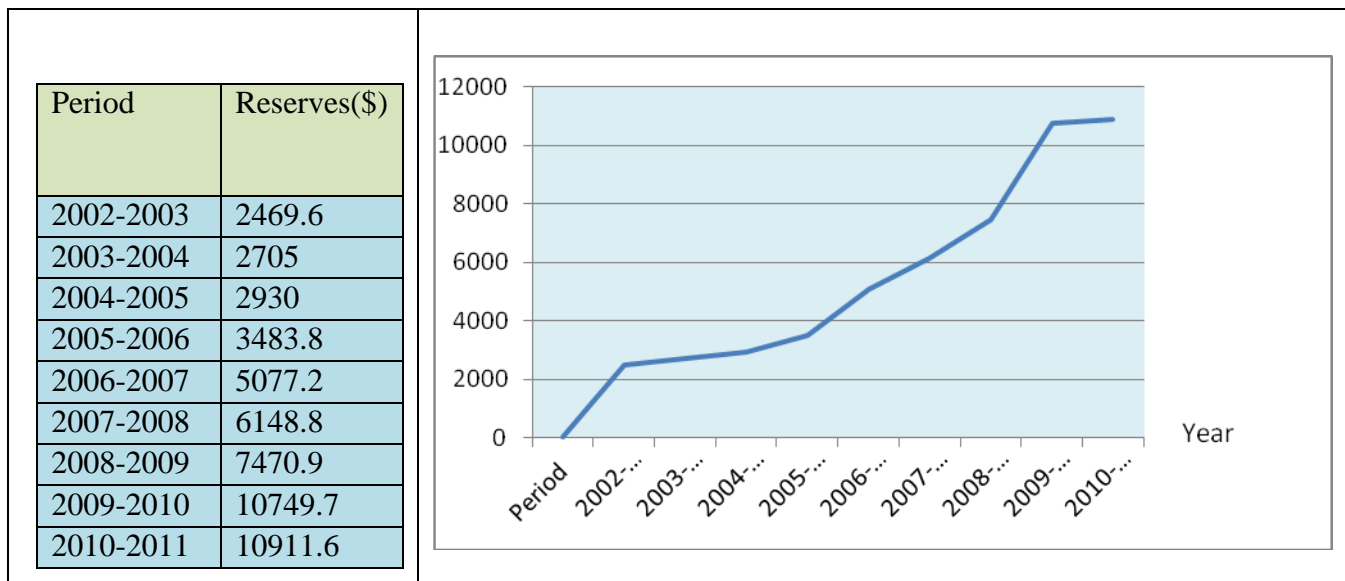
Source: Bangladesh Bank Quarterly, January-March 2011

Considering the growth rate of workers' remittances, it has been observed that the rate is quite higher after the free floating exchange rate regime that is 20.52 % (2003-2010) than that of fixed exchange rate regime of Bangladesh which is calculated as 11.89% (1993-2002). The increasing amount of workers remittance helps to balance the trade deficit in a prudent manner.

#### 4.3 Reserve Position:

The amount of foreign exchange reserve has been increased significantly over the last couple of years. During the FY 2003 to FY 2005, the trend was quite steady and flat. But, it has an upward trend after FY 2007. The main sources of foreign reserve are workers remittance, foreign loans and grants and exports.

Figure-4.3: The Foreign Reserve Position



Source: Bangladesh Bank Quarterly, January-March 2011

After the inception of floating exchange rate regime, the foreign exchange reserve boosted up due to huge amount of workers remittance and increasing trend of export.

#### 4.4 The Growth Rate of GDP:

The GDP growth rate reaches upto 6.7% during FY 11. From 1994 to 2010, the average growth rate of GDP was 5.47% reaching at high of 6.63% in June 2006. The record low rate was 4.08% during June 2004. For the last couple of years the growth rate was 5% above and Bangladesh is considered as a developing country.

Figure-4.4: Bangladesh GDP Growth Rate



Source: Bangladesh Bureau of Statistics, 2011

#### 4.5 The relationship among the variables:

The relationship between the exchange rate and three variables i.e, export, remittance and reserve reflects quite positive in correlation. The correlation has been computed considering the data from 2002-2011.

Correlation	Export	Remittance	Reserve
Exchange Rate	0.928315219	0.859373146	0.825444493

One regression analysis has been done with workers remittance and exchange rate. The purpose of the quantitative analysis is to identify if there is any relationship between exchange rate and workers remittance of Bangladesh. The monthly data of workers remittance from the financial year 2007-2008 to financial year 2011-2012 has been taken for the calculation. The regression model, exchange rate is independent variable and remittance is dependent variable. The regression model is:

$$Y=66.15+.010385 \text{ remittance}$$

The value of R square is .37 which means that the regression model explains 37% variation in exchange rate. The coefficient is very low which is and P value is quite high that is 3.74. So, the remittance does not show any significant impact on foreign exchange rate.

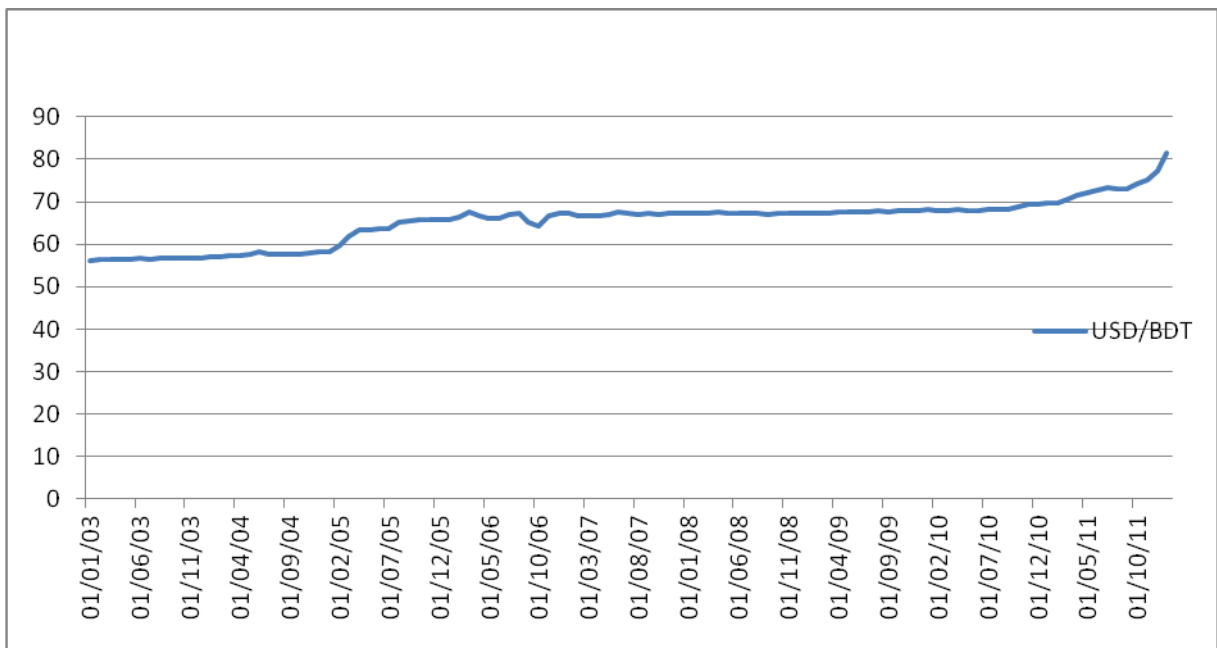
## Chapter 5

### Exchange Rate Situation

#### 5.1 Exchange Rate Movement:

In the recent Taka depreciates against US\$ drastically: Over the period, July 2010-January 2012, from Tk 70 to Tk 86 -- a depressing 23% fall down.

Figure-5.1: Exchange Rate Movement



Source: Website OANDA

The sharp fall of taka against US dollar continues for last couple of months. US dollar has been weakening against many other strong currencies like Euro, SF, Yen and GBP but getting stronger against Bangladesh Taka. Exchange rate depreciation creates the economy in a challenging situation. Continuous depreciating tendency higher the inflation rate that ultimately increase the trade deficit.

The ongoing depreciation of Bangladeshi taka is becoming the challenge for the central bank as well as the Government. The increasing trend of the trade deficit (figure: 7) also shows the possibility of the shortage of supply of the foreign currency i.e, US\$ in the market.

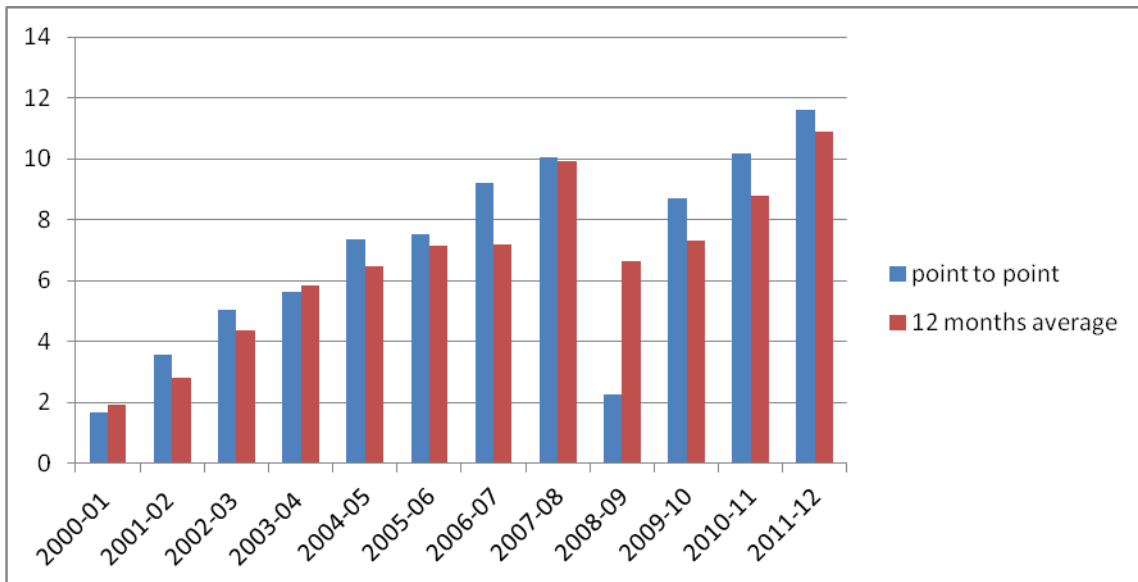
#### 5.2 Reasons for Currency Depreciation:

The reasons behind the currency depreciation are influenced by economic fundamental, exchange rate regime and Trading rules. There is a slow trend of capital inflow in the country for the last couple of years. The main reasons for that are low tendency of foreign direct investment and increasing trend of trade deficit.

### 5.2.1 High Inflation:

Inflation is appearing as a major threat in the economy in the recent past. Inflation had a moderate trend upto 2003 within 6%. It started increasing from 2004 and got sharp rise in 2008-2009 and the increasing trend is still continuing. The main cause of high inflation in Bangladesh is oil and food price hike in abroad.

Figure 5.2: Inflation



Source: Monthly Economic Trend-Bangladesh Bank, January 2012

The high level of inflation in the economy leads to lower the value of local currency taka.

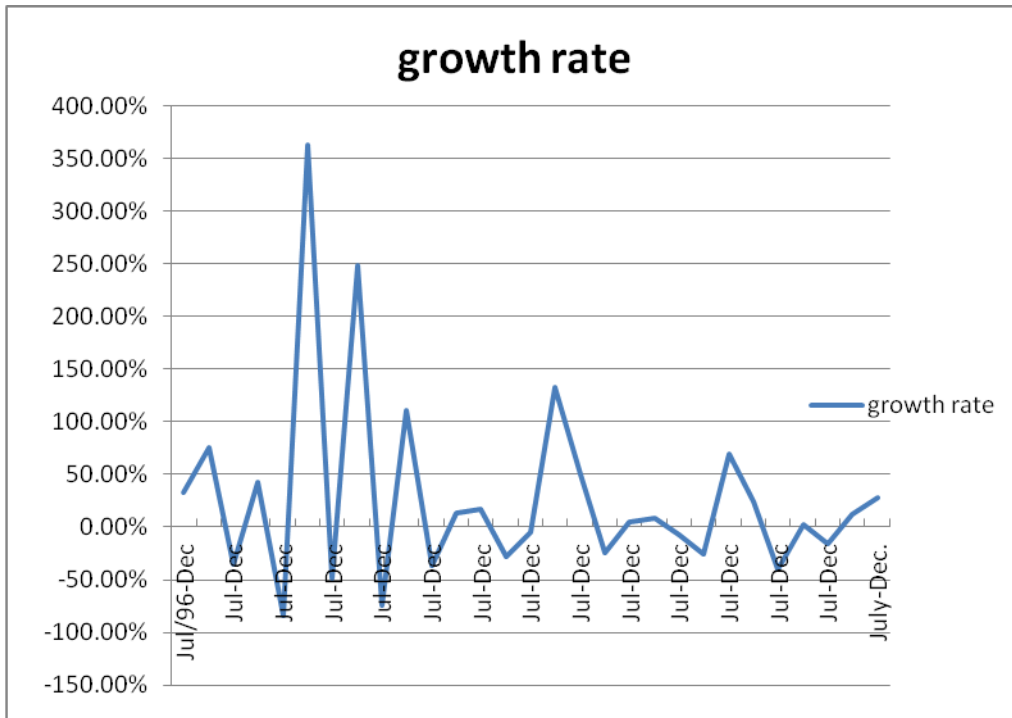
To cover the deficit budget, Government borrowings from the Central Bank (BB) and overall money supply increased leads to high inflation in the market.

### 5.2.2 Low Foreign Direct Investment:

The growth rate of foreign direct investment is showing a declining trend. The data has been used from 1996 to 2011. After 1998 and so on, the trend started to decline sharply. It increased a little bit during 2004-2005 but again has a very declining trend.



Figure-5.3: Growth Rate of Foreign Direct Investment



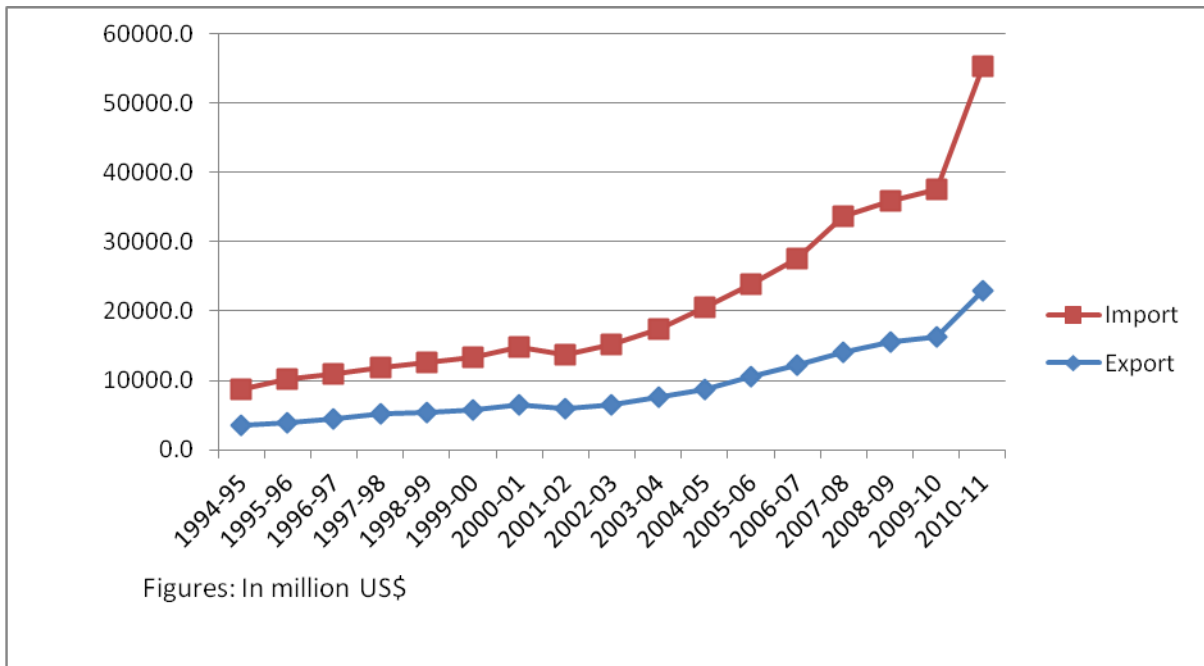
Source: Monthly Economic Trend-Bangladesh Bank, January 2012

In the recent past, the FDI growth rate is severely low. So, proper steps are supposed to be taken by the government authority.

### 5.2.3 Trade Deficit:

Though the export volume has an increasing trend since the inception of floating exchange rate regime, there is huge amount of trade deficit with an increasing trend.

Figure: 5.4 Trade Deficit of Bangladesh



Source: Monthly Economic Trend-Bangladesh Bank , January 2012

The amount of import has been increased sharply after 2006-2007. The gap between export and import becomes huge during the last financial year 2010-2011. Due to huge import payment, government debt has increased significantly in the country and demand for foreign currency increased.

## Chapter 6

### Recommendations and Conclusion

Considering the above mentioned discussions, some recommendations have been formulated in order to bring stability in the foreign exchange market in the short run and long run for the Government and Bangladesh Bank i.e, the central bank of the country. Those are discussing as follows:

**6.1. Control Inflation:** Effective measures are needed to be taken by the central bank to control inflation by reducing money supply in the economy. The formulation of the tighten monetary policy by the central bank is an important factor for controlling inflation. But the deficit budget of the Government creates huge Government Debt and prolong inflationary atmosphere. The related factors for reducing deficit budget

**6.2. Reduce Trade Deficit:** One of the important components to reduce the trade deficit is to enhance export volume of goods and services. Bangladesh is a import depended country. The main importable items are petroleum and food. Local industrialization is utmost important specially in the food sector (substitute food items production) and other exportable items to reduce huge liability of the Government.

**6.3 Enhancing Foreign Direct Investment:** Sufficient inflow of foreign direct investment could enhance the capital inflow in the country for long term. Bangladesh Government has specific policy for inviting FDI. Ensuring good governance, Infrastructural development, Utility, political stability will help to promote more investment from abroad in the country.

**6.4 Short Term Foreign Borrowings:** Borrowings from abroad is another option for supplying liquidity in the market. But the problem of short-term borrowing is that the country may fall into “Debt-trap” due to be unable to pay the money on time. Once the foreign currency injects in the market, it is difficult to recollect form the market as well. The Central Bank of Philippines in early 1990 can be remembered here. Due to short-term borrowing to meet the local market demand, got huge foreign liability. Continuous losses eroded it’s capital base and made it bankrupt in 1993. It took 25 years to reestablish the new central bank in that country.

So, Instead of foreign borrowings, Concessionary loans at a low interest rate from World Bank and ADB and other bilateral donors might be a better option to meet the ongoing gap in the market.

**6.5 Effective Capital Market:** The capital market development is utmost important in order to bring the steady situation in FX market. Ensuring enough flow of Foreign Portfolio Investment (FPI), good governance and security in the capital market is time demand.

**6.6 Derivatives Market:** Introduction of various derivative products as options, currency swap, interest cap, interest swap, futures, forwards etc, as well as ensuring huge portfolio investment might bring the positive impact in the exchange rate market.

**6.7 Formation of Domestic FX Market:** A formal forex market forum should be created, with the participation of independent professional bodies and with representation from the dealers association, Bangladesh Bank and other relevant government officials. This forum would provide the logistic support and platform for the forex market. Ideally, this forum would develop a secured web-based market to which only the members or participating organizations would have access. From this website, all the logistic support required for completing the forex dealings among the members/participating organizations could be provided.

**6.8 Autonomy of the Central Bank:** The autonomy of the central bank is desirable issue for the economy. The central bank should operate and perform independently with full automation.

### **Conclusion:**

This study shows that floating exchange rate regime has constructive effect on economic growth. The transition period from Fixed rate regime to Floating rate regime was quite smooth and stable. There is significant growth in the fundamental economic variables on the long path of the new exchange rate regime. The trend of export, workers' remittances and foreign reserves have been analyzed and found considerable growth on these variables. Nevertheless, the ongoing exchange rate depreciation along with high inflation is becoming a challenging issue for the regulators and Government as well. The gap between demand and supply of foreign currency in the market is getting bigger in the high inflationary economy which lead continuous loses in the value of the local currency. The key reasons have been found for the currency depreciation are inflation, government debt, trade deficit, low FDI etc. The study recommended some issues for Government's and Central's bank's part. The regulation should be proactive rather than reactive. There are some potentialities in this new regime; to reap this potentiality, Government as well as regulators should take effective steps.

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## APPENDIX I

### Trade Deficit of Bangladesh

Year	Export (in million USD)	Import (in million USD)	Trade Deficit (in million USD)
1994-95	3472.5	5250.6	-1778.1
1995-96	3882.4	6237.9	-2355.5
1996-97	4418.3	6436.8	-2018.5
1997-98	5161.2	6768.0	-1606.8
1998-99	5312.8	7205.4	-1892.6
1999-00	5752.2	7536.6	-1784.4
2000-01	6467.3	8401.5	-1934.2
2001-02	5986.1	7686.0	-1699.9
2002-03	6548.4	8691.8	-2143.4
2003-04	7603.0	9812.9	-2209.9
2004-05	8654.5	11832.1	-3177.6
2005-06	10526.2	13271.7	-2745.5
2006-07	12177.9	15441.0	-3263.1
2007-08	14110.8	19481.4	-5370.6
2008-09	15565.2	20291.4	-4726.2
2009-10	16204.7	21388.2	-5183.5
<b>2010-11</b>	<b>22928.2</b>	<b>32398.4</b>	<b>-9470.2</b>

Source: Monthly Economic Trend-Bangladesh Bank , January 2012

**Yearly Reserve Position**  
**In million USD**

Period	Reserves(\$)
2002-2003	2469.6
2003-2004	2705
2004-2005	2930
2005-2006	3483.8
2006-2007	5077.2
2007-2008	6148.8
2008-2009	7470.9
2009-2010	10749.7
2010-2011	10911.6

Source: Monthly Economic Trend-  
Bangladesh Bank , January 2012

**Yearly data of Workers Remittance:**

Year/Month	Remittances		Growth Rate	Average Growth Rate
	In million US dollar	In million Taka		
<b>2011-2012*</b>	<b>2117.37</b>	<b>157668.7</b>		
2010-2011	11650.32	829928.9		
2009-2010	10987.4	760109.59	13.39772078	
2008-2009	9689.26	666758.5	22.41982721	
2007-2008	7914.78	542951.4	31.94664639	
2006-2007	5998.47	412985.29	24.90541207	
2005-2006	4802.41	322756.8	24.79334977	
2004-2005	3848.29	236469.7	14.12586707	
2003-2004	3371.97	198698	10.12420109	
<b>2002-2003</b>	<b>3061.97</b>	<b>177288.2</b>	<b>22.42346459</b>	<b>20.51706112</b>
2001-2002	2501.13	143770.3	32.8903884	
2000-2001	1882.1	101700.1	-3.448382	
1999-2000	1949.32	98070.3	14.28001923	
1998-1999	1705.74	81977.8	11.82027363	
1997-1998	1525.43	69346	3.389543316	
1996-1997	1475.42	63000.4	21.22820568	
1995-1996	1217.06	49704	1.622370849	
1994-1995	1197.63	48144.7	10.00349034	
<b>1993-1994</b>	<b>1088.72</b>	<b>43549</b>	<b>15.2609</b>	<b>11.89409131</b>
1992-1993	944.57	36970.4		

Source : Foreign Exchange Policy Department, Bangladesh Bank

Bangladesh Bank Annual Report 2009-2010

Growth rate is self calculated



Yearly data of Inflation

<b>Year</b>	<b>Point to Point</b>	<b>12 months average</b>
2000-01	1.66	1.94
2001-02	3.58	2.79
2002-03	5.03	4.38
2003-04	5.64	5.83
2004-05	7.35	6.48
2005-06	7.54	7.16
2006-07	9.2	7.2
2007-08	10.04	9.94
2008-09	2.25	6.66
2009-10	8.7	7.31
2010-11	10.17	8.8
2011-12	11.59	10.91

Source: Monthly Economic Trend-Bangladesh Bank , January 2012

Yearly data of Export, Remittance, Reserve and Exchanger Rate  
(In million USD)

Year	FX Rate	Export in mil US\$	Workers Remittance (in mil US\$)	Reserve (in mil US\$)
FY02	62.7691	5985.89	2501.13	1582.9
FY03	63.2216	6548.54	3061.97	2469.6
FY04	64.0869	7602.99	3371.97	2705
FY05	68.0508	8654.52	3848.29	2930
FY06	73.9865	10526.16	4802.41	3483.8
FY07	74.1681	12177.86	5998.47	5077.2
FY08	73.4636	12685.4	7914.78	6148.8
FY09	73.8228	14170.7	9689.26	7470.9
FY10	74.5518	14763.8	10987.4	10749.7
FY11	79.1877	20313.8	11650.32	10911.6

Source: Monthly Economic Trend-Bangladesh Bank , January 2012

### Monthly data of Remittance and Exchange Rate

Year	Month	Remittance ( In million USD)	Ex rate (average)	Year	Month	Remittance ( In million USD)	Ex rate (average)
<b>2007-08</b>	July	567.11	73.6518	<b>2010-11</b>	July	857.31	74.5447
	August	470.95	73.4389		August	963.92	74.4778
	September	590.67	73.5663		September	837.71	74.5078
	October	559.05	73.3004		October	923.85	75.0673
	November	617.39	73.2946		November	998.64	75.3246
	December	635.34	73.473		December	969.10	75.5892
	January	710.74	73.4672		January	970.54	75.8669
	February	689.26	73.4063		February	986.97	76.0948
	March	808.72	73.2738		March	1102.98	76.8504
	April	781.71	73.4847		April	1001.97	77.8919
	May	730.26	73.2841		May	998.42	78.42
	June	753.58	73.3473		June	1038.91	78.843
<b>2008-09</b>	July	820.71	73.38	<b>2011-12</b>	July	1015.58	79.6805
	August	721.92	73.4947		August	1101.79	79.534
	September	794.18	73.2884		September	855.44	79.7888
	October	648.51	73.6468		October	1039.48	80.9414
	November	761.38	73.7971		November	908.79	81.9104
	December	758.03	73.691		December	1147.22	84.1857
	January	859	73.7961				
	February	784.47	73.8126				
	March	885.67	73.8073				
	April	840.99	74.1052				
	May	895.3	73.9459				
	June	850.5	73.9413				
	February	784.47	73.8126				
	March	885.67	73.8073				
	April	840.99	74.1052				
	May	895.3	73.9459				
	June	850.5	73.9413				
2009-10	July	885.38	73.9214				
	August	935.15	73.6394				
	September	887.57	73.7567				
	October	900.70	73.7551				
	November	1050.54	73.5378				
	December	873.86	73.8549				
	January	952.39	73.8181				
	February	827.96	73.9592				
	March	956.49	74.2051				
	April	922.16	74.0648				
	May	903.05	74.4125				
	June	892.15	74.6026				

## Regression Analysis: Exchange Rate and Remittance

### SUMMARY OUTPUT

#### *Regression Statistics*

Multiple R	0.610778
R Square	0.373049
Adjusted R Square	0.360993
Standard Error	2.020275
Observations	54

#### ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	126.2866232	126.2866	30.94114904	9.36275E-07
Residual	52	212.2385435	4.08151		
Total	53	338.5251666			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	66.1575	1.622261594	40.78103	3.7402E-41	62.90219774	69.41280968	62.90219774	69.41280968
X Variable 1	0.010385	0.001867047	5.562477	9.36275E-07	0.006638903	0.014131912	0.006638903	0.014131912

**FOREIGN DIRECT INVESTMENT (FDI) INFLOWS AND  
STOCKS BY COMPONENTS IN BANGLADESH**

(In million US\$)

Period	Inflows				Stocks			
	Equity Capital	Reinvested Earning	Intra-company Loans	Total	Equity Capital	Reinvested Earning	Intra-company Loans	Total
<b>1996-97</b>	<b>136.71</b>	<b>151.27</b>	<b>78.87</b>	<b>366.85</b>	...	...	...	...
Jul-Dec	40.79	79.92	36.92	<b>157.63</b>	...	...	...	...
Jan-Jun	95.92	71.35	41.95	<b>209.22</b>	...	...	...	...
<b>1997-98</b>	<b>349.02</b>	<b>181.31</b>	<b>72.97</b>	<b>603.30</b>	...	...	...	...
Jul-Dec	236.14	92.10	37.83	<b>366.07</b>	...	...	...	...
Jan-Jun	112.88	89.21	35.14	<b>237.23</b>	...	...	...	...
<b>1998-99</b>	<b>195.54</b>	<b>120.71</b>	<b>77.85</b>	<b>394.10</b>	...	...	...	...
Jul-Dec	167.63	100.67	70.93	<b>339.23</b>	...	...	...	...
Jan-Jun	27.91	20.04	6.92	<b>54.87</b>	...	...	...	...
<b>1999-00</b>	<b>152.98</b>	<b>80.71</b>	<b>149.53</b>	<b>383.22</b>	<b>1010.45</b>	<b>505.89</b>	<b>459.04</b>	<b>1975.38</b>
Jul-Dec	109.56	56.19	88.50	<b>254.25</b>	968.83	492.80	428.96	1890.59
Jan-Jun	43.42	24.52	61.03	<b>128.97</b>	1010.45	505.89	459.04	1975.38
<b>2000-01</b>	<b>372.27</b>	<b>81.00</b>	<b>110.66</b>	<b>563.92</b>	<b>1182.07</b>	<b>470.44</b>	<b>454.29</b>	<b>2106.80</b>
Jul-Dec	306.76	53.25	89.66	<b>449.67</b>	1215.54	470.37	475.85	2161.76
Jan-Jun	65.51	27.75	21.00	<b>114.26</b>	1182.07	470.44	454.29	2106.80
<b>2001-02</b>	<b>230.11</b>	<b>84.66</b>	<b>79.00</b>	<b>393.76</b>	<b>1408.98</b>	<b>505.13</b>	<b>448.82</b>	<b>2362.93</b>
Jul-Dec	168.27	37.26	34.68	<b>240.21</b>	1325.97	494.15	382.08	2202.20
Jan-Jun	61.84	47.40	44.32	<b>153.56</b>	1408.98	505.13	448.82	2362.93
<b>2002-03</b>	<b>163.98</b>	<b>164.97</b>	<b>50.23</b>	<b>379.18</b>	<b>1579.15</b>	<b>637.75</b>	<b>410.64</b>	<b>2627.54</b>
Jul-Dec	71.97	69.42	33.36	<b>174.75</b>	1472.70	550.10	427.89	2450.69
Jan-Jun	92.01	95.55	16.87	<b>204.43</b>	1579.15	637.75	410.64	2627.54
<b>2003-04</b>	<b>111.23</b>	<b>161.38</b>	<b>11.55</b>	<b>284.16</b>	<b>1854.10</b>	<b>708.43</b>	<b>321.16</b>	<b>2883.69</b>
Jul-Dec	64.13	74.58	7.11	<b>145.82</b>	1818.86	649.08	408.03	2875.97
Jan-Jun	47.10	86.80	4.44	<b>138.34</b>	1854.10	708.43	321.16	2883.69
<b>2004-05</b>	<b>361.14</b>	<b>297.11</b>	<b>145.53</b>	<b>803.78</b>	<b>2123.50</b>	<b>880.01</b>	<b>362.10</b>	<b>3365.61</b>
Jul-Dec	108.79	152.99	60.28	<b>322.06</b>	1940.57	822.04	328.07	3090.68
Jan-Jun	252.35	144.12	85.25	<b>481.72</b>	2123.50	880.01	362.10	3365.61
<b>2005-06</b>	<b>447.22</b>	<b>198.64</b>	<b>98.75</b>	<b>744.61</b>	<b>2468.63</b>	<b>974.18</b>	<b>322.72</b>	<b>3765.53</b>
Jul-Dec	173.24	103.36	86.94	<b>363.54</b>	2268.39	904.81	363.95	3537.15
Jan-Jun	273.98	95.28	11.81	<b>381.07</b>	2468.63	974.18	322.72	3765.53
<b>2006-07</b>	<b>464.50</b>	<b>281.00</b>	<b>47.24</b>	<b>792.74</b>	<b>2857.96</b>	<b>1146.22</b>	<b>364.23</b>	<b>4368.41</b>
Jul-Dec	229.67	169.46	12.28	<b>411.41</b>	2736.50	1133.87	316.86	4187.23
Jan-Jun	234.83	111.54	34.96	<b>381.33</b>	2857.96	1146.22	364.23	4368.41
<b>2007-08</b>	<b>545.69</b>	<b>197.71</b>	<b>25.29</b>	<b>768.69</b>	<b>3719.99</b>	<b>873.76</b>	<b>210.68</b>	<b>4804.43</b>
Jul-Dec	166.78	101.70	16.55	<b>285.03</b>	3068.07	1109.59	221.12	4398.78
Jan-Jun	378.91	96.01	8.74	<b>483.66</b>	3719.99	873.76	210.68	4804.43
<b>2008-09</b>	<b>535.42</b>	<b>336.61</b>	<b>88.56</b>	<b>960.59</b>	<b>3909.60</b>	<b>903.65</b>	<b>325.94</b>	<b>5139.19</b>
Jul-Dec	430.34	149.72	22.59	<b>602.65</b>	3823.32	742.04	250.66	4816.02
Jan-Jun	105.08	186.89	65.97	<b>357.94</b>	3909.60	903.65	325.94	5139.19
<b>2009-10</b>	<b>515.14</b>	<b>331.10</b>	<b>66.78</b>	<b>913.02</b>	<b>5014.96</b>	<b>544.21</b>	<b>410.29</b>	<b>5969.46</b>
Jul-Dec	113.47	178.05	50.70	<b>342.22</b>	4426.69	474.06	378.17	5278.92
Jan-Jun	401.67	153.05	16.08	<b>570.80</b>	5014.96	544.21	410.29	5969.46
<b>2010-11</b>								
July-Dec.	118.31	211.57	12.64	<b>342.52</b>	5196.21	533.65	342.21	6072.07
Jan-Jun	131.64	233.62	71.26	<b>436.52</b>	5143.70	612.69	462.67	6219.06

Source : Statistics Department, Bangladesh Bank.