

“An Appraisal of Exchange Rate Behaviour of Bangladesh”



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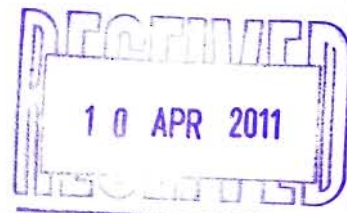
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EAST WEST UNIVERSITY

December 21, 2010

Dr. Tanbir Ahmed Chowdhury
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Subject: Submission of Project work.

Dear Sir,

I am glad to submit this report on the study of the “*An Appraisal of Exchange Rate Behaviour of Bangladesh*” as a part of my project report(BUS 498). The report deals with several important aspects on Exchange Rate Behaviour. In this report I have tried to analyze the impact of economic variables (interest, inflation and GDP growth rate) on exchange rate of Bangladesh and analyze the PPP, IRP and IFE during 2000 to 2009

Thank you for your sincere co-operation throughout the duration of the study.

I would once again like to express my sense of gratitude towards you for giving me this opportunity, and sincerely hope that my report would give you immense satisfaction. I will always be available to respond to any queries that you may have in this regard.

Sincerely,

Mehnazz Tabassum

Mehnazz Tabassum

2006-2-10-165

Acknowledgement

I am very much pleased to complete the research paper under the supervision of Dr. Tanbir Ahmed Chowdhury. In this particular research paper I tried to analyze the impact of economic variables (interest, inflation and GDP growth rate) on exchange rate of Bangladesh and analyze the PPP, IRP and IFE during 2000 to 2009. I am very much obliged to my supervisor Dr. Tanbir Ahmed Chowdhury and my teachers who gave their valuable time in the project and gave their valuable opinion and advice to complete this report. I also like to thank to my friends who help me to gather information related to this topic from different sources. Besides, my profound gratification goes to Dr. Tanbir Ahmed Chowdhury, the honorable supervisor of my report for his apt supervision to complete the report successfully. Not only this, he has also contributed much in this project by giving me proper guideline. Then, I would like to thank for his participation with me through an interview session and sharing the required information about different perspective to complete this research paper. I am also acknowledging to all of those web sites from which I have taken necessary helps. Again my gratitude goes to Dr. Tanbir Ahmed Chowdhury who provided me such a wonderful topic and also gave opportunity to gather knowledge about Exchange rate behaviour of Bangladesh.

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Executive Summary

Exchange rate is one of the central issues of macroeconomic policy. This has received particular attention from policy makers and researchers when Bangladesh adapted the floating exchange rate system. This study analyzes the exchange rate management and exchange rate behaviour of Bangladesh for the period 2000 to 2009. Exchange rate of Bangladesh has received wide attention among all concerned from end-May, 2003 when Bangladesh adopted the floating exchange rate system. The exchange rate management has, of late, received renewed attention with the emergence of global financial crisis and its likely impact on trade, investment and overall gross domestic product (GDP) growth in 2007/08.

The importance of exchange rates is very clear. But the reasons for which the exchange rates fluctuates more is not known. Some important factors for the economy of any country are interest rates for that country, its inflation rates and GDP growth rate. It could be possible that these economic factors can directly influence the exchange rates movement of any country. It is applicable for Bangladesh also. With these expectations here it has been tried to find the relationship among the exchange rates fluctuations of Bangladesh with the economic factors of the country – interest rates, inflation rates and GDP growth rate. To analyze the impact of interest rate, inflation rate and GDP growth on the exchange rate, this project considered the mostly exchangeable currencies with Bangladeshi taka, which are – Indian rupee, Japanese Yen, US Dollar, UK Pound and Euro.

The statistical analysis revealed no direct relationship between the economic factors and the exchange rate for the currencies. The project study reflects that the increase and decrease in interest rate, inflation rate and GDP growth rate do not result in simultaneous increase or decrease in exchange rates. There may be some other factors which govern exchange rate fluctuations. Further research and analysis is needed to find out the cause and reasons behind the exchange rate variations.

It is very important to make the exchange rate stable among the currencies. It will decrease the risk of international trade. If the risk due to variations in exchange rate is minimized both the international business and foreign trade will be enhanced and it will have a positive impact on the economy of Bangladesh. Stability in the exchange rates will help the economic

development of the country and also may add additional value to the countries economy. So it is very important to find out the reasons for which the exchange rate fluctuates frequently. If it is possible to find out the reason of exchange rate fluctuation and solve the problem, it will increase the opportunity for Bangladesh.

Chapter 1



1.0 PROBLEM AND THE PLAN

1.1 Origin of the Report

Project report is a practical part of academic studies. This is a reflection of academic knowledge through practical work experience. Thus this Project report aims to reflect the professional view of real world working environment.

The report on the “*An Appraisal of Exchange Rate Behaviour of Bangladesh*” is prepared by Mehnazz Tabassum which is an individual work done under the supervision and guidance of Dr. Tanbir Ahmed Chowdhury, Business Administration Department, East West University. It is the out put of three and half month long project program that has done on exchange rate behaviour. It also fulfills the partial requirement of the project work that a Business Graduate must undergo in order to qualify for the BBA degree in East West University.

1.2 Objectives of the Report

The main objective of the report is to analyze and explore the behaviour of Exchange rate in Bangladesh. The other minor objectives are:

- To present an overview of Exchange rate behaviour of Bangladesh
- To present an overview of exchange rate management in Bangladesh.
- To identify the exchange rate policies of Bangladesh.
- To analyze the PPP, IRP and IFE.
- To analyze the impact of economic variables (interest, inflation and GDP growth rate) on exchange rate.

1.3 Scope of the Report

The scope of this report is to find out the behaviour of Exchange rate in Bangladesh. The report is basically divided into two parts: The First part of the report gives an overview of exchange rate management, policies and behaviour in Bangladesh during 2000 to 2009.

The analysis part of the report basically evaluates the impact of inflation rate, interest rate and GDP growth rate on exchange rate in Bangladesh. This report also evaluates weather the exchange rate moves along with the PPP, IRP and IEF theory.

1.4 Methodology

The data are collected from related books, publication and articles, journal, different report magazines and document, Internet and from Bangladesh Bank To perform the study after identifying and collecting the data sources, they are to be classified, analyzed, interpreted and presented in a systematic manner and key points are to be found out. Collected information is processed by the use of computer system (SPSS, Excel). In this report I have attempted to find out whether the interest rate, inflation rate and GDP growth rate has any impact over the exchange rate movement in Bangladesh. So to do so I have considered five currencies (Indian Rupee, Japanese Yen, US Dollar, U.K Pound and Euro). To assess the impact of interest rate, inflation rate and GDP growth rate on exchange rate during the period 2000 to 2009 the following hypothesis has been developed:

Hypothesis 1: Interest Rates (commercial deposit) directly influence the fluctuations of Exchange Rates (Rs, ¥, \$, £, €).

Hypothesis2: Inflation Rates directly influence the fluctuations of Exchange Rates (Rs, ¥, \$, £, €).

Hypothesis 3: GDP Growth Rates (current market Price) directly influence the fluctuations of Exchange Rates (Rs, ¥, \$, £, €).

Hypothesis 4: GDP Growth Rates (constant market Price) directly influence the fluctuations of Exchange Rates (Rs, ¥, \$, £, €).

Detailed analysis working variables and working definition are embodied in the report.

1.5 Limitations

It is true that most in the time doing some study on a subject or plan to research on a subject, every material of study would not be available all the time .I might face some problems or there must be some limitations. At the beginning stage of my study I have had some problem, like I did not get all relevant information. Sometimes I got information but later it turned into uncompleted or old information. Another significant limitation of the study was time restriction. Even though I have given our full effort to make this report a good one, but it is

too tough to perform well such an analysis within a shorter period of time. Though I have faced some other problems such as-unavailability of some information, technical problems which includes computer problem, virus problems, software problems, I also had problems regarding some brochures, file, information paper. But I did not give it up. I continued my quest. And I was able to get over the problems and limitations.



Chapter 2

2.1 Overview of Exchange Rate Behaviour

In an era characterized by increasingly integrated national economies, the exchange rate is the key relative price in open economies. As such, a great deal of attention has been focused on characterizing its behavior. Unfortunately, it is unclear how much success there has been in predicting this critical relative price. As recently remarked, "There may be more forecasting of exchange rates, with less success, than almost any other economic variable." Due to wide economic and financial diversity among the developing countries of the world, the observed differences among their exchange rate regimes - from hard peg to free float and some combinations of these two extremes, are not at all surprising. These variations in the exchange rate regimes are due to the fact that, suitable exchange rate regime for a particular country depends on the level of its economic development and the extent of involvement with the global financial markets. However, the precise relationship between the circumstances of a country and the exchange rate regime that is most likely to suit its economic interest has still remained a matter of controversy.

Exchange rate management is one of the central issues of macroeconomic policy. Recent devastating financial crises involving a number of developing and transition countries, made the economist's views on exchange rate regimes to evolve significantly. Proponents of pegged exchange rate regimes argue that they provide more credibility, stable economic environment and faster economic growth. On the other hand, critics concluded that pegged regimes are inherently crisis-prone while flexible regimes allow large adverse shocks to be easily absorbed. While this debate is still continuing, recent experience of major financial crises reveals one fact that the intermediate regimes (adjustable peg, crawling peg, basket peg and target zone) are losing adept and popularity as they have been at the center stage in most of the crises. As an alternative, countries are tending to adopt either of the two extremes, hard peg or perfectly free float, a symptom termed as "hollowing of the middle" or "bipolar view".

One of the countries that most recently joined this procession is Bangladesh. In the recent world economic outlook published by International Monetary Fund, Bangladesh was placed in the group of Asian developing countries, which until the month of May 2003, had been operating under pegged exchange rate system of one kind or another. The exchange rate management has

of late, received renewed attention with the emergence of global financial crisis and its likely impact on trade, investment and overall gross domestic product (GDP) growth in 2007/08. Historically, Bangladesh had been maintaining various pegged exchange rate regimes, such as pegged to the British pound sterling (1972-1979), pegged to a basket of major trading partners' currencies with pound sterling as the intervening currency (1980-1982), pegged to a basket of major trading partners' currencies with US dollar as the intervening currency (1983-1999), and an adjustable pegged system (2000-2003). On the 31st of May 2003, Bangladesh adopted fully market-based floating exchange rate system. From then on, Bangladesh bank notified that it would no longer maintain a preannounce exchange rate bands for transactions with banks and the banks will fix buying and selling rates of dollar and other currencies according to supply and demand situation in the market. But Bangladesh Bank also pledged that it would scrutinize the market and intervene in the money market and US dollar transactions, if needed to ensure orderly conditions in the market.

The transition to a floating regime was smooth and the first ten months can be viewed as a "honeymoon period" for Bangladesh as the exchange rate remained fairly stable experiencing a depreciation of less than 1.0 per cent from June 2003 to April 2004. Exchange rate kept on rising gradually from mid-2004 and it reached its peak at Tk. 70/USD in 2006 from Tk. 58/USD, accounting for 20 per cent depreciation. Since then, it remains fairly stable and has been fluctuating between Taka 68 and 69 (2007-2009). The floating regime in Bangladesh is, therefore, characterized by both volatility and stability. Officially (de jure) Bangladesh maintains floating exchange rate system. Empirical evidence and theory suggests that floating exchange rates are characterized by little intervention in the exchange rate markets together with unlimited volatility of the nominal exchange rate. In a floating regime, since little or no intervention is required, reserves exhibits relatively low volatility. However, it is observed that relative volatilities of the exchange rate, reserves and interest rates are very low for the period 2007- 2009, indicating an active intervention in the foreign exchange market. Such foreign exchange intervention activities have led to a situation where the nominal exchange rate has remained almost fixed or has moved within a very narrow range for the aforesaid period. Bangladesh practices a managed floating rate system from the very beginning of its transition to floating regime. More precisely, the recent exchange rate behavior indicates a fixed exchange rate system is in place (from 2007 onward).

Now the question arises, why does Bangladesh maintain such a fixed exchange rate for quite a long time, despite pressure from exporters and others to depreciate the currency? Depreciation of currency entails several types of effects on the economy. First, depreciation directly affects the rate of inflation through the level of the pass-through. Many studies including a recent one by the Bangladesh Institute of Development Studies (BIDS) found a high pass-through effect of depreciation of taka in Bangladesh. Since Bangladesh is an import dependent country, any change in prices in the international market will eventually transmit to domestic prices. Second, depreciation also affects output growth through different channels including the balance sheet channel. Third, usually a larger depreciation entails a smaller increase in interest rates and this has effect on the credit channel. Therefore, the overall impact of depreciation depends on the trade-off between these effects. Caught in this dilemma, the monetary authorities perhaps have chosen to keep the exchange rate nominally fixed or almost fixed for last two years, by intervening in the foreign exchange market. However, to manage floats or to maintain a long-term value of the currency, Bangladesh Bank must have to acquire a good stock of international reserves. Occasional intervention in the foreign exchange market brings some positive benefits, particularly for developing countries like Bangladesh if the intervention is targeted to achieve some economic objectives such as stable inflation or trade competitiveness. A word of caution is in order if nominal exchange rate moves along a continuum for long time-it may create distortions in the market, such as macroeconomic symptoms of irrational exuberance, which include strong growth, accelerating inflation, rising international reserves, and gradual overvaluation (the loss of international price competitiveness). This is a troublesome situation and if it continues for long time, there might have the risk of possibility of crisis.

Like many other economic decisions, the decision of Bangladesh Government to adopt market based floating exchange rate system was not beyond controversy. Advocates in favor of the decision were saying that, the move was pragmatic and timely and would help Bangladesh to revive its competitiveness in the international market and would increase Government's commitment to the market. On the other hand, critics were arguing that the economic and financial strength of Bangladesh was not good enough to successfully operate under the chosen regime and predicted that it might create excess volatility in the exchange market and as a result would adversely affect international trade and investment.

2.2 Literature Review of Exchange Rate Policies of Bangladesh

Exchange rate regime of Bangladesh can be characterized as one of adjustable basket peg using a real effective exchange rate target. The exchange rate policy decisions, though notified in all cases by the Bangladesh Bank, are made on behalf of and in close consultation with the Ministry of Finance. Bangladesh Bank is not in the role of independent stewardship of exchange rate policy.

The Bangladesh Bank supports the current parity of Taka through a continuous presence in the market in the form of announced readiness to undertake United States dollar purchases and sales at rates decided by itself within the declared rate band (currently of one Taka width) any time an authorized dealer approaches. Any adjustment in the parity is implemented through the announcement by the Bangladesh Bank of a revised band for buying and selling rates following which the dealers adjust their rates for transactions with their customers and among themselves.

Previously, Bangladesh Bank used to announce specified buying and selling rates. From 3rd December 2000 Bangladesh Bank adopted the practice of declaring a 50 paisa band within which buying and selling transactions were to be undertaken; this band was widened to Taka 1.00 from 25th May 2001. From then Bangladesh is following a Floating exchange rate policy.

This section surveys empirical contributions on various aspects of exchange rate policies in Bangladesh. Several studies have attempted to analyze the behaviour of exchange rates in Bangladesh. Hossain (2002) investigates the exchange rate responses to inflation in Bangladesh for the period 1973-1999. He finds that the effect of devaluation on inflation during the fixed exchange rate regime was not significant, and he claims the results to be strong for the whole sample period. By analyzing the movement of the real exchange rate in Bangladesh for the period 1973-1996, Hossain (1997) finds that the continued inflows of foreign capital—foreign aid and overseas worker's remittances— have caused an appreciation of the real exchange rate by increasing the relative demand for non-tradable.

Rahman and Basher (2001) have estimated the equilibrium real exchange rate as well as exchange rate misalignment for the period 1977-1998. They find that trade liberalization and

increase in debt service burden results in a real depreciation of the currency; while increase in capital inflow, improvement in terms of trade, and increase in government consumption of non-tradable results in a real appreciation of the currency. From the estimated long run equilibrium real exchange rate, they find that Bangladesh currency was considerably overvalued until late 1980s. However, the real exchange rate broadly was in equilibrium during the 1990s. An ADB study concludes that the misalignment between the actual and equilibrium exchange rate for the period 1997-2001 has been small and has progressively narrowed since 1998. During 2001, the misalignment was only 2.2 percent.

Prior to adopting floating exchange rate regime, Islam (2003) concludes 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 behaviour of nominal exchange rates of Bangladesh after its transition to the floating rate regime.

Younus and Chowdhury (2006) made an attempt to analyze 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.

The above survey indicates that a systematic and comprehensive study on contemporary exchange rate policies of Bangladesh, particularly under the floating exchange rate regime is necessary.

2.3 Exchange Rate Management in Bangladesh:

Exchange rate management is one of the central issues of macroeconomic policies. Exchange rate of Bangladesh has received wide attention among all concerned from end-May, 2003 when Bangladesh adopted the floating exchange rate system. The exchange rate management has, of late, received renewed attention with the emergence of global financial crisis and its likely impact on trade, investment and overall gross domestic product (GDP) growth in 2007/08.

Foreign Exchange Market allows currencies to be exchanged to facilitate international trade and financial transactions. Historically, Evolution of the market in Bangladesh is closely linked with the exchange rate regime of the country. It had virtually no foreign exchange market up to 1993. BANGLADESH BANK, as agent of the government, was the sole purveyor of foreign currency among users. It tried to equilibrate the demand for and supply of foreign exchange at an officially determined exchange rate, which, however, ceased to exist with introduction of current account convertibility. Immediately after liberation, the Bangladesh currency taka was pegged with pound sterling but was brought at par with the Indian rupee. Within 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 as intervention currency. By this time a secondary exchange market (SEM) was allowed to grow parallel to the official exchange rate. This gave rise to a kerb market.

Bangladesh had been maintaining various pegged exchange rate regimes, such as pegged to the British pound sterling (1972-1979), pegged to a basket of major trading partners' currencies with pound sterling as the intervening currency (1980-1982), pegged to a basket of major trading partners' currencies with US dollar as the intervening currency (1983-1999), and an adjustable pegged system (2000-2003). On May 31, 2003, Bangladesh switched to floating exchange rate system by abandoning the adjustable pegged system. The transition to a floating regime was smooth and the first ten months can be viewed as a "honeymoon period" for Bangladesh as the exchange rate remained fairly stable experiencing a

depreciation of less than 1.0 per cent from June 2003 to April 2004. Exchange rate kept on rising gradually from mid-2004 the floating regime in Bangladesh is, therefore, characterized by both volatility and stability.

Officially Bangladesh maintains a floating exchange rate system. In a floating regime, reserves are expected to exhibit relatively low volatility with high nominal exchange rate volatility. However, the estimation of relative volatilities of the exchange rate, reserves and interest rates are found to be very low for the period 2000 to 2009, indicating active intervention in the foreign exchange market. This has led the nominal exchange rate to remain almost fixed or to move within a very narrow range for the period. But in reality *exchange* rate regime of Bangladesh was never completely freely floating rather Bangladesh pursued a managed floating system from the very beginning of its transition to the floating regime. More precisely, the recent exchange rate behaviour indicates a fixed exchange rate system is in place (from 2007 onward).

At present, the system of exchange rate management in Bangladesh is to monitor the movement of the exchange rate of taka against a basket of currencies through a mechanism of real effective exchange rate (RFER) intended to be kept close to the equilibrium rate. The players in the foreign exchange market of Bangladesh are the Bangladesh Bank, authorised dealers, and customers. The Bangladesh Bank is empowered by the Foreign Exchange Regulation Act of 1947 to regulate the foreign exchange regime. It, however, does not operate directly and instead, regularly watches activities in the market and intervenes, if necessary, through commercial banks. So, now Bangladesh attempts to stabilize exchange rates by intervening in the foreign exchange market. The exchange rate could be more volatile simply because it is subject to larger external shocks. Comparing exchange rate volatilities does not provide a complete idea of the willingness of the authority to defend its correspondence. It may be the case that the central bank is intervening in the foreign exchange market to keep the exchange rate within certain limits, while during the period of less volatility the authority is letting the exchange rate float independently. Similarly, comparing volatility of reserves may be problematic too. It is possible for reserves during a particular period to be relatively stable due to the absence of shocks that would have warranted a movement in the exchange rate, or in case the authority intervenes heavily, if a shock warrants it. To compare volatility of nominal exchange rates against major trading

partner Currencies using the coefficient of variation first we will see the exchange rate regime of Bangladesh:

Table 1: Exchange Rate Regime of Bangladesh

Year	Exchange Rate Regime
1972-1979	Managed float
1980-1982	Pegged exchange rate
1983-1999	Pegged exchange rate
Jan 2000-May 2003	Pre-Floating Regime
June 2003-Feb 2006	Floating Regime
Mar 2006- Nov 2008	Floating Regime

We compare volatility of nominal exchange rates against major trading partner Currencies using the coefficient of variation. It shows that Bangladeshi Taka remained stable against all of our trading partner's currencies except the US dollar.

Table 2: Comparison of Volatility of Exchange Rates (Coefficient of Variation)

Year	Taka/US dollar	Taka/Rupee	Taka/Pound	Taka/Yen	Taka/Euro
Pre-Floating Regime (Jan 2000-May 2003) N=41	0.047	0.019	0.066	0.039	0.101
Floating Regime (June 2003-Feb 2006) N=33	0.5	0.065	0.075	0.055	0.069
Floating Regime (Mar 2006- Nov 2008) N=33	0.11	0.063	0.058	0.064	0.076

Source: Hossain, Monzur and Ahmed, Mansur (2009): *Exchange Rate Policy under Floating Regime in Bangladesh*

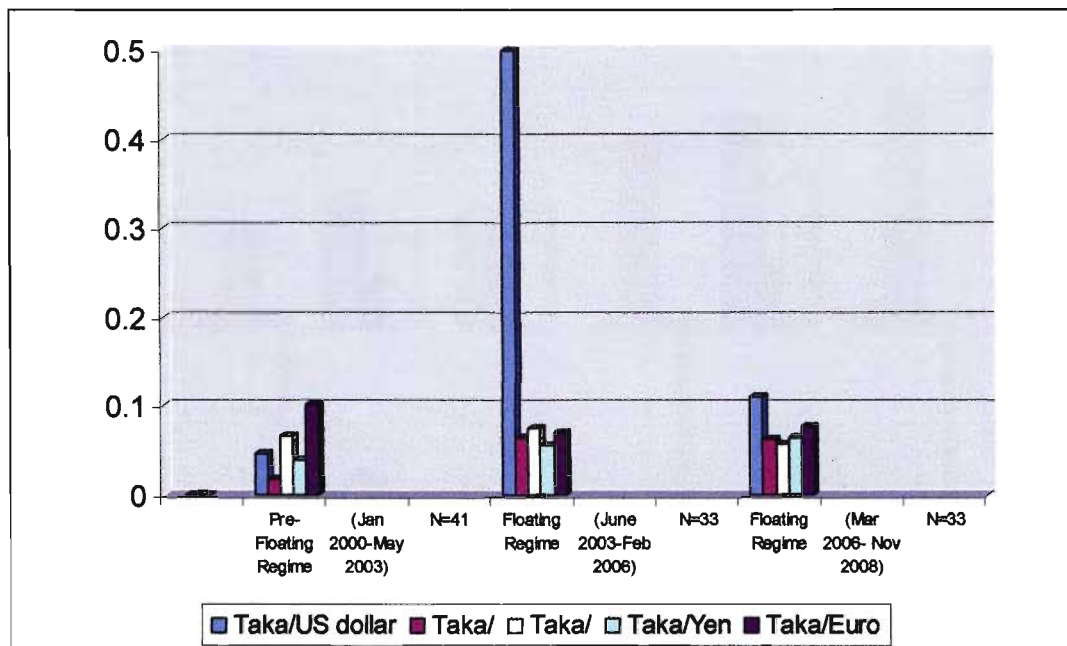


Figure 1: Volatility of Exchange Rates (Coefficient of Variation)

The findings in this section indicate that the way Bangladesh manages exchange rate is, by and large, not consistent with the characteristics of freely floating exchange rate regime. Evidence suggests that Bangladesh Bank often intervenes in the foreign exchange market in order to keep the nominal exchange rate almost fixed or to allow it to move within a very narrow range. However, the extent of intervention and its impact on exchange rate regime is not clear from the analysis of this section. For this reason, we assess the *de facto* exchange rate regime of Bangladesh in the next section.

Table 3: Sale and Purchase of Foreign Exchange by Bangladesh Bank (in Million USD)

	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009 (Jul-Apr)
Sale	0	459	413.1	0	735.5	70
Purchase	313.95	147.1	0	649.5	202.5	815.2
Net Injection	-313.95	311.9	413.1	-649.5	533	-745.2

Source: Bangladesh Bank, Monthly Economic Trends (June 2009)

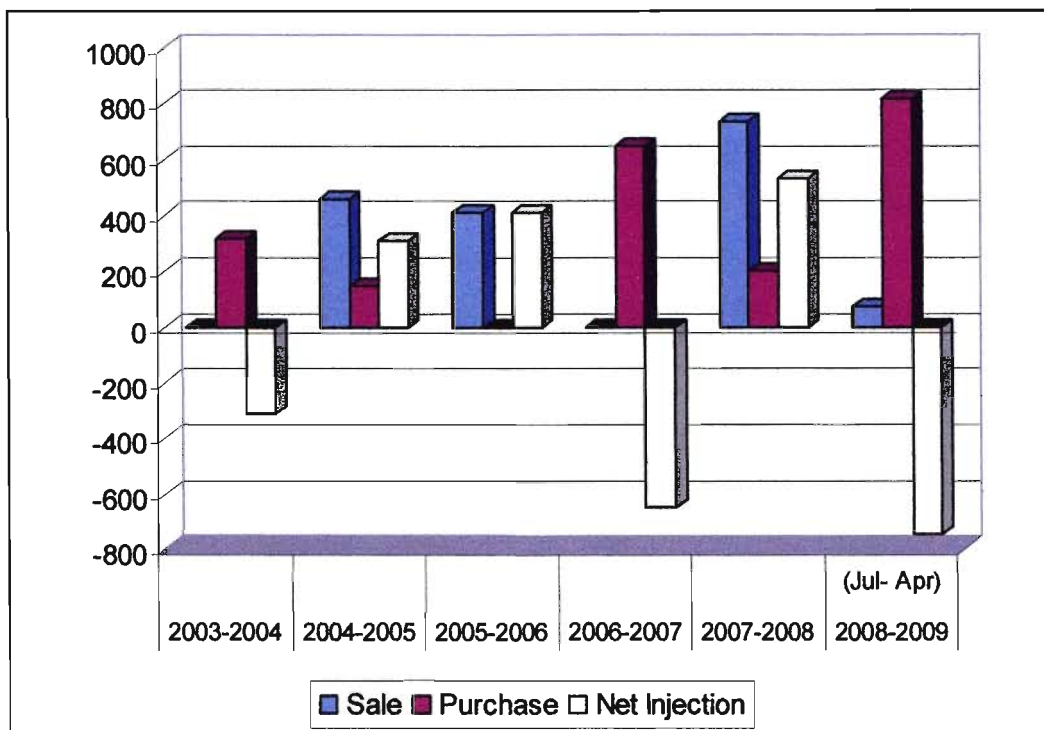


Figure 2: Net Injection

There are two issues that are important in exchange rate management. One is Real Effective Exchange Rate (REER) and another is Nominal Effective Exchange Rate (NEER). The real effective exchange rate (REER) is the inflation-adjusted and trade-weighted exchange rate, which is used as a popular index of international trade competitiveness of a country. On the other hand, nominal effective exchange rate (NEER) is a trade weighted index, which is also used to represent trade competitiveness. This section is devoted to a discussion of the movements of both the REER and the NEER. Following Bangladesh Bank's procedure, we calculated the REER and the NEER considering the year 2000 as base and using trade-weights of eight major trading partners namely USA, UK, Japan, EU, and India. This project also estimated bilateral real exchange rates (RER) against major trading partners.

2.3.1 Real Effective Exchange Rate (REER)

Real Effective Exchange Rate (REER) means the weighted average of a country's currency relative to an index or basket of other major currencies adjusted for the effects of inflation. The weights are determined by comparing the relative trade balances, in terms of one country's currency, with each other country within the index. This exchange rate is used to determine an individual country's currency value relative to the other major currencies in the index, as adjusted for the effects of inflation. All currencies within the said index are the major currencies being traded today: U.S. dollar, Japanese yen, euro, etc. This is also the value that an individual consumer will pay for an imported good at the consumer level. This price will include any tariffs and transactions costs associated with importing the good.

In Bangladesh the REER depreciated around 20 percent over the years in an unstable fashion. During the fixed regime, 2000-2003, the REER moved in tandem with the price differential and the movement of US Dollar vis-à-vis major currencies. The Taka gained competitiveness during 2000-2003 because of the continued lower inflation differential as well as occasional devaluations. However, during the turbulent period of the floating regime (2004-2006), the taka remained competitive because of high depreciation as well as US dollar depreciation vis-à-vis major currencies despite high inflation differentials (with high domestic inflation). From 2006, the REER shows an appreciating trend, but for a brief period. With almost a stable nominal exchange rate of the dollar in the period 2006-2008, the REER shows slightly upward trend because of high inflation differentials and US dollar depreciation vis-à-vis major currencies. It is also observed from the trend of the REER that some periodic adjustments of taka/dollar exchange rate might have contributed to the overall trend of depreciation. Since there is a long term trend in the REER movement, it suggests that the REER might have been overvalued to some extent.

Another point is that the calculation of the REER using CPI (consumer price index) may contain measurement error because CPI may not be the right index for the purpose. Since WPI (wholesale price index) contains largely tradable goods while CPI is more heavily weighted towards non-tradable goods, this phenomenon translates into a long-term rise of CPI relative to WPI. Therefore, the REER based on CPI is likely to underestimate the economy's competitiveness to the extent that this internal price movement is significant (relative to its trading partners). If an increase in the price of nontaxable relative to tradable is

due to greater productivity growth in the second sector than the first, such increases lead to real appreciation in the real exchange rates. This is well-known as the Balassa-Samuelson effect.

Internal price movements are persistently higher in Bangladesh and a sharp rising trend is observed since 2003:5, however, the WPI-based REER showed slightly appreciating trend from that period that provides an indication of the Balassa-Samuelson effect in the Bangladesh. It is interesting to know that the REER (based on WPI) depreciated in line with the rising pattern of relative prices, implying that Bangladesh maintains competitiveness by offsetting price inflation. Comparing the patterns of the CPI-based REER and WPI-based REER, it may be concluded that WPI-based REER better predicts the competitiveness of Bangladesh.

2.3.2 Nominal Effective Exchange Rate (NEER)

Nominal Effective Exchange Rate (NEER) means the unadjusted weighted average value of a country's currency relative to all major currencies being traded within an index or pool of currencies. The weights are determined by the importance a home country places on all other currencies traded within the pool, as measured by the balance of trade. The NEER represents the relative value of a home country's currency compared to the other major currencies being traded (U.S. dollar, Japanese yen, euro, etc.). A higher NEER coefficient (above 1) means that the home country's currency will usually be worth more than an imported currency, and a lower coefficient (below 1) means that the home currency will usually be worth less than the imported currency. The NEER also represents the approximate relative price a consumer will pay for an imported good.

In Bangladesh the behaviour of the nominal effective exchange rate (NEER) also shows the same depreciating but unstable trend. The NEER is a trade-weighted index without being adjusted for inflation. This index has particular importance in stabilizing the pace of competitiveness, especially when the currencies of the trading partners are more volatile.



2.4 Exchange Rate Misalignment

The prevention of misalignment implies that the actual exchange rate should correspond to the estimate of equilibrium exchange rate. It is not easy to either define the equilibrium exchange rate or to estimate it. The misalignment between the actual and equilibrium exchange rate for the period 1997 to 2001 has been small and has progressively narrowed since 1998. During 2001, the misalignment was only 2.2 per cent. Exchange rate policy certainly succeeded in preventing appreciation of the real effective exchange rate throughout the 1990s. In fact there has been more or less consistent depreciation of REER, the index rising to 116.2 in the year 2000. There was only one year, 1994, in which there was any noticeable appreciation and in that year the index fell to 102.2 compared to 104.6 in the previous year.

Now if we consider the actual REER and fitted REER during 2000 to 2008 it will help us to identify the estimated long-run relationship of the REER and macroeconomic fundamentals allow us to estimate the equilibrium REER from the VECM specifications. The long-run elasticity's have been applied to the actual values of the macroeconomic fundamentals in a given period and a series of equilibrium exchange rates obtained. The overvaluation or undervaluation of the exchange rate can be assessed by deriving the equilibrium 'sustainable' real effective exchange rate and subtracting it from the actual real effective exchange rate. As sharp fluctuation in macroeconomic fundamentals is usual, equilibrium REER based on the actual values of macroeconomic fundamentals will also show sharp fluctuation. This leads us to estimate a 'sustainable' equilibrium REER, which gives an estimate of departure from actual REER in the medium-term framework. Sustainable values of the fundamentals have been derived through three quarterly moving averages.

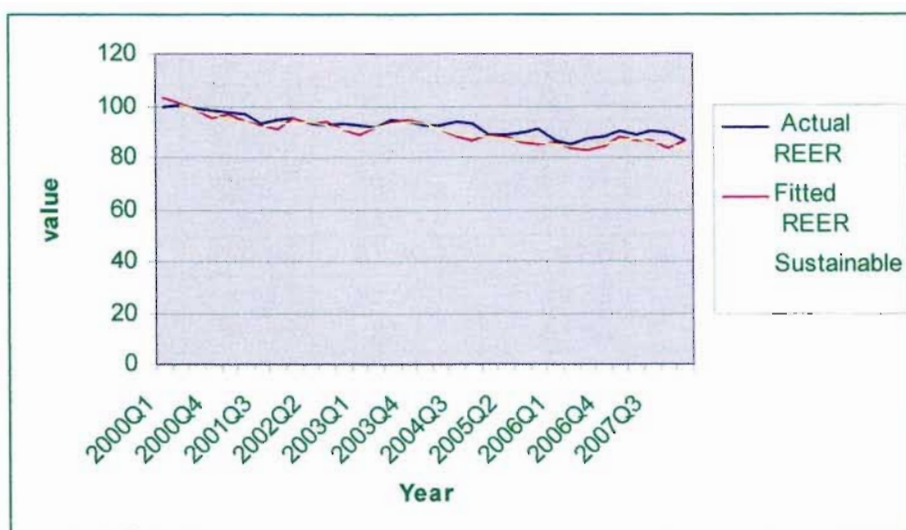


Figure 3: Actual and equilibrium REER

Table 4 and Figure 3 depict these real exchange rate and overvaluation of the taka. The observed real exchange rate seems to have been overvalued since 2004:Q2. For last two years from 2006, it appears that the REER remains overvalued on an average 3 percent. This indicates that the exchange rate remains very close to the equilibrium as warranted by the economic fundamentals. However, there were some scopes for depreciating the taka at around 3 percent.

Table 4: Exchange rate misalignment

Quarter	Actual REER	Fitted REER	Sustainable	Overvaluation*(%)
2000Q1	99.95	103.02		
2000Q2	100.63	101.19	100.72	-0.09
2000Q3	98.61	98.02	98.1	0.52
2000Q4	98.11	95.19	96.56	1.58
2001Q1	97.25	96.49	94.67	2.66
2001Q2	96.37	93.66	93.66	2.81
2001Q3	93.11	92.18	91.91	1.28
2001Q4	94.45	91.19	92.78	1.77
2002Q1	94.93	95	93.16	1.86
2002Q2	93.18	93.32	94.09	-0.97
2002Q3	92.63	93.95	92.63	0
2002Q4	93.17	90.65	91.06	2.26
2003Q1	92.47	88.66	90.32	2.33
2003Q2	91.37	91.67	91.4	-0.03
2003Q3	94.33	93.94	93.37	1.02

2003Q4	93.75	94.51	93.81	-0.06
2004Q1	92.72	92.99	92.82	-0.11
2004Q2	92.3	91.01	90.64	1.8
2004Q3	93.9	87.99	88.54	5.71
2004Q4	93.01	86.68	87.84	5.56
2005Q1	88.5	88.85	87.84	0.75
2005Q2	89.06	87.99	87.6	1.64
2005Q3	89.13	85.99	86.35	3.12
2005Q4	90.95	85.1	85.66	5.81
2006Q1	86.8	85.9	85	2.08
2006Q2	85.23	84	84.15	1.27
2006Q3	87.27	82.58	83.57	4.24
2006Q4	88.33	84.13	84.95	3.83
2007Q1	89.96	88.23	86.22	0.84
2007Q2	88.46	86.36	87.11	1.53
2007Q3	89.84	86.75	85.54	4.78
2007Q4	89.41	83.55	85.68	4.17
2008Q1	86.35	86.78	83.14	3.71

Source: Hossain, Monzur and Ahmed, Mansur (2009): *Exchange Rate Policy under Floating Regime in Bangladesh*



Chapter 3



3.1 Theories Use to Predict the Exchange Rate

There are three theories in international finance which helps to know about why exchange rates changes over time. These theories are:

1. Purchasing Power Parity
2. Interest Rates Parity and
3. International Fisher Effects

3.1.1 Purchasing Power Parity

Purchasing power parity (PPP) is a theory which states that exchange rates between currencies are in equilibrium when their purchasing power is the same in each of the two countries. This means that the exchange rate between two countries should equal the ratio of the two countries' price level of a fixed basket of goods and services. When a country's domestic price level is increasing (i.e., a country experiences inflation), that country's exchange rate must depreciated in order to return to PPP. PPP is calculated as:

The basis for PPP is the "law of one price". In the absence of transportation and other transaction costs, competitive markets will equalize the price of an identical good in two countries when the prices are expressed in the same currency. There are three caveats with this law of one price. (1) As mentioned above, transportation costs, barriers to trade, and other transaction costs, can be significant. (2) There must be competitive markets for the goods and services in both countries. (3) The law of one price only applies to trade able goods; immobile goods such as houses, and many services that are local, are of course not traded between countries.

PPP exchange rate (the "real exchange rate") fluctuations are mostly due to different rates of inflation between the two economies. In exact terms, PPP theory suggests that the equilibrium exchange rate will adjust by the same magnitude as the differential in inflation rates between two countries. Though PPP continues to be a valuable concept, there is evidence of sizable deviations from the theory of the real world. The PPP theory focuses on the relationship between the inflation rate differential and future exchange rate movements.

3.1.2 Interest Rate Parity

Interest rate parity is concerned with the relationship between the currency exchange rates of two nations and their local interest rates, and the essential role that it plays in foreign exchange markets. **IRP** connects the interest rates, spot exchange rates and forward exchange rates in a single comparison. The theory is that the differential between the interest rates of two countries is the same as the difference between the forward exchange rate and the spot exchange rate. As a result, the theory maintains there is no difference between investing locally in a foreign market and exchanging currency to invest in the foreign market directly.

There are two types of IRP. They are Covered Interest rate parity and uncovered interest rate parity. If IRP exists, it is not possible to benefit from covered interest arbitrage. Investors can still attempt to benefit from high foreign interest rate if they remain uncovered. But the theory of interest rate parity (IRP) focuses on the relationships between the interest rate differential and the forward rate premium at a given point in time. Therefore no arbitrage opportunity in the mutual trading of their currencies can exist unless this parity breaks down. In practice however, due to the government interference via currency controls, the full realization of this parity might not occur.

3.1.3 International Fisher Effect (IFE)

In international finance, a theory stating that an expected change in the exchange rate between two currencies is roughly equivalent to the difference between their nominal interest rates. This is based on the Fisher hypothesis, which states that real interest rates are independent of monetary considerations. If this is true, then a state with a low nominal interest rate has a low inflation rate; likewise, a country with a high nominal interest rate has a higher inflation rate. The real value of the high interest rate country will depreciate over time, leading to a circumstance in which its exchange rate, in relation to the low interest rate country, will change approximately according to the difference between their interest rates.

IFE is calculated as:

$$E = \frac{i_1 - i_2}{1 + i_2} \approx i_1 - i_2$$

Where:

"E" represents the % change in the exchange rate

" i_1 " represents country A's interest rate

" i_2 " represents country B's interest rate

This theory is controversial because, in practice, currencies with higher nominal interest rates tend to have lower inflation than currencies with lower interest rates. There is evidence that during some periods the IFE does not hold. Thus, investment in foreign short-term securities may achieve a higher return than what is possibly domestically. If a firm attempts to achieve this higher return, however, it does incur the risk that the currency denominating the foreign security might depreciate against the investor's home currency during the investment period. In this case, the foreign security could generate a lower return than a domestic security, even though it exhibits a higher interest rate. The IFE focuses on the interest rate differential and future exchange rate movements.

3.2 ANALYSIS OF PPP, IRP & IFE

At this point it may be helpful to see whether PPP, IFE and IRP are predicting the future exchange rate correctly. All three theories relate to the determination of exchange rates, they have different implications. The IRP theory focuses on why the forward rate differs from the spot rate and on the degree of difference that should exist. It relates to a specific point in time. In contrast, the PPP theory and IFE theory focus on how a currency's spot rate will change overtime. Whereas PPP theory suggests that the spot rate will change in accordance with the inflation differential, IFE theory suggests that it will change in accordance with interest rate differentials. Nevertheless, PPP is related to IFE because expected inflation differentials influence the nominal interest rate differentials between two countries.

The relative form of PPP can be use to estimate how an exchange rate will change in response to differential inflation rates between countries. Along with PPP theory there are other two major theories in international finance they are IRP and IFE. These two theories use interest rate rather than inflation rate differential to explain why exchange rate changes over time. But it is closely related to the PPP theories because interest rates are often highly correlated with inflation rate.

PPP theory suggests that exchange rate movements are caused by inflation rate differentials. If real interest rate and forward rate are same across countries, a difference in nominal interest rates could be attributed to the difference in expected inflation. So in this project inflation rate will be considered to analyze the PPP, IRP and IFE.

Some generalizations about countries can be made by applying these theories. High inflation countries tend to have nominal interest rates (due to the Fisher effect). Their currencies tend to weaken over time (because of the PPP and IFE) and the forward rates of their currencies normally exhibit large discounts (due to IRP). There are two to be analysis:

- If the foreign country's inflation rate is lower than the home country's inflation rate then the foreign country should appreciate in response to the higher inflation to the home country relative to the foreign country. If this exchange rate dose occurs, the price index of the foreign country will be as high as the index in the home country.
- If the foreign country's inflation rate is high than the home country's inflation rate then the foreign country should depreciate in response to the higher inflation to the home country relative to the foreign country. If this exchange rate dose occurs, the price index of the foreign country will be as high as the index in the home country.

Table 5: Calculation of PPP IRP and IFE

(Between Bangladesh and India, Bangladesh and Japan & Bangladesh, U.S and UK)

Year	Inflation Rates 12th month average	Inflation Rates (Rupee)	PPP,IRP & IFE Calculation	Inflation Rates (Japanese Yen)	PPP,IRP & IFE Calculation	Inflation Rates (US Dollar)	PPP,IRP & IFE Calculation	Inflation Rates (U.K Pound)	PPP,IRP & IFE Calculation
1999-00	2.79	4.01	-1.17	-0.78	3.59	2.2	0.58	3.8	-0.97
2000-01	1.94	3.77	-1.76	-0.68	2.64	3.4	-1.41	1.23	0.70
2001-02	2.79	4.29	-1.44	-0.89	3.71	2.8	-0.009	1.26	1.51
2002-03	4.38	3.8	0.56	-0.29	4.68	1.6	2.74	1.36	2.98
2003-04	5.83	3.77	1.98	0	5.83	2.3	3.45	1.35	4.42
2004-05	6.48	4.25	2.14	-0.29	6.79	2.7	3.68	2.04	4.35
2005-06	7.16	6.18	0.92	0.3	6.84	3.4	3.64	2.32	4.73
2006-07	7.2	6.37	0.78	0	7.2	3.2	3.87	2.34	4.75
2007-08	9.94	8.35	1.47	1.39	8.43	2.8	6.94	3.61	6.11
2008-09	6.66	8.3	-1.51	-1.4	8.17	9	-2.15	2.18	4.38

For Rupee: In Table 5 we can see that, Rupee (foreign currency) should appreciate by 0.56% in 2003, 1.98% in 2004, 2.14% in 2005, 0.92% in 2006, 0.78% in 2007 and 1.47% in 2008. But Rupee (foreign currency) should depreciate by -1.17% in 2000, -1.76% in 2001, 1.44% in 2002, and -1.4% in 2009.

For Japanese Yen: Japanese Yen should appreciate by 3.59% in 2000, 2.64% in 2001, 3.71% in 2002, 4.68% in 2003, 5.83% in 2004, 6.79% in 2005, 6.84% in 2006, 7.2% in 2007, 8.43% in 2008 and 8.17% in 2009.

For US Dollar: US Dollar should appreciate by 0.58% in 2000, 2.74% in 2003, 3.45% in 2004, 3.68% in 2005, 3.64% in 2006, 3.87% in 2007 and 6.94% in 2008. But US Dollar should depreciate by -1.41% in 2001, -0.009 in 2002 and -2.15% in 2009.

For UK Pound: UK Pound should depreciate by -0.97% in 2000 but appreciate by 0.70% in 2001, 1.51% in 2002, 2.98% in 2003, 4.42% in 2004, 4.35% in 2005, 4.73% in 2006, 4.75% in 2007, 6.11 % in 2008 and 4.38% in 2009.

For Euro: Information on euros inflation rates are not available for the period 2000 to 2009.

Now at this point it will be seen that whether the exchange rate moves as the PPP, IRP and IFE theories suggests.

Table 6: Exchange rates of Rupee, Japanese Yen, US Dollar and U.K. Pound

Year	Exchange Rates Indian Rupee (Period Average)	Exchange Rates Japanese Yen (Period Average)	Exchange Rates US Dollar (Period average)	Exchange Rates U.K. Pound (Period Average)
1999-00	1.15	0.47	50.31	80.04
2000-01	1.16	0.47	53.96	78.32
2001-02	1.19	0.46	57.43	82.86
2002-03	1.21	0.48	57.9	91.75
2003-04	1.3	0.53	58.94	108.07
2004-05	1.38	0.57	61.39	114.11
2005-06	1.5	0.59	67.08	119.41
2006-07	1.57	0.58	69.03	133.44
2007-08	1.71	0.62	68.6	137.48
2008-09	1.45	0.7	68.8	111.17

Source: Bangladesh Bank, Monthly Economic Trends (June 2009)

For Rupee: From table 5 and table 6 we see that the exchange rate the exchange rate between Taka and Rupee does not move as PPP, IRP and IFE theories suggests. There is a disparity. The percentage changes in the exchange rate are less volatile then the inflation differentials. The exchange rates are changing to a smaller degree then the theories would predict.

For Japanese Yen: From table 5 and table 6 we see that the exchange rate the exchange rate between Taka and Japanese Yen does not move as PPP, IRP and IFE theories. There is a disparity. The percentage changes in the exchange rate are more volatile then the inflation differentials. The exchange rates the changing to a lesser degree then the theories would predict.

For US Dollar: : From table 5 and table 6 we see that the exchange rate the exchange rate between Taka and US Dollar does not move as PPP, IRP and IFE theories. There is a disparity. The percentage changes in the exchange rate are much more volatile then the inflation differentials. The exchange rates the changing to a greater degree then the theories would predict.

For UK Pound: : From table 5 and table 6 we see that the exchange rate between Taka and UK Pound does not move as PPP, IRP and IFE theories. There is a disparity. The percentage changes in the exchange rate are much more volatile then the inflation differentials. The exchange rates the changing to a greater degree then the theories would predict.

Chapter 4

4.1 Related Research Framework

The conceptual framework and its key constructs were established initially from the economic data of Bangladesh. Based on their inputs, and judging from the literature on the topic from other countries, a number of service factors were identified. Four important attributes of economy emerged as latent variables from the data structure.

A set of related latent factors related to the choice of exchange rates in terms of interest rates (lending and deposit), inflation rates and GDP growth rates (at current market price and constant market price) of Bangladesh selected for use in the present study.

Four important attributes of economy which we considered here to identify that if they have any impact on the exchange rates behavior for our countries are:

1. Interest Rates for Deposit
2. Inflation Rates
3. GDP Growth Rates at Current Market Price and
4. GDP Growth Rates at Constant market price

Here we choose the popular currencies which exchanges more with Bangladeshi currencies like Indian Rupee, Japanese Yen, US Dollar, U.K Pound and Euro.

4.2 Variable Definition

With the increasing foreign trade, the exchange rates have more importance in our country's economy. There are some countries that have a huge impact with Bangladesh in case of export import. India, Japan, U.S, U.K and Euro countries are involving more with Bangladesh for international business. Another thing is, among these countries the visits of Bangladeshi people's happen more. So the Bangladeshi Taka exchanges more against these currencies. Some valuable currencies for our country are Indian Rupee, Japanese Yen, US Dollar, U.K Pound and Euro with which our currency exchanges more. So in this project, these currencies are considered to find an analysis that why the fluctuation happens towards the currencies. Thus the interest rates of Bangladesh, inflation rates of Bangladesh and GDP growth rate of this country have any impact on this appreciation or depreciation of the foreign currency against taka or not.

I identified some problems behind my research process and those are -

4.2.1 Broad Statement:

Whether the interest rates for deposit, inflation rates, GDP growth rates at current market price and GDP growth rates at constant market price of Bangladesh have any impact on the appreciation or depreciation of those foreign currencies or not.

4.2.2 Specific Components:

- Interest rates for deposit
- Inflation rates
- GDP growth rates at constant market price
- GDP growth rates at current market price

4.2.2.1. Interest rates for deposit:

Interest rate is a rate which is charged or paid for the use of money. An interest rate is often expressed as an annual percentage of the principal. It is calculated by dividing the amount of interest by the amount of principal. Interest rates often change as a result of inflation.

Table 7: Interest Rate of Bangladesh

Year	Interest rates Deposit Rate (%)	Growth (%)
1999-00	8.64	
2000-01	8.85	2.43
2001-02	9.12	0.030
2002-03	7.51	-0.18
2003-04	6.38	-0.15
2004-05	5.51	-0.14
2005-06	5.77	0.08
2006-07	6.51	0.13
2007-08	7.23	0.11
2008-09	7.97	0.10

Source: Bangladesh Bank, Monthly Economic Trends (June 2009)

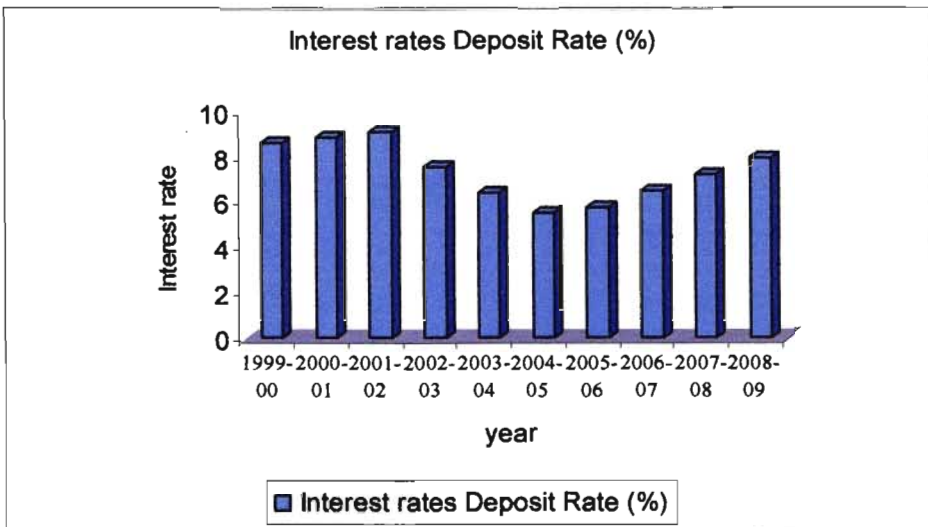


Figure 4: Interest rates Deposit Rate (%)

From the figure 4 we see that, from 2000-01 and 2001-02 interest rate increases. But from 2002-03 to 2005-06 interest rates showed a decreasing trend. From 2006-07 again started to increase.

4.2.2.2. Inflation Rate

The inflation rate is one of the most important economic forces consistently weighing on the value of a nation's currency. In economics, the **inflation rate** is a measure of inflation, the rate of increase of a price index (for example, a consumer price index). It is the percentage rate of change in price level over time. The rate of decrease in the purchasing power of money is approximately equal.

Table 8: Inflation Rate of Bangladesh

Year	Inflation Rates 12th month average	Growth (%)
1999-00	2.79	
2000-01	1.94	-30.46
2001-02	2.79	43.81
2002-03	4.38	56.98
2003-04	5.83	33.10
2004-05	6.48	11.15
2005-06	7.16	10.49
2006-07	7.2	0.56
2007-08	9.94	38.05
2008-09	6.66	-32.99

Source: Bangladesh Bank, Monthly Economic Trends (June 2009)

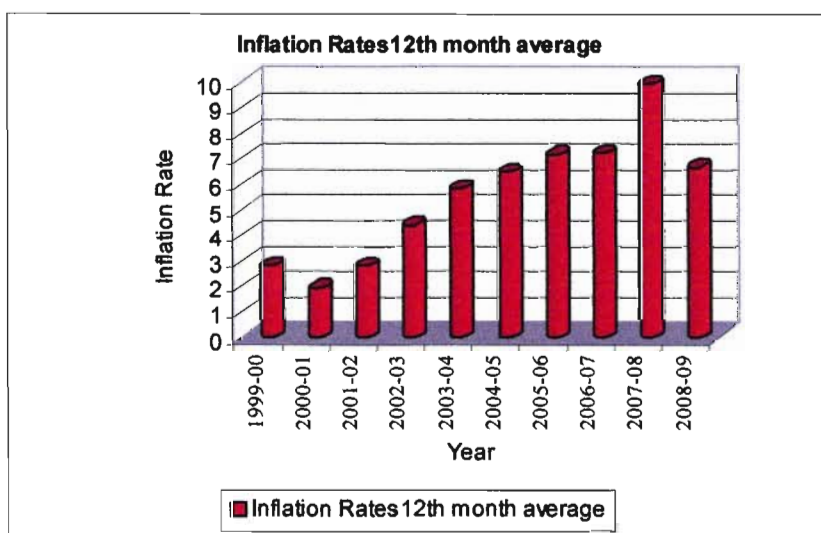


Figure 5: Inflation Rate

From the figure 5 we see that in 2000-01 the inflation rate decreases by 30.46% but from 2001-02 inflation rates started in increase. In the period 2007-08 the rate is in the highest position (9.94). But in the year 2008-09 the inflation decreases by 32.99%

4.2.2.3. GDP growth rates at constant market price

Table 9: GDP Growth at constant market rate (%)

Year	GDP at constant market rate	GDP Growth at constant market rate (%)
1999-00	204927	5.94
2000-01	215735	5.27
2001-02	225261	4.42
2002-03	237101	5.26
2003-04	251968	6.27
2004-05	266974	5.96
2005-06	284673	6.63
2006-07	302971	6.43
2007-08	211726	6.19
2008-09	340652	5.88

Source: Bangladesh Bank, Monthly Economic Trends (June 2009)

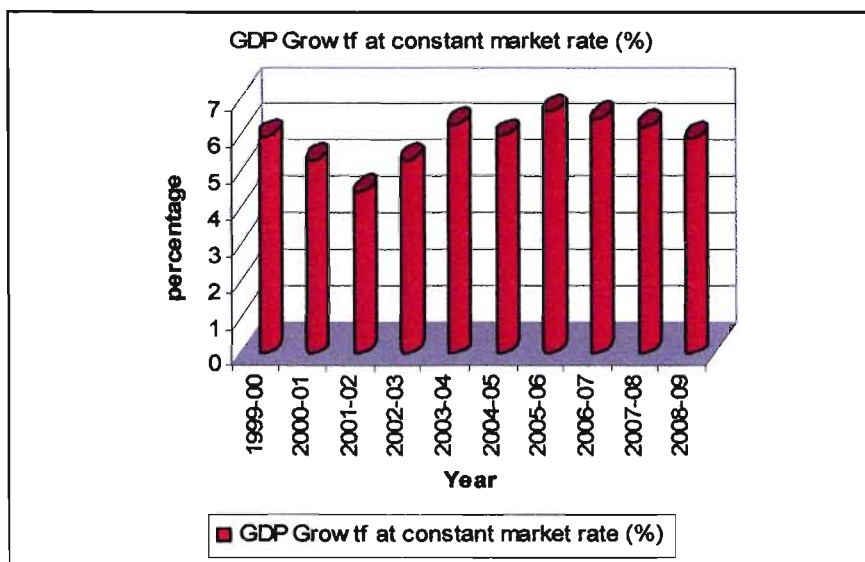


Figure 6: GDP Growth at constant market rate (%)

From the figure 6 we see that the GDP growth rate at constant market rate was 5.27% in the period 2001-02. But in 2001-02 GDP decrease by 4.42%. From 2002-03 GDP started to increase and it had an increasing trend till 2005-06. But during the period 2006-07 to 2008-09 GDP growth rate showed a decreasing trend.

4.2.2.4. GDP growth rates at current market price

Table 10: GDP growth rates at current market price

Year	GDP at Current Market Price	GDP Growth Rates at Current Market Price (%)
1999-00	237086	7.91
2000-01	253546	6.94
2001-02	273201	7.75
2002-03	300580	10.02
2003-04	332973	10.78
2004-05	370707	11.33
2005-06	415728	12.14
2006-07	472477	13.65
2007-08	545822	15.52
2008-09	614943	12.66

Source: Bangladesh Bank, Monthly Economic Trends (June 2009)

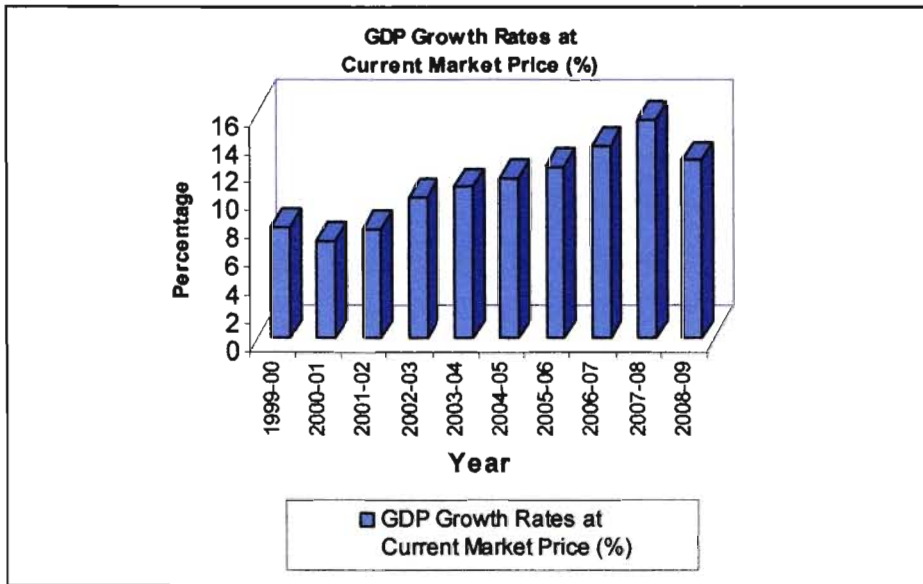


Figure 7: GDP growth rates at current market price

From the figure 7 we see that in the year 1999-00 the GDP growth rate at current market price was 7.91%. But GDP growth rate during 2001-02 was low (6.94%) compare to the previous year. From 2001-02 GDP showed an increasing trend. But again in the year 2008-09 GDP growth was low (12.66%) compare to the previous year.



4.3 Approaches to the Problem

4.3.1 Theory Development

For identifying the factors that influence the exchange rates, we have initially identified some variables, which are significantly correlated with the economic sector. When an individual thinks about exchange rates fluctuations some variables of economy comes to mind like interest rates, inflation rates, GDP growth rates etc.

Theoretically, changes in the inflation rate can affect the international trade activity, which influence the demand and supply of currencies and there for influences the exchange rate. Similarly, changes in the interest rate can affect investment in foreign securities, which influence the demand and supply of currencies and there for influences the exchange rate. And all nations want their GDP to be higher rather than lower, so all nations want their net exports to be positive. (Of course it is not possible for all nations to have positive net exports because one or more nations must import more than they export if the others export more than they import.). So that may influence the exchange rate between two countries So we can conclude that, exchange rates fluctuation is based on the simultaneous activation of these variables. These variables are to be described under the research design, then for data collection I have to select a sample, for analyzing data I have to determine the relevant analysis technique and finally the findings will be interpreted with the existing body of knowledge.

4.3.2 Model Development

For preparing my project report, I followed and used the mathematical models. I have some regression equations to identify some components known as dependent and independent variables and their impacts on the research. The equation:

$$Y = \beta_0 + \beta_1 \cdot X_1 + \beta_2 \cdot X_2 + \beta_3 \cdot X_3 + \beta_4 \cdot X_4 + \beta_5 \cdot X_5$$

Y = Dependent Variable (Exchange rates Fluctuations)

Beta = Constant

X = Independent Variable

(X_1 =Interest Rates for Lending, X_2 = Interest Rates for Deposit, X_3 =Inflation Rates, X_4 =GDP Growth Rates at Current Market Price, X_5 = GDP Growth Rates at Constant Market Price)

4.3.3 Research Questions

1. Does interest rates of Bangladesh for commercial deposit directly influence the exchange rates (Rs, ¥, \$, £, €)?
2. Does inflation rates of Bangladesh directly influence the exchange rates (Rs, ¥, \$, £, €)?
3. Does GDP Growth Rates at Current Market Price of Bangladesh directly influence the exchange rates (Rs, ¥, \$, £, €)?
4. Does GDP Growth Rates at Constant Market Price of Bangladesh directly influence the exchange rates (Rs, ¥, \$, £, €)?

4.3.4 Data Consideration

To analysis the data I considered the last 10 years interest rates, inflation rates and GDP growth rates of Bangladesh. This date will be use to determine whether interest rate, inflation rate and GDP has any impact on exchange rate

Table 11: Interest rates, Inflation rates & GDP growth rates of Bangladesh

Year	Interest rates Deposit Rate (%)	Inflation Rates 12th month average	GDP Growth Rates at Current Market Price (%)	GDP Growth Rates at Constant Market Price (%)	Exchange Rates Indian Rupee (Period Average)	Exchange Rates Japanese Yen (Period Average)	Exchange Rates US Dollar (Period Average)	Exchange Rates U.K. Pound (Period Average)	Exchange Rates Euro (Period Average)
1999-00	8.64	2.79	7.91	5.94	1.15	0.47	50.31	80.04	50.29
2000-01	8.85	1.94	6.94	5.27	1.16	0.47	53.96	78.32	48.21
2001-02	9.12	2.79	7.75	4.42	1.19	0.46	57.43	82.86	51.43
2002-03	7.51	4.38	10.02	5.26	1.21	0.48	57.9	91.75	60.63
2003-04	6.38	5.83	10.78	6.27	1.3	0.53	58.94	108.07	70.46
2004-05	5.51	6.48	11.33	5.96	1.38	0.57	61.39	114.11	78.16
2005-06	5.77	7.16	12.14	6.63	1.5	0.59	67.08	119.41	81.74
2006-07	6.51	7.2	13.65	6.43	1.57	0.58	69.03	133.44	90.17
2007-08	7.23	9.94	15.52	6.19	1.71	0.62	68.6	137.48	100.96
2008-09	7.97	6.66	12.66	5.88	1.45	0.7	68.8	111.17	94.52

Source: Bangladesh Bank, Monthly Economic Trends (June 2009)

4.3.5 Hypotheses Development

Hypotheses can be developed from the above framework are:

Hypothesis 1:

Interest Rates (commercial deposit) directly influence the fluctuations of Exchange Rates (Rs, ¥, \$, £, €).

Hypothesis 2:

Inflation Rates directly influence the fluctuations of Exchange Rates (Rs, ¥, \$, £, €).

Hypothesis 3:

GDP Growth Rates (current market Price) directly influence the fluctuations of Exchange Rates (Rs, ¥, \$, £, €).

Hypothesis 4:

GDP Growth Rates (constant market Price) directly influence the fluctuations of Exchange Rates (Rs, ¥, \$, £, €).

4.4 Data Analysis

4.4.1 Linear Regression

Data were analyzed via regression analysis using Linear Regression Model. Linear regression refers to any approach to modeling the relationship between one or more variables denoted y and one or more variables denoted X , such that the model depends linearly on the unknown parameters to be estimated from the data. Such a model is called a "linear model." Given a data set $\left[\left\{ y_i, x_{i1}, \dots, x_{ip} \right\}_{i=1}^n \right]$ of n statistical units, a linear regression model assumes that the relationship between the dependent variable y_i and the p -vector of regressors x_i is approximately linear. This approximate relationship is modeled through a so-called

“disturbance term” ε_i — an unobserved random variable that adds noise to the linear relationship between the dependent variable and regressors. Linear regression has many practical uses. Most applications of linear regression fall into one of the following two broad categories:

- If the goal is prediction, or forecasting, linear regression can be used to fit a predictive model to an observed data set of y and X values. After developing such a model, if an additional value of X is then given without its accompanying value of y , the fitted model can be used to make a prediction of the value of y .
- Given a variable y and a number of variables X_1, \dots, X_p that may be related to y , then linear regression analysis can be applied to quantify the strength of the relationship between y and the X_j , to assess which X_j may have no relationship with y at all, and to identify which subsets of the X_j contain redundant information about y , thus once one of them is known, the others are no longer informative.

4.5 Results and Findings:

4.5.1. For Indian Rupee:

Here,

Predictors: (Constant), GDP Growth Rates at Constant Market Price (%), GDP Growth Rates at Current Market Price(%), Interest rates Commercial Deposit Rate(%), Inflation Rates 12th month average

Dependent Variable: Exchange Rates Indian Rupee (Period Average)

Table 12: Model Analysis for Indian Rupee

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.970(a)	.942	.895	.06235

From the regression analysis, we have found that the Value of R Square is .942. That means- Independent variable (interest rates for deposit, inflation rates, and GDP growth rates at current market price and GDP growth rates at constant market price) has 94.2% impact over the dependent variable (Indian Rupee).

**Table 13: Coefficients (Indian Rupee)
(Hypothesis testing)**

Mode	Independent Variable	Unstandardized Coefficients		Standardized Coefficients	t-value	Sig.(p-value)
		B	Std. Error	Beta		B
1	(Constant)	0.477	0.427		1.119	0.314
	Interest rates Commercial Deposit Rate (%)	.024	0.024	0.164	.869	0.425
	Inflation Rates (12 months average)	.045	0.054	0.588	0.832	0.443
	GDP Growth Rates at Current Market Price (%)	.030	0.046	.437	0.656	0.541
	GDP Growth Rates at Constant Market Price (%)	.022	0.051	0.075	0.420	0.692

$$Y = \beta_0 + \beta_1 \cdot X_1 + \beta_2 \cdot X_2 + \beta_3 \cdot X_3 + \beta_4 \cdot X_4 + \beta_5 \cdot X_5$$

Exchange Rate Fluctuation(Rs) = 0+(.164)(.869)+(.832)(.443)+(.437)(.656)+(.420)(.692)

Hypothesis 1: Interest Rates (commercial deposit) directly influence the fluctuations of Exchange Rates (Rs):

Interest Rates (commercial deposit) have a positive influence on the exchange rate of Indian Rupee but it is not statistically significant as we can see that the p value (0.425) is larger than alpha value (.05). So, hypothesis 1 is rejected. That means that interest rates (deposit) do not influence the fluctuation of exchange rate directly.

So, H1 is rejected

Hypothesis 2: Inflation Rates directly influence the fluctuations of Exchange Rates:

Inflation Rates have a positive influence on the exchange rate of Indian Rupee but it is not statistically significant as we can see that the p value (0.443) is larger than alpha value (.05). That means that inflation rates do not influence the fluctuation of exchange rate directly.

So, H2 is rejected

Hypothesis 3: GDP Growth Rates (current market Price) directly influence the fluctuations of Exchange Rates (Rs):

From table-8, it is visible that GDP Growth Rates (current market Price) has a positive influence on the exchange rate of Indian Rupee but it is not statistically significant as we can see that the p value (.541) is larger than alpha value (.05). That means that GDP growth rates (current market price) do not influence the fluctuation of exchange rate directly.

So, H3 is rejected

Hypothesis 4: GDP Growth Rates (constant market Price) directly influence the fluctuations of Exchange Rates (Rs):

GDP Growth Rates (constant market Price) has a positive influence on the exchange rate of Indian Rupee but it is not statistically significant as we can see that the p value (.692) is larger than alpha value (.05). That means that GDP growth rates (constant market Price) do not influence the fluctuation of exchange rate directly.

So, H4 is rejected



4.5.2 For Japanese Yen:

Here,

Predictors: (Constant), GDP Growth Rates at Constant Market Price (%), GDP Growth Rates at Current Market Price(%), Interest rates Commercial Deposit Rate(%), Inflation Rates 12th month average

Dependent Variable: Exchange Rates Japanese Yen (Period Average)

Table 14: Model Analysis for Japanese Yen

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.836(a)	.699	.458	.05829

From the regression analysis, we have found that the Value of R Square is .699. That means-Independent variable (interest rates for lending, interest rates for deposit, inflation rates, GDP growth rates at current market price and GDP growth rates at constant market price) has 69.9% impact over the dependent variable (Japanese Yen).

Table 15: Coefficients (Japanese Yen)
(Hypothesis testing)

Model		Unstandardized Coefficients		Standardized Coefficients	t-value	Sig. (p-value)
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	.097	.399		.244	.817
	Interest rates Commercial Deposit Rate (%)	.012	.026	.197	.460	.665
	Inflation Rates 12th month average	.003	.051	.105	.065	.951
	GDP Growth Rates at current market price (%)	.021	.043	.733	.484	.649
	GDP Growth Rates at constant market price (%)	.020	.048	.166	.412	.697

$$Y = \beta_0 + \beta_1 \cdot X_1 + \beta_2 \cdot X_2 + \beta_3 \cdot X_3 + \beta_4 \cdot X_4 + \beta_5 \cdot X_5$$

Exchange Rate Fluctuation(¥) = 0 + (.197)(.460) + (.105)(.065) + (.733)(.484) + (.166)(.412)

Hypothesis 1: Interest Rates (commercial deposit) directly influence the fluctuations of Exchange Rates (¥)

Interest Rates (commercial deposit) also have a positive influence on the exchange rate of Japanese Yen but it is not statistically significant as we can see that the p value (.665) is larger than alpha value (.05). That means that interest rates (deposit) dose not influence the fluctuation of exchange rate of Japanese Yen directly.

So, H1 is rejected

Hypothesis 2: Inflation Rates directly influence the fluctuations of Exchange Rates (¥)

Inflation Rates have a positive influence on the exchange rate of Japanese Yen but it is not statistically significant as we can see that the p value (.951) is larger than alpha value (.05).

That means that inflation rates dose not influence the fluctuation of exchange rate of Japanese Yen directly.

So, H2 is rejected

Hypothesis 3: GDP Growth Rates (current market Price) directly influence the fluctuations of Exchange Rates (¥)

From table-15, it is visible that GDP Growth Rates (current market Price) has a positive influence on the exchange rate of Japanese Yen but it is not statistically significant as we can see that the p value (.649) is larger than alpha value (.05). That means that GDP growth rates (current market price) dose not influence the fluctuation of exchange rate of Japanese Yen directly.

So, H3 is rejected

Hypothesis 4: GDP Growth Rates (constant market Price) directly influence the fluctuations of Exchange Rates (¥)

GDP Growth Rates (constant market Price) has a positive influence on the exchange rate of Japanese Yen but it is not statistically significant as we can see that the p value (.697) is larger than alpha value (.05). That means that GDP growth rates (constant market Price) dose not influence the fluctuation of exchange rate of Japanese Yen directly.

So, H4 is rejected

4.5.3 For US Dollar

Here,

Predictors: (Constant), GDP Growth Rates at Constant Market Price (%), GDP Growth Rates at Current Market Price(%), Interest rates Commercial Deposit Rate(%), Inflation Rates 12th month average

Dependent Variable: Exchange Rates US Dollar (Period Average)

Table 16: Model Analysis for US Dollar

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.922(a)	.850	.729	3.50887

From the regression analysis, we have found that the Value of R Square is .850. That means- Independent variable (interest rates for lending, interest rates for deposit, inflation rates, GDP growth rates at current market price and GDP growth rates at constant market price) has 85.0% impact over the dependent variable (US Dollar).

**Table 17: Coefficients (US Dollar)
(Hypothesis testing)**

Model		Unstandardized Coefficients		Standardized Coefficients	t-value	Sig. (p-value)
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	46.168	24.009		1.923	.113
	Interest rates Commercial Deposit Rate (%)	-.753	1.580	-.144	-.477	.654
	Inflation Rates 12th month average	-1.757	3.058	-.652	-.574	.591
	GDP Growth Rates at current market price (%)	3.889	2.607	1.597	1.491	.196
	GDP Growth Rates at constant market price (%)	-2.037	2.889	-.201	-.705	.512

$$Y = \beta_0 + \beta_1 \cdot X_1 + \beta_2 \cdot X_2 + \beta_3 \cdot X_3 + \beta_4 \cdot X_4 + \beta_5 \cdot X_5$$

Exchange Rate Fluctuation(\$) =

$$0 + (-.144)(-.477) + (-.652)(-.574) + (1.597)(1.491) + (-.201)(-.705)$$

Hypothesis 1: Interest Rates (commercial deposit) directly influence the fluctuations of Exchange Rates (¥)

Interest Rates (commercial deposit) also have a positive influence on the exchange rate of Japanese Yen but it is not statistically significant as we can see that the p value (.654) is larger than alpha value (.05). That means that interest rates (deposit) dose not influence the fluctuation of exchange rate of US Dollar directly.

So, H1 is rejected

Hypothesis 2: Inflation Rates directly influence the fluctuations of Exchange Rates (¥)

Inflation Rates have a positive influence on the exchange rate of Japanese Yen but it is not statistically significant as we can see that the p value (.591) is larger than alpha value (.05). That means that inflation rates dose not influence the fluctuation of exchange rate of US Dollar directly.

So, H2 is rejected

Hypothesis 3: GDP Growth Rates (current market Price) directly influence the fluctuations of Exchange Rates (¥)

From table-17, it is visible that GDP Growth Rates (current market Price) has a positive influence on the exchange rate of Japanese Yen but it is not statistically significant as we can see that the p value (.196) is larger than alpha value (.05). That means that GDP growth rates (current market price) dose not influence the fluctuation of exchange rate of US Dollar directly.

So, H3 is rejected

Hypothesis 4: GDP Growth Rates (constant market Price) directly influence the fluctuations of Exchange Rates (¥)

GDP Growth Rates (constant market Price) has a positive influence on the exchange rate of Japanese Yen but it is not statistically significant as we can see that the p value (.512) is larger than alpha value (.05). That means that GDP growth rates (constant market Price) dose not influence the fluctuation of exchange rate of US Dollar directly.

So, H4 is rejected



4.5.4 For U.K Pound:

Here,

Predictors: (Constant), GDP Growth Rates at Constant Market Price (%), GDP Growth Rates at Current Market Price(%), Interest rates Commercial Deposit Rate(%), Inflation Rates 12th month average

Dependent Variable: Exchange Rates U.K Pound (Period Average)

Table 18: Model Analysis for U.K Pound

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.982(a)	.964	.935	5.50840

From the regression analysis, we have found that the Value of R Square is .964. That means- Independent variable (interest rates for lending, interest rates for deposit, inflation rates, GDP growth rates at current market price and GDP growth rates at constant market price) has 96.4% impact over the dependent variable (U.K Pound).

**Table 19: Coefficients (U.K Pound)
(Hypothesis testing)**

Model		Unstandardized Coefficients		Standardized Coefficients	t-value	Sig. (p-value)
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	50.457	37.691		1.339	.238
	Interest rates Commercial Deposit Rate (%)	-2.945	2.481	-.176	-1.187	.288
	Inflation Rates 12th month average	-.074	4.801	-.009	-.015	.988
	GDP Growth Rates current market price (%)	6.640	4.093	.852	1.622	.166
	GDP Growth Rates at constant market price (%)	.873	4.535	.027	.192	.855

$$Y = \beta_0 + \beta_1 \cdot X_1 + \beta_2 \cdot X_2 + \beta_3 \cdot X_3 + \beta_4 \cdot X_4 + \beta_5 \cdot X_5$$

Exchange Rate Fluctuation (£) =

$$0 + (-.176)(-1.187) + (-.009)(-.015) + (.852)(1.622) + (.027)(.192)$$

Hypothesis 1: Interest Rates (commercial deposit) directly influence the fluctuations of Exchange Rates (¥)

Interest Rates (commercial deposit) also have a positive influence on the exchange rate of Japanese Yen but it is not statistically significant as we can see that the p value (.288) is larger than alpha value (.05). That means that interest rates (deposit) do not influence the fluctuation of exchange rate of U.K Pound directly.

So, H1 is rejected

Hypothesis 2: Inflation Rates directly influence the fluctuations of Exchange Rates (¥)

Inflation Rates have a positive influence on the exchange rate of Japanese Yen but it is not statistically significant as we can see that the p value (.988) is larger than alpha value (.05). That means that inflation rates do not influence the fluctuation of exchange rate of U.K Pound directly.

So, H2 is rejected

Hypothesis 3: GDP Growth Rates (current market Price) directly influence the fluctuations of Exchange Rates (¥)

From table-19, it is visible that GDP Growth Rates (current market Price) has a positive influence on the exchange rate of Japanese Yen but it is not statistically significant as we can see that the p value (.166) is larger than alpha value (.05). That means that GDP growth rates (current market price) do not influence the fluctuation of exchange rate of U.K Pound directly.

So, H3 is rejected

Hypothesis 4: GDP Growth Rates (constant market Price) directly influence the fluctuations of Exchange Rates (¥)

GDP Growth Rates (constant market Price) has a positive influence on the exchange rate of Japanese Yen but it is not statistically significant as we can see that the p value (.855) is larger than alpha value (.05). That means that GDP growth rates (constant market Price) dose not influence the fluctuation of exchange rate of U.K Pound directly.

So, H4 is rejected

4.5.5 For Euro:

Here,

Predictors: (Constant), GDP Growth Rates at Constant Market Price (%), GDP Growth Rates at Current Market Price(%), Interest rates Commercial Deposit Rate(%), Inflation Rates 12th month average

Dependent Variable: Exchange Rates Euro (Period Average)

Table 20: Model Analysis for Euro

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.976(a)	.953	.915	5.67901

From the regression analysis, we have found that the Value of R Square is .960. That means- Independent variable (interest rates for lending, interest rates for deposit, inflation rates, GDP growth rates at current market price and GDP growth rates at constant market price) has 96.0% impact over the dependent variable (Euro).



Table 21: Coefficients (Euro)
(Hypothesis testing)

Model		Unstandardized Coefficients		Standardized Coefficients	t-value	Sig. (p-value)
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	-11.997	38.858		-.309	.770
	Interest rates Commercial Deposit Rate (%)	.726	2.558	.048	.284	.788
	Inflation Rates 12th month average	.150	4.949	.019	.030	.977
	GDP Growth Rates current market price (%)	6.786	4.220	.968	1.608	.169
	GDP Growth Rates at constant market price (%)	.813	4.676	.028	.174	.869

$$Y = \beta_0 + \beta_1 \cdot X_1 + \beta_2 \cdot X_2 + \beta_3 \cdot X_3 + \beta_4 \cdot X_4 + \beta_5 \cdot X_5$$

Exchange Rate Fluctuation(€) =

$$0 + (.048) + (.284) + (.019)(.030) + (.968)(1.608) + (.028)(.174)$$

Hypothesis 1: Interest Rates (commercial deposit) directly influence the fluctuations of Exchange Rates (¥)

Interest Rates (commercial deposit) also have a positive influence on the exchange rate of Euro but it is not statistically significant as we can see that the p value (.788) is larger than alpha value (.05). That means that interest rates (deposit) dose not influence the fluctuation of exchange rate of Euro directly.

So, H1 is rejected

Hypothesis 2: Inflation Rates directly influence the fluctuations of Exchange Rates (¥)

Inflation Rates have a positive influence on the exchange rate of Euro but it is not statistically significant as we can see that the p value (.977) is larger than alpha value (.05). That means that inflation rates dose not influence the fluctuation of exchange rate of Euro directly.

So, H2 is rejected

Hypothesis 3: GDP Growth Rates (current market Price) directly influence the fluctuations of Exchange Rates (¥)

From table-21, it is visible that GDP Growth Rates (current market Price) has a positive influence on the exchange rate of Euro but it is not statistically significant as we can see that the p value (.169) is larger than alpha value (.05). That means that GDP growth rates (current market price) dose not influence the fluctuation of exchange rate of Euro directly.

So, H3 is rejected

Hypothesis 4: GDP Growth Rates (constant market Price) directly influence the fluctuations of Exchange Rates (¥)

GDP Growth Rates (constant market Price) has a positive influence on the exchange rate of Euro but it is not statistically significant as we can see that the p value (.869) is larger than alpha value (.05). That means that GDP growth rates (constant market Price) dose not influence the fluctuation of exchange rate of Euro directly.

So, H4 is rejected

4.6 DISCUSSIONS

This study was conducted to examine the factors influencing exchange rates in Bangladesh and also to know the management of exchange rate in Bangladesh. In general, this study tested the direct influence on the interest rates, inflation rates and GDP growth rates on the exchange rate fluctuations for Indian Rupee, Japanese Yen, US Dollar, U.K Pound and Euro. The results proposed a model where no variable has shown direct positive and significant influence on the exchange rates fluctuations.

I have tested it by conducting a Regression analysis. So I can say that none of these are the most important factors and according to the study all these have positive influence but not significant statistically. I hypothesized that interest rates, inflation rates and GDP growth rates directly influenced the exchange rate movement. Result does not support these hypotheses. So the alternative hypothesis accepted which means interest rates, inflation rates and GDP growth rate does not directly influenced the exchange rate movement.

In this project I have also examine the exchange rate management and policies during 2000 to 2009. Exchange rate management in Bangladesh can be rated as good since the exchange rate remains very close to its equilibrium as warranted by economic fundamentals. However, there is scope to improve exchange rate management with some pragmatic policies as indicated below

- A managed floating exchange rate system with a policy of short-term stability and long-to-medium term flexibility might be appropriate for Bangladesh. Exchange rate can be allowed to move along the market trend to a certain extent and intervention would be desirable to smooth out the pace of depreciation/appreciation.
- The management of the nominal exchange rate must not be ad-hoc; rather it can be managed by taking the policy of REER stabilization. Since Bangladesh's trade is dollar-denominated, we propose to create a REER basket of five major currencies (instead of eight currencies in the current system) including the Rupee, US dollar, the Euro, the UK pound and the Japanese yen. In that case, it would be easier for the central bank to maintain the stability of the REER easily.

- For **managing** floats, an active intervention in the foreign exchange market requires the *accumulation of a sufficiently large stock of reserves*. A frequent and small adjustment to the **exchange rate** can be appropriate in the sense that it may help sustain a reasonable levels of **international reserves**.
- A **trigger** mechanism needs to be adopted for additional adjustments in the face of a real **shock** which cannot be absorbed by gradual adjustments in domestic prices. In the face of a **crisis**, it is better to stabilize the NEER instead of the REER when other trading-partner **currencies** are fluctuating against each other.
- **Finally**, it is necessary for Bangladesh to work toward institutional development such as **inter-bank** bond market with greater emphasis given to financial liberalization in order to **bring** depth and efficiency to the foreign exchange market.

4.7 CONCLUDING REMARKS

Exchange Rate drives the economic sector of our country. If the exchange rates become stable for a long period of time then the scope for foreign trade of our country can be wider. For this reason, in my analysis I tried to find the direct relations of the main economic variables with the exchange rate changes. But these variables do not have any direct influence on the exchange rates.

The very important economic factors of Bangladesh which considered here (interest rates, inflation rates and GDP growth rate) to find the possible result behind the reason that influence the exchange rates are not responsible for changes of exchange rate. Although these economic factors have relations with exchange rate but these do not have any impact which can directly pressure the appreciation or depreciation of the currencies value and it already proven in previous tests. From the previous analysis, we can sure that the increase and decrease of the interest rate, inflation rate and GDP growth rate are not responsible to increase and decrease of the value of exchange rate. So we can not say that if the interest rate, inflation rate and GDP growth rate are increase the exchange rate fluctuation are increases or if decrease then exchange rate fluctuation also decreases. So there must be another reason which directly influences the exchange rates behavior. These economic factors may help or appreciate the obvious reason which is responsible for exchange rate changes but not directly influenced the movement of the exchange rate against Bangladeshi Taka.

Results of this study substantially contribute to understanding of the factors that influence the exchange rate movements. This study has produced greater understanding of the variables that appear to be most influential in exchange rate fluctuations in Bangladesh. Results of this study should provide the economy with greater insight concerning the factors that influence exchange rates most. This research clarifies the roles of interest rates, inflation rates and GDP growth rates in case of exchange rate movements.

This project also analyzes exchange rate policies and management of Bangladesh under a floating rate regime in a comprehensive manner. It analyzes both the behaviour of the nominal exchange rate and the real exchange rate. Although Bangladesh was committed to maintain a freely floating regime, our findings suggest that its exchange rate policies were not

consistent with the characteristics of freely floating regime. Generally speaking, Bangladesh **pursues** a managed floating rate regime. Given the *thin* foreign exchange market, high **exchange rate** pass-through and exchange rate shocks (exchange market pressure), it appears **to be difficult** for Bangladesh to maintain a freely floating regime.

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