MONEY MARKET AND FOREIGN EXCHANGE TRANSACTIONS: BANGLADESH PERSPECTIVE

A DISSERTATION PRESENTED TO
UNIVERSITY OF DHAKA

FOR THE DEGREE OF MASTER OF PHILOSOPHY IN BANKING

Supervisor

DR. AZIZUR RAHMAN KHAN
Professor and Founder Chairman
Department of Banking & Insurance
Faculty of Business Studies
University of Dhaka

Prepared By

MUHAMMAD MONIRUL HOQUE JUWEL
M.Phil Roll: 01, Reg.: 309, Session: 2004-2005
Department of Banking& Insurance
Faculty of Business Studies
University of Dhaka

Dhaka; October 7, 2012

The thesis has not been submitted for the award of any other degree of this or any other Institute/University.

DR. AZIZUR RAHMAN KHAN
Professor and Founder Chairman
Department of Banking & Insurance
Faculty of Business Studies
University of Dhaka

DECLARATION

I, Muhammad Monirul Hoque Juwel, MPhil Researcher, University of Dhaka do hereby declare that the thesis on "Money Market and Foreign Exchange Transactions: Bangladesh Perspective" is an original and benefited work done by me for partial fulfillment of the MPhil program, as a part of academic curriculum which not been previously submitted and shall not in future be submitted for obtaining similar degree from any other University. I have tried my best to make this report as informative as possible.

I further undertake to indemnify the Banking Department against any loss or damage arising from breach of the foregoing obligations.

Muhammad Monirul Hoque Juwel
Signature of the MPhil Researcher
MPhil Roll no.: 01
Reg. no. : 309/2004-05
Session : 2004-2005
Department : Banking & Insurance
Faculty : Business Studies

ACKNOWLEDGEMENT

"In the name of ALLAH, The Beneficent and The Merciful"

Praise be to ALLAH that gives me an opportunity to complete this research on "Money Market and Foreign Exchange Transactions: Bangladesh Perspective".

First and foremost, I am deeply indebted to my supervisor Dr. A R Khan, Professor & Founder Chairman, Department of Banking & Insurance, University Dhaka for his stimulation inspiration astute guidance, valuable suggestion, sagacious advice's and whole-hearted supervision to me during the practical orientation period. Without him, simply this piece of work would have not been possible. One simple cannot wish for any better or friendlier supervisor than him.

I would like to express my deepest gratitude to University of Dhaka, especially to Department of Banking and Insurance that provide support for the research. I am extremely appreciative to Prof. M. Muzahidul Islam, a great deal thankful to the Chairman Professor Dr. Md. Rafiqul Islam and Prof. Shibli Rubayat Ul Islam of Dhaka University who were my teachers of this department. I have acknowledged their suggestions and tools of techniques how to complete a business research. I would like to extend sincere thanks to Prof. Dr. Shah Md. Ahsan Habib and Associate Prof. Md. Mohiuddin Siddique, BIBM for their valuable advice.

I would like to extend my gratitude and appreciation to the Bangladesh Bank and BASIC Bank Ltd. who provides me the data used and other contributors who help make this research possible. I wish to express my sincere gratitude to Mr. Abdul Adud, DGM of BASIC Bank for providing me with necessary support. Great appreciation goes to my friend Md. Tawhidul Islam helped me a great deal of ideas on how the study usually works.

Last but not least I owe and respectfully offer my thanks to my noble parents for their constant moral support and mellifluous affection which helped me to achieve success in every sphere of life and without their kind devotion this thesis would have been a sheer dream. I thank my beloved wife, Nargis Akter for her support, strength, encouragement while I worked on this research.

And finally, I would like to say that I have tried to prepare this report accurately. However there might be some errors and mistakes. So I seek kind consideration as I am in the process of learning. I hope this research will benefit not only the academic and university but also to the public at large.

Above all, I thank Almighty Allah for all mercies.

TABLES OF CONTENTS

FOCUS	PAGE
Chapter: Preparatory	i-ix
i. Declaration	i
ii. Acknowledgement	ii
iii. Tables of Contents	iii-iv
iv. List of Tables, Figures, Charts & Graphs	v-vi
v. List of Acronyms	vii-ix
Chapter-1: Introduction	1-12
1.1 Background of the Study	1
1.2 Statement of the Problem	3
1.3. Objectives of the Study	6
1.4 Rationale of the Study	6
1.5 Methodology of the Study	7
1.6 Plan of Presentation	11
1.7 Limitations of the Study	12
Chapter-2: Review of Literature	13-18
Chapter-3: Financial Systems of Bangladesh	19-27
3.1 Definition & Structure	19
3.2 Financial Institutions /Intermediaries	21
3.3 Financial Instruments	22
3.4 Financial System: Bangladesh Context	24
3.5 Financial Institutions in Bangladesh	26

TABLES OF CONTENTS

FOCUS	PAGE
Chapter-4: Financial Market of Bangladesh	28-49
4.1 Definition & Structure	28
4.2 Money Market	30
4.3 Foreign Exchange Market	33
4.4 Participants	36
4.5 Instruments	39
4.6 Capital Market	47
Chapter-5: Relationship of Money Market and Forex Market	50-61
Chapter-6: Analysis and Interpretation of FOREX Risks	62-67
Chapter-7: Summary of Findings	68-69
Chapter-8: Conclusion and Recommendations	70-77
Appendix	
Bibliography	i-iv

LIST OF TABLES

TABLE #	CAPTIONS	PAGE
3.1	Financial System	20
3.2	Participant of Financial Institutions in Financial Market	21
3.3	Relationship among Financial Institutions, Financial Markets & Financial Instruments	23
3.4	Financial System of Bangladesh	25
3.5	Financial Institutions in Financial Market	26
4.1	Summary of Classification of Financial Markets can be divided into different sub types:	29
4.2	Constituents of money market Developed By author	32
4.3	Money & Capital Market Instruments/Products	33
4.4	Money Market Participant role	36
4.5	Classification of Money Markets' products can be divided into different sub type	39
4.6	Money Market developed by Author	39
4.7	Monthly Interest rates	43
4.8	Yield volatility of T-Bills in Bangladesh	45
4.9	Difference between Money Market and Capital Market	48
5.1	Exchange Rate Movements	56
5.2	Correlation between depreciation, volatility and other foreign exchange market variables	56
5.3	Comparative Movement of Bank Rate, Call Money Rate & Commercial Lending Rates	59
5.4	Correlation- matrix of Exchange & call rate	60
6.1	Forward contracts resulting in Premium and Discount:	63
6.2	Awareness of Forward Contracts	64
6.3	Usage of Forward contracts in future	64
6.4	FC account holders	65
6.5	Awareness about Pre-Shipment and Post-Shipment Credit	65
6.6(a)	FC (Deposits) A/C	66
6.6(B)	ERQ A/C	66

LIST OF FIGURES

FIG #	CAPTIONS	PAGE
1.1	Thesis method and structure	7
3.1	An integrated picture of the financial system is shown	26
4.1	Hierarchical Orders of Financial Markets	30
4.2	Overnight Money Market rates	47
5.1	Daily Exchange Rate (weighted average)	54
5.2	Exchange rate situation over the year	54
5.3	Volatility in BDT/USD Exchange Rate and Call Money Rate	60

LIST OF CHARTS

CHART #	CAPTIONS	PAGE
4.1	Structure of Foreign Exchange Market	35
4.2	Types of Foreign Exchange Market	35
5.1	Linking the Money Market to the Foreign Exchange Market	52
5.2	Movement of Nominal Exchange Rate and REER based	57
5.3	Weighted average exchange rate movement trends	58
5.4	Foreign Reserve and Nominal Exchange Rate	58

LIST OF GRAPH

GRAPH #	CAPTIONS	PAGE
3.1	An integrated picture of the financial system	19
4.1	Structure of Financial Markets	29
4.2	Money Market Instruments	40
4.3	T-BILL Yeild	46

LIST OF ACRONYMS

ALM – Asset Liability Management

BB- Bangladesh Bank

BOP-Balance of Payment

BCD -Bearer of Certificate of Deposits

BDT- Bangladesh Taka

BAFEDA -Bangladesh Foreign Exchange Dealers Association

BASIC Bank –Bangladesh Small Industries and Commerce Bank

BBS- Bangladesh Bureau of Statistics

BIBM – Bangladesh Institute of Bank Management

BIDS- Bangladesh Institute of Development Studies

BHBFC- Bangladesh House Building Finance Corporation

CD - Certificate of Deposit

CPI- Consumer Price Index

CRR- Cash Reserve Requirement

CSE - Chittagong Stock Exchange

CMO -Collateralized Mortgage Obligation

CDBL - Central Depository Bangladesh Ltd.

CRCs -Credit Rating Companies

CAMD -Capital Adequacy and Market Discipline

DD- Demand Deposits

DPS - Depository Pension Scheme

DSE - Dhaka Stock Exchange

DMB- Depository Money Bank

DSUs - Deficit Spending Units

DBH- Delta Brac Housing

ERQ -Exporter Retention Quota A/C

FCBs - Foreign Commercial Banks

FC- Foreign Currency

FY- Fiscal Year

FD- Financial Development

FDD- Foreign Demand Draft

FOREX/ FX- Foreign Exchange

FER Act – Foreign Exchange Regulations Act

FIs-Financial Institutions

FSRP -Financial Sector Reform Program

FDI –Foreign Direct Investment

IMM- Inter-bank Money Market

GDP- Gross Domestic Product

GMT –Greenwich Mean Time

GBP- Great Britain Pound

IDLC – International Development Leasing Corporation

ICB -Investment Corporation of Bangladesh

IPOs - Initial Public Offers

L/C- Letter of Credit

JPY- Japanese Yen

M1- Narrow Money

M2- Broad Money

MoF- Ministry of Finance

MPD- Monetary Policy Department

MFIs- Microfinance Institutions

MRA- Micro Credit Regulatory Authority

MCPs- Microcredit Programs

MMMFs –Money Market Mutual Funds

MIS –Management Information System

NBFIs- Non-Bank Financial Institutions

NGOs- Non Government Organizations

NCDs –Negotiable Certificate of Deposit

NHL –National Housing Ltd.

NPA – Non –Performing Asset

NPLs – Non-Performing Loans

OMO -Open Market Operations

OTC – Over the Counter

PKSF -Palli Karma Sahayak Foundation

PCBs- Private Commercial Banks

PLS -Profit-Loss Sharing

PDs- Primary Dealers

R/D- Reserve Deposit

RM- Reserve Money

R&D -Research and Development

Repo- Repurchase agreements

SCBs –State-Owned Commercial Banks

SBs -Specialized Banks

SOEs -State-Owned Enterprises

SEC- Securities and Exchange Commission

SD- Savings Deposits

SLR- Statutory Liquidity Requirement

SSUs - Surplus Spending Units

SMEs – Small and Medium Enterprises

TD- Time Deposits

TC- Traveller's Cheque

T-Bills- Treasury Bills

US- United States

USD –United State Dollar

Chapter-1: Introduction

1.1 Background of the study

The money market of Bangladesh reached its present phase through a series of changes and evolution. Initially, after liberation, money market was the major constituent part of the financial market of the country. Capital market, its other segment was a relatively smaller part. All financial institutions of the country were nationalised after liberation. The growth and evolution of money market in the country took place during the period from 1971 to the early eighties under various sets of interventionist rules and regulations of the government and as such it could hardly reflect the actual market conditions. However, in this period a vast financial superstructure with large network of commercial bank branches was established in the country. Simultaneously, non-bank financial institutions under government sector also emerged with the objective of mobilising financial resources and channelling them for short, medium and long-term credit and investments. The market participants had to operate in an environment of directed lending and loan disbursement goals, and predetermined rates of interest fixed by the authority. However, rate of interest in the call money market was flexible but due to prevalence of liberal refinance facility at predetermined rates from Bangladesh Bank, the activities of call money market remained insignificant.

In the beginning of the 1980s, money market in Bangladesh entered a new period with the denationalisation of two nationalised banks and establishment of some private banks. With this development money market assumed the characteristics of a competitive market in the country. However, the administered interest rate structure and the government's policy of priority sector lending continued to operate as factors that deterred the development of a liberalised money market in the country. Money markets play a key role in banks' liquidity management and the transmission of monetary policy. In normal times, money markets are among the most liquid in the financial sector. By providing the appropriate instruments and partners for liquidity trading, the money market allows the refinancing of short and medium-term positions and facilitates the mitigation of business' liquidity risk. The banking system and the money market represent the exclusive setting monetary policy operates in Bangladesh. A developed, active and efficient interbank market enhances the efficiency of central bank's monetary policy, transmitting its impulses into the economy best. Thus, the development of the money market smoothes the progress of financial intermediation and boosts lending to economy, hence improving the country's economic and social welfare. Therefore, the development of the money market is in all stakeholders' interests: the banking system itself, the Central Bank and the economy on the whole.

Inter-bank call money market is very important for the financial institutions for their required fund management. A short brief on the above five markets is given below. Inter bank market in Bangladesh operates in a limited scale in the form of inter bank deposits and inter bank borrowings, and has virtually no interest rate fixing mechanism. Traditionally, scheduled commercial banks lend to each other when they are in need of temporary funds. Sometimes, banks also keep a part of their resources to other banks as deposit and borrow as and when needed against the lien of those deposits. Usually, small banks keep their funds as deposits with large banks for their safety. Non-bank financial institutions also take part in this market by way of lending their fund to the deficit banks. The inter bank transactions are concentrated mainly in Dhaka city.

Call money market was initially a part of inter-bank market. In 1980s, banks participated in a limited scale in the call money market mainly to wipe out the temporary mismatch in their assets and liabilities. Formation of private banks during the 1980s provided new opportunities to develop the call money market. In 1985, two investment companies and in 1989, one leasing company were allowed to participate in the call money market. But at present, all banks including specialized banks and non-bank financial institutions are allowed to participate in this market.

Bill market is restricted to buying and selling of government treasury bills. Commercial banks and non-bank financial institutions are obliged to buy these bills as approved securities to meet their Statutory Liquidity Requirement (SLR) under the Banking Company Act-1994. Moreover, these instruments are being used to mop up excess cash from the banking sector and help government to borrow money from the banks to meet its budgetary shortfall. But the commercial bill market remains very narrow in our country. Treasury bill rate largely influences the market rate of other segments of the money market, particularly, the rate of interest in the call money market.

Before the First World War, most central banks supported their currencies with convertibility to gold. Although paper money could always be exchanged for gold, in reality this did not occur often, fostering the sometimes disastrous notion that there was not necessarily a need for full cover in the central reserves of the government. The Bretton Woods system came under increasing pressure as national economies moved in different directions during the sixties. A number of realignments kept the system alive for a long time, but eventually Bretton Woods collapsed in the early seventies following President Nixon's suspension of the gold convertibility in August 1971. The dollar was no longer suitable as the sole international currency at a time when it was under severe pressure from increasing US budget and trade deficits

In terms of section 2 of the Foreign Regulation Act 1947, as adapted in Bangladesh, Foreign Exchange means foreign current and includes all deposits, credits and balance payable in foreign currency as wells all foreign currency in truant as such drafts, Travelers cheque, L/Cs, Bills of Exchange and promissory note payable in any foreign currency. In addition, the expression 'Foreign Exchange' or 'exchange' is sometimes used particularly by the press to describe the ratios or rates of exchange at which currencies exchange for one another. Thus, the foreign trade i.e. Export and Import settlement necessitates conversion of the buyer's currency into the seller currency.

And for conversion there has to be a price of one currency in terms of another; that is there must be as rate, of exchange at which the exchange of two currencies will take place. Just like any other commodity in the market, price of a currency in terms of another currency is determined by the share market force of demand and supply of the currency concerned in the exchange market.

1.2 Statement of the problem

The role of the financial market in the expansion of the real sector and the economy at large cannot be over-emphasized. A critical characteristic of the money market is that it should deep and broad so as to absorb large volume of transactions without significant effects on security prices and interest. This characteristic requires that there exist many active market participants such that the transactions of an individual investor will have just infinitesimal effect on security prices and interest rates. The characteristic also requires that there are many varieties of securities so as to ensure that there are always alternative investment instruments available to satisfy the respective return-risk desires of investors in the market.

Money market in Bangladesh has experience significant growth, both in the breadth of securities as well as the volume of trading since the liberalization of the financial system in 1990, it still needs to be deepened further to achieve the required vibrancy that is expected of a money market. This is not to say that the money market in Bangladesh is ineffective. Much have been said and written about the capital market in Bangladesh but the reversal is the case for the money market in the country. Therefore, there is the need to examine this crucial market and evaluate its performance in terms of its contribution to economic development.

The advent of the financial market was squeezed with a lot of encouragement by all in the financial sector. The present possibility for money market & foreign exchange market to diversify into broader range of products make business really bright for market participants. But this diversification advantage is a once in a business time opportunity that should be consumed with some caution and prudence as this involves a great deal of risk. The very nature of the forex business is so sensitive because it is short term dealing.

The principal concern of this thesis is to ascertain to what extent money market can manage their risks, what tools or products are at their disposal and to what extent their performance can be augmented by proper forex risk management policies and strategies.

Money markets occupy a central place in modern financial systems, offering monetary services and credit intermediation in the "near bank capital market" at maturities most commonly one year and less. The money market is so named because it enables participants to acquire cash on short notice or to place excess funds in easily salable short-term marketable securities. Money markets offer monetary services and short-term finance in the capital market with the credit support of institutional sponsors. Investors finance money market instruments at specific interest because their salability on short notice confers an implicit monetary services yield. The fragile equilibrium depends on collective confidence in the credit quality of instruments supplied to the market. Central bank monetary and credit policies have influenced interest rates and credit intermediated in the money market, especially during the credit disorder. Permissive regulatory rulings have allowed borrowers to take increasing advantage of specific interest funding in money markets via securitization and structured finance—vastly increasing maturity, credit, and liquidity transformation through asset backed commercial paper, repurchase agreements, and money market mutual funds. The strong presence of money market can boost the economic development of a country. The main purpose of money market is to provide the liquidity need of financial institutions, non-bank financial institutions and other participants in the market. In spite of this, they can play a significant role in the development of money market through active participation directly; issuing different money market securities to collect short term fund for new loan sanction and to innovate new short-term financial products like securitization of the mortgage loan.

At present, the global economy becomes increasingly integrated, international dealings with frequent foreign currency settlement brought about by the gradual increase in foreign exchange risk; therefore, how to choose a suitable way to avoid exchange rate risk management has become a problem demanding prompt solution will focus on the foreign exchange risk prevention techniques discussed. Foreign exchange transaction risk is carried out in a variety of enterprises to foreign currency transactions, due to changes in exchange rates and transaction settlement, when signed the contract when the currency conversion when the increase or decrease the amount of risk.

The Bangladesh economy is based like any other economy on the money market, which is designed as a means of liquidity adjustment. As a financial instrument a country needs to be safe in their moves, but also make a potential path for growth. The money market in Bangladesh needs to be infused with more liquidity or cash in order to help fund economic growth. The largest problem by far is the corruption of the system that even transparency is unable to fix because there is not enough regulation. If the system was working as it should, the impact on economic growth would be positive in that the economy could recover and support the nation. A money market is set up to be a support for the nation; however, when too many hands are in the basket it makes it extremely hard for the money market to work in the favour of everyone involved.

There is overlapping and delays in creating the needs of industrial and trade sector. The branches of the financial institutions are not opened in the rural areas to collect the savings of the villages. In advancing loans financial institutions compete with each other to show better performance. Some times they lend the money to those people who can not repay. So before advancing loans they must be careful in checking the character and financed condition of the borrower.

1.3 Objectives of the Study

The main objective of this dissertation is to analyze the operations and activities of the Money Market and Foreign Exchange Transactions in Bangladesh with particular thrusts to identify adhering weakness and defects, explore development potentials and find handout suggest effective strategies for strengthening these markets. The specific objectives of the study are stated below:

1. To observe the structure and operational mechanisms of the money market in Bangladesh. (*Realised in Chapter 4, pp.30-38.*)
2. To examine money market and foreign exchange transactions in Bangladesh emphasizing their products/ instruments. (*Realised in Chapter 4, pp.39-49.*)
3. To find out the clues for how our foreign exchange transactions risks can be reduced. (*Realised in Chapter 6*)
4. To identify the key relationship between money market and foreign exchange market. (*Realised in Chapter 5*)

As corresponding to the above stated objectives, the research also planned to explore the role of perfect and developed money market and foreign exchange market, their relationship with financial stability and development.

1.4 Rationale of the Study

The study will explore the impact or effectiveness of money market instruments on stabilization of the economy, though the scope of study will be limited to the financial sector. It is hoped that the exploration of his sector will give a broad view of money market instruments on economic stabilization it will serve as an inspiration to other potential students and institutions or individuals as it will contribute to practical life, knowledge advancement and stabilization of Bangladesh economy. The economy is a large component with lot of diverse and sometimes complex parts; this research works only look at a particular part of the economy (the money market). This work cannot cover all the facets that make up the financial sector, but will look at the money market and foreign exchange market and its instruments as being used by the financial participant for the stabilization of the economy on its road to industrialization and economic development. In other words, its focus is not on the entire financial, which is a combination of both money and capital markets, but will only investigate exclusively on the money market as well as its part of foreign exchange transaction. The empirical analysis and estimation covers the period between 1971 and 2011.

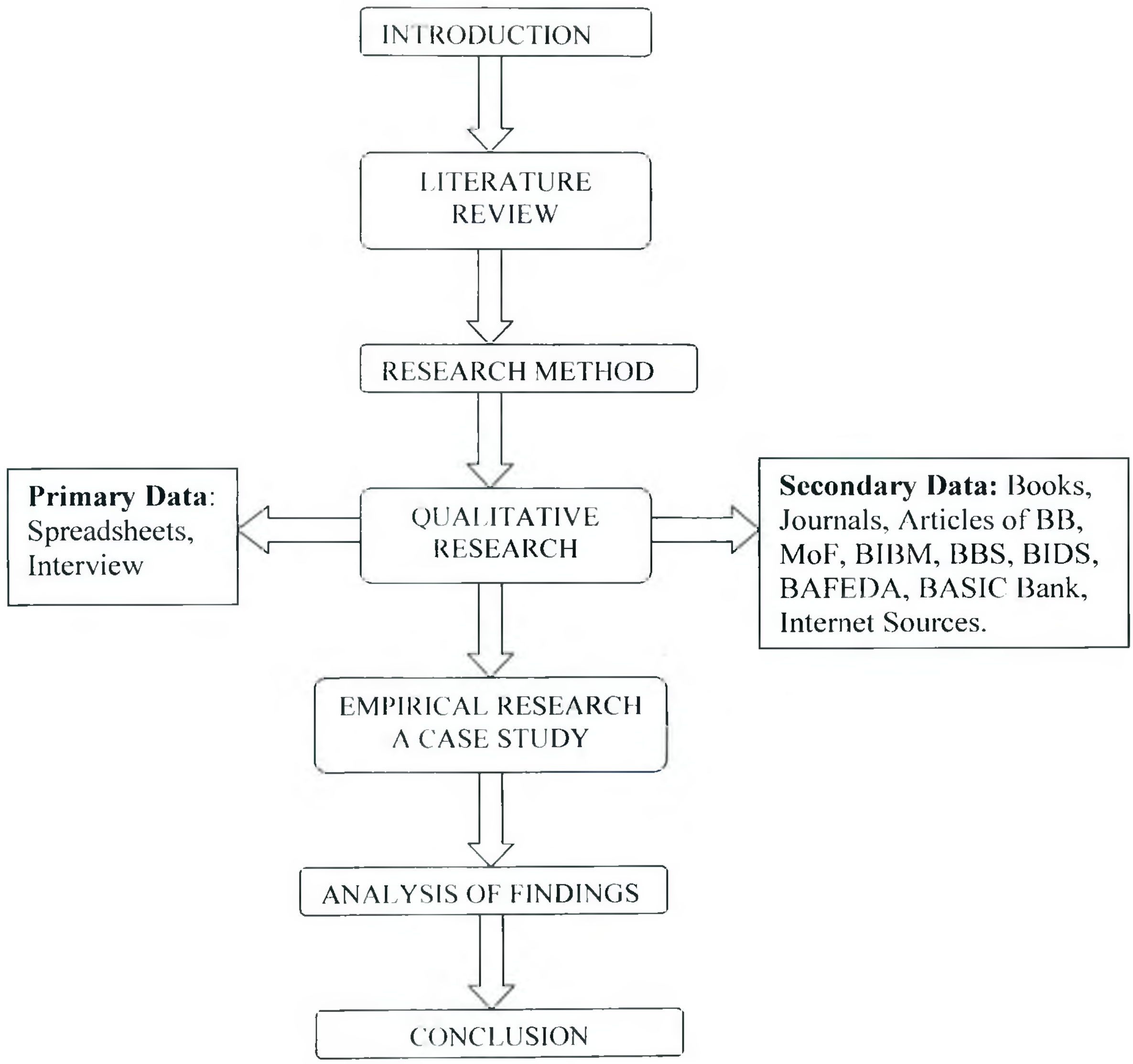
1.5 Methodology of the Study

The methodology of the study in money market & foreign exchange transaction require details process, i.e. clearly characterized purpose, well recognized problem, planned design, and adequate analysis applying high ethical corresponding to the objective of the study.

1. The Approach

The research approach applied in this study merge the descriptive, qualitative, empirical and analytical methods.

Figure 1.1: Thesis method and structure



Source: Complied by the author from various thesis method literatures

The theoretical background of the thesis has been built up by reviewing available literature on areas related to the research issues in question and by analyzing financial systems and financial markets in general and highlighting in developing countries like Bangladesh. The two components of the financial markets covered in the study are:

(a) Money market, including inter-bank money market, call money, treasury bills and commercial bills; and

(b) Foreign exchange market with analysis of instruments, exchange rate and risks.

The study ultimately aims at identifying policy issues in various components of the financial markets of the country and recommending measures for progress of the sector.

2. Research Questions

The research questions obtained in this report are based on the data available in the bank and the conversation made with the customers of the bank. The intent of this study is to investigate relationships between and within two sets of Bangladesh financial markets: money markets and foreign exchange markets. Money market is proxied by money market products specially call money and foreign exchange market and its transactional risks.

3. Research Design

This Research was initiated by examining the secondary data to gain insight into the situation prevailing in the bank. By analyzing the secondary data, the study aim is to explore the short comings of the present system and primary data will help to validate the analysis of secondary data besides on unrevealing the areas which calls for improvement.

4. Collection of Data:

The data collected for this project is primary as well as secondary data.

- **Primary data:**

  A telephonic interview was made to the people of different profession. Some were also personally visited and interviewed. They were the main source of Primary data. The method of collection of primary data was direct personal interview through word-of-mouth.

- **Secondary Data:**

  The secondary data was collected from internal sources. It was collected on the basis of bank's books of accounts, organizational file, official records, preserved information in the bank's database and their official website.

5. Sampling Plan

- **Sampling Units:** The managerial professionals dealing with export and imports of different companies were interviewed. The basic criterion is that their company should maintain an account with the BASIC Bank's Foreign Exchange department.
- **Research Instrument:** The managerial professionals were contacted through telephone from the bank since they were situated in different areas. The customers who came to bank were also asked the same questions.
- **Contact Method:** Personal interview and Telephonic interview.

6. Sample Size

My sample size for this project is 35 respondents. The entire customers who deal with import and export business was considered for this study. The telephonic interview method was selected due to the geographical location of the customers as well as the number of customers was very low.

7. Theoretical approach

Theoretical analysis has been developed in separate chapter the following points:

1. Financial System Analysis in Chapter 3
2. Analysis of Financial Market in Chapter 4
3. Analysis of Money Market & Foreign Exchange Market relationship in Chapter 5
4. Risk analysis in Foreign Exchange Transactions in Chapter 6

The performance of the domestic foreign exchange market has been analyzed by using the criteria such as market structure and size, market liquidity, and supply side participants and some indicators such as the number of authorized dealers (ADs) in the country, their service network and coverage, bank-wise distribution of AD branches, bank-wise and total holdings of foreign exchange, trends in exchange rates, exchange rate spread in the official and informal foreign exchange transactions, transaction volumes in the inter-bank foreign exchange market, sources of foreign exchange earnings/inflows, trends in foreign exchange reserves, performance of offshore banking units, off-balance sheet activities of banks and performance of money changers.

8. Data Sources: The study is prepared based on both primary and secondary data. Data used in the dissertation had been collected in large part from secondary sources, which comprised published materials like books, journals, bulletins, reports and financial statements and unpublished official documents and reports of banks and non-bank financial institutions. Most important amongst the sources used were the Bangladesh Bank & BIBM publications and records and related publications of the agencies such as Ministry of Finance of the government of Bangladesh and Bangladesh Foreign Exchange Dealers Association (BAFEDA). Some data were collected from internal official records of source agencies/organizations. The data relating to fundamental macro-economic variables such as inflation, interest rate, exchange rates, index of industrial production, capital flows etc had been collected mainly from the publications of Bangladesh Bank and Bangladesh Bureau of Statistics.

The primary data had been collected through a limited scale undisguised, structured and closed-end questionnaire survey and expert opinion survey of people involved in various institutions of money and foreign exchange market in Bangladesh. The main purpose of the survey; however ware not to get field level data on operations of financial tools and instruments and their impact on the country's money and foreign exchange markets. Rather the intention was to confirm validity of data recorded in the dissertation, check whether the tentative findings of the study match with the pulses of administrators and policy makers and discuss possible strategic and immediate measures for the improvement of different segments of the country's money and foreign exchange markets.

9. Data analysis & Processing:

Several techniques have been applied in this stage, among which simple arithmetical & statistical averages, percentiles, ratio analysis and tabular presentation of data have been used. Graphical presentation of some variables has been applied to establish relationship among them.

1.6 Plan of Presentation

Plan of the study provides a brief description of the present study. The description is planned and structured under eight chapters which are as follows:

Chapter-1: Introduction:

This chapter is completed with Background of the Study, Statement of the problem, Objectives of the Study, Rationale of the Study, Methodology of the Study, Plan of Presentation and Limitations of the Study.

Chapter-2: Literature review:

This chapter explains the review of literatures.

Chapter-3: Financial System of Bangladesh:

This chapter shows the introduction of financial system including summery of Financial Institutions and Financial Instruments with regard to general basis and discussed absolutely Financial System of Bangladesh in changes since liberation.

Chapter-4: Financial Market in Bangladesh:

This chapter is analysed on summery of Financial Market in Bangladesh specially Money Market, Foreign Exchange Market & Capital Market and their products/ instruments.

Chapter-5: Relationship of Money Market and Foreign Exchange Market:

This chapter is evaluated the Bangladesh money market and Foreign Exchange Markets' relationship based on interest rate & exchange rate in view of economic as well as financial development.

Chapter-6: Analysis and Interpretation of FOREX Risks:

The chapter is examined the surveyed data and interview result on transaction of Foreign Exchange risks in the Forex Market of Bangladesh.

Chapter-7: Summery of Finding:

Chapter seven presents on summary of findings.

Chapter-8: Conclusion and Recommendations:

Concluding comments in chapter eight reflects on conclusion and recommendations for the study based on summery of findings of the study.

Lastly bibliographically references have been quoted.

1.7 Limitations of the Study

The study examined operational performance, efficiency, potentiality and intrinsic entity of money market & foreign exchange market. Although this research was carefully prepared, I am still aware of its limitations and shortcomings. Several limitations and shortcomings have been faced to examine the above issues. While present study has yielded some preliminary findings, its design is not without flaws. A number of caveats need to be noted regarding the present study.

i. The study has been undertaken on only single country experience i.e. Bangladesh
ii. Required level of information could not be obtained regarding money market and foreign exchange market from Central bank, BASIC Bank as there had no sufficient data as new area of study.
iii. Although there is much remains to be done, work generates important findings in the field of international banks' competitiveness in the foreign exchange market.
iv. Time & information scarcity: The researcher is a bank employee, so managing required time for the study was quite tough, the researchers finds it difficult to cope in terms of sourcing for materials and traveling to different places of findings. Some important data from sample bank could not been collected as those were secret information on their eyes.

In spite of these limitations I am inclined to say that such types of limitation are almost common in data based work, rather possible efforts have in this regard been made in obtaining the data through cross-checking by different data collection methods including personal observation, exchange of views etc.

In conclusion, I believe that the said limitations of the study may effect a very little adverse on the findings.

Chapter -2: Review of Literature

In this chapter, the author analyses the empirical evidence in these two markets that influences the work developed in this study. The literatures have focused on linkages and measurements of integration particularly between money markets and foreign exchange markets of difference nations. There are also quite a number of studies that focus on relationship between money market and foreign exchange market particularly in a domestic setting. Studies of relationships on returns of indices in the different markets were noted by Becker, Finnerty and Gupta (1990), Koch and Koch (1991), Malliaris and Urrutia (1991), Theodossiou and Lee (1993), Tang (1995).

Money Market Development

Forces influencing interest rates in the money markets are varied and may reflect conditions of supply of and demand for different money market instruments.

i. IMF (2001) and World Bank (2001) view that prudential supervision and payment settlement system regulations play important roles in developing the money market by guarding against risky market practices and fraud. An active money market is a prerequisite for the development of markets in foreign exchange and in government securities. A money market not only supports the bond market by increasing the liquidity of securities, but also makes it cheaper. When the money market is illiquid and interest rates are volatile, investors in bonds face greater liquidity risks that limit their ability to invest in long-term assets (Mohanty, 2002). At the same time, money markets are interdependent on securities markets. Deeper money markets can be facilitated by the availability of a wide range of high-grade securities, which can serve as collateral in inter-bank lending and are easy to liquidate in the event of counter-party defaults.

ii. Willis (1963) argues that promoting money market needs joint efforts of market intermediary organizations and financial institutions. The money market, with increasingly active transactions provides a platform for the liquidity management of financial institutions, thus raise the liquidity in the whole financial system. A flourishing money market promotes financial liberalization and interest rate mercerization, and paves the way for the further integration of the domestic and international financial markets. The money markets offer commercial banks a concept of regulated fund operation, which guarantees both liquidity and profitability. The market provides a convenient platform for commercial banks asset-liability management, where they can take the initiative to adjust the term and interest rate structure of their assets and liabilities based on their forecast of interest rate movements, and so as to control interest rate risk and liquidity risk resulting from the mismatch of asset and liability positions. A gradually improved and regulated money market also paves the way for the innovation and internal control of commercial banks.

iii. Park (1993) notes that Treasury bills, with no default risk and an active secondary market, usually yield the lowest rate in the money market and other instruments appear to move with Treasury bill rates.

iv. Thaler (1993) argues that money market development depends on the soundness of financial institutions. In the absence of creditworthy counter parties, market participants would be reluctant to deal in the inter-bank market, but would transact solely with the central bank. Market participants, therefore, should be able to assess one another's creditworthiness on the basis of timely disclosure of reliable financial information, underpinned by high quality accounting standards and widespread use of external audits. In order to enhance liquidity, participation in the market can be broadened to include sound non-bank financial institutions.

v. Cook (1993). Money markets comprise that part of the financial markets where short-term financial assets are bought and sold. By definition, the financial assets, such as stocks and bonds that are treaded in these markets mature in one yaes or loess. Financial institutions, corporations, governments and the treasury are active in the money markets as they adjust their short-term portfolios. Domestic money markets provide an important mechanism in an economy for transferring short-term funds from lenders to borrowers. For corporations, governments and financial institutions with temporary excess funds, these markets provide an efficient means to lend to others corporations, governments and individuals who have a temporary need for funds. Key money market characteristics include a high degree of safety of principal. Most markets are informal 'telephone' markets with low transaction costs. Most money market instruments are liquid, which means that they can be quickly converted into cash assets without a sizeable loss. Each day billions of dollars are traded in the money markets. Several important money market instruments are government treasury bills, short-term government agency securities, commercial papers, mutual funds, etc.

vi. Mehran and Laurens (1997) notes that the central bank plays a key role in the money market development. Early in the process, the central banks should begin developing new monetary instruments (such as treasury bills, central bank bills, and central bank auctions), reforming the system of reserve requirements, and designing the terms and conditions of access of standing facilities. Central bank policies and standing facilities should be designed and conducted in a manner that creates incentives for market participants to trade money among themselves before trading with the central bank. The central bank must also ensure that there is a two-way market in bank reserves and short-term funds by avoiding protracted periods of excess reserves and by alleviating systemic liquidity shortages. To manage systemic liquidity effectively, the central bank must have the technical capacity to forecast liquidity and possess the instruments to inject into and withdraw funds from the market.

vii. Green (1997) holds that the central banks use repurchase agreements (repos) as essential instrument for money market development and as a key tool for indirect monetary control sc daily liquidity management, especially before development of an active secondary market for government securities. Whereas 'outright' purchases and sales of securities by the central bank require a secondary market in (government) securities, repos allow the central bank to adjust its balance sheet and systemic liquidity without a secondary market. Repos also offer flexibility in terms of duration and timing of central liquidity management operations, because they can be effective with little notice, for very short periods of time, and without the need to create treasury bills in shorter maturities than already issued. Reducing the issuance of new treasury bills in different maturities can help deepen .secondary markets in existing securities. From the central bank's perspective, repos have &e advantage of enabling liquidity management operations without triggering unwanted volatility in bond prices and the yield curve that outright operations are likely to cause.

viii. Babbbel & Santomero (2001), the money market has both a primary and secondary market. In the primary market, short term funds are obtained quickly and easily at interest rates that vary according to the credit standing of the borrower, the nature of the borrowing instrument, the source of funds, and so forth. For most money market instruments, a secondary market also exists where claims are traded at interest rates that result from the interplay of supply and demand for those instruments.

ix. Rose (2003), remarks the money market, like all financial markets, provides a channel for the exchange of financial assets for money. However, it differs from other parts of the financial system in its emphasis on loans to meet purely short-term cash needs (i.e., current account, rather capital account transaction). The money market is the mechanism through which holders of temporary cash surpluses meet holders of temporary cash deficits. It is designed, on the one hand, to meet the short term cash requirements of corporations, financial institutions, and governments, providing a mechanism for granting loans as short as overnight and as long as one year to maturity. At the same time, the money market provides an investment outlet for those spending units (also principally corporations, financial institutions, and governments) that hold surplus cash for short periods of time and wish to earn at least some return on temporary idle funds. The essential function of the money market is to bring these two groups into contract to make borrowing and lending possible.

x. Pozar et al. 2010, p. 50; "Money market investors effectively fund every step in the shadow credit intermediation process…they are the lifeblood of the shadow banking system." Individuals, businesses, and governments all invest in money market instruments. They invest indirectly through regulated money market mutual funds and unregulated money market intermediaries. Large individual and institutional investors acquire wholesale money market instruments indirectly and directly. Money markets evolved initially to finance short-term assets with short-term securities. Bills of exchange have been employed for centuries to finance international trade. Until recently, B/E is relatively little "maturity transformation."

Relationships in Money Markets

Researchers in this field investigate the integration between markets measured by linkages between interest rates in different geographic setting. Some of the studies related to the money market are reviewed below.

i. Hartman (1984) examines the linkages between the Eurodollar and US domestic financial markets. The results show that using weekly data allows the isolation of significant fluctuations being transmitted between markets in both directions. In particular, financial markets in the US are affected significantly by foreign events. It is impossible to reach precise conclusions about the causes of historical variation in the rates. However, this study provides evidence that at most 40% of the variation in Eurodollar interest rates over the 1975-1978 period can be traced to domestic US sources and that between about one- fifth and two-thirds of the variation in domestic rates can be traced to foreign sources.

ii. Fung and Isberg (1992) examine the relationship between US and Eurodollar certificate of deposit (CD) rates for the period 1981-1988 using an error correction model. Their results indicate that there is a structural change in the CD rates. In the earlier sub-period (1981-1983), there exists unidirectional causality leading from the domestic to the external markets. In the more recent sub-period (1984-1988), however, significant reverse

Foreign Exchange Market Growth

The money and foreign exchange markets are key components of the financial system. Foreign exchange markets facilitate the trade of one foreign currency for another and foreign exchange dealers handle most transactions in this market. Businesses, financial institutions, governments, investors, and individuals use the foreign exchange markets to adjust their currency holdings. The foreign exchange markets play a critical role in facilitating cross-border trade, investment, and financial transactions. The importance of foreign exchange markets has grown with increased global economic activity, trade, and investment, and with technology that makes real-time exchange of information.

i. McDonald and Siegel.(1986) has shown that in response to one-standard-deviation shock to interest and exchange rates, the dynamic capital mobility of all four crisis countries in East Asia has decreased in the short ma. These shocks also increase the capital-market risk in these countries. The thinness of foreign-exchange markets causes destabilizing speculations, especially when exchange-rate flexibility is increased is experienced in the Asian crisis countries. Analysis of the impact of the foreign-exchange market thinness on the dynamic capital mobility and capital-market risk bears huge importance.

ii. Rose (1994) notes that a number of factors influence foreign exchange rates and these are: balance-of-payments position, speculation over future currency values, domestic economic and political conditions, and the central bank interventions. A country experiencing a trade deficit usually faces downward pressure on its foreign exchange rate. Speculators buy or sell currencies when they see profitable opportunities. Deteriorating economic conditions and inflation typically have an adverse affect on foreign exchange rates. Central banks may buy or sell currencies to influence the value of their currency.

iii. Aron and Ayogu. (1997) apply co-integration methodology to test foreign exchange market efficiency in Sub- Saharan African countries. They find that the market with a larger liquidity such as European and North American foreign exchange markets have higher market efficiency than those with a smaller liquidity such as the African and Asian markets except Japan. They use monthly parallel market and official exchange rates for South Africa to test weak form efficiency by a variant of the martingale model and find that exchange rate returns are predictable by past values of the exchange rate and the market is inefficient.

iv. Ishii et al (2003) holds the view that the efficiency and depth of the foreign exchange market hinges on several factors, namely the degree of competition, the removal of impediments to price discovery, and the dissemination of information in the market. The introduction and development of a foreign exchange market requires the availability of foreign exchange for various external transactions, which depends on the situation of currency convertibility. At a minimum, exchange controls and regulations affecting foreign exchange dealings should be modified to ensure market-based allocation and pricing of foreign exchange. Structural features of foreign exchange markets, including market microstructure and prudential supervision, also affect the depth and volatility of these markets.

v. Recently, Ahmed (2005), report their findings that the returns series in South Asian foreign exchange markets are stationary during the period from 1999 to 2004. Although there have been many studies that investigated foreign exchange market efficiency in many countries around the globe, there is dearth of investigations that involves South Asian markets. They reject random walk hypothesis for those markets by using the Runs test. The current paper involves longer period of data which is required to detect the tendency of mean reversion in a time series. In addition, it employs more advanced techniques to test for efficiency in the foreign exchange market.

Chapter-3: Financial Systems of Bangladesh

3.1 Definition & Structure

The financial system is a set of organized institutional set-up through which surplus units transfer their funds to deficit units. Financial system is the system that allows the transfer of money between investors and borrowers. The financial system provides a mechanism whereby an individual, firm or household, who is a surplus spending unit (SSU), may conveniently make funs available to a deficit spending unit (DSU) who intend to spend more than their current income. The key word 'conveniently' is important. It means the financial system will be so developed and mechanism for transactions so designed and rule and regulations for dealings so formulated that both the supplier and demanders of funds will not face any difficulties while they will be transacting with each other. Gurusamy, writing in *Financial Services and Systems* has described it as comprising "a set of complex and closely interconnected financial institutions, markets, instruments, services, practices, and transactions."

According to Franklin Allen and Douglas Gale in *Comparing Financial Systems*:

"Financial systems are crucial to the allocation of resources in a modern economy. They channel household savings to the corporate sector and allocate investment funds among firms; they allow inter temporal smoothing of consumption by households and expenditures by firms; and they enable households and firms to share risks. These functions are common to the financial systems of most developed economies. Yet the form of these financial systems varies widely."

Fig-3.1: An integrated picture of the financial system

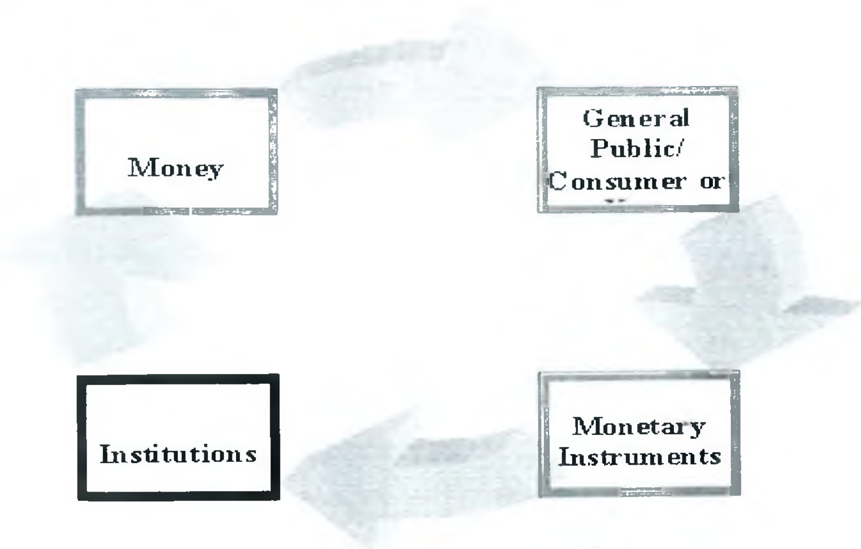
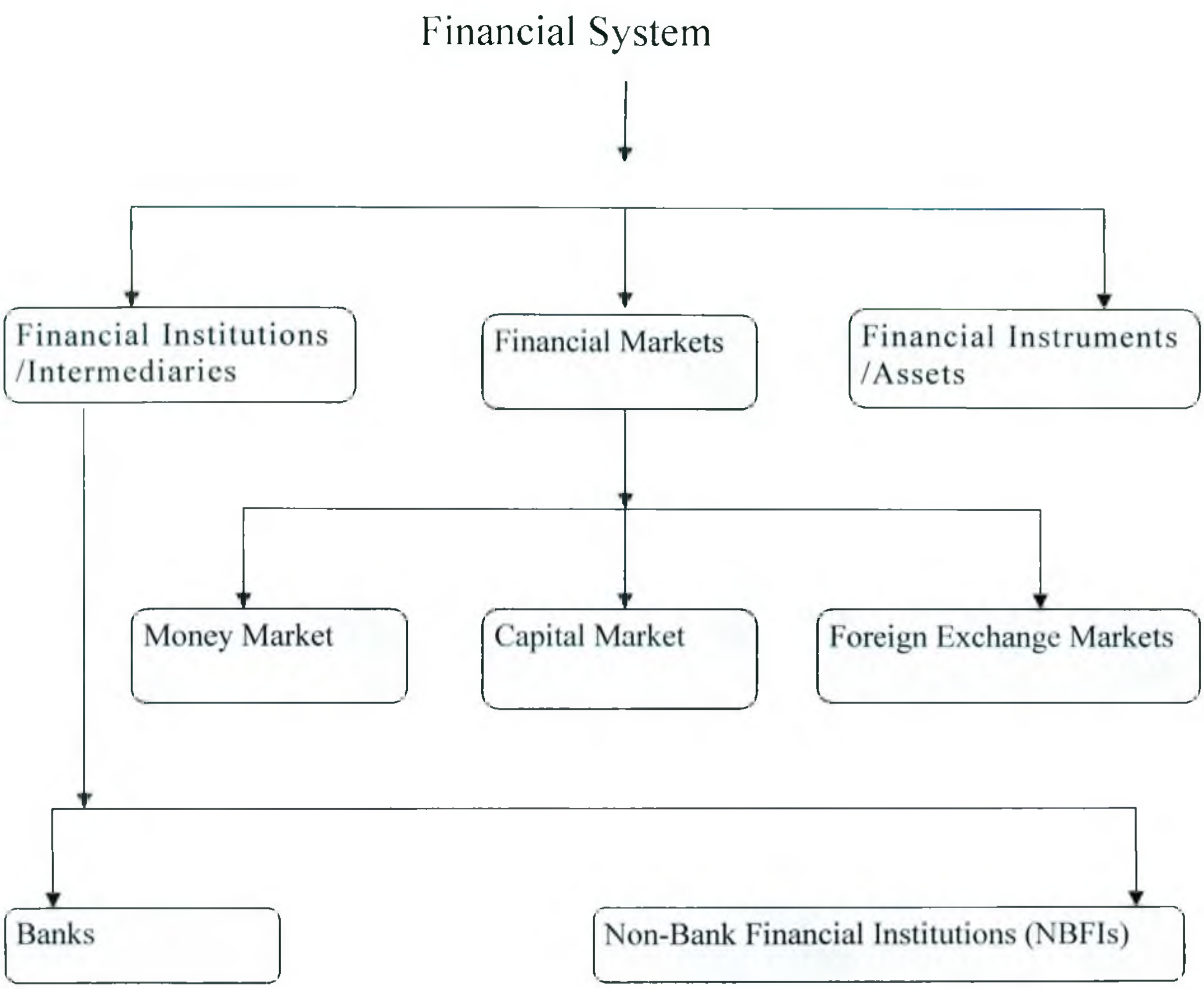


Table -3.1: Financial System



Source: Complied from financial system literature

Structure of Financial System:

The Main Constituents of Financial System are:

01. Financial Institutions/Intermediaries.

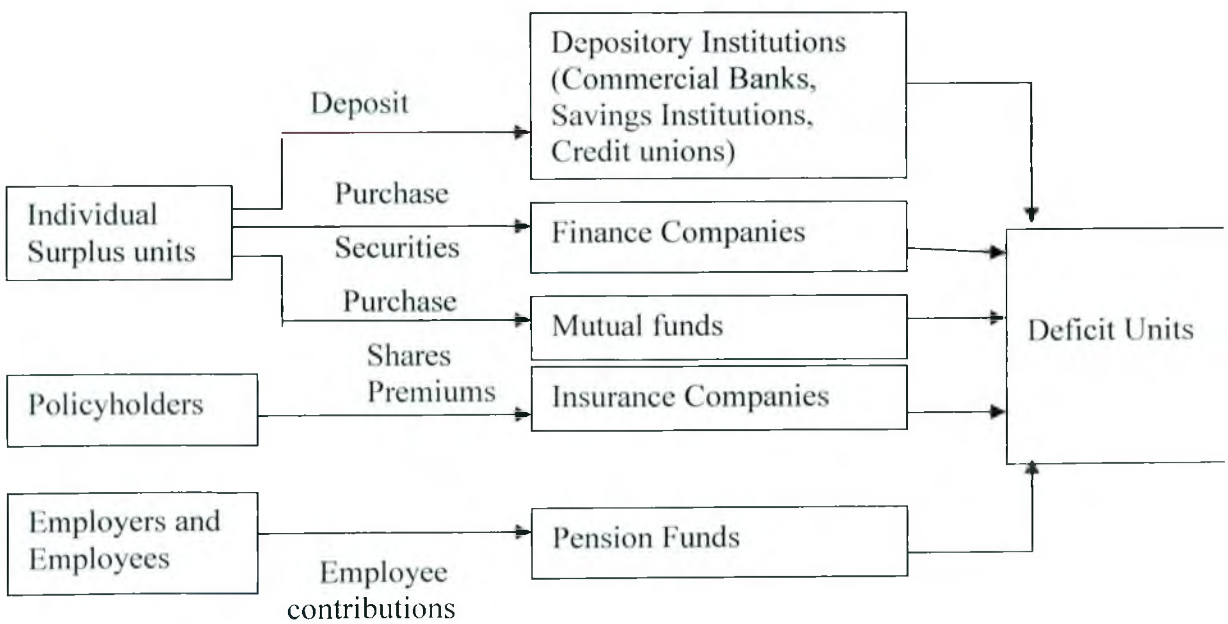
02. Financial Instruments/Assets

03. Financial Markets.

3.2 Financial Institutions/Intermediaries:

All Institutions which are registered for doing business of money or money equivalents or money related instruments or tools are refers to a Financial Institution. When an Institution involved with the following function is called Financial Institution. An organization which borrows funds from lenders and lends them to borrowers on terms which are better for both parties than if they dealt directly with each other. Financial institutions as 'intermediaries': As a general rule, financial institutions are all engaged to some degree in what is called intermediation. Rather obviously 'intermediation' means acting as a go-between for two parties. The parties here are usually called lenders and borrowers or sometimes-surplus sectors or units, and deficit sectors or units. As a general rule, what financial intermediaries do is: to create assets for savers and liabilities for borrowers which are more attractive to each than would be the case if the parties had to deal with each other directly.

Table-3.2: Participant of Financial Institutions in Financial Market



Source: Madura (2004)

3.3 Financial Instruments

Financial instruments are those securities/items that are being sold in the financial markets. A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. Financial instruments represents financial assets those are negotiable in nature.

Different types of Financial Instruments:

It has two forms: (i) Money and (ii) Security

Money: Medium that is universally acceptable in an economy both by sellers of goods and services as payment for the goods and services and by creditors as payments for debts. *Security:* A security is a written evidence of the extension of loan. Most of the financial instruments take the form of securities.

Main types of financial instruments are as follows:

A. Equity Instruments
B. Debt Instruments
C. Asset-backed Instrument
D. Hedging Instrument

A. Equity Instruments

There are two types of Equity instruments. Following is the discussion on these instruments. **i)** *Common Stock*: **ii)** *Preferred Stock*:

B. Debt Instruments

Long Term or Capital Market Debt Instruments:

Corporate Bond: Long term debt issued by private corporations

i. Convertible Bond, ii. Junk Bonds iii. Govt. Treasury Notes iv. Govt. Treasury Bond

Short Term or Money Market Debt Instruments

Govt. Issues: i. Treasury Bills, ii. Tax Anticipation Bills, iii. Treasury Notes, iv.Govt. Agency Issues

Non-governmental Issues: i. Commercial Paper, ii Negotiable Certificate of Deposit, iiii. Banker's Acceptance, iv. Repurchase Agreements

C. Asset Backed Instruments (Recent Innovation in Financial Market)

Mortgage Markets: i. Adjustable Rate Mortgages, ii. Mortgage-backed Securities, iii. Collateralized Mortgage Obligation (CMO), iv. Zero Coupon Bond:

D. Hedging Instruments (forward contract and future market)

i. Forward Contract ii. Futures Contract.

Table-3.3 Relationship among Financial Institutions, Financial Markets & Financial Instruments

Financial Instruments	Financial Markets	Financial Institutions	Investors	Maturities	Secondary Market Activity
Treasury bills	Money Market	Central Bank	Households, firms	28, 59, 91 days	High
Retails CDs	Money Market	Banks and savings Institutions	Households	7 days to 5 yrs	Nonexistent
NCDs	Money Market	Large Banks and savings Institutions	Firms	2 weeks to 1 yr	Moderate
Commercial Paper	Money Market	Banks & Finance Companies	Firms	1 to 270 days	Low
Eurodollar Deposits	Money Market & FEX	Banks outside the US	Firms & government	1 day to 1 yr	Nonexistent
Bank acceptances	Money Market	Banks	Firms	30 to 270 days	High
Federal Funds	Money Market	Depository Institutions	Depository Institutions	1 to 7 days	Nonexistent
Repurchase agreement	Money Market	Nonfinancial firms & FIs	Nonfinancial firms & FIs	1 to 15 days	Nonexistent
Treasury notes & bonds	Capital Market	Central Bank	Households and firms	1 yr to 5 yrs	High
Municipals bonds	Capital Market	State & Local Govt	Households, firms	10 to 30 yrs	Moderate
Corporate bonds	Capital Market	Firms	Households, firms	10 to 30 yrs	Moderate
Mortgages	Capital Market	Individuals and Firms	FIs	15 to 30 yrs	Moderate
Equity	Capital Market	Firms	Households, firms	No maturity	High
Preference share	Capital Market	Firms	Households, firms	No maturity	High
Forward	FEX	Banks	Firms	15 days to 1 yr	Moderate
Future	FEX	Dealers, Banks	Firms	15 days to 1 yr	Moderate
Option	FEX	Dealers, Banks	Firms	15 days to 1 yr	Moderate
Spot	FEX	Banks	Firms	No maturity	Moderate
SWAPs	FEX	Banks	Banks	No maturity	Moderate

Source: Complied by the author from various financial market literature

3.4 Financial System: Bangladesh Context

The financial system in Bangladesh includes Bangladesh Bank (the Central Bank), scheduled banks, non-bank financial institutions, Microfinance institutions (MFIs), insurance companies, co-operative banks, credit rating agencies and stock exchange. Among scheduled banks there are 4 State owned commercial banks (SCBs), 4 specialized banks (SBs), 30 domestic private commercial banks (PCBs), 9 foreign commercial banks (FCBs) and 31 non-bank financial institutions (NBFIs) as of December 2011 after that total number of institutions are increasing rapidly. The financial system of Bangladesh is mainly bank dependent. Though in the recent years, a number of non-banking financial institutions (leasing and merchant banks) have been established, yet the banking sector still captures the lion share of the financial market. Bangladesh Bank is the key player for the financial sector of Bangladesh as well as for the economy. Bangladesh Bank is the banker to the government as well as to other banks. It formulates and implements monetary policy, manages foreign exchange reserve and is the authority to supervise and regulate other banks and non-bank financial institutions. The financial sector of Bangladesh has gone through a lot of reforms in the past two decades and central bank reform was a key element of the reform agenda. This study maps the various reforms that have taken place so far. Bangladesh Bank has improved in certain areas and yet there are avenues where more can be done. The bank plays a dual role in the economy. Bangladesh Bank supervises and regulates the country's banking sector where it has significant improvements. On the other hand, the bank underachieves in terms of autonomous formulation and implementation of monetary policy in coordination with the government.

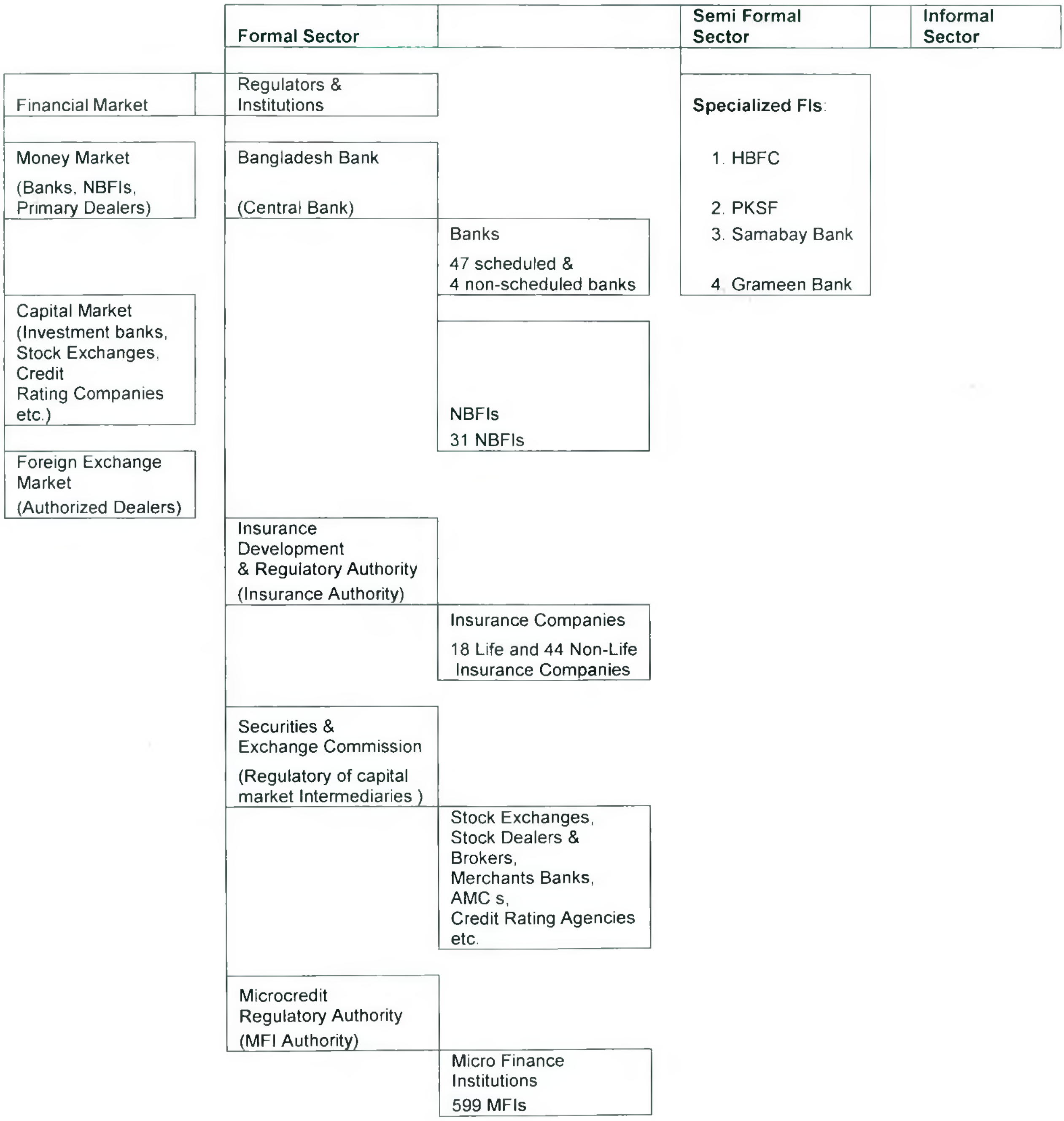
The financial system of Bangladesh is comprised of three broad fragmented sectors: 1. Formal Sector, 2. Semi-Formal Sector, 3. Informal Sector.

The sectors have been categorized in accordance with their degree of regulation. The **formal sector** includes all regulated institutions like 1. Banks, 2. Non-Bank Financial Institutions (FIs), 3. Insurance Companies, 4.Capital Market Intermediaries like Brokerage Houses, Merchant Banks etc.; 5. Micro Finance Institutions (MFIs). The **semi formal sector** includes those institutions which are regulated otherwise but do not fall under the jurisdiction of Central Bank, Insurance Authority, Securities and Exchange Commission or any other enacted financial regulator. This sector is mainly represented by Specialized Financial Institutions like 1. House Building Finance

Corporation (HBFC), 2. Palli Karma Sahayak Foundation (PKSF), 3. Samabay Bank, 4. Grameen Bank etc., Non Governmental Organizations.

The **informal sector** includes private intermediaries which are completely unregulated.

Table 3.4: Financial System of Bangladesh



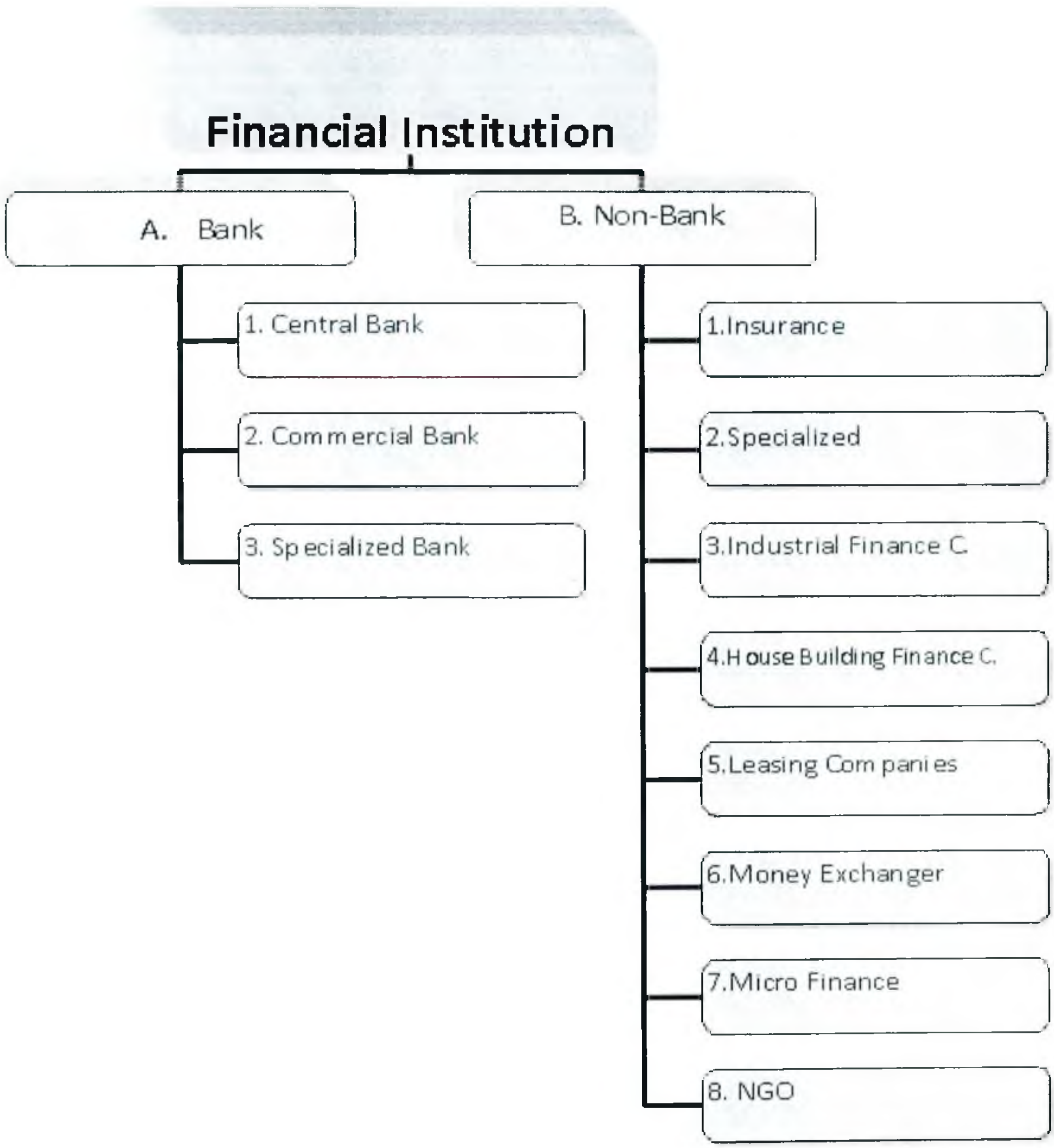
Source: Bangladesh Bank

3.5 Financial Institutions in Bangladesh

1. Banks:

After the independence, banking industry in Bangladesh started its journey with 6 Nationalized commercialized banks, 2 State owned Specialized banks and 3 Foreign Banks. In the 1980's banking industry achieved significant expansion with the entrance of private banks. Now, banks in Bangladesh are primarily of two types: Scheduled Banks and Non-Scheduled Banks.

Table-3.5: Financial Institutions in Financial Market



Source: Complied by the author from various financial institutes literatures

2. Non Bank Financial Institutions (NBFIs) are those types of financial institutions which are regulated under Financial Institution Act, 1993 and controlled by Bangladesh Bank. Now, 31 FIs are operating in Bangladesh while the maiden one was established in 1981. Out of the total, 2 is fully government owned, 1 is the subsidiary of a SCBs, 13 were initiated by private domestic initiative and 15 were initiated by joint venture initiative. The major difference between banks and FIs are as follows:

- FIs cannot issue cheques, pay-orders or demand drafts.
- FIs cannot receive demand deposits,
- FIs cannot be involved in foreign exchange financing,
- FIs can conduct their business operations with diversified financing modes like syndicated financing, bridge financing, lease financing, securitization instruments, private placement of equity etc.

3. Capital Market Institutions: After the independence, establishment of Dhaka Stock Exchange initiated the pathway of capital market intermediaries in Bangladesh. In 1976, formation of Investment Corporation of Bangladesh opened the door of professional portfolio management in institutional form. In last two decades, capital market witnessed number of institutional and regulatory advancements which has resulted diversified capital market intermediaries.

4. Micro Financial Institute in Bangladesh The member-based Microfinance Institutions (MFIs) constitute a rapidly growing segment of the Rural Financial Market (RFM) in Bangladesh. Microcredit programs in Bangladesh are implemented by various formal financial institutions (nationalized commercial banks and specialized banks), specialized government organizations and Non-Government Organizations (NGOs). Despite the fact that more than a thousand of institutions are operating microcredit programs, but only 10 large Microcredit Institutions (MFIs) and Grameen Bank represent 87% of total savings of the sector and 81% of total outstanding loan of the sector.

5. Insurance Institutions: Insurance sector in Bangladesh emerged after independence with 2 nationalized insurance companies- 1 Life & 1 General; and 1 foreign insurance company. In mid 80s, private sector insurance companies started to enter in the industry and it got expanded. Now days, 62 companies are operating under Insurance Act 2010. Out of them, 18 are Life Insurance Companies including 1 foreign company and 1 is state-owned company and 44 General Insurance Companies including 1 state-owned company.

Chapter-4: Financial Market in Bangladesh

4.1 Definition & Structure

Financials markets: "Financial Markets are generally known as a market where financial securities or/and assets are bought and sold by the buyers and sellers respectively." Markets in which funds are transferred from people who have excess of available funds to people who have a shortage. A financial market is a market in which people and entities can trade financial securities, commodities, and other fungible items of value at low transaction costs and at prices that reflect supply and demand. Securities include stocks and bonds, and commodities include precious metals or agricultural goods.

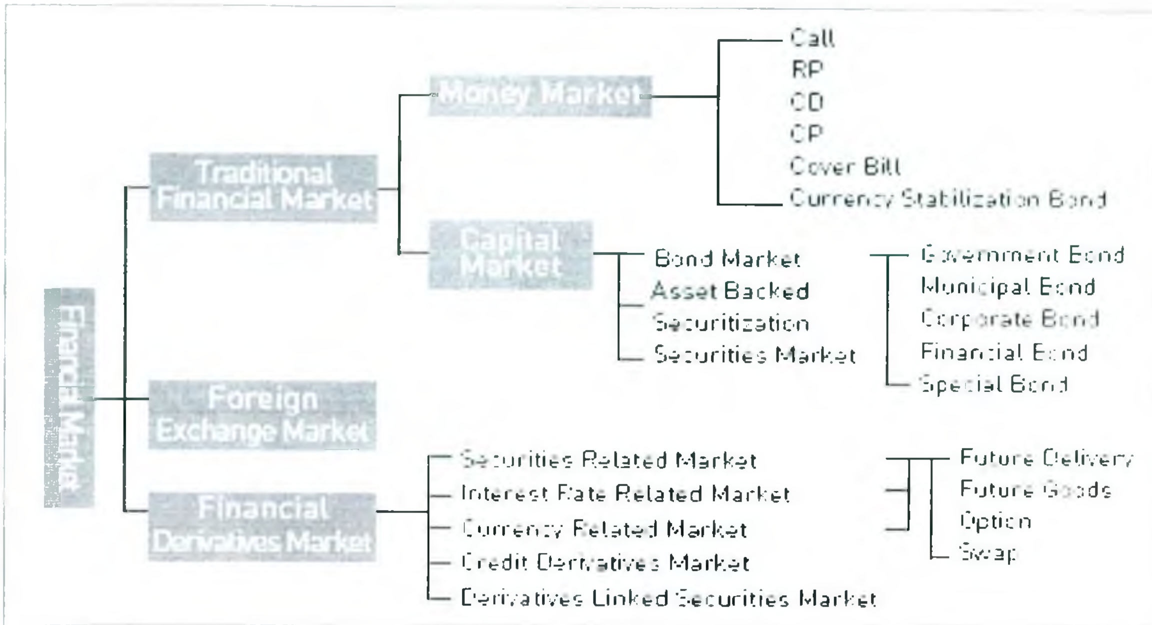
The institutions and procedures that facilitate the transaction of financial securities are called financial market. These securities may be short or long in terms of maturity. Again the securities may be earning fixed income for certain period known as interest or may be participating in the profit and loss of the organization. The fixed income securities are known as debenture whereas the profit and loss sharing securers are known as shares.

Financial Market vs Financial Intermediary

The financial system has two major components. One is the Financial Market where SSUs can invest or lend their funds directly to the DSUs. This is called Direct Finance. An example is the market for corporate bonds. Purchase of Stock is another example of direct finance.

The other major component of the financial system is made up of the Financial Intermediaries - various institutions such as banks, savings and loan associations and credit unions - that as go-betweens to link up SSUs and DSUs. Here the linkage between saver and borrower is indirect. This is called Indirect Finance. Even though the ultimate lender is the SSU, the DSU owes repayment to the financial intermediary, and the financial intermediary owes repayment of the deposit to the SSU.

Graph 4.1: Structure of Financial Markets



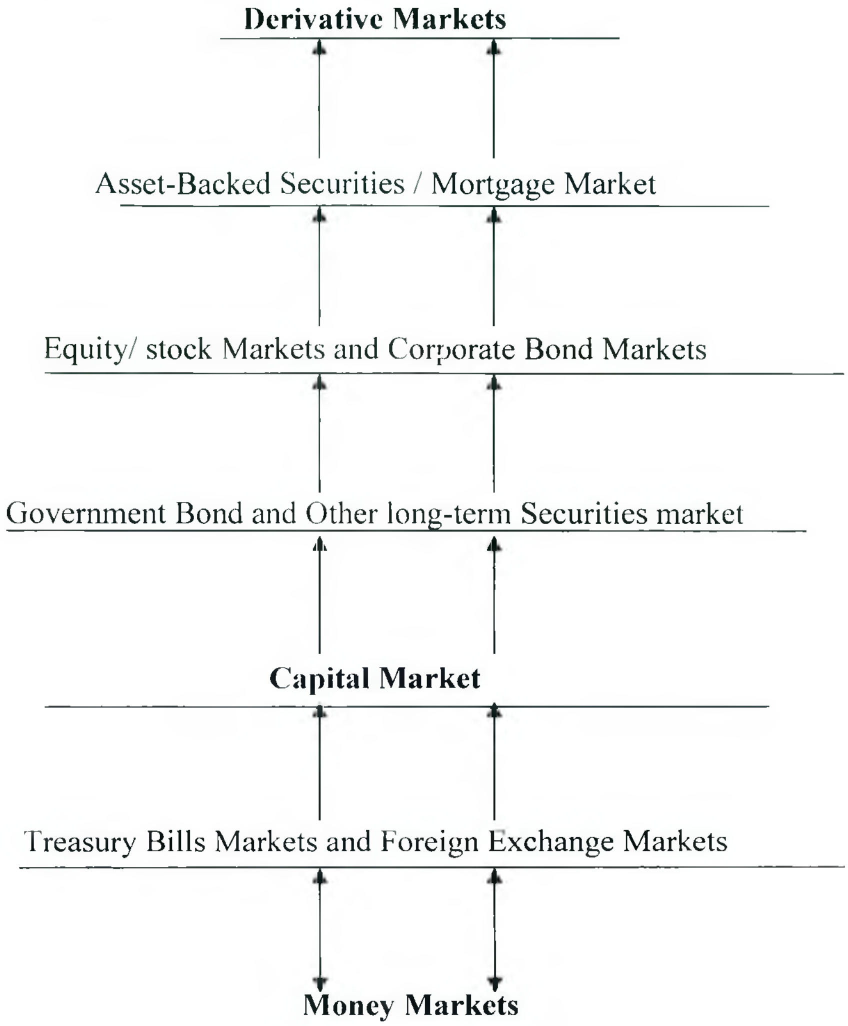
Source: Complied by the author from Websites

Table-4.1: Summary of Classification of Financial Markets can be divided into different sub types:

Classification by Nature of claim	1. Debt Market 2. Equity Market
Classification by Maturity of claim	1. Money Market 2. Capital Market
Classification by timing difference of claim	1. Spot market 2. Forward market 3. Futures market
Classification by Seasoning of claim	1. Primary Market 2. Secondary Market
Classification by Immediate or Future Delivery	1. Cash or Spot Market 2. Derivative Market
Classification by Organizational structure	1. Auction Market 2. Over-the counter market 3. Intermediated market
Classification by Global Financial Market	1. Internal market (Domestic and Foreign) 2. External Market/ Int.l market/ Offshore market

Source: Financial Market developed by Author

Figure 4.1: Hierarchical Orders of Financial Markets



Source: Karacadag (2003)

Major Markets in Financial Market:

4.2. Money Market: A Money market is an important part of the financial market where money or its equivalent financial instruments with very high liquidity and a very short maturity can be traded. Money is synonym of liquidity. Money market consists of financial institutions and dealers in money or credit who wish to generate liquidity. It is better known as a place where large institutions and government manage their short term cash needs. For generation of liquidity, short term borrowing and lending is done by these financial institutions and dealers Due to highly liquid nature of securities and their short term maturities, money market is treated as a safe place. Hence, money market is a market where short term obligations such as treasury bills, commercial papers and banker's acceptances are bought and sold. The operations in the money market are generally short-term (upto 1 year) in nature, in capital market short-term to long term and in gilt securities market generally long-term. However, in an integrated financial system, the occurrence of an event in one market of the financial system will have an impact on the other market system. The presence of an active and vibrant money market is an essential pre-requisite for the growth and development of an economy. The money market is a subsection of the fixed income market. Money market investments are also called cash investments because of their short maturities.

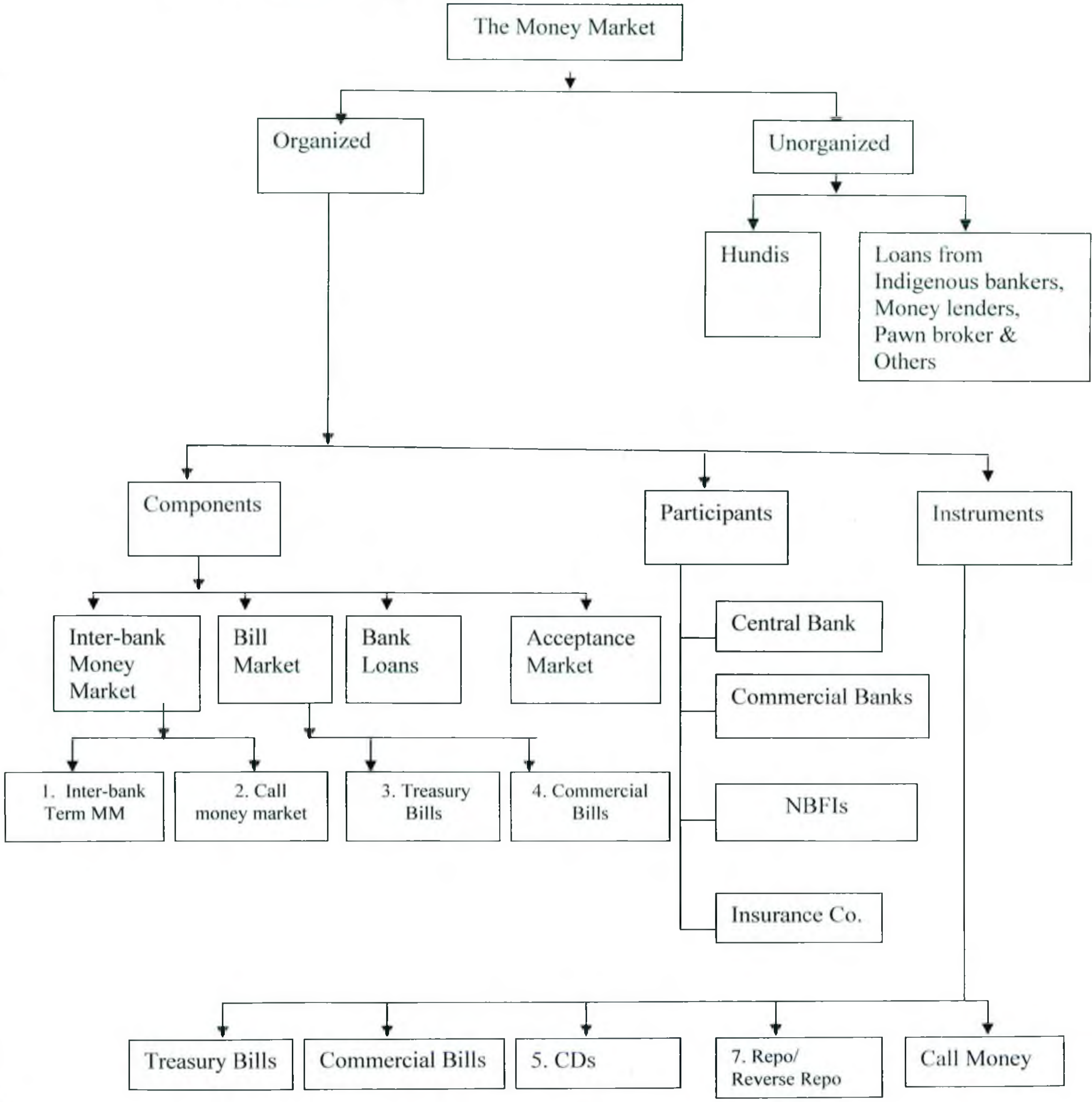
Furthermore, the money market is a dealer market, which means that firms buy and sell securities in their own accounts, at their own risk. Compare this to the stock market where a broker receives commission to acts as an agent, while the investor takes the risk of holding the stock. Another characteristic of a dealer market is the lack of a central trading floor or exchange. Deals are transacted over the phone or through electronic systems.

A money market means the institutions and procedures that facilitate the transaction of short-term securities. Short-term securities have the maturity of one year or less than one year. Examples of these securities are Govt. treasury bonds, bills of exchange, commercial paper etc. The money market is a market for short term (less than one year) loan; in fact it is money or near money that is being bought and sold. It is not a place (like the stock market) but an activity. The money market is a component of the financial markets for assets involved in short-term borrowing and lending with original maturities of one year or shorter time frames. Trading in the money markets involves Treasury bills, commercial paper, bankers' acceptances, certificates of deposit, federal funds, and short-lived mortgage- and asset-backed securities. It provides liquidity funding for the global financial system. Money markets and capital markets are parts of financial markets.

According to the McGraw Hill Dictionary of Modern Economics,

"Money market is the term designed to include the financial institutions which handle the purchase, sale, and transfers of short term credit instruments. The money market includes the entire machinery for the channelizing of short-term funds. Concerned primarily with small business needs for working capital, individual's borrowings, and government short term obligations, it differs from the long term or capital market which devotes its attention to dealings in bonds, corporate stock and mortgage credit."

Table 4.2: Constituents of money market:



Source: Constituents of money market Developed by Author

4.3 Foreign Exchange Market: The term foreign exchange refers to the process of converting home currencies into foreign currencies and vice versa. According to Dr. Paul Einzing "Foreign Exchange is the system or process of converting one national currency into another, and of transferring money from one country to another". The market where foreign exchange transactions take place is called a foreign exchange market. It does not refer to a market place in the physical sense of the term. In fact, it consists of a number of dealers, banks and brokers engage in the business of buying and selling foreign exchange. It also includes the central bank of each country and the treasury authorities who enter into this market as controlling authorities.

Table 4.3 Money & Capital Market Instruments/Products

Financial Markets	Category	Financial Instruments
1. Money Market	Interest Based	1. Negotiable Certificate of Deposits 2. Repurchase Agreement 3. Bank & Consumer Commercial Paper 4. Call Money 5. Mutual Fund 6. Repo 7. Reverse Repo
	Non-interest	8. Treasure Bills 9. Banker Acceptances 10. Bank bills
2. Foreign Exchange Market		1. Spot 2. Forward 3. Option 4. Future
3. Capital Market	Primary Market & Secondary Market	1. Initial Public Offering (IPO) 2. Non-Resident Portfolio Investment 3. ICB Programmes 4. Unit Certificates 5. Share: Ordinary Share, Preference Share 6. Stocks 7. Mutual Funds 8. Govt. Securities:Treasury bonds 9. Debt Securities 10. Debenture 11. Bonds 12. Corporate bonds 13. Derivatives, 14. Future and Options.

Source: Complied by the author from financial instruments literature

Definition & Structure

The foreign exchange market is a market in which foreign exchange transactions take place. In other words, it is a market in which national currencies are bought and sold against one another. FOREX, an acronym for Foreign Exchange, is the largest financial market in the world. Forex is an over-the-counter (OTC) or off-exchange market. Foreign Exchange is a process which is converted one national currency into another and transferred money from one country to another country.

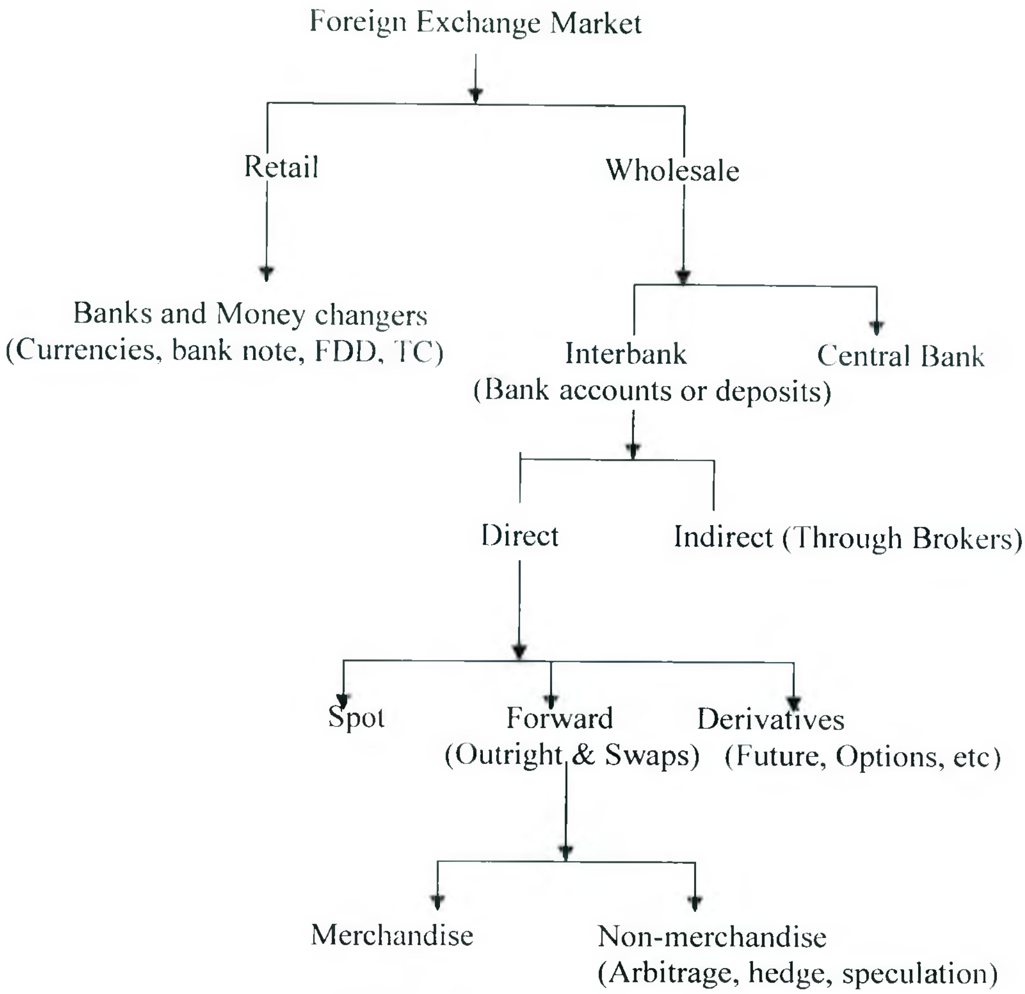
According to Mr. H. E. Evitt, Foreign Exchange is that section of economic science which deals with the means and method by which right to wealth in one country's currency are converted into rights to wealth in terms of another country's currency. It involved the investigation of the method by which the currency of one country is exchanged for that of another, the causes which rented such exchange necessary the forms which exchange may take and the ratio or equivalent values at which such exchanges are effected.

An individual or institution buys one currency and sells another in a simultaneous transaction. Currency trading always occurs in pairs where one currency is sold for another and is represented in the following notation: BDT/USD or EUR/YEN. The exchange rate is determined through the interaction of market forces dealing with supply and demand.

The forex market as it is often called is the market in which currencies are traded. Currency trading is the world's largest market consisting of almost trillion in daily volumes and as investors learn more and become more interested, the market continues to rapidly grow. The foreign exchange market is the market where currencies of different countries are traded. Because different countries in the world buy goods and services from one another, the different currencies change hands between countries. If Bangladesh, for instance, buys vehicles from the USA, we would need US $ to pay for them. We would then buy US $ from the foreign exchange market, paying with Bangladesh Taka.

The foreign exchange market (Forex, FX, or currency market) is a form of exchange for the global decentralized trading of international currencies. Financial centers around the world function as anchors of trading between a wide range of different types of buyers and sellers around the clock, with the exception of weekends. The foreign exchange market determines the relative values of different currencies.

Chart 4.1: Structure of Foreign Exchange Market



Source: Collected from Webpage/ Internet

Chart 4.2: Types of Foreign Exchange Market:

Source: BIBM Manual for Foreign Exchange & Money Market Products (2007)

4.4 Participants in Money Market & Foreign Exchange Market

The transactions in the money market are of high volume involving large amount. So, money market is dominated by a small number of large players. Some of the important players in the money market are:

Table 4.4: Money Market Participant role

SI#	Player	Role
01	Government	Borrowers/ Issuers
02	Bangladesh Bank	Intermediary
03	Commercial Banks	Borrowers/ Issuers
04	NBFIs	Borrowers/ Issuers
05	Housing Finance	Borrowers/ Issuers
06	Insurance Company	Issuers
07	Pension fund	Investors
08	Mutual Fuind	Investors
09	Individuals	Investors
10	Dealers	Intermediaries

Source: Madura (2006)

More specifically, the identify different participants as:

1) Government Treasury Department – They are the only demander of fund. The Government is the most active player and the largest borrower in the money market. It raises funds to make up the budget deficit. The funds may be raised through the issue of Treasury Bills and government securities.

2) Central Bank, Bangladesh Bank- in modern countries the central bank is guaranteed a monopoly over the supply of banknotes and coins and is responsible for a smoothly operating monetary system. Bangladesh Bank (BB), as the central bank, has legal authority to supervise and regulate all the banks. It performs the traditional central banking roles of note issuance and of being banker to the government and banks. The Bangladesh Bank is the most important player in the money market.

3) Commercial Bank – They are both supplier and demander of fund. Commercial Banks play an important role in the money market. They undertake lending and borrowing of short term funds. The collective operations of the banks on a day to day basis are very predominant and hence have a major impact and influence on the interest rate structure and the liquidity position. They are most active players in the foreign exchange market.

4) NBFIs- *There* are many non-bank financial institutions (NBFIs) operating in Bangladesh beside the traditional banking sectors and it plays an important role in money market. They undertake lending and borrowing of short-term funds. Since, they transact in large volumes, they have a significant impact on the money market.

5) Housing Finance- providers are also slowly gaining ground; they fund their operations with long term deposits including some contractual deposit schemes. In Bangladesh have 03 nos. house finance institutions; such as BHBFC, DBH, NHL.

6) Insurance Company- The largest type of financial intermediary handling individual savings. Receives premium payments and places these funds in loans or investments to cover future benefit payments. Lends funds to individuals, businesses, and governments or channels them through the financial markets.

7) Pension Fund -Accumulates payments (contributions) from employees of firms or government units, and often from employers, in order to provide retirement income. Money is sometimes transferred directly to borrowers, but the majority is lent or invested via the financial markets.

8) Mutual Fund -Pools funds of savers and makes them available to business and government demanders. Money market mutual funds provide competitive returns with very high liquidity. Mutual funds also invest their surplus funds in various money market instruments for short periods.

9) Individuals -form an important and integral part of the market through cash income and spending, investments and borrowings at banks and funds (e.g. unit trusts, pension funds, etc.) and other short-term funds, which they invest and borrow.

10) Money market Dealers- They are the intermediaries in the money market. Primary Dealers were introduced by Bangladesh Bank for developing an active secondary market for Government securities. There are 15 dealers in Bangladesh money market.

11) Authorized dealers- FE Dealers are large commercial banks, which buy and sell FE. FE dealer of commercial banks maintain NOSTRO A/C with foreign bank in the financial centers of the world: London, New York, Tokyo, Frankfurt. FE dealers typically maintain a trading room equipped with telephones and telex machines. They usually communicate directly with the trading rooms of banks in other centers. In

Bangladesh as per FEX guideline the ADs are free to deal directly among themselves without going through brokers.

12) Foreign Exchange brokers- Forex brokers play very important role in the foreign exchange market. *Brokers* serve as an agent of the customer in the broader FX market, by seeking the best price in the market for a retail order and dealing on behalf of the retail customer. They charge a commission or mark-up in addition to the price obtained in the market. Brokers do not take open positions in the FE market.

13) Importer & Exporter- *The* customers who are engaged in foreign trade participate in foreign exchange market by availing of the services of banks. Exporters require converting the dollars in to taka and importers require converting taka in to the dollars, as they have to pay in dollars for the goods/services they have imported. They are importers/exporters of goods and services. They buy and sell FE for transaction purposes. Instead they go to a commercial bank for the transactions. Currently, they participate indirectly through brokers or banks.

14) Money Changers- Wherever used in this publication, the term "Money Changer" would mean a sole proprietorship or partnership firm/company licensed by Bangladesh Bank under "FER Act, 1947" to act as Money Changer for dealing in certain foreign exchange transactions as directed by Bangladesh Bank from time to time.

15) Money transfer/remittance companies *i.e. Western Union-* Money transfer companies/remittance companies perform high-volume low-value transfers generally by economic migrants back to their home country. The largest and best known provider is Western Union with 345,000 agents globally followed by UAE Exchange

16) Kerb market- where currency racketeers transact foreign currencies through a chain of middlemen. This market emerged in the restricted regime of foreign exchange transaction but continues to be active. This market operates in the alleys or lanes and by-lanes of Dhaka city around the foreign exchange branches of authorised banks. Dealers of hundi also form part of this market.

17) Retail client-: Retail clients are the ones who deal through commercial banks and authorised dealers. These include individuals, international investors, multi-national corporations and others who need foreign exchange.

4.5 Instruments of Money Market & Forex Market

Table 4.5: Classification of Money Markets' products can be divided into different sub type

Nature of classification	Category	Instruments/ Products
Classification by Securities	Non-Securities	Call money Short-term deposit Cash Credit Bank Overdraft
	Securities	Treasury bill Repos Reverse Repos CDs Trade Bills Commercial Paper
Classification by Singular or Parallel	Singular	Treasury Bills Repo Call Loans Commercial Papers[1]
	Parallel	Inter-bank money market Call money market Certificates of deposit.
Classification by Seasoning of claim	Primary Market	All MM instruments
	Secondary Market	Treasury bill
Classification based on Interest	Interest instruments	CDs Repo Bank Commercial Paper Call Money
	Discount instruments (Non-interest)	Bankers' acceptances Treasury bills Land Bank bills
System of MM	Public	Treasury bill Repo
	Private	Certificates of deposit. Commercial Paper

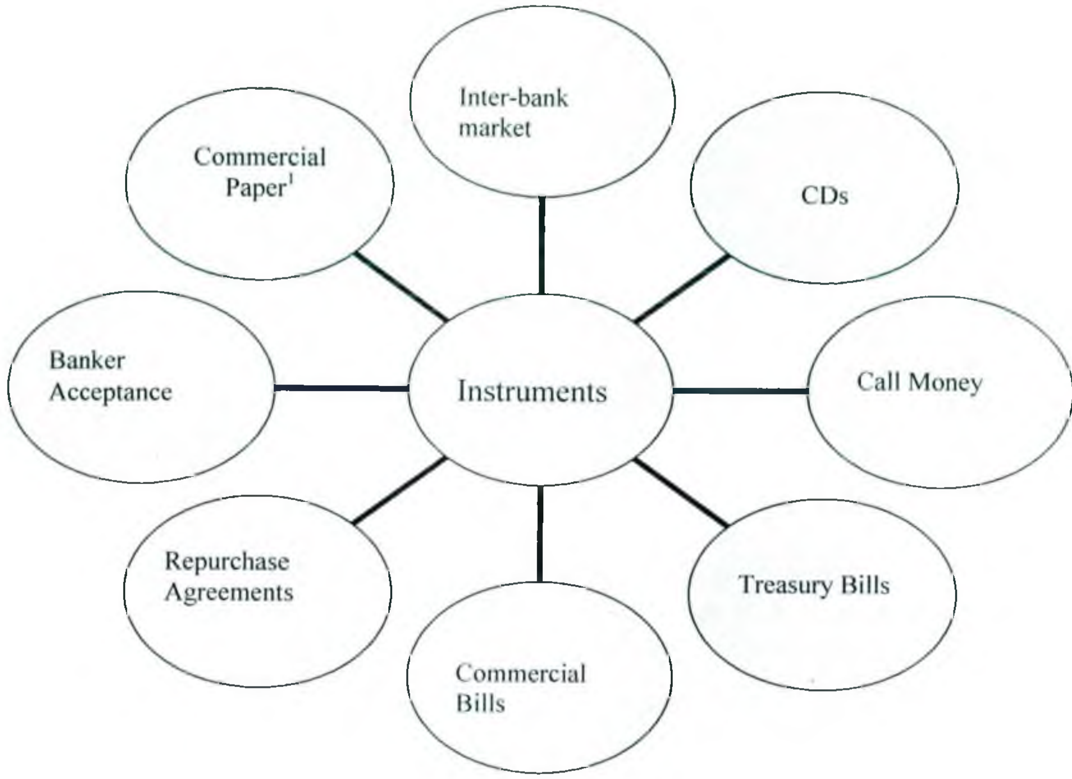
Source: Complied by the author from financial instruments literature

Table 4.6: Money Market securities

MM Securities	**Issued by**	**Common Investors**	**Maturities**	**Secondary market**
Treasury Bills	Government	Banks & FIs	28 days-364 days	Yes
Retails CDs	Banks	House holds	1months to 20 yrs	No
NCDs	Banks	Banks/ FIs	2 weeks to 1 year	No
Bankers Acceptance	Bank	Banks	30 to 120 days	No
Repo	Central Bank	Commercial Banks	01 day to 7 days	Yes

Source: Complied by the author from Money Market Securities literature

Graph 4.2 -Money Market Instruments



Source: Developed by the author on the basis of BIBM Manual (2007)

Foreign Exchange Instruments (Financial)

There are four financial instruments that are used in the trade of currency in foreign exchange market

1. Spot In this kind of trade, the transaction has a 2-day delivery date. This is a direct exchange between two currencies and often involves cash and does not include any interest. This is by far the most voluminous trade that is carried out in the forex market.

A "direct exchange" between two currencies is represented by this trade, it has the shortest time frame, rather than contract cash is involved; and interest is excluded from the agreed-upon transaction. The data for this study has been taken from the spot market. By volume among all FX transactions, a Spot transaction has got the second largest turnover after Swap transactions in the Global FX market.

2. Forward In this kind of trade, currencies are exchanged on a future, agreed upon date. The seller and the buyer agree upon a future date on which to exchange their currencies with each other. The currency is then exchanged at the rate of exchange prevalent on that day. In order to deal with the foreign exchange risk there is one way and that is to engage in a forward transaction. For any date in the future a buyer and seller agree on an exchange rate, and then on that date the transaction takes place, regardless of the current market rates at that time when the transaction takes place. The duration of the trade might be a one day, a few days, months or years. Usually both parties decide the date. One way to deal with the foreign exchange risk is to engage in a forward transaction. In this transaction, money does not actually change hands until some agreed upon future date. A buyer and seller agree on an exchange rate for any date in the future, and the transaction occurs on that date, regardless of what the market rates are then.

3. Future This is a very unique type of a forex transaction. In this, two parties decide to exchange currencies with each other for a pre-agreed length of time and then agree to reverse the transaction at a future date. Foreign currency futures are exchange traded forward transactions having standard contract sizes and maturity dates, for instance, $1000 for next November at a rate that is already agreed by both parties. It is a rough estimate that the average contract length is 3 months. Futures contracts are usually inclusive of any interest amounts.

4. Option A foreign exchange option (commonly shortened to just FX option) is a derivative where the owner has the right but not the obligation to exchange money denominated in one currency into another currency at a pre-agreed exchange rate on a specified date. The options market is the deepest, largest and most liquid market for options of any kind in the world.

Call option, often simply labeled a "call", is a financial contract between two parties, the buyer and the seller of this type of option. The buyer of the call option has the *right, but not the obligation* to buy an agreed quantity of a particular commodity or financial instrument (the underlying) from the seller of the option at a certain time (the expiration date) for a certain price (the strike price). The seller (or "writer") is obligated to sell the commodity or financial instrument should the buyer so decide. The buyer pays a fee (called a premium) for this right.

Put option A put or put option is a contract between two parties to exchange an asset, the underlying, at a specified price, the strike, by a predetermined date, the expiry or maturity. One party, the seller of the put, has the right, but not an obligation, to sell the asset at the strike price by the future date, while the other party, the buyer, has the obligation to buy the asset at the strike price if the buyer exercises the option.

Money Market Instruments:

Inter bank market in Bangladesh operates in a limited scale in the form of inter bank deposits and inter bank borrowings, and has virtually no interest rate fixing mechanism. Traditionally, scheduled commercial banks lend to each other when they are in need of temporary funds. Sometimes, banks also keep a part of their resources to other banks as deposit and borrow as and when needed against the lien of those deposits. Usually, small banks keep their funds as deposits with large banks for their safety. Non-bank financial institutions also take part in this market by way of lending their fund to the deficit banks. The inter bank transactions are concentrated mainly in Dhaka city. *Inter-bank market* operates within a limited scale in the form of inter bank deposits and borrowings and has virtually no fixed price fixing mechanism.

01. Certificate of deposit was introduced as a money market instrument in Bangladesh in 1983. Its objective was to strengthen the money market and bring idle funds, including those arising from black money and unearned incomes, within the fold of the banking system. The Bearer of Certificate of Deposits (BCD) with a fixed maturity is issued by and payable at the bank to Bangladeshi nationals, firms and companies. The certificate does not contain the name of the purchaser or holder. The interest rate is not fixed as in the case of other deposit resources accepted by the banks at present. The interest is determined on the date of issue of CDs based on the demand and supply of funds in the money market. The difference between the face value of CDs and the prepaid interest is received by the bank from the purchaser of CDs at the time of issue. The bearer of CDs can sell the same to another purchaser. The bank maintains no record other than the Certificate No., rate of interest allowed, and the date of sale and encashment. A bank does not issue certificate of deposits for the value exceeding the limit prescribed for it by the Bangladesh Bank.

02. Call money market is initially a part of inter-bank market. Interbank call money represents over 90% of total inter-bank transactions and he residual comprises interbank term money or notice deposits. *Call money* is a short term loan made by a bank to a borrower, where unlike the more usual kinds of loan, which are for a set term, and with a payment schedule, call money is repayable on demand. Call money market is the most sensitive part of money market, in which a good number of players from the banking as well as the non-bank financial sector actively participate on a regular basis. Initially, this market developed as an inter-bank market where the banks in temporary deficit of cash resorted to borrowing from other banks having surplus funds.

Features of Call Money Rate In Bangladesh changes in the inter bank call money rate were more pronounced than the bank rate i.e. the rate at which the central bank lends to the scheduled banks.

The bank rate and the inter bank call money rate (from May 2010 to March 2012) are shown in *Table 4.7: Monthly Interest rates*

End of period	Bank rate	Call money market's weighted average interest rates on		Schedule banks' weighted average interest rates on		Spread
		Borrowing	Lending	Deposits	Advances	
2012						
January	5	19.66	19.66	7.86	13.49	5.63
February	5	18.18	18.18	7.95	13.63	5.68
March	5	12.51	12.51			
2011						
January	5	11.64	11.64	6.39	11.34	4.95
February	5	9.54	9.54	6.54	11.41	4.87
March	5	10.35	10.35	6.81	11.95	5.14
April	5	9.5	9.5	7.06	12.02	4.96
May	5	8.64	8.64	7.24	12.17	4.93
June	5	10.93	10.93	7.27	12.42	5.15
July	5	11.21	11.21	7.32	12.55	5.23
August	5	12.03	12.03	7.4	12.63	5.23
September	5	10.41	10.41	7.42	12.74	5.32
October	5	9.77	9.77	7.46	12.8	5.34
November	5	12.7	12.7	7.53	12.83	5.3
December	5	17.15	17.15	7.52	13.03	5.51
2010						
January	5	4.83	4.83	6.31	11.51	5.2
February	5	4.51	4.51	6.23	11.47	5.24
March	5	3.51	3.51	6.09	11.3	5.21
April	5	4.35	4.35	6.09	11.32	5.23
May	5	5.07	5.07	6.09	11.31	5.22

Source: Statistics Department, Bangladesh Bank

C. ***Bill market*** is restricted to buying and selling of government treasury bills. In the past, it was basically concentrated in transaction of government treasury bills of 3-month maturity at predetermined rates. Commercial banks were obliged to buy these bills as approved security to meet their statutory liquidity requirement (SLR) under the Banking Companies Act. Moreover, these instruments were being used to mop up excess cash from the banking sector and help government to borrow money from banks to meet its budgetary shortfall.

3. Commercial bill market remained very narrow in the country largely due to a low level of industrialisation and a slow growth of trade and commerce. Banks traditionally financed two broad categories of commercial bills viz. inland bills and export bills. These bills are marketable papers and can be resold in the market at a competitive rate. Prevalence of cash credit system of the banks is a major hindrance in the way of the development of an active commercial bill market in the country. Stamp duty, procedural difficulties and reluctance of the drawees of bills to undertake the additional paper work involved in handling documents etc hindered the development of commercial bill market. With the introduction of FSRP, the commercial bill market is gradually developing in the country. Bangladesh Bank introduced its own security, the 91-day Bangladesh Bank Bill in December 1990. This added a new dimension in the bill market of Bangladesh.

4. Treasury Bills issued by the government as an important tool of raising public finance and up to 1994, were of three types, although all of them were 90-day bills. Among these three types, bulk was represented by ad-hoc treasury bills issued to meet the cash balance need of the government. A second type was the 3-months treasury bills on tap introduced in August 1972 and their purpose was to mop up the excess liquidity of banks. The third type was the 3-months treasury bills introduced for subscription exclusively by the NBFIs, non-financial enterprises and the public.

Treasury bills are designated by the number of days to their maturity. There are six types of T- bills that prevail in Bangladesh. These are

a) 28 days T-bill

b) 91 days T-bill

c) 182 days T-bill,

d) 364 days T-bill

e) 2 years T-bill (no more in new issue)

f) 5 years T-bill (no more in new issue)

The market for Bangladesh Treasury bills has a complex structure and involves numerous participants--Ministry of Finance, Bangladesh Bank, government securities dealers and brokers, and other holders of Treasury securities.

Table 4.8: Yield volatility of T-Bills in Bangladesh

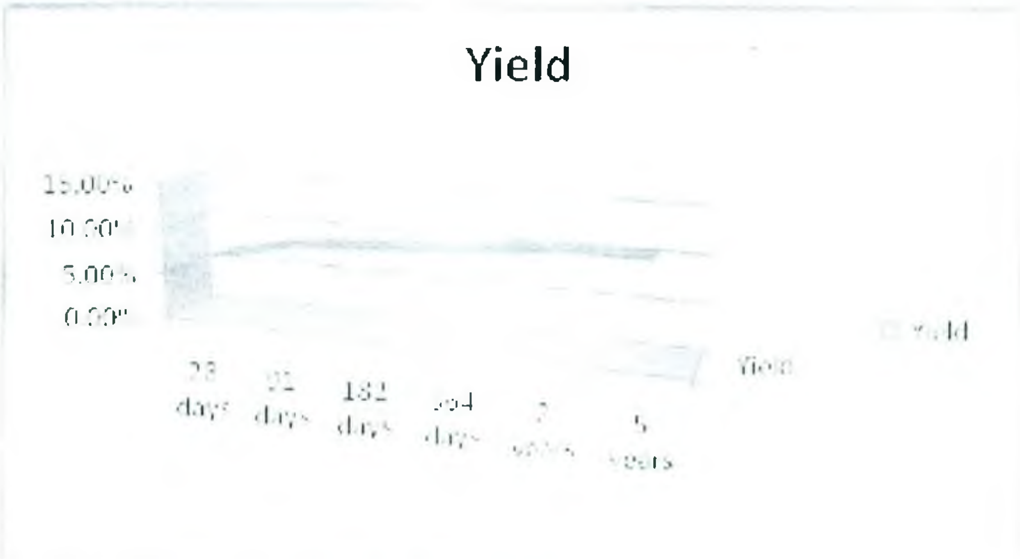
Yield volatility of T-Bills in Bangladesh As of 27-07-2010 Auction 20.255							
T-Bill	Yield	28 days	91 days	182 days	364 days	2 yrs	5yrs
28 days	6.84%	-					
91 days	8.52%	1.68%	-				
182 days	9.15%	0.63%	0.63%	-			
364 days	9.76%	0.61%	0.61%	0.61%	-		
2 yrs	10.62%	0.86%	0.86%	0.86%	0.86%	-	
5yrs	10.69%	0.07%	0.07%	0.07%	0.07%	0.07%	-

Source: Statistics Department, Bangladesh Bank

Secondary Market for T-Bill

Until 2003, there was no secondary market for T-bills transaction in Bangladesh. Government had decided to introduce the secondary T-bill market with a vision of broadening the government securities market. World's leading financial institution Citigroup's subsidiary Citibank, N.A. and local Prime Bank Limited had taken part in the first secondary transaction of T-bills in Bangladesh that year. Citibank, N.A. had sold a T-bill of 2 years maturity bearing Taka 3 crore of face value to Prime bank. Bangladesh Bank had taken necessary steps to assist this transaction. This was regarded the first secondary T-bill transaction in the country. a. Primary Dealers: Bangladesh Bank has selected eight banks and one non-bank financial institution as primary dealers (PDs) to handle secondary transactions of T-bills and other government bonds. The eight banks are Sonali Bank, Janata Bank, Agrani Bank, Prime Bank Ltd, Uttara Bank Ltd, South-East Bank Ltd, Jamuna Bank Ltd, and NCCBL, and the only NBFI is International Leasing and Financial Services Ltd. The inter-bank Repo is one kind of secondary market for T- bills and government securities, which was introduced from July 27, 2003. The selected banks and the NBFI have already ended all procedural eligibility requirements for being appointed and start operating as secondary bond market dealers.

Graph 4.3: T-BILL Yeild



Source: Statistics Department, Bangladesh Bank

This is an upward sloping yield curve or normal yield curve which indicates that the higher the maturity, the higher the yield. That means, yield of 91-dayu T-bill is higher than that of 28-day T-bill and so on. Here the yield spread between the 91-day T-bills and 28-day T-bills is 1.68%, which is the maximum than those of others. The reason is that the demand of T-bills gradually decreases with term to maturity.

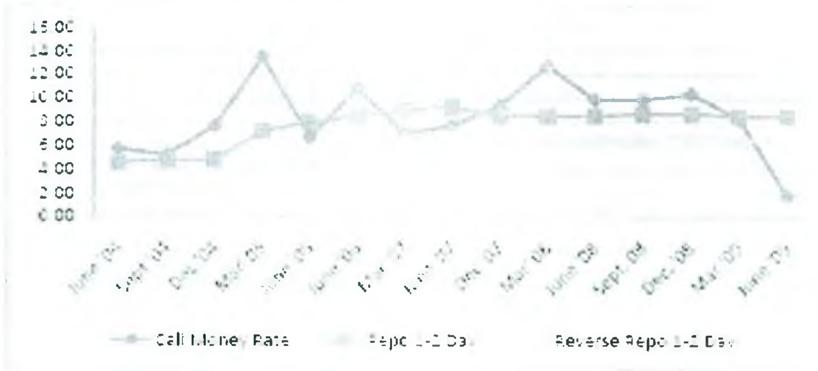
5) Repo & Reverse Repo:

Repurchase transactions, called Repo or Reverse Repo are transactions or short term loans in which two parties agree to sell and repurchase the same security. Repo is a commitment of the seller to the buyer to buy back the instrument as and when the buyer intends to sell. This is an arrangement between seller and buyer. Earlier in Bangladesh, there was a premature encashment facility for the investors of T-bills. Premature encashment facility is a procedure of buying back the security when cash is needed giving amount and accrued interest. This is also called discounting the T-bills. Currently, instead of Discounting Window, Repo facility is opened for the investors.

Reverse Repo

When a bank or financial institution has excess liquidity, it can deposit it to Bangladesh bank. This procedure is frequently known as Reverse Repo. There is also a Reverse Repo auction thatis held side by side of the T-bill auction. Reverse Repo auction is also held for 1 and 7 days tenure.

Figure-4.2: Overnight Money Market rates



Source: Monetary Policy Review: April, 2009, Bangladesh Bank

6) Banker's Acceptance: The Banker's Acceptance is traded in the Secondary market. The banker's acceptance is mostly used to finance exports, imports and other transactions in goods. The banker's acceptance need not be held till the maturity date but the holder has the option to sell it off in the secondary market whenever he finds it suitable. It is a short term credit investment created by a non financial firm and guaranteed by a bank to make payment. It is simply a bill of exchange drawn by a person and accepted by a bank. It is a buyer's promise to pay to the seller a certain specified amount at certain date. The same is guaranteed by the banker of the buyer in exchange for a claim on the goods as collateral. The person drawing the bill must have a good credit rating otherwise the Banker's Acceptance will not be tradable. The most common term for these instruments is 90 days. However, they can very from 30 days to180 days.

7) Commercial Papers: - an unsecured, short-term loan issued by a corporation. Maturities on commercial paper are usually no longer than nine months, with maturities of between 30 days to 270 days. Commercial Papers are actively traded in the secondary market since they are issued in the form of promissory notes and are freely transferable. But in Bangladesh it is not available.

4.6 Capital Market:

Concept: The market dealing in long term finance is known as capital market. This market makes available funds for long-term investment. Hence, capital market is a market for long term credit. The capital market is the market for the issue and trading of long-term securities. During the trading of these instruments, the securities traded are informally classified into short-term, medium-term and long-term securities depending on their term to maturity. Where the term to maturity of the instrument is up to five years, the security is classified as a short-term capital market instrument. Where the term to maturity is five to ten years, the security is classified as medium term, and where the term to maturity is more than 10 years, the security is known as long-term. Capital Market is the market, or realistically, the group of interrelated markets, in which capital in financial form is lent or borrowed for medium and long term and, in cases such as equities, for unspecified periods.

Table: 4.9 Difference between Money Market and Capital Market

Basis	Capital Market	Money Market
Classification	Primary Market and Secondary Market	No such classification
Requirement	Deals with funds for long-term requirement	Deals with supply of short-term requirements
Number of Instruments	Only shares and Debentures	Many like CDs, T-Bills, etc
Players	General investors, brokers, Merchant Bankers, Registrar to the Issue, Underwriters, Corporate investors, NBFIs and Bankers.	Commercial Bank, Bangladesh Bank and Government
Maturity of instruments	More than 1 year	1 year or less
Risks	More and varied	Less
Finance	Long term	Short term
Relation with central bank	Indirect	Direct

Source: Complied by the author from financial instruments literature

Players of capital market:

a) Investors,

b) PLCs,

C) Stock Exchanges,

d) Brokers and Dealers,

e) Merchant banks,

f) Securities and Exchange Commission,

g) CDBL.

Capital Market Products:

a) *Bonds:* Bond market links issuers having long term financing needs with investors willing to place funds in a long term, interest bearing securities. A matured domestic bond market offers wide range of funding for the government and the private sector. While fixed income instruments are the epitome of long term finance options, the size of tradable government bonds is small, secondary trading is rare, and more critically, public issue of corporate bonds may remain suspended, as it has been the case in Bangladesh since1996.

b) *Stocks:* The stock market is an important ingredient of the financial system in Bangladesh. It is an important avenue for channeling funds to investors through mobilizing resources from individuals. In view of the rapidly increasing role of the stock market, volatility in stock prices can have significant implications on the performance of the financial sector as well as the entire economy.

c) *Govt. Securities:* The government has initiated reforms program in the area of debt management since 2005. It has enacted the Bangladesh Government Treasury Bonds (BGTB) Rules, 2003 under which T. Bonds are being marketed on a regular basis. Development of a primary market for buying and selling of Government bonds of varying maturity (5 year, 10-year, 15-year and 20-year) to raise fund from the domestic market is one of the significant achievements of such reforms initiatives. Treasury Bills and Treasury Bonds auctions are being held on the basis of a pre-announced Auction Calendar.

e) *Debentures:* When any duly stamped debenture is renewed by the issue of a new debenture in the same terms, the Collector shall, upon application made within one month, repay to the person issuing such debenture, the value of the stamp on the original or on the new debenture, Provided that the original debenture is produced before the Collector and cancelled by him in such manner as the Government may direct.

Chapter-5:
Relationship of Money Market and Foreign Exchange Market

The Money and Foreign Exchange Markets are key components of the Financial System.

Money markets are the financial markets where short-term financial assets are bought and sold. By definition, the financial assets, such as stocks and bonds that are traded in these markets will mature in one year or less. Over a billion dollars in transactions take place in these markets on a daily basis. Financial institutions, corporations, governments, and the Bangladesh Bank Treasury are active in the money markets as they adjust their short-term portfolios.

Foreign exchange markets facilitate the trade of one foreign currency for another. Most exchanges are made in bank deposits and involve U.S. dollars in New York. Over a million dollars in foreign exchange trades take place every day; foreign exchange dealers handle most transactions. Businesses, financial institutions, governments, investors, and individuals use the foreign exchange markets to adjust their currency holdings.

Domestic Money Markets

Money markets provide an important mechanism in an economy for transferring short-term funds from lenders to borrowers. For corporations, governments, and financial institutions with temporary excess funds, these markets provide an efficient means to lend to other corporations, governments, and individuals who have a temporary need for funds. Money markets, therefore, represent the short-term spectrum of the financial markets, where securities that mature in a year or less are traded.

Key money market characteristics:

- "Generally characterized by a high degree of safety of principal."
- Most markets are informal "telephone" markets with low transaction costs.
- Most money market instruments are liquid, which means that they can be quickly converted into cash assets without a sizeable loss.

Money Market Interest Rates

Forces influencing interest rates in the money markets are varied and may reflect supply and demand conditions in different money market instruments. There are also broader forces that affect interest rates in all money and capital markets. Treasury bills, with no default risk and an active secondary market, usually yield the lowest rate in the money market and those other instruments appear to move with Treasury bill rates. However, point out that the current and expected interest rates on Money market funds are "The basic rates to which all other money market rates are anchored." That relationship reflects the use of the Bank rate by the Bangladesh Bank in implementing monetary policy.

Foreign Exchange Markets Play an Important Role

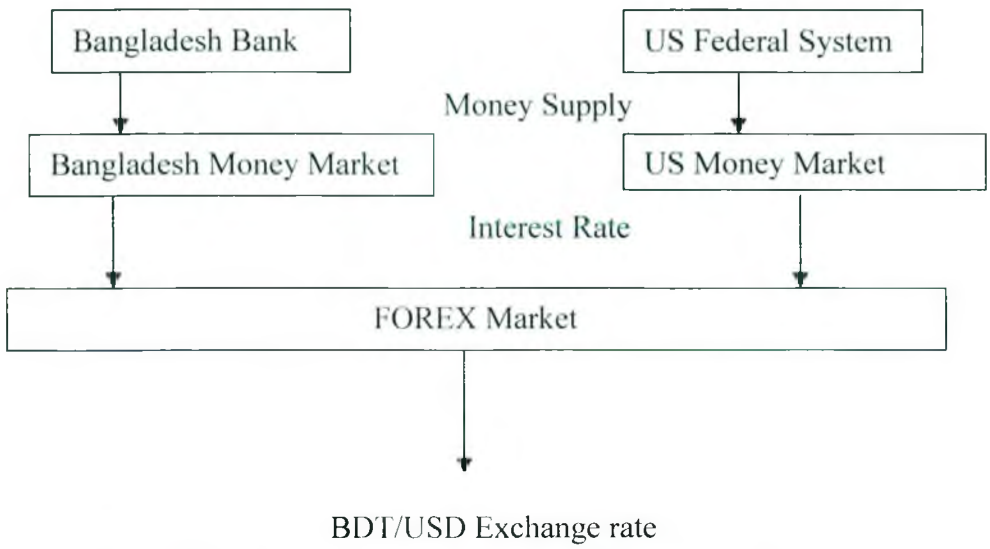
The foreign exchange markets play a critical role in facilitating cross-border trade, investment, and financial transactions. These markets allow firms making transactions in foreign currencies to convert the currencies or deposits they have into the currencies or deposits they want. Most transactions are handled by foreign exchange dealers; on a typical day they handle over a million dollars in foreign currency exchanges involving U.S. dollars alone. The importance of foreign exchange markets has grown with increased global economic activity, trade, and investment, and with technology that makes real-time exchange of information and trading possible.

Factors Driving Exchange Rate Movements

A number of factors may influence foreign exchange rates, including the following cited:

- Balance-of-payments position. A country experiencing a trade deficit usually faces downward pressure on its foreign exchange rate.
- Speculation over future currency values. Speculators buy or sell currencies when they see profitable opportunities.
- Domestic economic and political conditions. Deteriorating economic conditions and inflation typically have an adverse affect on foreign exchange rates.
- Central bank intervention. Central banks may buy or sell currencies to influence the value of their currency.

Chart: 5.1 Linking the Money Market to the Foreign Exchange Market:



Source: Complied by the author on the basis of Website data

Relationship between Money Market and Foreign Exchange Market

The money markets for short-term deposits and loans for the home and foreign currencies are linked to the foreign exchange market. The link between these markets is the forward margin which is the difference between the spot and forward rates. Margin is a function of interest rate differentials. For the determination of forward rates through the operation of interest parity principle the prerequisites are the existence of a term inter-bank money market locally and the freedom to banks to borrow or deposit funds abroad. In Bangladesh, the domestic money market is distinct from the foreign exchange market. Foreign exchange has been kept in a separate watertight compartment from the taka. The forward margin instead of being determined by interest rate differentials, in the Bangladesh forex market, is a function of demand and supply.

An in-depth analysis of the relationship between foreign exchange and money markets is an important issue for the policy makers, as any policy changes in one market can affect the movements in the other market significantly. An increase in interest rates in the money market tends to alleviate the depreciating pressure on the domestic currency in the foreign exchange market and a depreciating pressure in the foreign exchange market tends to aggravate an upward pressure in the money market. Therefore, an analysis of the movements in the foreign exchange and money markets, particularly the mechanism of volatility transmission between foreign exchange and money markets is vital for effective policy making. Available data for the last two fiscal years indicate that both the foreign exchange and the money markets in Bangladesh experienced notable volatility, which resulted in substantial depreciation of BDT against major currencies along with persistent inflationary pressure and a temporary rise in the interest rate, call money rate in particular, in the money market. This paper attempts to analyze the underlying causes and impact of the recent developments in the foreign exchange and money markets with a special attention to the policy implications.

Performance of the Foreign Exchange Market

During the early stage of the floatation, the foreign exchange market in Bangladesh remained largely stable with low volatility and minimal depreciation of Taka against major currencies due to the sound transition to the floating regime facilitated by the adequate preparatory steps taken by Bangladesh Bank and the then low inflationary global economic environment. From January 2000 to December 2011 the BDT/USD exchange rate remained fairly stable while during FY'2007-'2010 it experienced substantial depreciating pressure.

In FY 2008-09 and 2009-10 the exchange rate of taka against dollar remained steady due to sufficient supply of foreign reserve such as USD 10750 million in FY 2009-10 and USD 7471 million in FY 2008-09. But in the recent FY 2010-11 and in current months, the overall increase in commodity and food prices has increased the cost of import, while the flows of remittance have relatively declined. As a result Bangladeshi Taka against dollars has depreciated. The exchange rate against the US dollar has dropped and the USD stands at 1:74.69 against taka in August. The real effective exchange rate shows that in FY 2010-11, it has depreciated to 97.78 from 94.18. This depreciation causes increase in export and decrease in volumes of import. In recent months, the nominal exchange rate is 74.15 in June 2011 whereas it was 69.44 in June 2010. Over the years, but in recent months with faster speed, Bangladeshi currency has depreciated against the USD, despite otherwise observed for the USD vis-à-vis other currencies. Export rises in FY 2010-11 as USD 20,611 million which was USD 16236 million in FY 2009-10. However, import rises in a great volume which is USD 27714 million. For the depreciation in exchange rate, the import should have decreased but this did not happen due to increase in cost of commodities and food.

Figure 5.1: Daily Exchange Rate (weighted average)

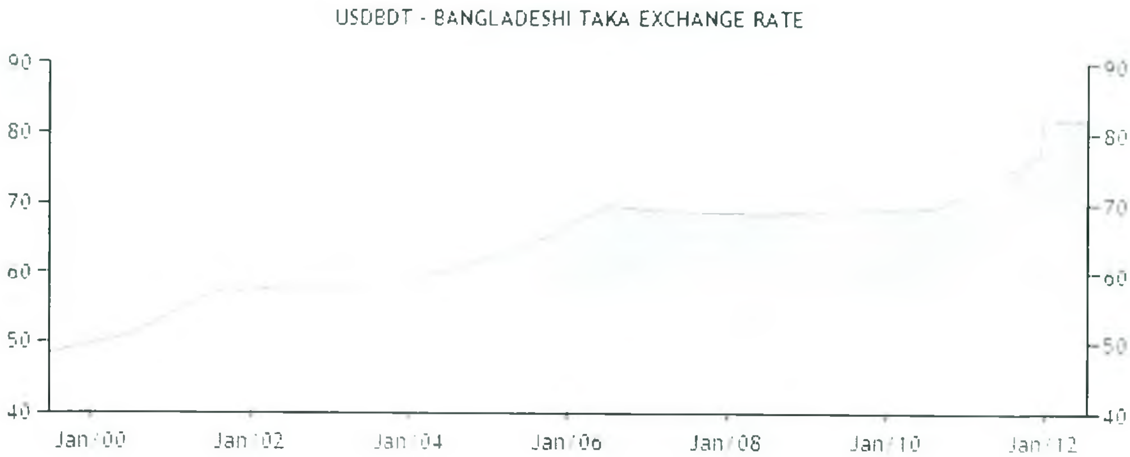
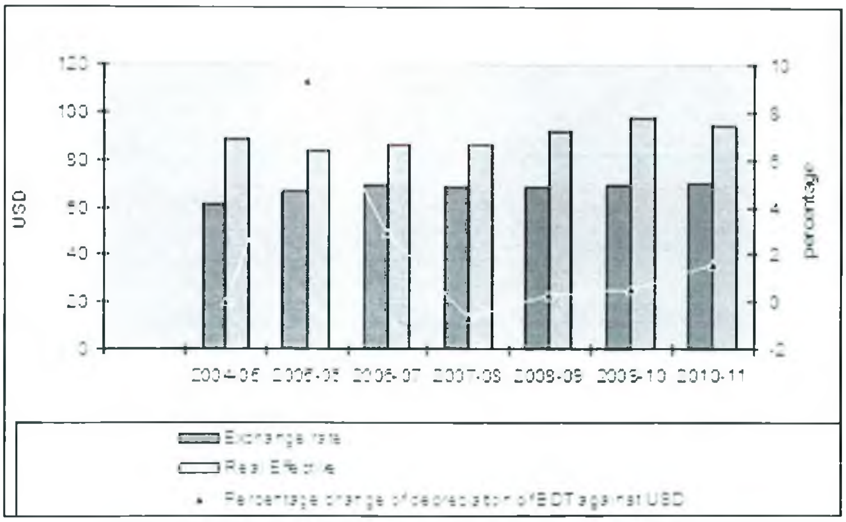


Figure 5.2: Exchange rate situation over the year



Source: Statistics Department, Bangladesh Bank. Bangladesh Economic Review

Bangladesh is an import-oriented country and depreciation of taka increases the import bill, causing trade deficit to go larger. The devaluation of taka may temporarily induce an increase in the value of export, but the country being an import dependent one, overall may put further pressure on the prices to go up, resulting in higher inflation. In addition, the increase in import bill may increase the domestic price in the economy. Thus the dual reasons may seriously dampen the economic situation by increasing inflation. The following Figure shows that the export and import payments are increasing over the years, causing a continuous trade deficit and imbalance in balance of payment.

Possible clarification of Exchange Rate Movements

The behavior of exchange rate movements depends on the demand and supply of foreign currency which itself is determined by the interactions of different parts of the market. Below an attempt is being made to explain the recent movements in the exchange rate in terms of changes in different segments of the foreign exchange market as well as the money market factors.

(a) Movements of the Foreign Exchange Market Variables

Bangladesh floated its exchange rate for Taka with effect from 31 May 2003. Under this exchange rate regime, exchange rate is being determined on the basis of demand and supply of the respective currencies. Authorised Dealer banks are now free to set their own rates for inter-bank and customer transactions. However, in order to maintain stability in the foreign exchange market Bangladesh Bank remains vigilant over the developments in the foreign exchange market by closely monitoring buying and selling of foreign exchanges. Despite hefty growth in exports (41.7 percent) and comparatively lower growth in wage earners remittances (6.0 percent), Bangladesh Taka witnessed 6.34 percent depreciation against US dollar in FY11 mainly due to higher import demand. The overall percent growth in imports compared to the previous year because of acceleration in domestic investment activities (which in turn caused huge foreign exchange demand for import of capital goods) and import of food items has widened the trade gap and caused depreciation of Taka against USD. The weighted average inter-bank rate stood at Taka 74.15 per USD as of 30 June 2011 against 69.45 as of 30 June 2010. However Bangladesh Bank continued its role in the foreign exchange market in line with its monetary policy goal to ensure stability in the market. It is evident that in both the last two fiscal years there was a sharp rise in demand for import LCs and thus precipitating a temporary instability in the foreign exchange market.

Exchange rate of Taka per US$ appreciated about 3.28% in the month of February and has since stabilized. This resulted from higher remittances and aid, lower import pressures and changed exchange rate expectations. Overall during the course of FY11 the Taka has depreciated by 9.35 percent between early July-End March.

Table5.1 Exchange Rate Movements: (Taka per US$)

Month	2010-11		2011-12[P]	
	Month Average	End Month	Month Average	End Month
July	69.4370	69.4100	74.4835	74.7050
August	69.4886	69.5850	74.4497	73.6150
September	69.6744	70.2150	74.5746	75.2300
October	70.5474	70.7850	75.7187	76.1950
November	70.3913	70.3650	76.4780	76.8600
December	70.6170	70.7450	79.6659	81.8450
January	71.0363	71.1500	83.4233	84.4400
February	71.1735	71.3000	83.0926	81.7600
March	71.9456	72.7350	81.7604	81.7950
April	72.8235	72.9000		
May	73.1919	73.4850		

Source : Statistics Department & MPD

Note: 2/ Exchange rate represent the mid-value of buying and selling rates. P= Provisional,

Table 5.2: Correlation between depreciation, volatility and other foreign exchange market variables

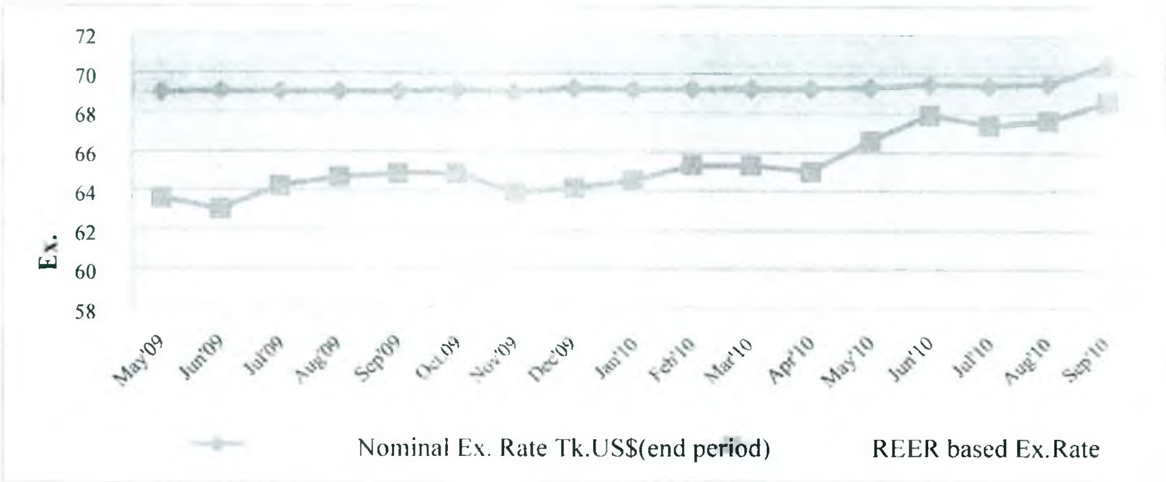
	Depreciation	Volatility	IMEXGAP/ Reserve	LCOP/ Reserve	REM/ Reserve
Depreciation	1				
Volatility	-0.67	1			
IMEXGAP/Reserve	-0.40	0.22	1		
LCOP/Reserve	-0.32	0.45	0.37	1	
REM/Reserve	-0.26	0.41	0.16	0.69	1

Source: Authors' calculation

Exchange rate movements:

The nominal exchange rate of Taka/USD (mid-value of buying and selling rate) stood at Tk.70.48 in September 2010 which was Tk.69.06 in September 2009 reflecting depreciation of Taka by 2.0 percent. The real effective exchange rate index increased to 97.34 as of end September 2010 from 93.94 in end September 2009, signifying the appreciation of real value of Taka as a result of that the difference between REER based exchange rate and nominal exchange rate slimmed down to 1.87 in September 2010 as compared to 4.19 in September 2009 indicating reduction in the competitiveness in nominal exchange rate. In the beginning of FY 11, the depreciation pressure on exchange rate of Taka against USD entailed improvement in competitiveness of Bangladeshi export in term of large difference between REER based exchange rate and nominal exchange rate. REER started to appreciate since, August, 2010 having need for sporadic market intervention by BB with USD purchase.

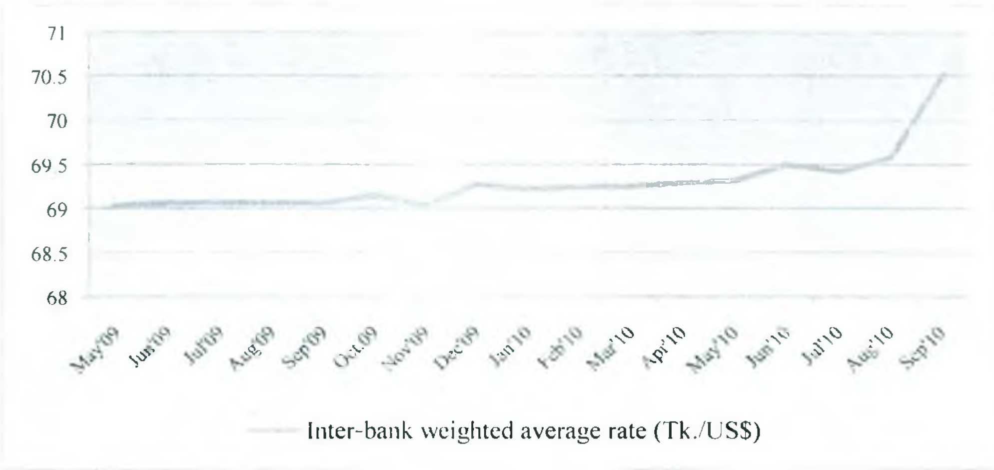
Chart: 5.2: Movement of Nominal Exchange Rate and REER based Exchange Rate



Source: MPD, BB

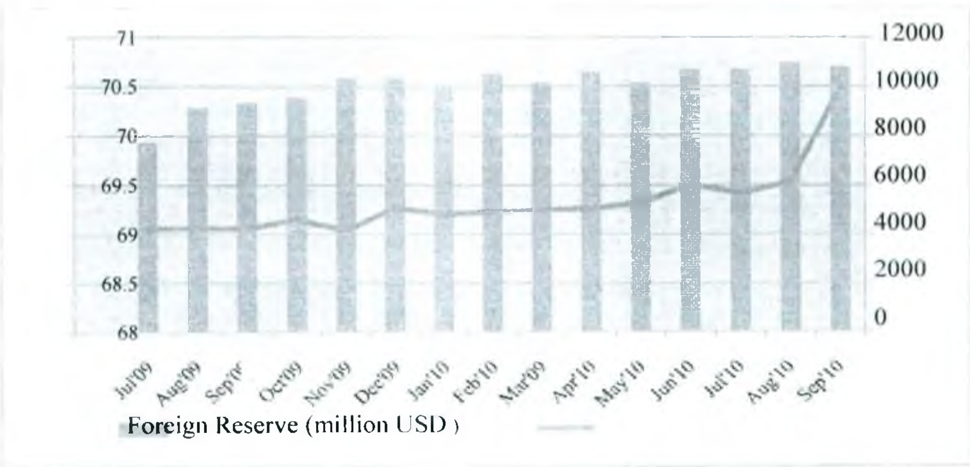
The weighted average nominal exchange rate in inter-bank foreign exchange market fluctuated within a very narrow range of BDT 69.1-69.5 during the FY10. The weighted average exchange rate remained same at BDT 69.06 against US dollar during July-September '09 and then started to oscillate with highest point at BDT 70.52 on 30th September, 2010. (Chart 5.4) Foreign exchange reserve stood higher at US$10833.55 million as of end September, 2010 against US$9363 million at the end of September 2009, though reserve position slightly dropped in September, 2010 from US$ 10992.49 million in August, 2010. Taka started to continue depreciating since August 2010 because of robust growth in imports and restraint in foreign reserve growth with lower inflow of remittances.

Chart: 5.3: Weighted average exchange rate movement trends



Source: MPD, BB

Chart: 5.4: Foreign Reserve and Nominal Exchange Rate



Source: MPD, Bangladesh Bank

b) The Money Market Factors

As mentioned above, the nexus between foreign exchange and money markets is close. An increase in the import payments generates pressure on the exchange rate, which lead to higher credit demand generating pressure in the money market. The consequent increase in the interest rate, on the other hand, limits the expansion of credit and thereby limits the flow of import payments and eases the depreciating pressure on the home currency. With a view to controlling the twin pressure, namely of high inflation and exchange rate depreciation, the monetary authority in Bangladesh continued to pursue a restrained monetary policy. The monetary stance and a relatively higher inflow of foreign reserves led to an improvement of the liquidity condition in the inter-bank foreign exchange market such that the pressure on BDT/USD exchange rate eased significantly in the last few years..

Table 5.3: Comparative Movement of Bank Rate, Call Money Rate & Commercial Lending Rates

	Bank Rate	Call Money Rate	Commercial Lending Rate of the Bank (Maximum)
2002	5.00	8.00- 10.00	15.00
2003	5.00	6.50- 10.00	15.00
2004	5.00	6.00- 9.25	15.00
2005	5.00	4.25- 9.25	15.00
2006	5.00	4.00-8.00	15.00
2007	5.00	5.50-13.00	15.00
2008	5.00	5.75-13.00	15.00
2009	5.00	8.00 -9.00	16.00
2010	5.00	0.7-6.6	17.00
2011	5.00	3.3-33.5	18.00

Source: Bangladesh Bank & BAFEDA

5. Possible Explanation of Money Market Movements

The reasons for this movement in the money market mainly include the following:

(i) Relatively faster expansion of credit than that of deposits resulting from high credit demand and higher interest rates on the various national savings instruments;

(ii) Systematic withdrawal of excess liquidity by BB;

(iii) High seasonal demand for foreign currency resulting from the increased imports bills; and

(iv) As there is an observed inverse relationship between excess liquidity and call money rates, a reduction in excess liquidity in the banking system tends to increase the volatility in the money market. Therefore, managing liquidity condition in the banking system is at the core of stability of the money market. The monetary authority controls the excess liquidity in order to keep it in line with the target monetary base by utilizing the standard instruments such as SLR, CRR, interest rates on government Treasury bills/bonds and other short term interest rates, such as repo/reverse Repo. Generally excess liquidity is affected by the changes in demand for liquid assets by the public and private sectors for different economic purposes. Rise in government and other public sectors borrowing from the banking system as well as unanticipated increase in demand for private sector credit can create extra pressure in the liquidity situation.

Underlying relationship between the Foreign Exchange and Money Market:

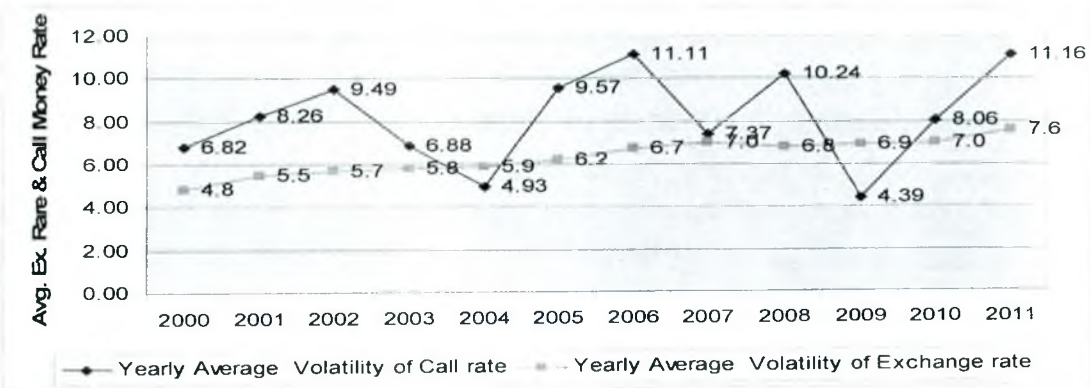
The preceding analysis of the money and foreign exchange markets delineates that functioning of these markets are interlinked and temporary instability in one market can generate pressure in the other market. This relationship is depicted in Table-5.4 by a correlation-matrix combining foreign exchange and money market variables. It is observed that there is high positive correlation between exchange rate and average call rate -estimated coefficient is 0.68 for FY05-06. In the same way, volatility of exchange rate and call money rate are closely associated with each other (In 2007 Figure 5.3).

Table 5.4: Correlation- matrix of Exchange & call rate

Correlation-Matrix				
	ER	Volatility of ER	Avg. Call rate	Volatility of CR
Exchange Rate	1			
Volatility of ER	.45	1		
Avg. Call rate	.68	.47	1	
Volatility of CR	.22	.53	.62	1

Source: Authors' calculation

Figure 5.3: Volatility in BDT/USD Exchange Rate and Call Money Rate



Source: Authors' calculation

Figure-5.3 shows that increasing volatility in the foreign exchange market can transmit into the heightened volatility in the money market and vice versa. In year 2007 volatility indicator in both the foreign exchange and money markets reached their highest level and declined subsequently in the year 2004 & 2009. In response, the monetary authority in Bangladesh adopted various policy actions consistent with the tight monetary policy stance and various market conditions contributing significantly in mitigating the pressure on exchange rate of Taka with the improved liquidity in the inter-bank foreign exchange and money markets.

Concluding Remarks

Over the last two fiscal years both the foreign exchange and the money markets in Bangladesh experienced notable volatility, which resulted in substantial depreciation of BDT against major currencies and a temporary rise in the interest rate in the money market. In this paper a modest attempt has been made to explain these developments and the links between these two markets. It is observed that, when the gap between the monthly flow of imports and exports widens or demand for opening import LCs rises (as shares of reserves), the exchange rate tends to depreciate. Similarly, volatility of the exchange rate appears to move in tandem, with the two aforementioned pressures. On the other hand there is high positive correlation between exchange rate and average call money rate and between volatility of exchange rate and that of call money rate, which signal that temporary instability in one market can generate pressure in the other market. These findings are tentative but they deserve careful review in fine tuning the day-to-day management of the policy stance.

Chapter-6:

Analysis and Interpretation of FOREX Risks

Based on the information collected using through the telephonic interview as well as the secondary data from different sources, we can segregate the problems with regard to the Forward contracts, FC Deposit accounts, inflow and outflow of the currencies and their impact on the Risk Management of the customers of the Bank. Each one are addressed separately and the analysis is carried out.

Forward Contracts as a Risk Mitigation Tool

It is a feature that can be utilized by Bangladesh residents who engage in exports and imports of goods as well as other transactions that involves them to deal with the foreign currency. This enables them to be aware of the exchange risks involved in their transactions. Any person who get some amount in the form of foreign currency for their export transactions or any other remittances can enter into a Forward contract. It is simply hedging their risk so that they need not gamble with the future events.

A quick example would help to illustrate the mechanics of a cash settled Forward contract done in the foreign exchange branch. Let us assume that the exchange rate is USD 1 = Tk.70 on January 1, 2011 Bady Fashion Ltd., agrees to buy from Anwar Spinning Mills Ltd., 1000 yarns of cotton on April 1, 2011 at a price of $ 30.00 per yarn (Total Value is USD 30,000 i.e Tk.21,00,000 in terms of Bangladeshi currency on the day which the transaction is entered). Here the Bady Fashion Ltd. has to pay Tk. 21,00,000 to Anwar Spinning Mills Ltd., on April 1, 2011. If on April 1, 2011 the spot price (also known as the market price) USD 1 = Tk. 68, the Bady Fashion Ltd., will incur loss. They will get only an amount of Tk.20,40,000. The remaining amount of Tk.60,000 is a loss for them. Therefore, in order to cover this risk aroused due to exchange rate fluctuation the company can enter into a Forward contract with the bank.

The company can enter into the Forward contract when they are sure of getting a particular amount on a particular date. This contract helps them to be on the safer side and they are assured of that particular amount on which they have entered into.

There of two type of Forward contracts- (i) Forward Purchase contract and Forward Sale contract. The term purchase and sale are used with respect to the banker. In a Forward purchase contract the banker agrees to purchase a certain amount of foreign currency from the exporter. Here the exporter hedges his risk. In a Forward sale contract the banker agrees to sell a certain amount of foreign currency to the importer. Under this case the importer hedges the risk.

When we analyze a Forward contract and find the difference between the forward rate (the rate at which the agreement is entered into) and the real exchange rate or the spot rate, the contracts would end up at a Premium or Discount.

Forward contracts ended in Premium:

In case of a Forward purchase contract, if the forward rate is more than the spot rate and in case of a Forward sale contract, if the spot rate is more than the forward rate then the contract results in a Premium.

Forward contracts ended at Discount:

In case of a Forward purchase contract, if the spot rate is more than the forward rate and in case of a Forward sale contract, if the forward rate is more than the spot rate the contract ends at a Discount.

By taking this as the base, we can analyze the total number of contracts that have been ended in Premium as well as Discount. This can give us a clear insight as how the Forward contract works.

Analysis of Forward Premium and Forward Discount contracts: For the study period [2008-2011]

The following table tells us about the number of contracts that have been resulted in Premium as well as discount.

Table 6.1: Forward contracts resulting in Premium and Discount:

Sl. No.	Category	No. of contracts	Result in %
1.	No of contracts ended in Premium	181	56.92
2.	No of contracts ended at Discount	137	43.08
	Total no. of Forward Contracts	**318**	**100**

Source: (Forward contract register of BASIC Bank, Main Branch, Dhaka)

Interpretation:

When a person enters into a Forward contract, it doesn't mean that he has earned any profit or incurred any loss, it simply tells that the particular contract has ended at a Premium or Discount against his transaction.

From the Table 6.1 we can come to a conclusion that we can conclude that 56.92% of the Forward contracts have ended at a Premium and only 43.08% have ended at a

Discount. This implies that in the recent years, entering into a Forward contract mostly have ended at premium.

Analysis based on the personal and telephonic interview:

This analysis is based on the personal as well as telephonic interview which was done to the customers of BASIC Bank who engage in the export and import transactions.

Q1. Are you aware of Forward contract?

This question was asked to know the awareness level of Forward contracts to the importers of BASIC Bank. The result was as follows.

Table 6.2: Awareness of Forward Contracts

Sl. No.	Category	No. of respondents	Result in %
1.	Yes	14	40
2.	No	21	60
	Total	**35**	**100**

Source: (Results computed through telephonic interview)

Interpretation:

The table 6.2 shows that very few among the importers are aware of the Forward contracts. It clearly shows that only 40% of the respondents are aware that there is a tool named Forward contract for exchange risk. The remaining 60% of the respondents are not aware about this tool. They don't use any tools for hedging. They simply gamble on the exchange rates and most of the time they incur loss due to the exchange rate fluctuations.

Q2. Will you use Forward contracts in future?

This question was asked to know whether the customers would prefer to use Forward contracts as their hedging tool in order to overcome their exchange rate fluctuation risk.

Table 6.3: Usage of Forward contracts in future

Sl. No.	Category	No. of respondents	Result in %
1.	Yes	30	85.71
2.	No	5	14.29
	Total	**35**	**100**

Source: (Results computed through telephonic interview)

Interpretation:

We made the clients of the bank aware about the Forward contracts. From the table 6.3 we can conclude that all their importers are now aware of the Forward contracts and most of them will use it in future to reduce their exchange risk. Some importers were reluctant and told that they will maintain their currencies in FC account and this is of no use to them.

Q3. Do you have a FC account (General)?

This question was asked to know about the number of customers who have opened an FC account with the BASIC Bank, Main Branch, Dhaka.

Table 6.4: FC account holders

Sl. No.	Category	No. of respondents	Result in %
1.	Yes	11	31.43
2.	No	24	68.57
	Total	**35**	**100**

Source: (Results computed through telephonic interview)

Interpretation:

From the above table 6.4 it is evident that only 31.47% of the clients own an FC account. The remaining 68.57% do not have such account. They are bound to face more exchange risk. These people may use the Forward contract facility to hedge their exchange risk.

Q4. Are you aware of Pre-Shipment and Post-Shipment Credit?

As noted by me there were very few Pre-Shipment and Post-Shipment advances taken by the Importers & exporters. This question is asked to know whether the Importers & exporters are aware of the Pre-Shipment and Post-Shipment credit advances and whether they are aware and don't require them.

Table 6.5: Awareness about Pre-Shipment and Post-Shipment Credit

Sl. No.	Category	No. of respondents	Result in %
1.	Aware, Will use	6	17.14
2.	Aware, but not required	26	74.29
3.	Not aware	3	8.57
	Total	**35**	**100**

Source: (Results computed through telephonic interview)

Interpretation:

Most of the clients are aware of the Pre-Shipment and Post-Shipment advances but their form of business does not require this facility. From the above Table 6.5 it is clear that 74.29% of people are aware of the Pre-Shipment and Post-Shipment advances but they don't require such facility. 17.14% of people are aware and said that they will continue using this facility. The remaining 8.57% of people were not aware of this facility and they are ready to use them in future.

Analysis Based On Day-To-Day Forex Operations at the Branch

While taking the day-to-day operations of the bank, it can consider the two kinds of Foreign Currency such as FC (interest bearing) deposit accounts & Exporter Retention Quota (ERQ) accounts (non-interest bearing) of the bank. When I tried to compare the growth of the FC (Deposit) account & ERQ account, I found that the there was a remarkable decrease in the ERQ account whereas there was a steady increase in the FC (deposit) account.

Comparison between FC (deposits) and ERQ:

The following is a comparison between the ERQ and FC (Deposits) accounts. It is done for the period starting from December, 2008 to December, 2011.

Table 6.6 (A): FC (Deposits) A/C

Deposits as on	No. of Accounts	Total Balance in USD
31.12.2008	40	2,50,000.00
31.12.2009	44	3,02,000.00
31.12.2010	46	4,10,000.00
31.12.2011	48	4,74,800.00

Source: (Books of Accounts of BASIC Bank, Main Branch)

From the above table 6.6 (A) we can identify that there is a steady increase in the FC (Deposit) account. *Table 6.6 (B): ERQ A/C*

Deposits as on	No. of Accounts	Total Balance in USD
31.12.2008	30	17,74,000.00
31.12.2009	27	14,28,000.00
31.12.2010	25	11,90,000.00
31.12.2011	20	10,12,000.00

Source: (Books of Accounts of BASIC Bank, Main Branch)

The above table 6.6 (B) indicates the total number as well as the volume of ERQ. From this we could estimate that the number of accounts has been at a considerable decrease for the study period.

Interpretation:

From the above tables [6.6(A), 6.6(B)] we can conclude that there had been a notable decrease in the ERQ as well a simultaneous increase in the FC (Deposit) account. This was due to the interest rate given under both the accounts. There is no interest rate given in the ERQ accounts has undergone a drastic decrease and that have resulted the customers to be price conscious and they have started shifting from ERQ deposits to FC Deposit account.

Chapter-7: Summary of Findings

A. Findings on Research question

General Findings

- There are lots of risks due to exchange rate fluctuations. The banking industry in Bangladesh has many instruments to mitigate this risk.
- It is noted that customers are cost conscious. Most of the Forward purchase contracts are entered as the option Forward contracts and the Forward sale contracts are entered into fixed Forward contracts. This implies that when the customer has to export goods he goes for an option Forward contract and when he imports he goes for a Forward sale contract.

Specific Findings

- Table 6.1 indicates that the Forward Premium contracts are more in number than the Forward Discount contracts. This is the situation in the BASIC Bank, Main Branch, Dhaka for the study period.
- Table 6.2 explains that only 40% of the customers are aware about the Forward contracts and the remaining don't know that there are tools for hedging their risk. 85.71% of the customers were willing to enter into these Forward contracts in future. While the remaining tells that they have FC account and these Forward contracts were of no use to them and will not use them. This is shown in Table 6.3.
- Table 6.4 shows us that 31.43% are FC account holders. This implies that many of customers are doing regular transactions in imports and exports. They convert the foreign currency into Bangladeshi Rupees whenever they feel that the rate is better.
- It was found that the Pre-Shipment and the Post-Shipment finance taken by the customers were very few in number. Most of them are aware of this facility given by banks but they feel that their business does not require them. As shown in Table 7.5, 91.43% of the customers are aware of these advances but only 17.14% use this facility. 74.29% of the customers tell that they don't require this facility. The remaining 8.57% are not aware about this facility.
- The FC Deposits are in a declining trend due to the increase in the rate of interest. This has made the 6.6 (B) explains us how the number of accounts has shown a remarkable decrease in ERQ Accounts and a steady growth in the

FC deposits account clearly indicating that a shift has taken place in recent years.

Suggestions for findings on Research question

While we consider Forward contracts, we would like to suggest the customers of BASIC bank to enter into Forward contracts for their transactions to hedge their risk. Even if they have any chance of the contract ending at a huge difference they can go for cancellation of the contract.

- The bank need not worry about the cancellation of Forward contracts because they obtain cancellation charges. But they should be careful that the customers do not use these Forward contracts for speculation purposes.
- Even if a customer is an FC account holder they can enter into Forward contracts because sometimes there is a chance that they may never get a good rate in future.
- The customers can also see which currency gives them a better rate with the help of calculating Cross rates and enter Forward contracts in that currency.
- When we compare the ERQ accounts and FC Deposit account the bank can advice their customers to move to FC deposits so that they get a better returns. Thus they can have a good relationship to their customers.

Comments on Findings on Research question

The beginning of Globalization has witnessed a rapid rise in the quantum of cross border flows involving different currencies, posing challenges of shift from low-risk to high-risk operations in foreign exchange transactions. This dissertation explains that very few customers of the bank are aware of the derivatives and are using them. The non-users of derivatives have fear of high Costs of as reasons for not using them. Even the users of derivatives have concerns arising from using them. Many of the customers do not have adequate knowledge of the use of derivatives. Hedging is always done only with the Forward contracts. In most cases, Banks provide the necessary expertise and advice. The Exchange Risk Management practices in Bangladesh are developing at a slow speed. To conclude, it is identified that there is need for a greater sense of urgency in developing foreign exchange market fully and using the hedging instruments effectively.

Chapter-8: Conclusion and Recommendations

Bangladesh comes out as an independent country following the war of liberation in 1971, when it inherited a financial market with a workable structure of institutional and legal bases. In 1972, the government had nationalized the country's banking and insurance sector and initiated some measures for strengthening the sector and ensuring its operations in a framework. Since the early 1990s, the money market has undergone a significant transformation in terms of instruments, participants and technological infrastructure. Consequently, a good number of banks, insurance and other non-bank financial institutions came into business, deepening tie structure of the country's financial market. Various reform measures have resulted in a relatively deep, liquid and vibrant money market. The transformation has been facilitated by the Bangladesh Bank's policy initiatives as also by a shift in the monetary policy operating procedures from administered and direct to indirect market-based instruments of monetary management. The changes in the money market structure and monetary policy operating procedures in Bangladesh have been broadly in step with the international experience and best practices. Along with the shifts in the operating procedures of monetary policy, the liquidity management operations of the Bangladesh Bank have also been fine-tuned to enhance the effectiveness of monetary policy signalling. The increasing financial innovations in the wake of greater openness of the economy necessitated the transition from monetary targeting to a multiple indicator approach with greater emphasis on rate channels for monetary policy formulation. Accordingly, short-term interest rates have emerged as a key instrument of monetary policy since the introduction of Repo, which has become the principal mechanism of modulating liquidity conditions on a daily basis. To liberalize the financial sector, the government has implemented a financial sector reform project (FSRP) during 1990-96, which was the first systematic reform initiative with wide ranging agenda, from interest and exchange rates to policy liberalizations. The existing literature covered role of money & foreign exchange markets in economy aspects of financial markets and emphasized on the lie growth. But literature pays little attention to many real problems of the money markets of developing and less developed countries such as efficiency of payments system, market imperfections and information asymmetries, causes of liquidity constraints and high cost of funds, peculiarities of securities market and inter-bank money and foreign exchange markets.

The thesis (a) reviewed the financial system of the country including its structure, i.e., markets (money market, foreign exchange market and capital market), institutes (banks, non-bank financial institutions reversible instruments); (b) analyzed operational mechanisms of the various components of the money market & foreign exchange market of the country; (c) Relationship between Money market and Foreign Exchange Market and (d) analysis of Foreign Exchange transactional risks.

The thesis has critically reviewed and examined the soundness of the country's financial system, including the performance of money and foreign exchange markets.

Following are the summary of-major findings (as detailed in concerned chapters and sections in the text) of the thesis:

1 The underdeveloped nature of the inter-bank market in Bangladesh is evident from the large spread between the highest and lowest rates in the call money market. It is because of the fact that with the implementation of FSRP, the need for funds of banks other than the Bangladesh Bank increased with abolition of easy refinance facility from the central bank.

2. There was sufficient excess reserves with banks, the inter-bank rate came down but the rate denoted increase with the accentuation of short-fall in reserves position of banks. Compared to nationalised banks and domestic private banks, the foreign banks in general, and Islami banks in particular, held higher excess reserves with them.

3. Higher exchange rate spread and lack of competition, lower holdings of foreign exchange, shortage of skilled human capital, presence of informal market and unusual activities of off-shore banking units and moneychangers, restricted participation of dealer banks in foreign exchange dealing in international financial markets and absence of standard components of them hindered the development of the country's foreign exchange market.

4. Forward foreign exchange markets are undeveloped despite most survey respondents allowing forward currency (and other foreign exchange derivative) trading.

The money market of Bangladesh suffers at both edges from lower demands and lower supplies. Consequently, the market continues to remain imperfect, inefficient and thus, low performing. The findings summarized above and detailed in specific chapters/sections in the thesis suggest that money market of Bangladesh in its present condition is not able to provide the nation with optimum level of financial services and push the economy to take a sustainable upward shift.

On the basis of the analytical and empirical findings, the thesis suggests the following policy, functional and operational strategies to be considered for implementation.

Recommendations

Following are various measures and actions this thesis considers important for inclusion in the policy reforms and structural and functional improvement of the money market and institutions in Bangladesh:

A. For the progress of banking system and the money market

- The activities of the money-lenders, indigenous bankers, and chit funds should be brought under the effective control of the Bangladesh Bank of Bangladesh.
- Hundies used in the money market should be standardised and written in the uniform manner in order to develop an all-Bangladesh money market.
- Banking facilities should be expanded, especially in the unbanked and neglected are as.
- Discounting and rediscounting facilities should be expanded in a big way to develop the bill market in the country.
- For raising the efficiency of the money market, the number of clearing houses in the country should be increased and their working improved.
- Adequate and easy remittance facilities should be provided to the businessmen to increase the mobility of capital
- As per recommendation, well-managed non-banking financial institutions, like leasing and Hire-purchase companies, Merchant Banks, Venture capital companies should be allowed to operate in the money market.
- The Bangladesh Bank has taken several steps to remove the differences which existed between the different sections of the money market. All banks in the country have been given equal treatment by the Bangladesh Bank as regards licensing, opening of branches, the types of loans to be given etc. The discrimination between foreign and Bangladesh banks does not exist now.
- The Bangladesh Bank has taken steps to reduce considerably the differences in the interest rates between different sections of the money market as well as different centres of the money market and at different times. The interest rates are deregulated and banking and financial institutions have the freedom to determine and adopt market-related interest rates.
- Bangladesh Bank has been able to reduce considerably monetary shortages through open market operations.

- A sound banking system requires an effective legal framework, which enables the central bank to supervise and/or regulate the money market with sufficient authority to maintain money market discipline.
- In order to impart transparency and efficiency in the money market transaction the electronic dealing system has been started. It covers all deals in the money market. Similarly it is useful for the BB to watchdog the money market.
- LIBOR/DIBOR- London Inter Bank Offered Rate/ Dhaka Inter Bank Offered Rate also serves as good money market index. This is the interest rate at which banks borrow funds from other banks.
- Introducing new instruments will create adequate opportunity for investment of short-term excess fund, which in turn will increase liquidity and further reduce dependency on the call money market.
- Retailing of government papers should be encouraged. The primary dealers can play a role in this context.
- assist and empower the central bank to develop (i) a plan for removal of the remaining exchange controls; (ii) strengthen the prudential framework for banks and non-bank institutions and oversee the proper and full implementation of both on-site and off-site examination system, (iii) undertake a detailed feasibility study for domestic resource mobilization, including an assessment on the possibility for issuance of central bank bills/securities in order to increase market orientation; (iv) enhance the credit appraisal, portfolio management, and debt-recovery capabilities of banks and non-bank institutions; and (v) introduce and develop die investment management capability of those regulated institutions.
- redesign the central bank's market monitoring and intervention process towards a pragmatic one and make die policy options flexible and bank specific on die basis of individual bank's exposure to risks and their management efficiency;
- expose the banking system to international standards and procedures in banking regulation and supervision;
- modify the securities laws that will simplify the authorization process for issuance of money market instruments by commercial banks;
- restructure local banking system for greater efficiency of banks and safety of public money with them;

- fill in the skill and knowledge gaps in critical areas of banking, such as credit evaluation and risk management; financial analysis of enterprises; management and monitoring of credit facilities; and asset and liability management;
- make stringent provisions for punishment of employees of banking sector for violation of laws and regulations;
- make provisions for incentives separately and distinctly for prudent development and management efficiency on die part of bank owners and management executives;
- avoid excessive monetization of government's fiscal deficits through banking system by making public borrowings through the market at market determined rates;
- phase out immediately die non-bank participants from inter-bank market by granting them permission to operate in the 'repo' market;
- ensure central bank's online access to banks' data base for regulatory purpose and make the existing early warning system timely, useful and pragmatic;
- even out the liquidity imbalances in the banking system to balance the demand with the supply for short-term finance in the money market;
- facilitate money market transactions for small and medium sized institutions who are not regular participants in the market;
- Banks and other players in the market have to be licensed and efficiency supervised by regulators
- Demand and supply must exist for idle cash
- Electronic Fund Transfer (EFT), Depository system, Delivery versus payment (DVP), High value inter-bank payment system, etc. are pre-requisites.
- Market should have varied instruments with distinctive maturity and risk profiles to meet the varied aptitude of the players in the market.
- Central bank should intervene to moderate liquidity profile.
- Market should be integrated with the rest other markets in the financial system to ensure perfect equilibrium.
- Uses a broad range of financial instruments.
- Promote financial mobility in the form of inter-sectoral flows of funds
- Facilitate the implementation of monetary policy by way of open market operations.

B For the progress of the Foreign Exchange Market

- encourage real trading in the inter-bank foreign exchange market as a measure for operational and structural shift towards more activation of the market;
- develop market micro-structure including information management system;
- allow access of new participants access to the foreign exchange market, specifically hedge funds and foreign currency denominated proprietary traders who have experience of accessing markets through auto-dealing interfaces;
- transform the market from direct inter-dealer trading to broker-inter-dealer trading;
- progress the overall operational efficiency of the dealer banks in foreign exchange by increasing deal flow, risk management capability and both theoretical knowledge and practical working skills;
- encourage real trading in the inter-bank foreign exchange market as a measure for operational and structural shift towards more activation of the market;
- develop the foreign exchange market for efficient and effective foreign exchange dealing, instead of mere buying and selling;
- establish structure to begin foreign exchange electronic dealing in the bank-to-bank market;
- increase transparency of dealer banks in price and pricing methods;
- make the market more, competitive by reducing bid-offer spread and rationalizing margins earned by market-making banks;
- remove the time-zone inconsistencies of the country's forex market with international financial centers;
- facilitate introduction of derivatives trading, such as interest rate swaps and bond futures, and other workable instruments and mechanisms;
- intensify competition in the market to provide the users with benefits of competitive exchange rate;
- close down the moneychangers to protect the exchange rate from, unusual instability;
- intensify monitoring on the off-shore banking units in the country to prevent them from unlawful and unethical financial transfers and handlings; and
- facilitate further the remittance inflow process into the country to achieve liquidity sufficiency.

generate real benefits for savers and investors through efficient and open money and capital markets. It will discuss whether the technical, financial, regulatory and prudential issues are best handled by the appropriate financial and regulatory authorities. The final objective is to make the country's financial market an efficient and well-regulated one capable of producing leading-edge products and technology, which will facilitate international capital flows and benefit domestic firms and investors and stimulate economic growth in the country.

A liquid and vibrant money market is necessary for the development of a capital market, foreign exchange market, and market in derivative instruments. The money market supports the long term debt market by increasing the liquidity of securities. The existence of an efficient money market is a precondition for the development of a government securities market and a forward foreign exchange market.

Trading in forwards, swaps, and futures is also supported by a liquid money market as the certainty of prompt cash settlement is essential for such transactions. The government can achieve better pricing on its debt as it provides access to a wide range of buyers. It facilitates the government market borrowing. Monetary control through indirect methods (repos and open market operations) is more effective if the money market is liquid. In such a market response to the central bank's policy actions are both faster and less subject to distortion.

Bibliography

1. Ahmed, Syed M and Ansari, Mohammed I (1998): "Financial Sector Development and Economic Growth: The South-Asian Experience," Journal of Asian Economics, Vol.9(3).pp.503-17;

2. Ahmed, K.M., Ashraf, S., and Ahmed, S. (2005). Efficiency of Foreign Exchange Markets: Evidence from South Asian Countries. South Asia Economic Journal,

3. Alain C. and Steven Weinberg (2001): Foreign exchange markets in the 1990s: Intrude market volatility and the growth of eletronic trading. Board of Governors of the Federal Reserve System, Federal Reserve, New York;

4. Auerbach and H. Hermann (1999): "Aging, Financial Markets and Monetary Policy",. Heidelberg, Springer, 55-83;

6. Aron, J. and M. Ayogu. (1997). "Foreign Exchange Market Efficiency Tests in Sub-Saharan Africa: Econometric Analysis and Implications for Policy". Journal of African Economies (Special supplement on exchange rates), 6 (3), 150-192.

7. Arnone M. and Iden. George R.(2002): 'Primary Dealers in Government Securities: Policy Issues and Selected Countries' Experience, Working Papers No.03/45;

8. Ahmed. Faruquddin. (1999). "The Money Market in Bangladesh" Bank Parikrama, Vol XIX, Nos. 3 & 4 September and December 1994, pp. 19-34.

9. Alam, Md Nurul and Sayeeda Bilquis Jahan (1996); "Inter Bank Call Money Market in Bangladesh" (1996), *Bank Parikrama*, Vol-XXI, Nos. 1 & 2, March & June.

10. Bangladesh Bank (2005), FID Circular No-01, March 05.Azad. Abul Kalam (December 2002). "Behavior of Treasury Bills Market in Bangladesh", Journal of 11.

11. Business Studies. Dhaka University. Vol XXII, No. 2. pp. 285-302.

12. Bangladesh Bank (2011): Monthly Economic Trends, Bangladesh Bank, Statics Department, Vol XXXVI, No. 11, September 2011;

13. BCA (1991): Bank Company Act, 1991, Government of the People's Republic of Bangladesh, Dhaka;

14. Babbbel & Santomero, (2001), Financial Markets, Instruments, and Institutions, Singapore, McGraw-Hill Irwin, pp. 226-227.

15. Cook, Timothy Q., (1981) "Determinants of the Spread Between Treasury Bill and Private Sector Money Market Rates, " Journal of Economics and Business, vol. 33 (Spring 1981), pp. 177-87

16. Cook, Timothy Q., and Thomas Hahn (1990). "Interest Rate Expectation and the Slope of the Money Market Yield Curve" Federal Reserve Bank of Richmond Economic Review, vol. 76. pp.3-26

17. Copeland, Laurence S. (2000), *Exchange Rates and International Finance,* 3rd Edition, London: Prentice Hall.

18. Campbell, J. Y., Lo, A. W., & MacKinlay, A. C. (1997). The econometrics of financial markets. Princeton University Press.

19. Coleman, M., (1990). Cointegration-based tests of daily foreign exchange market efficiency. Economics Letters, 32, 53–59.

20. Corbae, D., Ouliaris, S., (1986). Robust tests for unit roots in the foreign exchange market. Economics Letters, 22, 375–380.

21. Fry, M. J., (1998): Money, Interest and Banking in Economic Development, John Hopkins Unversity Press, Baltimore. (2nd edition in 1995)

22. Fabozzi, J Frank, (2000) Fixed Income Analysis for the Chartered Financial Analyst Program.

23. Goldreich, D., 2003, Underpricing in discriminatory and uniform-price Treasury auctions, Working paper, London Business School, December.

24. Georgetti, Ken. (2000): "Instability in World Financial Markets"; Conference paper, IMF, Washington, D.C.-October;

25. Goldsmith, R.W.(1969): Financial Structure and Development, Yale University Press (New Haven, Conn);

26. Gup & Kolari,(2005), Commercial Banking: The Management of Risk, Replika Press Pvt. Ltd., India, pp. 17-18.

27. Hardy, Laniel C. (2000). Building Behavior in Treasury Bills Auctions, Evidence Pakitan, IMF Working Paper-WP/00/111, June.

28. Huybens, E., and R. Smith, (1999): Inflation, Financial Markets, and Long-Run Real Activity, Journal of Monetary Economics, 43, 283-315..29;

29. Ian Domowitz (1983): "The structure of financial markets and the theory of the firm." Journal of Law and Economics. 26 London;

30. IMF (1999): Foreign Exchange Market Reforms in Bangladesh; Monetary and Exchange Affairs Department, Volume 2, Appendices, July;

31. Johnson, Haztel J. (1993). Financial Institutions and Markets- A Global Perspective, McGraw-Hill Inc, New York.

32. Jeff Madhura. "Financial Markets and Institutions" (7th Edition). Thomson south-western

33. Kim, Yun-Hwan (2001), Developing Treasury Securities Market in Asia, Asian Development Bank, Manila, June.,"

34. Kothari, C. R (2003): Research Methodology- Methods and Technique, Second Edition, Wiswa Prakahsan, Mumbai-Pune;

35. Levine, R. (2000): Bank-Based or Market-Based Financial Systems: Which is Better?" Carlson School of Management, University of Minnesota Working paper;

36. Levine, R., N. Loayza, and T. Beck (2000): Financial intermediation and growth: Causality and causes. Journal of Monetary Economics, 46, 31-77;

37. Lee, C.I., Pan, M.S., & Liu, Y. A.(2001). On market efficiency of Asian foreign exchange rates: evidence from a joint variance ratio test and technical trading rules. Journal of International Financial Markets, Institutions and Money 11, 199–214.

38. Liu, C.Y., He, J., (1991). A variance ratio test of random walks in foreign exchange rates. Journal of Finance 46, 773–785.

39. McCullouch, J. Huston., "The Monotonicity of the Term Premium: A Closer Look," Journal of Financial Economics, vol. 18 (March 1987), pp.185-92

40. Masuoka, (1990), Asset and Liability Management in the Developing Countries Modern Financial Techniques, The World Bank, June, (1990).

41. Marshall and Bansal, (2003), Financial Engineering A Complete Guide to Financial Innovation, Prentice-Hall of India Private Limited, New Delhi.

42. McKinnon, Ronald (1973): Money and Capital in International Development, Brookings Institution, Washington, D.C.;

43. Mishkin, F.S. (1996): " The causes and Propagation of Financial Instability: Lessons for Policy Makers,". Banque De France Bulletin Digest no.27, March;

44. Messe, R.A., Singleton, K.J., (1982). On the unit roots and the empirical modeling of exchange rates. Journal of Finance 37, 1029–1034.

45. Mishra, M. N. (1987), *Money Banking and International Trade and Public Finance*, 2nd Edition, New Delhi: S. Chand and Company Ltd.

46. Neave, Edwin H. (1998): Financial Systems- Principals and Organizations; Routledge, London- New Yorks;

47. Oh, G., Kim, S., & Eom, C.(2007). Market efficiency in foreign exchange markets. Physica A 382, 209–212

48. Peterson, S. (2005): Financial Reforms in Developing Countries, Public Policy Insight, John F. Kennedy School of Government, Harvard University, USA;

49. Peter S. Rose & Sylvia C. Hudgins. "Bank Management & Financial Services" (7th Edition). McGraw-Hill International Edition

50. Rose, (2003), Money and Capital markets: Financial Institutions and Instruments in a Global Marketplace, New Delhi, McGraw-Hill Irwin, pp. 271-272

51. Rajan, R.G. and L.Zingales. (1999): Financial Systems, Industrials Strucure, and Growth." University of Chicago. Manuscript;

52. Rahman, A., & Saadi, S. (2007). Random walk and breaking trend in financial series: An econometric critique of unit root tests. Review of Financial Economics

53. Simon, D.P., 1994a, Markups, quantity risk and bidding strategies at Treasury coupon auctions, Journal of Financial Economics 35,43-62.

54. Simon, D.P., 1994b, The Treasury's experiment with single-price auctions in the mid-1970s: Winner's or taxpayer's curse? Review of Economics and Statics 76, 754-60.

55. Sarker, Md. Abdus Samad (1999); "Fluctuations in Inter Bank Call Money Market and Their Implications", Bank Parikrama, Vol-XXIV, Nos. 3 & 4, September & December, pp. 25-38

56. BASIC Bank Limited: Annual Report, 2008-2011,

57. Bangladesh Bank: Annual Report, 2008-2011,

58. MOF, 2010, Bank O Arthik Pratishthaner Karjabali 2009-2010 (Functions of Banks and Financial Institutions 2009-2010, Dhaka: MOF, GOB) .

59. MOF, 2011, Bank O Arthik Pratishthaner Karjabali 2010-2011 (Functions of Banks and Financial Institutions 2010-2011, Dhaka:MOF, GOB).

60. SEC (2011): Annual Report-2011, Securities and Exchange Commission (Sec), Dhaka.

61. National Accounts Statistics, (2010). (Provisional Estimates of GDP, 2004-05 and Final Estimates of GDP,2003-04, *Bangladesh Bureau of Statistics*.

62. Wu, J.L. & Chen, S.L. (1998). Foreign exchange market efficiency revisited. Journal of International Money and Finance, 17, 831 -838.