

The Impact of the Financial Market and Banking Reforms on Interest Rate Determination in Bangladesh

Prepared for

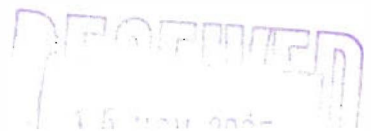
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September 05, 2004



Mr. Kazi K. Shams Chisty
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Subject: Submission of Internship Report

Dear Sir,

I am pleased to present the report on "*The Impact of the Financial Market and Banking Reforms in Interest Rate Determination in Bangladesh*", for fulfillment of my Internship requirement. This report will provide you with a description of the organizational aspects of The Premier Bank Limited, and an insight into the interest rate behavior in Bangladesh and the impact of financial reforms on it.

I have tried my best to follow your guidelines in every aspect of preparing this report. I collected what I believed to be the most relevant information to make my report as analytical and coherent as possible.

I enjoyed preparing this report because it provided me an opportunity to increase my understanding of a very interesting topic. I appreciate this opportunity to prepare this report. I will be happy to answer any questions on this report.

Sincerely Yours,

Sabrina Anis

ID # 99-2-10-050

ACKNOWLEDGEMENT

It was a great pleasure for me to be associated with The Premier Bank Limited, a leading private sector bank committed towards services. I am profoundly grateful to Mr. Kazi K.S. Chisty, Proctor East West University, who gave me unreserved and useful guidance in the making of this report.

I am indebted to the Vice President and manager and other officials of The Premier Bank Limited. Despite their tight schedule, they tried their best to help me.

I also would like to express my gratitude to the different officials of Bangladesh Bank for allowing me to use their library. My thankful acknowledgment also goes to those authors of various journals that I consulted.

EXECUTIVE SUMMARY

Interest rate plays a vital role in a country's economy. It is predisposed by numerous macroeconomic factors and simultaneously influences several other macroeconomic parameters. Even a slight change in the interest rate structure can have major influence on country's balance of payments. On the other hand, and a more dominant one, interest rate is one of the key factors in a country's banking system. Banking activities are all dependent on interest rates.

A country's development is based on the mobilization of wealth or capital funds. The most important actor in such channeling is the business sector, where the life-blood is the consistent flow of investment that is provided by the banking sector of the economy.

A sudden change in the interest rates structure instantaneously influences the flow of such investment funds, which ultimately bears impact on the industrialization process. Such susceptibility has made interest rate an important tool that the government pays significant attention to.

This study is an endeavor to track and predict interest rate movements. It includes statistical analysis done on the basis of theoretical relations among the concerned variables.

The study first projects the current macroeconomic scenario of Bangladesh with a snap shot of the financial sector. Next, the study illuminates the reforms that have been undertaken in different regimes of the country, and the impacts and developments from such restructuring programs. The intricacies of such alterations have been pointed out and appraised in terms of their consequences on the economy. Then the study explores the interest rates related theoretical issues. This section covers major interest rates determining theories.

The analytical part of the study emphasizes on determining the interest rates movements. The analysis was facilitated with the incorporation of sophisticated statistical and spreadsheet software. The report precludes the abstract statistical outputs but includes only the results relevant to the analysis.

Bank rate, deposit rate, and advance rate statistics have been considered for a period of sixteen fiscal years from 1988-89 to 1999-04. The correlations among these rates have been found to be significantly positive. However, advance rate shows an esoteric nature. Because advance rate is significantly influenced by exogenous factors like high degree of loan classification, rather than a bank's discretion of setting a competitive rate.

Several regression lines have been generated against each of the three rates on a time frame. In every case it was found that the polynomial regression curve extends a better fit and forecast. The study further excavates into the major dependents of these interest rates and tries to forecast those variables. Such as the average deposits per deposit money bank branch is likely to be influenced by the deposit rate. However, since the study reveals that relationship between only these two variables is insignificant in explaining such movements, such anomalies have been elaborated qualitatively.

TABLE OF CONTENTS

| CHAPTER | | PAGE No. |
|---------|--|--|
| 1 | ORGANIZATION 1.1 Overview of the Bank 1.2 Vision of the Bank 1.3 Objective of the Bank 1.4 Administration of the Bank 1.6 Management of the Bank 1.7 Activities of the Bank 1.8 List of the Products | 9 9 10 10 11 17 22 |
| 2 | INTRODUCTION 2.1 Origin of the Report 2.2 Objectives of the Report 2.3 Scope of the Report 2.4 Research Methodology 2.5 Limitation of the Report | 24 24 30 30 31 |
| 3 | BANGLADESH: RECENT MACROECONOMIC PERFORMANCE AND PRECIS OF THE FORMAL FINANCIAL SECTOR 3.1 Bangladesh; Recent Macroeconomic Performance 3.2 Precis of the Formal Financial Sector | 32 36 |
| 4 | INTEREST RATE 4.1 Introduction 4.2 Functions of Interest Rates 4.3 Nominal and Real Interest Rates 4.4 The Classical Theory of Interest Rates 4.5 The Liquidity Preference Theory 4.6 Loanable Fund Theory 4.7 The Rational Expectations Theory 4.8 Role of Interest Rate in Government Policy | 41 42 43 45 49 53 58 63 |
| 5 | THE IMPACT OF THE FINANCIAL MARKET AND BANKING REFORMS ON INTEREST RATE DETERMINATION IN BANGLADESH 5.1 Introduction 5.2 Interest Rate Policy: First Stage 5.3 Interest Rate Policy: Second Stage 5.4 Interest Rate Policy: Third Stage 5.5 Interest Rate Policy: Fourth Stage 5.6 The Effects of the Interest Rate Reforms 5.7 The Impact of the FSRP on Interest Rate 5.8 Financial Sector Reform: Status Quo | 70 71 71 71 72 73 75 80 |
| 6 | CONCLUSION | 82 |
| 7 | REFERENCES | 83 |

THE PREMIER BANK LIMITED

OVERVIEW OF THE PREMIER BANK LIMITED

The Premier Bank Limited was incorporated in Bangladesh as banking company on 10 June 1999 under Companies Act 1994. Bangladesh Bank, the Central Bank of Bangladesh issued banking license on June 17, 1999 under Banking Companies Act, 1991. The Head Office of Premier Bank located at Banani, one of the fastest growing commercial and business area of Dhaka City. The bank has 10 branches located at Dilkusha, Gulshan, Banani, Elephant Road, Mohakhali (Islamic Banking Branch), Imamganj in Dhaka, Agrabad in Chittagong, Voirab in Ashugonj, Khulna and Sylhet.

VISION OF THE PREMIER BANK LIMITED

Premier Bank is well prepared to meet the challenges of the 21st century. The bank has the advantage of having talented, efficient, brilliant and dedicated professionals, as part equipped with state of the art technology. The bank engages in wide range of activities from small scale lending to large industrial project financing from household savings of neighborhood to savings of expatriate Bangladeshis living abroad.

Offering efficient, qualitative, specialized services and providing a range of customer friendly products at an affordable price with a quick delivery system is Premier Bank's commitment. The Bank would constantly make endeavor to explore the new products and services suiting the needs of the clients. Thus the Bank confidently looks forward to a new horizon with a distinctive vision for making this Bank a highly competitive, most modern, and transparent commercial banking institution comparable with any modern bank of the country.

OBJECTIVES OF THE PREMIER BANK LIMITED

- Boosting up investment in private sector by financing independently or under syndication arrangement.
- Encouraging and motivating the new entrepreneurs to establish industries and business in line with the development of national economy.
- Developing the model of participatory banking.
- Financing the foreign trade of the country both in Export and Import.
- Developing the standard of living of the limited income group by offering consumer credit.
- Finance the industry, trade and commerce through conventional way as well as by offering various customer friendly credit products.
- Enhancing savings tendency of the people by offering attractive and lucrative new savings schemes.
- Boosting up mobilization of savings both from urban and rural area.
- Developing competitive, most modern, scientific and social welfare oriented banking institution of the country.

ADMINISTRATION OF THE PREMIER BANK LIMITED

Board of Directors: Management and direction of the affairs and business of the Bank are entrusted to the Board of Directors, which exercise all the powers and do all the acts and things that may be exercised/done by the Bank.

Presently there are thirteen members in the board including one member from Taiwan. The members of the Board of Directors came from a very respectable position in the society. They are from highly successful group of business and industry in Bangladesh. Dr. H B M Iqbal is the Chairman of the Board of Directors. He is a well-known personality in Bangladesh with excellent record of success in business and industry. Mr. Kazi Abdul Majid is the Managing Director of the Bank who is also the Ex-Officio Member of the Board.

The other members of the Board are:

- Dr. Arifur Rahman, Vice Chairman
- B. H. Harun
- Kutubuddin Ahmed
- Nurul Amin
- Abdus Salam Murshedy
- Shafiqur Rahman
- Al-Haj Abul Kashem
- Mohammad Mazharul Islam
- Nawrin Iqbal
- Faiza Rahman
- Shaila Shelly Khan

MANAGEMENT OF THE PREMIER BANK LIMITED

CHIEF EXECUTIVE OF THE BRANCH

Presently manager of the Gulshan Branch of Premier Bank Ltd. is holding the position of First Vice President. Manager is the chief of the branch and representative of the Bank in the area. He is responsible for the management of the affairs of the branch and is to get things done by the employees responsible to him. Depending on the grade of the manager, he has administrative, financial and business powers which are to be exercised for the interest of the Bank. Duties and responsibilities of a Manager of Premier Bank are given below.

ADMINISTRATIVE DUTIES

- A manager has all authority to give directions to officers and employees of the branch for the functioning of office work.

- He will train up employees so that all kinds of works can be done by them independently.
- He has all authority to do any work for safeguarding the interest of the branch. But he must not do anything for which has not been authorized.
- He will promote knowledge, develop faculty, consciousness and practice discipline.
- For smooth functioning of the branch, the manager shall prepare a duty chart showing allocation of work among his personnel and employees. He shall change the duty chart at least once a year and shall ensure that no senior staff is placed for working under a junior one and no occasion for dissatisfaction and complexity arises among the staff members.
- The manager will prepare a draft copy of schedule of passing and signing limit for the personnel of the branch considering their grade, ability, and efficiency in triplicate and will forward the same to head office for approval.
- A voucher requiring counter signature shall be first signed by the officer-in-charge of the department from where the transaction originates and then countersigned by the manager.
- The manager shall impartially prepare the Annual Performance Appraisal (APA) Reports and Periodical Performance Reports (PPR), personally on all the employees of the branch.
- In case of any doubt, the manager may check the cashier and other staff physically in presence of another officer or staff. When occasion arises for farming of charge for misconduct, negligence of duties, insubordination etc. the matter shall be reported to the Head Office in concrete shape for necessary action.
- The manager has to maintain harmonious relationship amongst the staff members and shall motivate employees for greater output.

MAIN RESPONSIBILITIES

- Mobilization of deposit and business.
- Maximization of profit by increasing income and economizing expenses.
- Safety and security of cash.
- Proper conduct of business of the branch.
- Routine and surprise checking of ledger, documents, bills and works of the personnel and the employees.
- Investment of Bank's fund in business as per guidelines and instruction given by Head Office.
- Allotment and supervision of works of the personnel and employees of the branch and checking up the attendance register.
- Looking after the recovery and supervision of all outstanding advances.
- Maintenance of liaison with Head Office and other Branch's Local Administration and Public Sector/ Private Sector enterprises and the prospects and elite of the area.
- Proper checking of cash, securities, bills, parcels and godown etc.

BUSINESS POWER

Manager should not exercise any business power not authorized by Head Office. Business powers of the manager will be as per delegation made by Head Office from time to time. The manager should be fully conversant with his business power.

FINANCIAL POWER

Financial power of the manager for incurring expenditure like payment of rent, rates, taxes, telephone bills, conveyance, T.A., D.A., repairs etc. and for routine expenses including stationary, table stationary etc. and for payment of interest will be guided by Head Office instructions issued from time to time. Manager

should not incur any expenditure, which is not authorized by Head Office. The manager should be fully conversant with his financial power.

OTHER POINTS

- In respect of disciplinary action, manager cannot dismiss any staff, frame memorandum of charges and sign dismissal, suspension, termination and discharge letter.
- Manager cannot retire any staff.
- Manager cannot grant annual increment to any staff. Special increment or withholding of increment shall rest with Head Office.
- Manager is not authorized to appoint any staff and sign letter of appointment, nor he can promote/ sign letter of promotion of any staff. He cannot transfer any staff nor can accept the resignation of any staff.

DUTIES AND RESPONSIBILITIES OF OTHER OFFICERS/EMPLOYEES OF THE BRANCH

Officer-in-charge of a concerned department is any officer entrusted with the responsibilities of proper supervision of work of that department. The responsibilities of the officer-in-charge of a department are as follows:

- He should consider and forward the leave applications of the staffs working under his supervision to the manager/authorized officer for necessary action.
- In case of any deviation and violation of the rules and regulations or non-compliance of the instructions by any staff of the department, the concerned officer-in-charge will take necessary steps to bring the situation in order /solve them personally and thereafter, he will refer the matter to manager for necessary action.

- He shall attend office 15 minutes ahead of office hour and shall not leave office without completion of daily works and intimation to the supervising officer.
- He shall sign the voucher as per limit.
- He should act as an immediate supervising officer for the staff working in the concerned department.

CASH IN CHARGE

- Holds the key of cash safe.
- Receives cash from other banks/branches and acknowledge, where necessary. Opens the cash safe before commencement of business along with other personnel holding the keys.
- Supervises receipt and payment of cash.
- Supervises the carrying of the cash to the Cash Department.
- Delivers cash to the paying cashiers against receipt on a memo.
- Countersigns the credit vouchers if he is an attorney.
- Arranges sending cash to other branches.
- Check the receiving cashier's and paying cashier's receipt/ payment sheet and collect cash from them.
- Writes the cash balance book and cash position memo and signs them.
- Maintains record of stamped forms.
- Investigate and informs the manager about excess or shortage of cash.
- Gets books and cash checked by the manager or authorized officer.
- Supervises the custody of cash in the safe and books in the strong room.
- Checks the drawers of the cashiers before leaving the office.

ACCOUNTS IN CHARGE

- Supervises safe keeping of books and vouchers.
- Gets cash book, transfer book and subsidiary ledgers balance.

- Checks and signs the books maintained and vouchers passed in the department.
- Holds in his custody the stitched and sealed vouchers.
- Sends statements and returns to the Head Office and Bangladesh Bank.
- Gets adjusting, closing and reversing entries.

CLEARING IN CHARGE

- Signs all the standard letters issued from the department.
- Checks and signs vouchers and advises.
- Signs endorsement/discharge on the instruments.
- Checks the schedules.
- Checks and signs the books maintained in the department.
- Ensure reversal of the entries outstanding in sundry asset account and account of clearing and transfer delivery.
- Keeps the undelivered instruments in the security box which is kept overnight in the strong room.

ACTIVITIES OF THE PREMIER BANK LIMITED

The following list includes the activities presently taking place in The Premier Bank Limited. It also includes the activities that the bank management plans to undertake in the future.

- **LAONS AND ADVANCES**
 - Working capital loan for small and export oriented industry
 - Project Loan
 - Cash Credit
 - Overdraft
 - Packing Credit and Trust Receipt

House Building Finance

Bank Guarantee

□ **DEPOSIT**

Current Account

Savings Account

Short Term Deposit

Fixed Deposit

Bearer's Certificate of Deposit (BCD)

Non-Resident Foreign Currency

Deposit Account (NFDC)

Resident Foreign Currency Account

Special Savings Schemes

□ **TRADE FINANCE**

Export

Import

□ **OTHER SERVICES**

Safe Custody (Locker)

Travelers Cheque

Demand Draft

Pay Order

Telegraphic Transfer

Selling and Buying Foreign Currency

Standing Instructions

Tele-Banking

Credit Card

Automated Teller Machine (ATM)

Online Banking

Lease Financing

RATE OF INTEREST ON DEPOSIT AND LENDING

RATE OF INTEREST ON DEPOSITS

| Particulars | Proposed Rate per Annum |
|--------------------|-------------------------|
| Savings Deposit | 8.50% |
| Short Term Deposit | 6.50% |
| Fixed Deposit | |
| 1 & 2 months | 8.75% |
| 3 months | 9.25% |
| 6 months | 9.50% |
| Particulars | Proposed Rate per Annum |
| 12 months | 10.00% |
| 24 months | 10.50% |
| 36 months | 11.00% |

Bearer Certificate of Deposit (BCD) is issued applying FDR rate as per following chart:

| BCD Value | Amount required to be deposited by the customer | | | |
|-------------|---|------------------------------|------------------------------|------------------------------|
| | For 12 months (10.00% p.a.) | For 9 months (9.50% p.a.) | For 6 months (9.50% p.a.) | For 3 months (9.25% p.a.) |
| Tk. 100,000 | Tk. 90,910 | Tk. 93,350 | Tk. 95,465 | Tk. 97,742 |
| Tk. 50,000 | Tk. 45,455 | Tk. 46,675 | Tk. 47,735 | Tk. 48,871 |
| Tk. 25,000 | Tk. 22,730 | Tk. 23,340 | Tk. 23,866 | Tk. 24,435 |

CONSOLIDATED STATEMENT OF AFFAIRS OF THE PREMIER**BANK LIMITED AS ON APRIL 30, 2004**

| ASSETS | AMOUNTS IN TK |
|-----------------------------------|----------------------|
| Cash & Bank Balance | 1,265,146,753.99 |
| Money at call | 175,000,000.00 |
| Investments | 60,008,700.00 |
| Loans and Advances | |
| Loan against imported merchandise | 10,733,298.33 |
| Loan against Trust Receipts (LTR) | 765,071.02 |
| Packing Credit | 270,862.52 |
| House Building Loan | 1,750,451.65 |
| Cash Credit | 31,211,611.83 |
| Secured Overdraft | 25,162,090.24 |
| T.O.D. (Current A/C) | 199,658.00 |
| Consumer's Credit Scheme | 6,773,555.15 |
| Staff Loan | 3,685,253.68 |
| Inland Bill Purchase | 24,356,600.40 |
| Foreign Bill Purchased/Discount | 12,088,670.25 |
| Other Assets | 62,995,844.73 |
| Adjusting A/C Debit | 15,245,477.28 |
| Assets as per Contra | 213,629,926.86 |
| H/O General A/C | (151,868.40) |
| Profit and Loss A/C | 10,751,693.94 |
| Total Expenditure | 87,223,356.52 |
| Total Assets | 2,006,847,007.99 |

| LIABILITIES | AMOUNTS IN TK |
|--------------------|----------------------|
| Paid Up Capital | 222,000,000.00 |
| Deposits | |
| Current Deposit | 64,070,491.03 |

| | |
|-------------------------------|------------------|
| Savings Deposit | 61,529,205.74 |
| Short Term Deposit | 47,644,047.87 |
| Fixed Deposit | 810,933,958.00 |
| Bearer Certificate of Deposit | 15,082,248.00 |
| Deposit in Foreign Currency | 9,995.00 |
| Monthly Savings Scheme | 1,676,605.67 |
| Monthly Income Scheme | 850,000.00 |
| Education savings Scheme | 3,025,381.00 |
| Sundry Deposit | 30,047,189.26 |
| Bills Payable | 4,810,198.39 |
| Other Liabilities | 436,000,000.00 |
| Adjusting A/C Credit | 17,479,171.20 |
| Liabilities as per Contra | 213,629,926.86 |
| Total Income | 78,058,589.34 |
| Total Liabilities | 2,006,847,007.99 |

LIST OF SERVICES

MONTHLY SAVINGS SCHEME

The bank introduces this scheme to facilitate the individuals for small amount of savings, where individuals can save small amount in their account each month for a certain period. Under this scheme, a person can make regular savings of Tk. 500 or any multiple thereof per month and gets a substantial amount after 3 or 5 years which ever he choose. He is also entitled to extra bonus if he deposits the installment every month regularly (that is inside the seventh day of every month). The offer for installment of Tk. 500 and Tk. 1000 is as follows:

| Deposit amount for each month | Tk. 500 | Tk. 1000 |
|-------------------------------|---|---|
| Benefit after three years | Tk. 20,900 (with bonus Tk. 800) Interest rate per annum is 00.0% | Tk. 41,800 (with bonus Tk. 1,600) Interest rate per annum is 00.0% |
| Benefit after five years | Tk. 42,500 (with bonus Tk. 2,500) Interest rate per annum is 13.5% | Tk. 85,000 (with bonus Tk. 5,000) Interest rate per annum is 13.5% |

Loan is allowed up to 85% of the deposited amount. Any individual may open this account. Photographs and introduction is not required to open this account. Account may also be opened in the name of a minor. A person can open more than one account for different size of deposit at any branch of the bank. In case of extreme emergency, the person can make premature enactment; in that case, interest will be paid at savings rate.

✓ MONTHLY INCOME SCHEME

Under this scheme an individual can deposit in Tk. 50,000 or in multiples thereof for a period of three years or five years, which would generate a regular monthly income for that particular period. The payoff for the deposit of Tk. 50,000; Tk. 100,000; Tk. 200,000 and Tk.500,000 are as follows:

| Deposit amount | Tk. 50,000 | Tk. 150,000 | Tk. 200,000 | Tk. 500,000 |
|-------------------------------------|-------------------|--------------------|--------------------|--------------------|
| Benefit for 3 years (each month) | Tk. 450 | Tk. 1350 | Tk. 1,800 | Tk. 4,500 |
| Benefit for 5 years (each month) | Tk. 500 | Tk.1,550 | Tk. 2,000 | Tk. 5,000 |

Interest rate earned for three-year period is 11.25% and for five-year period is 12.50%. Benefits are negotiable for deposit of Tk. 1,000,000 or above. Payment of benefit starts after 30 days of deposit. In case of extreme emergency, the person can make premature encashment; in that case, interest will be paid at savings rate. Loan is available up to 85% of the deposit. Nomination is also acceptable. No photograph or introduction is required to open this account. Bangladeshis living abroad may also open this account for providing fixed amount of income to their dependent residing in Bangladesh.

✓ EDUCATION SAVING SCHEME

This scheme provides the opportunity for meeting the educational expenses of an individual's children at school, college or university. Deposit of Tk. 25,000 or any multiple thereof for five year is required to open this account. Thus, the person can enjoy monthly benefit for 5 years or a lump sum payment at the end of fifth year. Loan is available up to 85% of the deposit. In case of extreme

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emergency, the person can make premature encashment; in that case, interest will be paid at savings rate. The students in the merit list will be awarded special stipend/gift. Benefits under this scheme are as follows:

| Term | Deposit | Monthly benefit | |
|--|----------------|------------------------|-----|
| or | | | |
| Lump sum for five years payment | | | |
| 5 years | Tk. 25,000 | Tk. 980 | Tk. |
| | 44,000 | | |
| 5 years | Tk. 50,000 | Tk. 1,960 | Tk. |
| | 88,000 | | |

Interest rate for this scheme is 12% per annum in case of lump sum payment and 11.50% per annum for monthly benefit.

STUDENTS CREDIT PROGRAM FOR HIGHER EDUCATION

In Bangladesh, the literacy rate is too low. To make the country develop, it is utmost necessary to make the people educated. The main reason for the poor education in the country is the low income of the people. To promote higher education in Bangladesh Premier Bank Limited has introduced this credit scheme which is the first of its kind in the country whereby the meritorious students will enjoy credit facility in each month to defray educational expenses.

TARGET GROUP

Target Group: Meritorious undergraduate and graduate students of recognized universities and colleges.

OBJECTIVE OF THE SCHEME

- To provide financial assistance to the meritorious students for higher education.
- To achieve one of the social welfare objective of the bank.

PURPOSE OF THE LOAN

The loan will be given to meet the expenses of admission fees, books and stationary, instruments, monthly fees, examination fees and boarding and lodging.

ELIGIBILITY

For undergraduate students minimum 70% marks in HSC and SSC examinations. For graduate students 55% marks in degree and 70% marks in HSC and SSC examinations.

Parents or guardians may apply with the estimate of education expenses in the bank's prescribed form to any branch duly recommended by the Head of the Department or Head of the Educational Institution. The loan is to be disbursed in a lump sum amount where necessary and monthly installments. The amount and period of the loan will be fixed on case to case basis considering the degree/ educational institution at which the student is enrolled or to be enrolled. Monthly installment varies from Tk. 1,000 to Tk. 1,500 for a period of maximum four years. The interest rate is 11% per annum. Loan is repayable in 36 equal monthly installments after one year from the date of completion of the course or securing job, which ever is earlier. During the loan period progress report to be submitted to bank from time to time. Original certificates of all

examinations and personal guarantee of the parents, student and third party is required as security.

CONSUMER CREDIT SCHEME

The Consumer Credit Scheme has been devised and introduced by The Premier Bank Limited to extend credit facility to the limited and fixed income group to improve their standard of living. Under this scheme, the bank finances the purchase of consumer durable like Air Conditioner, Freezer, Television, Washing Machine, Private Cars, Personal Computers, intangibles such as medical expenses, holidays, marriages and others like home repair, renovation etc. The consumer repays the loan in easy monthly installments stretching from 24 to 48 installments. Credit is available for the individuals such as confirmed personnel/ executives of government /semi-government organizations, autonomous bodies, corporations, multinational companies, banks, insurance companies, teachers and educational institutions, personnel of armed forces and other self employed persons. The loans under this scheme ranges from Tk. 10,000 to Tk. 300,000. Equity in the form of margin should be at least 15% of the value of the item, in case of vehicle it should be at least 30%. The amount of equity should be deposited by the client/borrower before disbursement of the loan. The loan amount is disbursed through A/C Payee Pay Order/ Demand Draft directly to the seller/ manufacturer/ agents of the products except for intangibles, renovation, home repair and redecoration. Interest rate is 14% per annum. Other fees included 1% of the loan amount as risk fund and 2% as service charge.

RURAL CREDIT SCHEME

For poverty alleviation in the rural area and mobilization the rural savings, the bank has introduced this loan scheme. Low income group of the rural area are the target group for lending. The loan is allowed for the purpose of establishing

Poultry, Agro-based Handicrafts, Rice Hasking, Purchase of Rickshaw-van, Sewing Machine, Milking Cow, Grocery Shop, Small Business etc. The loan is short term in nature for maximum one year. The maximum amount of loan is Tk. 10,000 per borrower. No security or equity is required but personal and group guarantee for each other is necessary. The prospective borrower will have to be a member of a group. Authorized bank officer will make on the spot survey regarding relevant information about the willing borrower. The loan is to be sanctioned in lump sum amount. The loan is to be disbursed to the group members in three phases. Initially two members of the group will be allowed loan after the group formation, which must be consist of five members and two members from the same family, and after completion of 7 days training and approval of the group by the branch manager. Another two members will be allowed loan after 15 days of first sanction. Remaining member will be allowed loan after 7 days of second disbursement. Loan is repayable in 50 equal weekly installments starting after 7 days of loan disbursement. The rate of interest and service charge are 14% and 3% per annum of the loan amount.

INTRODUCTION

2.1 ORIGIN OF THE REPORT

The report has been prepared to fulfill the partial requirement of the Internship under the Bachelors of Business Administration program of East West University.

My area of concentration is the *interest rate*, which I had voluntarily elected in response to my fascination in the behavior of the interest rate in general. Subsequent approval followed from our course teacher Kazi K.S. Chisty, Associate Professor, East West University.

Interest rate behavior in the past decade, in comparison with other variables through correlation, regression (linear, log-linear and polynomial) and ensuing analysis form the essence of the report.

2.2 OBJECTIVES OF THE REPORT

The classified objectives of the report are exhibited as follows:

PRIMARY OBJECTIVE

- To make an endeavor in explaining the behavior of interest rates by establishing relationships through experiential and concrete data analysis.

SECONDARY OBJECTIVES

- To gain knowledge regarding the reform policies concerning interest rates.
- To acquire an in depth understanding of the functions of interest rates in the economy in general and in the Bangladesh economy in particular.
- To associate theories of interest rate with empirical findings.

2.3 SCOPE OF THE REPORT

The scope of the report is dedicated to presentation of the macroeconomic overview of Bangladesh, an overview of the formal financial sector of Bangladesh in terms of banks and non-bank financial intermediaries, interest rate reform policies, selected interest rate theories, the behavior of interest rates with respect to specific variables and interest rate determination.

2.4 RESEARCH METHODOLOGY

The primary focus of the study was on establishing the existence or non-existence of relationships between interest rates and other prudently selected variables. The statistical analysis was done by the help of a statistical program in a computer. The part of the analysis contains the regression of selected interest rates against time and other influencing variables to establish statistical relations. Regression methods were subsequently used to determine the most suitable one, which would provide the most accurate scenario and projection. Regression lines generated by these methods are checked for best-fit criterion considering the R^2 measure best fit.

With respect to information, the author of the report resorted exclusively to secondary data. For this purpose the September 2003 issue of *Economic Trends*, published by the Statistics Department of Bangladesh Bank was utilized along with several back issues of the same complementing the acquisition of additional information.

With respect to guidance in preparing the assignment, I sought and obtained time-to-time advice from Kazi K.S. Chisty, Procter , East West University.

2.5 LIMITATION OF THE REPORT

The limitation of the report lies in the limited exposure of the author in the fascinating field of interest rates. Persistent effort was made for pertinent analysis by the author. But his relative inexperience may have influenced him in providing somewhat naïve elucidations in a couple of occasions.

BANGLADESH: RECENT MACROECONOMIC PERFORMANCE AND PRECIS OF THE FORMAL FONANCIAL SECTOR

3.1 BANGLADESH: RECENT MACROECONOMIC PERFORMANCE

In the last year due to the bumper Iri-Boro crop, the economy achieved a growth rate of more than 5%. This time it is the Aman, the main crop of Bangladesh. Aman production this year has broken all the previous records. Against a target of 9.5 million, it is expected that the production will exceed 10 million. So far this year there has not been import of food grain, while in the last year around 4 million of food grain had to be imported. One of the direct impacts of the bumper production of the Aman has been the low level of inflation (below 4% as of last November).

But not all the news is good for the economy. Export continues to suffer as a result of the poor performance in the main sector. Apparel (ready-made garments and knitwear). The poor performance in the export sector is heavily reflected in the overall sluggishness in the manufacturing sector. Though there are some positive news in the higher growth rate of private sector credit distribution from the banks, there are also worries because of the even higher growth of government borrowing which many believes would crowd out private investment if the industry begins to pick up.

The higher amount of government borrowing is mainly the result of sluggishness in the revenue earning. While there is some good growth in the income tax revenue, other revenue sources- mainly the customs revenue has not been doing well. It is however not surprising because of the fact that overall import has been sluggish throughout the first half of the year due to stagnant situation in the economy.

The following section presents the recent trends of some of the important economic macro economic parameters.

INDUSTRIAL GROWTH

During July -October period in current fiscal year (Fiscal year 2003) Manufacturing growth (based on quantum index of manufacturing) rate has stood at 5.2% (compared to the same period last year). This is somewhat better than the first three months (July-September) period growth of 4.6%. But if it is considered that this growth rate is against the same period last year, a period where industrial activities were terribly affected by the worst flood, the growth figure of 5.2% is definitely worrying. What is more disturbing is that there has been a decline of industrial activity during the month of October'03 compared to the previous month, August'03. The quantum index of manufacturing of medium and large industries was 200.23 in September'03. It came down to 199.68 in October'03. Clearly the Export slowdown has fallen upon heavily on the industrial performance of the country.

Source: BBS

EXPORT

Export Growth rate has stood at only 7.18% in the first six months of this fiscal year (July'03-Dec03), slightly up from the 6.98% during the first five months, compared to the same period last year. This growth has been below than targeted (more than 4% below target). Though some sectors, like Knitwear (around 30% growth) and Leather (24.78%), which has been performing poorly throughout the previous fiscal year have done remarkably well, some important sectors like RMG (woven), frozen food and tea has done poorly throughout the period.

| UP | DOWN |
|----------------------|-----------------------|
| Woven Garments 0.32% | Agri Products -16.78% |
| Knitwear 29.94% | Tea -63.72% |
| Leather 24.78% | |
| Raw Jute 2.23% | |
| Jute Goods 4.24% | |
| Frozen food 9.2% | |

Source: EPB

IMPORT

Total Import payment during the period July -August of current period declined by 4.3% compared to the same period of previous year. The decline was mainly due to decrease of import of consumer goods by more than 25%. Also lower manufacturing growth and investment has resulted in decline of import of Capital goods by 3.33%, industrial raw material by 1.6% and intermediate goods by 1.6%.

Full first quarter figures are not available for actual import. But the available L/C figures show that during the whole period of first quarter of FY 2003, import has been very sluggish. Opening of Fresh L/C during the first quarter has increased by only 3.38%. But amount of L/C settlement has actually decreased during the period by 4.3%.

RESERVE

FOREX reserve stood at \$1.64 billion as of December 31. On 30th July 2003 the FOREX reserve was US \$ 1.57 billion (7772.2 Crore TK.).

Source: Bangladesh Bank

REVENUE EARNING

Revenue earning of the government during the first six months of the FY (FY 2003) is not satisfactory. Total tax revenue receipt grew by less than 7% compared to the same period last year, which is far below the target (12.4% shortfall than targeted). Tax earning from three of the main revenue sources—customs duty, VAT and income tax have been below target during the first quarter of this fiscal, though they have been slightly better (except customs duty) than same period previous year. But it has to be taken into consideration that revenue collection remained abnormally low due to flood. The slow growth rate in revenue collection makes it further evident the hangover of the economy, specially the manufacturing sector.

GROWTH OF REVENUE EARNING DURING 1ST 6 MONTHS (JULY-DEC) OF FY 2003

| | Customs Duty | VAT | | Supplementary Tax | | INCOME TAX | TOTAL TAX REVENUE |
|---|-----------------|--------|--------|-------------------|--------|---------------|----------------------|
| | | Local | Import | Local | Import | | |
| Surplus/ Shortfall against target | -20.8% | -1.5% | -13.8% | -17.8% | 9.6% | 2.76% | 11.45% |
| Growth against 1 st 6 months of FY 03 | -8.72% | 13.75% | 2.09% | -1.42% | 1.6% | 16.78% | 1.68% |

Source: NBR

3.2 PRÉCIS OF THE FORMAL FINANCIAL SECTOR

CENTRAL BANK

Bangladesh Bank is the central bank of the country, which is responsible for promoting growth and development of banking system in the country and for overall control of the activities of all other banks. It has an issue and a banking control department to carry out its objectives, to implement the Government monetary policy and to manage international transactions.

COMMERCIAL BANKS

The banking sector has experienced a major jolt after the 80s when due to new policies a large number of private banks came up. The number has reached largely in the last few years. This has changed the banking sector in terms of inception of newer services and faster accommodation of customer needs. This sector used to be dominated by the nationalized commercial banks. Now there are more private commercial banks. This scenario change has resulted in the dynamism of the sector concerned. As a consequence the nationalized banks are also coming up with the newer facilities like credit cards ATM machines etc. However, the nationalized banks have a much more pervasive influence in the overall economy than the private commercial ones.

INSURANCE

In the field of insurance the government has allowed both public and private sectors to operate life and general insurance business in order to develop a healthy competition. In the public sector Jiban Bima Corporation and Postal Life Insurance are concentrating on life insurance, and Shadaran Bima Corporation is focused on general insurance. In the private sector more than twenty companies are in the life and general insurance business. Among them private insurance companies Delta Life Insurance and Popular Insurance are a couple of renowned names. Bangladesh government exercises tight control over the foreign insurance companies, among which American Life Insurance Company (ALICO) is one of the major players.

LEASING

Leasing companies provide hedging and work as a source of fund to several businesses. This type of financial institutions is relatively new in Bangladesh. However, the inherent nature of this institution and the pervasive advantage to the business sector of any country encourages the inception of such an

institutions. By now Bangladesh has quite a few numbers of leasing companies and the number is increasing each year.

MERCHANT BANKS

Merchant banks in general are not prevalent in Bangladesh. One of the sole players in this category operating in Bangladesh is the Investment Corporation of Bangladesh (ICB). ICB is a government organization, which is an institutional buyer of shares in the primary market. It also extends bonds namely in the form of ICB units to the secondary market. Apparently there functions are similar to investment banks. Lately AIMS Bangladesh has surfaced as the first private Bangladesh merchant bank, though they are yet to become a full fledged one.

SAVINGS BANKS AND BUILDING SOCIETY

These are basically credit societies formed in similar congregation characteristics, i.e., individuals associated through professional acquaintances; residential propinquities and common interests form the societies. However, such advanced forms of saving institutions have yet to be initiated and recognized in a formal way in Bangladesh.

POSTAL SAVINGS NETWORKS

Perhaps the most traditional and well known for of savings institutions largely extended to the people in common in Bangladesh is the postal savings networks, which take advantage of the numerous post offices situated throughout the country. It is distinct in form, as the deposits are readily acknowledged in prescribed books without the aid of any receipts.

SPECIAL SCHEMES AND INSTITUTIONS

In Bangladesh these institutions basically take the form rural finance, which endeavors to provide credit for the landless and rural women in general, and investment and entrepreneurial activity, which basically provides entrepreneurial training along with credit extensions. An example of the former is BRDB or Bangladesh Rural Development Board and the latter MIDAS.

SOCIAL SECURITY INSTITUTIONS

Such institutions are not a common phenomenon in Bangladesh. These are basically safety net programs e.g., social security for the unemployed. The current government regime has initiated a scheme of “*Old Age Allowance*”.

PROVIDENT AND PENSION FUNDS

These institutions are a common phenomenon in our country. These may be public or private. But the real distinction arises in the following two forms;

- Contributory and gratuities and
- Provident and pensions

In the first case, government makes equal contributions to the predetermined contribution of the concerned individual's income. The gratuities are understandably of lower amounts. In the latter case, the income set aside is exclusively from the individuals' own salary.

STOCK MARKET

The stock markets are yet to recover from the boom and bust episode of 1996. All share price index of the Dhaka Stock Exchange was 23002.2 in December 1996, steadily declined to 487.8 by the end of 2003. With the objective of infusing fresh funds the government has recently agreed in principle to amend

the Insurance Act 1938 and the Trust Act 1882 allowing the insurance and trust funds for investment in the stock market.

MONEY, CREDIT AND CAPITAL MARKET

A variety of measures have been taken for macro-economic stability, increase in savings and investment, balance of payments, restraining inflation, creation of favorable climate for foreign investment including discipline in the financial sector. The devastating flood of 1998 adversely affected agriculture and industries sectors. To generate momentum in these sectors through quick rehabilitation, appropriate policies were formulated for banks for increased flow of credit.

OTHER SPECIALIZED GOVERNMENT INSTITUTIONS

There are other specialized government financial institutions (autonomous bodies), namely,

- House Building Finance Corporation (HBFC)
- Bangladesh Krishi Bank (BKB)
- Bangladesh Shilpa Bank (BKB)
- Bangladesh Shilpa Reen Sangstha (BSRS)

These are operating in their respective fields to help develop these sectors by providing credit and other services at convenient terms. Industrial Credit and Development Corporation of Bangladesh has also been set up by the Government to provide equity support to public limited companies in the private sector.

OTHER NON-BANKING FINANCIAL INSTITUTIONS

Lease financing institutions were set up in Bangladesh in early 1980s. Over the last fifteen years or so these lease financing institutions played an important

role in providing alternative sources of term and capital asset financing to the private sector. Primary focus of those institutions was in the area of 3-5 years term financial leasing with particular emphasis on balancing, modernizing, replacement and expansion (BMRE) of existing units. These lease financing institutions expanded their range of services by introducing House Financing, Short Term Financing and Financing for customers' household assets, which have broadened their customer base. In line with further diversifications, those institutions initiated operation on Corporate Financing, Underwriting, Issue Management and other Investment Banking related services in late 1990s.

Mainly because of aggressive operation of new leasing companies, leasing industry posted a growth of 38% over the previous year. Competition in the term finance market intensified following the entry of more leasing companies into the market as well as active term-finance operation by the commercial banks. Total number of financial institutions engaged in leasing operation stood at 17 at the end of last year.

INTEREST RATES

4.1 INTRODUCTION

Money and capital markets are vast pool of funds, depleted by the borrowing activities of households, businesses, and governments and replenished by the savings by these sectors and supplied to the financial system. A financial system renders a channel through which a borrower can collect funds from different sources and a saver can accumulate (or invest) funds into different investment choices. The money and capital markets of an economy make investment and economic growth possible by providing the funds needed for the purchase of machinery, equipment, construction of buildings, and other productive and value adding activities.

The act of saving and lending, borrowing and investing are closely linked

through the financial system and one factor that significantly influences and ties all of them together is the rate of interest.

The interest rate is a price that the borrower must pay to the lender in order to mitigate for the risk that is involved with any investment and to pay a premium because the saver refrains from consuming the fund for a better utilization in the future.

Like other markets in a market economy, financial market has a 'price' expressed as interest rate.

4.2 FUNCTIONS OF INTEREST RATES

The rate of interest performs several important roles in the economy.

- It helps guarantee that current savings will flow into investment to promote economic growth.
- It rations the available supply of credit, generally providing loanable funds to those investment projects with the highest expected returns.
- It brings into balance the supply of money with the public's demand for money. When supply of money in the market is low, interest rate rises and limits the scope of more investment and ensures investment into selected and high-yield projects.
- It is also an important tool of government policy through its influence on the volume of saving and investment. If the economy is growing too slowly and unemployment is rising, the government can use its policy tools to lower interest rates in order to stimulate borrowing and investment. On the other hand, an economy experiencing rapid inflation has traditionally called for a government policy of higher interest rates to slow both borrowing and spending.
- A recent economic study showed that policy taken by the central bank of an economy to control short-term nominal interest rate yield in two outcomes:
 - It insulates aggregate output from the exogenous demand-side

disturbances.

- It supports an economy to quickly recover from supply-side maladies with the aid of a persistent lowering of short-term nominal rates. *

**(Peter N. Ireland, "Interest Rates, Inflation, and Federal Reserve Policy since 1980", Journal of Money, Credit, and Banking, Vol. 32, No. 3 August 2000, Part 1).*

4.3 NOMINAL AND REAL INTEREST RATES

Presence of inflation causes interest rates to be calculated from two distinctive definitions. The nominal interest rate is expressed in terms of current money (Taka or Dollar) value. The real interest rate is expressed in terms of constant or inflation adjusted value. The real interest rate is the nominal interest rate less the rate of inflation.

It is real interest rate, not the nominal rate, which is important in making investment decisions.

RANGE OF RATES

Although financial analysts and economists often find it convenient to think in terms of a single interest rate, in fact, there exists a whole cluster or range of interest rates. The differences among these rates occur because of several reasons.

RISK

The varying degrees of risk on loans are important factors, the greater the chance the borrower will be unable to pay the loan, the more interest the lender will charge to compensate for this risk.

MATURITY

The length or maturity of a loan also affects the interest rate. Other things being equal, long-term loans usually command higher rates of return than do short-term loans, because the long-term lender suffers the inconvenience and possible sacrifice of forgoing alternative uses for his or her money for a greater period of time.

LOAN SIZE

Given two loans of equal length and risk, the interest rate usually will be somewhat higher on the smaller of the two loans. This is so because the administrative costs of a large and a small loan are about the same absolutely.

TAXABILITY

Lenders are interested in their after-tax rate of interest, and securities exempted from taxation attract investors. A high-income-tax-payer lender would be inclined to invest into tax-exempted investments.

MARKET IMPERFECTION

Market imperfections are also important in explaining some interest rate differentials.

To uncover the basic rate-determining forces it is necessary to make a simplifying assumption:

There is one fundamental interest rate in the economy known as pure or risk free interest rate, which is a common component of all interest rates.

The closest approximation of this pure rate in the real world is the market yield on government bonds. Once the pure rate of interest is determined all other

interest rates can be determined from it by examining the special characteristics of the securities issued by individual borrowers.

The forces determining the real rate of interest is a controversial issue in macroeconomics and finance. Some theories are placed by different and are explained in the following.

4.4 THE CLASSICAL THEORY OF INTEREST RATES

One of the oldest theories concerning the determinants of the risk-free interest rate is the classical theory of interest rates, developed during the 18th and 19th centuries by number of British economists and elaborated by Irvin Fisher (1930) earlier in this century. The classical theory argues that the rate of interest is determined by two forces:

- The supply of saving, which is derived mainly from households.
- The demand for investment capital, coming mainly from the business sector.

SUPPLY OF FUND

Savings generates investment, and the households, businesses, and the government saves funds for investment. Interest rate affects the saving decision of any individual and business.

In making the decision on the timing and amount of saving to be done, households typically consider several factors: the size of current income, the desired savings target, and the desired proportion of income to be set-aside in the form of savings (i.e., the propensity to save). Generally the volume of household savings rises with income. Although income levels probably dominate saving decisions, interest rates also play an important role. Interest rates affect an individual's choice between current consumption and saving for future consumption. The classical theory of interest assumes that individuals

have a definite time preference for current enjoyment of goods and services over future enjoyment. Therefore, the only way to encourage an individual or a family to consume less now and save more is to offer a higher rate of interest on current savings. The classical theory considers the payment of interest a reward for waiting—the postponement of current consumption in favor of greater future consumption. Higher interest rates increase the attractiveness of saving relative to consumption spending, encouraging more individuals to substitute current saving for some quantity of current consumption. This is called substitution effect that entails a positive relationship between interest rates and the volume of savings.

Not only households, but also businesses, save and direct a portion of their savings into the financial markets to purchase securities and make loans. Most business hold saving balances in the form of retained earnings. The volume of business saving depends on two key factors: the level of business profits and the dividend policies of corporations. These two factors are summarized in the retention ratio. Although the principal determinant of business saving is profits, interest rates also play a role in the decision of what proportion of current operating costs and long-term investment expenditures should be financed internally and what proportion externally. Higher interest rates in the capital markets typically encourage firms to use internally generated funds more heavily in financing projects. Conversely, lower interest rates encourage greater use of external funds from the money and capital markets.

Governments also save, though less than frequently than households and businesses. In fact most government savings (budget surplus) appears to be unintended saving that arises when government spending is less than revenue.

DEMAND FOR INVESTMENT FUNDS

Businesses require huge amounts of funds each year to purchase equipment, machinery, and inventories to support the construction of new buildings and other physical facilities. The majority of business expenditures for these

purposes consists of what economists call replacement investment, that is, expenditures to replace equipment and facilities that are wearing out or are technologically obsolete. A smaller but more dynamic form of business capital spending is labeled net investment: expenditures to acquire additional (new) equipment and facilities in order to increase output. The sum of replacement plus net investment equals gross investment.

Although the internal rate of return provides a yardstick for selecting potentially profitable investment projects, how much to spend on any point of time is influenced by the financial markets. It is through changes in the cost of raising funds that the financial markets can exert a powerful influence on the investment decisions of business firms. As credit becomes scarcer and more expensive, the cost of borrowed capital rises, eliminating some investment projects from consideration.

This reasoning explains, in part, why demand for investment capital by business firms was regarded by the classical economists as negatively related to the rate of interest. At low interest rates, more investment projects become economically viable and firms require more funds to finance a longer list of projects. On the other hand, if the rate of interest rises to high levels, fewer investment projects will be pursued and fewer funds will be required from financial markets.

EQUILIBRIUM RATE OF INTEREST

The classical economists believed that interest rates in the financial markets were determined by the interplay of the supply of saving and the demand for investment. Specifically, the equilibrium rate of interest is determined at the point where the quantity of savings supplied to the market is exactly equal to the quantity of funds demanded for investment.

The market rate of interest moves toward its equilibrium level. However, supply and demand forces change so fast that the interest rate rarely has an

opportunity to settle in at a specific equilibrium level. At any given time, the rate is probably above or below its true equilibrium level but moving toward that equilibrium. If the market rate is temporarily above equilibrium, the volume of savings exceeds the demand for investment capital, creating an excess supply of savings. Similarly, if the market rate lies temporarily below equilibrium, investment demand exceeds the quantity of savings available. The classical theory of interest rates helps to understand some long-term forces driving interest rates.

LIMITATIONS OF THE CLASSICAL THEORY OF INTEREST

The classical theory sheds considerable light on the factors affecting interest rates. However, it has some serious limitations. The central problem is that the theory ignores factors other than saving and investment that affects interest rates. For example, many financial institutions have the power to create money today by making loans to the public. When borrowers repay their loans, money is destroyed. The volume of money created or destroyed affects the total amount of credit available in the financial system and therefore must be considered in any explanation of the factors determining interest rates.

In addition, the classical theory assumes that interest rates are the principal determinant of the quantity of savings available. Today economists recognize that income is more important in determining the volume of saving. Finally, the classical theory contends that the demand for borrowed funds comes principally from the business sector. Today, however, both consumers and governments are important borrowers, significantly affecting credit availability and cost.

4.5 THE LIQUIDITY PREFERENCE THEORY

The classical theory of interest has been called a long-term explanation of interest rates because it focuses on the public's thrift habits and the productivity of capital—factors that tend to change slowly. During the 1930s, British economist John Maynard Keynes (1936) developed a short-term theory of the rate of interest that, he argued, was more relevant for policy makers and for explaining near-term changes of interest rates. This theory is known as the liquidity preference theory of interest rates.

THE DEMAND FOR LIQUIDITY

Keynes argued that the rate of interest is really a payment for the use of a scarce resource, money. Businesses and individuals prefer to hold money for carrying out daily transactions and also as a precaution against future cash needs even though its yield is low or nonexistent. Interest rates, therefore, are the price that must be paid to induce money holders to surrender a perfectly liquid asset and hold other assets that carry more risk. At times the preference for liquidity grows very strong. Unless the government expands the money supply, interest rates will rise. In the theory of liquidity preference, only two outlets for investor funds are considered: bonds and money (including bank deposits). If the interest rates rise, the market value of bonds paying a fixed rate of interest falls; the investor would suffer a capital loss if those bonds were converted into cash. On the other hand, a fall in interest rate results in higher bond prices; the bondholder will experience a capital gain if he or she sells off the bonds for cash. To Keynes, the holding of money could be a perfectly rational act (to the classical economists it was irrational to hold money because it provided little or no return) if interest rates were expected to rise, because rising rates can result in substantial losses for investors in bonds.

MOTIVES FOR HOLDING MONEY

Keynes observed that the public demands money for three different purposes (motives): The transaction motive represents the demand for money to purchase goods and services. Because inflows and outflows of money are not perfectly synchronized in either timing or amount and because it is costly to shift back and forth between money and other assets, businesses, households, and governments must keep some cash in the till or in demand accounts simply to meet daily expenses. Some money also must be held as a reserve for future emergencies and to cover extraordinary expenses. This precautionary motive arises because we live in a world of uncertainty and cannot predict exactly what expenses or opportunities will arise in the future.

Keynes assumed that money demanded for transactions and precautionary purposes is dependent on the level of national income, business sales, and prices. Reflecting money's role as a medium of exchange, higher levels of income, sales, or prices increase the need for money to carry out transactions and to respond to future opportunities. However, neither the precautionary nor the transactions demand for money was assumed to be affected by changes in the interest rates. In fact, Keynes assumed money demand for precautionary and transactions purposes to be fixed in the short term. In the long run, however, these demands change as income changes.

Short-term changes in interest rates were attributed by Keynes to a third motive for holding money—the speculative motive—that stems from uncertainty about the future prices of bonds. If investors expect rising interest rates, many of them will demand money or near-money assets instead of bonds because they believe bond prices will fall. As the expectation that interest rates will rise grows strong in the marketplace, the demand for money as a secure store of value increases.

At low interest rates, many investors believe that interest rates are soon to rise (i.e., bond prices are going to fall), and therefore more money is demanded. At

high rates of interest, on the other hand, many investors will conclude that interest rates soon will fall and bond prices rise, so the demand for money decreases while the demand for bonds increases.

THE SUPPLY OF MONEY

The other major element determining interest rates in liquidity preference theory is the supply of money. In modern economics, the money supply is controlled, or at least closely regulated, by government. Because government decisions concerning the size of the money supply presumably are guided by the public welfare, not by the level of interest rates, it is assumed that the supply of money is inelastic with respect to the rate of interest. Such a money supply curve is represented in the following figure by the vertical line M.

THE EQUILIBRIUM INTEREST RATE

The interplay of the total demand for and the supply of money determine the equilibrium rate of interest in the short run. As shown in the following figure, the equilibrium rate is found at point i_E , where the quantity of money demanded by the public equals the quantity of money supplied. Above this equilibrium rate, the supply of money exceeds the quantity demanded, and some businesses, households, and units of government will try to dispose of their unwanted money balances by the purchasing bonds. The prices of bonds will rise, driving interest rates down toward equilibrium at i_E . On the other hand, at rates below equilibrium, the quantity of money demanded exceeds the supply. Some decision makers in the economy will sell their bonds to raise additional cash, driving bond prices down and interest rates up toward equilibrium.

LIQUIDITY PREFERENCE THEORY PROVIDES SOME USEFUL INSIGHTS

It explains investors' behavior in different interest rates, and the theory suggests that it is rational at certain times for the public to hoard money and at other times to dishoard unwanted cash.

It illustrates how central banks can influence interest rates in the financial markets, at least in the short run. For example, if the higher rates are desired, the central bank can contract the size of the money supply and interest rates will tend to rise.

Subsequent research by Friedman (1968), Cagan (1972), and others suggests that three dynamic effects on the equilibrium interest rate follow when the money supply changes:

- (1) An initial money-supply liquidity effect.
- (2) A subsequent money-supply income effect, and, over a longer time horizon,
- (3) A money-supply price expectations effect.

For example, an increase in the money supply creates excess liquidity, at least temporarily, and interest rates fall. However, the excess liquidity will generate additional spending in the economy, driving up income and increasing the demand for money. Unless the money supply expands further, interest rates will begin rising. Finally, an increasing money supply coupled with rising income may generate inflationary expectations. Businesses and consumers will come to expect rising prices, as will lenders of funds, who therefore will raise their interest rates on their loans. Thus given sufficient time, the liquidity effects of money supply changes will be offset by income and price-expectations effects. Interest rates may end up higher or lower than their initial level after a money-supply change, depending on the relative strengths of these three effects.

LIMITATION OF THE LIQUIDITY PREFERENCE THEORY

The liquidity preference theory is a short-term approach to interest rates determination unless modified because it assumes income remains stable. In the longer run, interest rates are affected by the changes in income and inflationary expectations. Indeed, it is impossible to have a stable-equilibrium interest rate without also reaching an equilibrium level of income, saving, and investment in the economy. Also, liquidity preference theory considers only the supply and demand for the stock of money, whereas business, consumer, and government demand for credit clearly have an impact on the cost of credit. A more comprehensive view of interest rates is needed that considers the important roles played by all actors in the financial system: businesses, households, and government.

4.6 LOANABLE FUND THEORY

A view that overcomes many of the limitations of earlier theories is the loanable funds theory of interest rates. This view argues that the risk-free interest rate is determined by the interplay of two forces: the demand for and supply of credit (loanable funds). The demand for loanable funds consists of credit demands from domestic businesses, consumers, and governments and also borrowing in the domestic market by foreigners. The supply of loanable funds stems from four sources: domestic savings, hoarding demand for money, money creation by the banking system, and lending in the domestic market by foreign individuals and institutions.

DEMAND FOR LOANABLE FUNDS

The demand for loanable funds comes from four sources as mentioned earlier. Firstly, the domestic consumers demand loanable funds to purchase a wide variety of goods and services on credit. Recent research indicates that consumers are not particularly responsive to the rate of interest when they seek credit but focus instead principally on the non-price terms of loan, such as the

down payment, maturity, and size of installment payments. This implies that consumer demand for credit is relatively inelastic with respect to the rate of interest. Certainly a rise in interest rates leads to some reduction in the quantity of consumer demand for loanable funds (particularly when home mortgage credit is involved), whereas a decline in interest rates stimulates some additional consumer borrowing. However, along the consumer's relatively inelastic demand schedule, a substantial change in the rate of interest must occur before the quantity of consumer demand for funds changes significantly.

The credit demands of domestic businesses generally are more responsive to changes in the rate of interest than is consumer borrowing. Most business credit is for such investment purposes as the purchase of inventories and new plant and equipment. A rise in interest rates eliminates business investment projects from consideration (the idea explained in the classical approach). On the other hand, at lower rates of interest, many investment projects look profitable, with their expected return exceeding the cost of funds. Therefore, the quantity of loanable funds demanded by the business sector increases as the rate of interest falls.

Government demand for loanable funds is a growing factor in the financial market but does not depend significantly on the level of interest rates.

In recent years, foreign banks and corporations have entered in the economy of any country. This foreign credit demand is sensitive to the spread between domestic lending rates and interest rates in foreign markets. If a country's interest rates decline relative to foreign rates, foreign borrowers will be more inclined to borrow money in that country. At the same time, with higher foreign interest rates, the country's lending institutions will increase their foreign lending and reduce the availability of loanable funds to domestic borrowers. The net result is that there is a negative or inverse relationship between foreign borrowing and domestic interest rates relative to foreign interest rates.

The total demand for loanable funds is the sum of domestic consumer, business, and government credit demand plus the foreign credits.

THE SUPPLY OF LOANABLE FUNDS

Loanable funds flow into the money and capital markets from at least four different sources:

- (1) Domestic savings by businesses, consumers, and governments;
- (2) Disharding (spending down) of excess money balances held by the public;
- (3) Creation of money by the domestic banking system; and
- (4) Lending to domestic borrowers by foreigners.

DOMESTIC SAVING

The supply of domestic saving is the principal source of loanable funds. Most economists today believe that income levels, rather than interest rates, are the dominant factor in the decision of how much and when to save. But there is evidence that business and household saving may be goal oriented: the so-called income effect. For example, an individual wishes to accumulate some money in anticipation of retirement. Interest rates subsequently rise and then the individual will be probably saving less because higher interest rates will enable the saver to reach his or her target with less sacrifice of current income. Clearly, then, the income effect would have the opposite result on the volume of saving than the substitution effect described in the classical theory of interest rates. The substitution effect argues for a positive relationship between the rate of interest and the volume of saving, while the income effect suggests a negative relationship between interest rates and savings volume. Recent research using econometric models has suggested the importance of another factor—the wealth effect—in influencing savings decisions. Individuals accumulate wealth in many different forms: real assets (automobiles, houses, lands) and financial assets (stocks, bonds). If interest rates rise, the market

value of financial assets will fall until their yield approaches market-determined levels. Therefore, a rise in interest rates will result in decreases in the value of wealth held in financial assets, forcing the individual to save more to protect his or her wealth position. For businesses and individuals heavily on debt, however the opposite effects may ensue. When interest rates rise, debt contracted in earlier periods when interest rates were lower seems less of a burden. Therefore a rise in the interest rates tends to make those economic units carrying a large volume of debt relative to their financial assets feel better off. They may tend to save less as a result.

The net effect of the income, substitution, and wealth effects leads to a relatively interest-inelastic supply of savings curve. Substantial changes in interest rates usually are required to bring significant changes in the volume of aggregate saving in the economy.

DISHOARDING OF MONEY BALANCES

Still another source of loanable funds is centered on the public's demand for money relative to the available supply of money. The public's demand for money varies with interest rates and income levels, the supply of money on the other hand, as closely controlled by the government. Clearly, the two—money demand and money supply—need not be the same. The difference between public's total demand for money and the money supply is known as hoarding. When the public's demand for cash balances exceeds supply, positive hoarding of money takes place as some individuals and businesses attempt to increase their cash balances at the expense of others. Hoarding reduces the volume of loanable funds available in the financial markets. On the other hand, when the public's demand for money is less than the supply available, negative hoarding (dishoarding) occurs. Some individuals and businesses will dispose of their excess cash holdings, increasing the supply of loanable funds available in the financial system.

CREATION OF CREDIT BY DOMESTIC BANKING SYSTEM

Commercial banks and nonblank thrift institutions offering payments accounts have the unique ability to create credit by lending and investing their excess reserves. Credit created by the domestic banking system represents an additional source of loanable funds, which must be added to the amount of saving and the dishoarding of money balances (or minus the amount of hoarding) to derive the total supply of loanable funds in the economy.

FOREIGN LENDING TO THE DOMESTIC FUNDS MARKET

Finally, foreign lenders provide large amounts of credit to domestic borrowers. These inflowing loanable funds are particularly sensitive to the difference between the country's interest rate and interest rates overseas. If domestic interest rates rise relative to that of offered abroad, the supply of foreign funds to domestic market would tend to rise. Foreign lenders will find it more attractive to make loans to domestic borrowers. At the same time, domestic borrowers will turn more to foreign markets for loanable funds as domestic interest rates climb relative to foreign rates. The combined result is to make the net foreign supply of loanable funds to the domestic credit market positively related to the spread between domestic and foreign rates of interest.

The total supply of loanable funds, including domestic saving, foreign lending, dishoarding of money, and new credit created by the domestic banking system is depicted in the following figure.

THE EQUILIBRIUM RATE OF INTEREST

The two forces of supply and demand for loanable funds determine not only the volume of lending and borrowing on in the economy, but also the rate of interest. The interest rate tends toward the equilibrium point at which the supply of money of loanable funds equals the demand for loanable funds. This point of equilibrium is shown in the following figure as i_E . If the interest rate is

temporarily above equilibrium, the quantity of loanable funds supplied by domestic savers and foreign lenders, by the banking system, and from the dishoarding of money exceeds the total demand for loanable funds, and the interest rate will bid down. On the other hand, if the interest rate is temporarily below equilibrium, loanable funds demand will exceed the supply. The interest rate will be bid up by borrowers until it settles at equilibrium once again. The equilibrium depicted in the following figure is only a partial equilibrium position, however. This is due to the fact that interest rates are affected by conditions in both the domestic and world economy. A stable equilibrium interest rate will be characterized by the following:

- Planned saving = Planned investment
- Money supply = Money demand
- Quantity of loanable funds supplied = Quantity of loanable funds demanded
- The difference between foreign demand for loanable funds and the volume of loanable funds supplied by foreigners to the domestic economy = The difference between current exports from and imports into the domestic economy.

4.7 THE RATIONAL EXPECTATIONS THEORY

In recent years, a fourth major theory about the forces determining interest rates has appeared and now appears to be gaining supports. This is the rational expectations theory of interest rates. It builds on a growing body of research evidence that the money and capital markets are highly efficient institutions in digesting new information affecting interest rates and security prices.

The important assumptions and conclusions of the rational expectations theory are that:

- (1) The prices of securities and interest rates should reflect all available information and the market uses all of this information to establish a probability distribution of expected future, prices, and interest rates;
- (2) Changes in rates and security prices are correlated only with unanticipated, not anticipated, information;
- (3) The correlation between rates of return in successive time periods is zero;
- (4) No unexploited opportunities for profit (above a normal return) can be found in the securities' markets;
- (5) Transactions and storage costs for securities are negligible and information costs are small relative to the value of securities traded; and
- (6) Expectations concerning future security prices and interest rates are formed rationally and efficiently.

This last observation means that businesses and individuals are assumed to be rational agents who form expectations about the distribution of future security prices and interest rates that do not differ significantly from optimal forecasts made from using all the available information the marketplace provides. Moreover, a rational agent will tend to make unbiased forecasts of future security prices, interest rates, and other variables. That is, he or she will make no systematic forecasting errors and will easily spot past patterns in forecast errors and correct them quickly.

If the money and capital markets are highly efficient in the way described, this implies that interest rates will always be at or very near their equilibrium levels. Any deviation from the equilibrium rate dictated by demand and supply forces will be almost instantly eliminated. Security traders who hope to consistently earn windfall profits from correctly guessing whether interest rates are too high (and therefore will probably fall) or are too low (and therefore will probably rise) are unlikely to be successful in the long run. Moreover, knowledge of the past interest rates will not be a reliable forecast of where those rates are likely to be in the future. Old news will not affect today's interest rates because those

rates already have impounded the old news. Interest rates will change only if entirely new and unexpected information appears.

We can illustrate the foregoing points about the rational expectations theory of interest by modifying the loanable funds theory of interest so that its demand and supply schedules reflect not just actual demand and supply but also the expected demand for and supply of loanable funds. For example, referring to the following figure lets suppose D_0 and S_0 reflect the actual supply and demand for loanable funds in the current period, while D_F reflects the actual demand for loanable funds that will prevail in the next time period. The supply of loanable funds is assumed to be the same in both time periods ($S_0=S_F$).

Now let's assume that during the current period, the government makes an unexpected announcement of its increased need to borrow more money in future period F due to an unusually large budget deficit. The result is a new expected demand for loanable funds curve D_F , projected to prevail in the next (future) period F but as viewed by borrowers and lenders today in time period 0. In this case, the equilibrium interest rate in the current period will not be i_0 , but rather i_E , where the expected demand curve (D_F) intersects the actual supply curve S_0 . The equilibrium quantity of loanable funds traded in the current period then will be C_E not C_0 , this is because, according to the rational expectations theory, borrowers and lenders will act as rational agents, using all the information they possess (including expected events, such as the government announcing it will need to borrow more money in a future period) to price financial assets today. When the future period arrives, the equilibrium interest rate will rise to rate i_F and the quantity of loanable funds traded then will be C_F . The equilibrium rate moves upward because the demand for loanable funds in period F is more than the expected future loanable-funds demand as seen by market participants in period 0.

Lets suppose, on the other hand, that actual loanable-funds demand in period F increases upward and beyond D_0 but by a smaller amount than was anticipated by investors in the market in period 0. Demand schedule D_F would then fall

somewhere between D_0 and D_E . The equilibrium interest rate (with the supply curve unchanged) would be lower than i_E , lying somewhere between i_0 and i_E .

But this is a startling conclusion that actual demand increased (above D_0 , but not to D_E) in the next period with supply held constant; still, the equilibrium interest rate fell. Such a conclusion makes sense only when we assume that the real world works the way the rational expectations theory says it should. To know which way interest rates will go, we must know what the market expects to begin with. In this example, the demand for loanable funds rose but not as high as the market expected. Therefore, interest rates will decline other factors held constant.

The rational expectations view argues that forecasting interest rates requires knowledge of the public's current set of expectations. If new information is sufficient to alter those expectations, interest rates must change. If correct, this portion of the rational expectations theory creates significant problems for government policymakers. It implies that policymakers cannot cause interest rates to move in any particular direction without knowing what the public already expects to happen and, indeed, cannot change interest rates at all unless government officials can convince the public that a new set of expectations is warranted. Moreover, because guessing what the public's expectations are is treacherous at best, rational expectations theorists suggest that rate hedging—using various tools to reduce the risk of loss from changing interest rates—is preferable to rate forecasting. Indeed, to be a consistently correct interest rates forecaster under the rational expectations theory one must know (a) what market participants expect to happen and (b) what new information will arrive in the market before that information actually arrives.

A growing number of studies today imply that at least some elements of the rational expectations/efficient markets view do show up in actual market behavior. For example, studies by Mishkin and Philip Pippenger (1976) find that past interest rate movements are not significantly related to current rates of return on bonds or stock, as the theory predicts. Other studies (e.g., Rozeff,

1974) find that past information on economic conditions and money supply movements also appear to bear little correlation to today's interest rate levels or to observed changes in current interest rates. However, unanticipated growth in the money supply, income, and the price level do appear to be correlated with bond and stock returns, especially with short-term interest rates (as noted by Engel and Frankel, 1984). Moreover, adjustments in interest rates and security prices to new information appear to be very rapid.

LIMITATIONS OF THE RATIONAL EXPECTATIONS THEORY

Nevertheless, the rational expectations view is still in the development stage. One key problem is that we do not know very much about how the public forms its expectations—what data are used, what weights are applied to individual bits of data, and how fast people learn from their forecasting mistakes. As Bullard (1991) notes, because the rational expectations theory is not well defined, empirical tests of the theory are not yet very convincing.

Several characteristics of real-world markets seem at odds with the assumptions of the expectations theory. For instance, the cost of gathering and analyzing information of relevant to the pricing of loans and securities is not always negligible, as assumed by the theory, tempting many lenders and borrowers of funds to form their expectations by rules of thumb (trading rules) that are not fully rational. Although rationality formed expectations appear to exist in large auction markets (such as the markets for government securities or listed common stock), it is not clear that such is the case for other financial markets, such as those for consumer loans. Finally, some current interest rates—for example, those on short-term securities—do exhibit significant correlations with past interest rate movements. Thus not all interest rates and security prices appear to display the kind of behavior implied by the rational expectations theory. A great deal of research work remains to be done about how people learn and especially on how systematic forecasting errors are correlated by market participants.

4.8 ROLE OF INTEREST RATES IN GOVERNMENT POLICY

Although the rational expectations theory states that the government can subtly or even cannot affect the activities of national economy with the regulation of interest rates, other earlier theories supporting the government's ability to control the economy with manipulating interest rates proves to be both possible and rational. The government can control money supply by varying the interest rates, or alternatively can issue new money to reduce the existing market interest rates. However, under the environment of market economy, the government can only control the rates that are under the authority of the central bank, and that of government bonds. In this respect, one of the basic problems facing most less developed countries is the scarcity of domestic capital in relation to the size of investment required to achieve high and self-sustaining rates of growth of national and per-capita real income. Although the accumulation of capital is not the prime determinant of economic growth, its role as a necessary, even if not a sufficient, condition in the economic development of less developed countries is widely recognized. The importance of capital accumulation is also reflected in the use of savings as an explicit variable in most economic growth models, a typical example of which is the well-known Harrod-Doman model. In view of the crucial role of capital accumulation, the price of capital as measured by the level and structure of interest rates may justifiably be expected to assume an important role in the economic policies of the less developed countries. But, paradoxically, positive interest rate policies have been conspicuously lacking in the developing economies apart from a few notable exceptions. The use of interest rate perhaps best depicted in the development of China, Korea, and Indonesia where governments positively applied the tool of interest rate to stabilize and develop the economy. Even in the literature the emphasis has been more on the structure, behavior, and determinants of interest rates than on the policies pursued. Discussions of interest rate policy in the less developed countries have been concerned largely with the role of interest rates as loan rates—that is to say, as a means of regulating the cost and availability of credit. But interest

rate policy has other relevant aspects than the purely monetary. For instance, interest rates can be viewed as instruments for more effective mobilization of savings (as deposit rates) through the offer of realistic rates on monetary savings, such as time and savings deposits, claims on financial institutions, and government securities. Similarly, interest rates can be viewed as a social rate of discount to determine the optimum allocation of savings between consumption and investment and as a rationing device for efficient allocation among different alternative forms of investment.

Therefore a purposive interest rate policy has different aspects, each of which is relevant for particular phases of monetary policy or development planning. Consequently, interest rate policies have to reconcile the conflicting requirements of rates that are appropriate to the desired level and composition of investment and also attractive enough to stimulate savings. This calls for policies aimed at an optimum level of interest rates as well as a proper spread between different rates in keeping with the changing requirement of economic growth and stability.

The role of interest rates in helping to mobilize voluntary domestic savings merits much closer attention, not only because of its bearing on the economic growth of the less developed countries but also because of the general skepticism regarding the efficacy of interest rates in mobilizing savings. This skepticism in turn derives from the lack of a determinate causal link between interest rates and aggregate real savings in the national accounts sense, or even between interest rates and financial savings. Moreover, even for personal savings, the econometric evidence, while by no means conclusive, does suggest that such variables as the level, distribution, and rate of growth of disposable income, wealth, price levels, industrialization, and urbanization are far more influential than rate of interest in explaining observed variations in the savings/income ratio. In fact, efforts to introduce fiscal and monetary variables such as taxes and interest rates, into savings functions have not been notably successful. Thus the inductive evidence appears to justify much of the received doctrine on the relative unimportance of interest rates as an incentive for

saving. All this reflects the complexity of the determinants, motives, and incentives underlying the savings behavior of individuals and households, which is, moreover, subject to life cycle. For instance, saving may be for a specific purpose (the Harrodian "hump saving"), for old age, for inheritance, or for unknown future contingencies. It is in fact even debatable how far the act of saving, which is really a residual between income and consumption, partakes of the nature of deliberate and purposive behavior, except for contractual or compulsory savings. Strictly, savings, which is something negative, is not a resource or a quasi-resource and cannot therefore be an overall restraint on growth, although finance can act as a constraint on households and firms. The uncritical treatment of saving as a resource and its implicit use as a numeraire for valuating other resources can therefore be misleading. But while the concept of saving as a residual is true of aggregate saving in the typical Keynesian model of an economy at less than full employment, it does not necessarily hold good for particular components of saving, still less for saving by particular persons or groups in specific forms, such as interest-bearing assets. It would be unrealistic to deny the existence of an ex ante savings gap that acts as a constraint on the rate of growth.

LIMITATIONS OF 'A PRIORI' CRITERIA FOR ASSESSING INTEREST RATE POLICIES

Since capital is scarce, it follows that there should be an incentive for saving as well as a device for its efficient allocation among alternative uses. These twin functions are discharged, although with varying efficiency, through the interest rate mechanism. But even a perfectly competitive capital market does not ensure an optimum level of savings or a socially desirable pattern of investment. In the less developed countries, where capital markets are subject to even more imperfections than that of developed countries, the structure and level of interest rates as determined by the free play of demand and supply do not always reflect the true economic cost of capital. This raises the question of what, if any, the rational and practical criteria are for an interest rate policy in the developing countries.

Although many attempts have been made to derive a conceptual rate of interest, variously defined as the 'accounting' or 'shadow' rate of interest, as a theoretical norm with which to measure the deviation of actual rates of interest, their practical utility is questionable.

- First, such models are essentially aggregative, static equilibrium models based on highly restrictive and unrealistic assumptions, such as a closed economy, perfect competition, production functions with constant returns to scale, constant savings ratios, constant marginal propensities to save, the absence of state interference, and the lack of technical progress. All these assumptions are scarcely relevant to the problems of developing economies, which have to accumulate capital at an increasing rate to attain self-sustaining growth.
- Second, such models raise difficult empirical problems of measurement of the relevant variables and parameters, such as the stock of capital, output/capital ratios, factor shares, savings ratios, which are by no means easy to estimate in less developed countries because of paucity of basic data.
- Third, the models yield a unitary rate of interest for the whole economy that, however elegant theoretically, can scarcely function as even an appropriate index of the real cost and availability of savings in the highly fragmented capital markets with the multiplicity of customer interest rates that is typical of the less developed countries.
- Fourth, the impracticability of identifying optimum rates of interest also reflects the more fundamental problem of finding objective criteria for 'optimum' saving or 'optimum' investment, because a major issue in the choice of the optimum rate of saving is one of equity between the present and the future, and this cannot be resolved without recourse to

temporal value judgments, the same objections would apply to optimum interest rate.

SOME POSSIBLE CRITERIA

Since there are no operationally meaningful a priori criteria of what constitutes a realistic and appropriate level and structure of interest rates for any economy, policy in this respect is necessarily reduced to a matter of judicious empiricism, keeping in view the objectives that are sought to be achieved through regulation of interest rates. Therefore, interest rates are best regarded as 'multivalued instruments' rather than as 'targets' of economic policy. The appropriateness of interest rates therefore must be judged strictly in relation to policy objectives, depending on the aspect of interest rates that is to be assigned the greater weight, i.e., their possible role as an incentive to financial savings (income factor) or as an instrument of credit policy (cost factor). Although policy has to be based on a delicate balancing of the multiple roles of interest rates, the present paper is concerned largely with their potentialities in mobilizing financial savings in the organized sector.

In this context, a useful but not wholly unambiguous criterion is to examine whether the money rates of interest on typical savings media, such as bank deposits and government securities, are positive in real terms after deflating their nominal levels for changes in the purchasing power of money as measured by some appropriate index. But the significance of the resulted real rate would depend on the indices used, the terms and maturity of the interest-bearing asset, etc. The cost of living index, being more relevant to savings decisions than are variations in the wholesale price index, would be a fairly satisfactory index.

Among other possible criteria of the appropriateness of interest rates in the organized sector of the less developed countries are the levels in (1) the unorganized sector in the same country and, (2) developed economies.

But the rates in the organized sector is not meaningful for evaluating rates for organized finance, since the former contain substantial elements of monopoly profit, high-risk premiums, and excessive costs of administration. Moreover, as one of the prime objectives of policy in the less developed countries is to reduce the usurious levels of inherent rates in the unorganized sector, it is hardly appropriate to invoke them as a basis for judging levels in the organized sector.

LIMITATIONS OF INTEREST RATE STATISTICS

Any discussion of interest rate policies has necessarily to take account of the limitation of existing information on the structure and level of interest rates. In the absence of adequate data on the structure and behavior of interest rates in the unorganized sector, as distinct from rates that merely help to convey some representative 'orders of magnitude.' But in order to arrive at the actual effective rates, nominal rates (for lending rates) have to be appropriately adjusted upward for (1) compensatory balance requirement, (2) commission charges and commitment fees. Moreover, for a precise evaluation of the significance of quoted interest rates, one would need a weighted average of lending rates, with the weights being assigned according to the volume of lending at each quoted or customer rate of interest. Such data, however, are virtually impossible to collect, and it is consequently difficult to arrive at a 'weighted' average of loan rates of interest. Moreover, not only is there a whole range of interest rates, but also a variety of conditions that may be attached to a loan. Each transaction, therefore, has its unique characteristics. As a result, for each borrowing operation there is one particular rate of interest, which is the relevant rate of interest.

Information on deposit as well as bond rates to be suitably qualified to take account of such factors as premiums, tax privileges, and other advantages from which depositors and bondholders may benefit. For marketable government securities the extent of official support is an important factor, since such support, whatever its other merits, implies that the resultant rates are not strictly

free market rates. To that extent they do not represent 'pure' rate of interest. But despite this limitation, market yields on government securities represent the nearest approximation in any economy to a pure rate of interest as measured by the obligation that is basically risk free and most widely held.

5.1 INTRODUCTION

This section critically examines the impact of the financial market and banking reforms on interest rate determination in Bangladesh. Such lessons learned can prove serviceable to other developing countries going through a similar process of market reforms. One of the objectives of the Financial Sector Reform Policy has been to shift from an interest rate system wherein nominal interest rates were set by the central bank to a system allowing for interest rates to be determined by the market. Under present conditions in Bangladesh the nominal interest rates are high compared to what may be expected from a regime of competitive pricing. Collusive behavior and misconceived pricing strategies have resulted in the persistence of high real interest rates. Deposit rate-setting by public banks (NCBs) is conservative and driven by a wish to reduce deposit growth. Private banks are, however, pricing deposits to obtain a greater market share. The private banks have generally not introduced transparent discounts for low-risk loans and the NCBs are apparently reluctant to do so, which may have resulted in a serious misallocation of resources in Bangladesh.

In 1989 there was an elaborate structure of nominal lending and deposit interest rates that were essentially kept constant. The deposit rates during the 1980s were generally appropriate for the average inflation rate and, lending rates were limited to the cost of funds and direct costs without adequate recognition of risk factors. However, the structure of lending rates reflected a complex set of political and economic choices supporting particular development objectives.

Interest rate policy in Bangladesh can be separated into four stages since liberation in 1971.

5.2 INTEREST RATE POLICY: FIRST STAGE

The **first decade** was characterized by interest rates being fixed by the central bank for both deposits and advances, the deliberate direction of credit to achieve the resource allocation that the government felt appropriate, and pervasive negative real rates.

The financial policy of the 1970s reflected the belief of the national economic managers that the real economic decisions should be made by the government, rather than directed by interest rates (prices). The interest rates were essentially accounting prices arbitrarily established under the general belief that these were irrelevant and should be kept low as a stimulus to domestic investment.

5.3 INTEREST RATE POLICY: SECOND STAGE

In the 1980s, **the second stage of interest rate policy** was characterized by an important change that raised deposits rates to a level generally higher than the inflation rate, which resulted in positive returns to holders of fixed deposits. This step, usually one of the important objectives of a financial sector reform, was thus, undertaken a decade in advance of the startup of the full reform program. However, once the structure of interest rates was raised only very limited changes were made during the next decade. Generally, more and more exceptions were introduced or special lending categories were identified for purposes of directing credit. Furthermore, the volume and direction of credit continued to be largely dictated by the government.

5.4 INTEREST RATE POLICY: THIRD STAGE

In 1990, **the third stage** was initiated. Interest rate bands were established for eleven lending categories that covered all possible loans. For lending rates below a shadow rate determined by the central bank, the government paid subsidies to the bank, thus making subsidies transparent. This reform allowed banks to set interest rates freely as long as they remained inside the bands.

Deposit rates were freed except that a floor and ceiling for saving and fixed deposits were established. At the same time, directed lending was stopped and the central bank initiated a rediscount facility – essentially for lending to the banks—at a uniform interest rates (the bank rate), thereby replacing an entire menu of refinance rates.

5.5 INTEREST RATE POLICY: FOURTH STAGE

Finally, **the fourth stage** was initiated in 1992. The bands were removed from all but three of the eleven lending sectors (exports, agriculture, and small industry) and the banks were permitted to set any rates for advances that they believed to be appropriate. Floors on savings and fixed deposits were continued, while ceilings were removed. The central bank has consequently defined an interest rate regime that is essentially free. Only a small share of the loan portfolio remains within the compass of the three special bands. The frequency of setting rates was changed from an initial period of every six months to every month. The banks are now permitted to divide their clients into risk groups within each lending category, with the maximum difference between the highest and lowest rates not exceeding two percent.

For most of the lending portfolio, the banks are essentially free to determine an interest rates structure that is appropriate to their assessment of conditions. The bands were to be determined by calculating, for each lending category, a shadow interest rate related to the cost of funds, return on capital, risk, and operating costs. The shadow interest rate was meant to determine the center of the band. However, the government would be able to adjust the band according to its policy objective. If the shadow rate was greater than the upper rate of the band (i.e., the bank was forced to charge a rate below cost) then the bank would be subsidized directly through the budget. Deposit rates on saving and fixed deposits were to be controlled through bands.

The deposit rate floors were to be related to the inflation rate, keeping the floor $\frac{1}{2}\%$ - 1% above the inflation rate. The floor was designed to ensure that the

deposit rates were above the inflation rate. The ceiling was meant to ensure that banks did not follow high deposit rate strategies linked with making risky loans to justify such high cost deposits.

5.6 THE EFFECT OF THE INTEREST RATE REFORMS

What has been the actual outcome of these attempts to keep interest rates more market determined? Since the introduction of this policy, deposit rates have tended to be kept low so that the cost of funds to the banks can be kept low. This often results in negative real deposit rates and promotes disinter mediation with depositors preferring other uses for their funds. In developing countries, these other assets are usually land or commodity stocks. This type of repressed returns may also lead to capital flight if the domestic return appears less favorable than an offer from returned abroad. The effect of the low deposit rates is to reduce the effectiveness of the management of the depositor's funds. The owners of the funds have demonstrated restricted ability to identify good investments and typically follow rather traditional and conservative asset management strategies.

The attempt by the government to determine the interest rate in different sectors of the economy in effect moves the resource allocation decisions out the hands of businessmen and financial system and into the hands of the planners. This is impossible to do. For example, two of the most rapidly growing sectors in manufacturing in Bangladesh are rice milling and garments; in neither sector the government sponsor or identify investment programs. Farther more money is fungible and the government cannot ensure that it is used for the purposes for which it is sanctioned. Use of interest rate policy to control investment has thus always been a speculative endeavor for Bangladesh's financial policy makers.

The real interest rates have risen sharply but are now beginning to decline both from reductions in the nominal and also due to the rate of inflation. In assessing real interest rates we find that real deposit floors are substantially higher than at the start of the reform program. Although the declines in the floors have been

systematic, high deposit floors and rates were maintained throughout 1994. The real deposit rates remained higher than during 1991 although there has been a significant decline in recent years. The real lending rates have similarly increased through 1993 and had begun to decline in 1994. However, these rates remain far above the rates before the reform program was initiated.

Table: Pre and post behavior of Interest Rates, Credit and Deposit Growth

| | Before | After | Entire Period |
|---|--------|--------|------------------|
| Average lending rate | 4.68 | 9.61 | 7.45 |
| Average deposit rate | -1.02 | 3.47 | 1.45 |
| Average spread | 5.69 | 6.24 | 6.00 |
| % increase in private credit (annual) | 7.90 | 3.10 | 3.70 |
| % increase in private deposit (annual) | 8.10 | 3.30 | 3.80 |
| % increase in public deposit (annual) | 4.50 | 1.70 | 2.10 |
| % increase in public credit (annual) | 4.20 | 1.70 | 2.00 |
| Average net credit to government & SOEs TK. Crore (Real seasonalized) | 4988.0 | 5979.0 | 5545.0 |
| Average net deposit to government and SOEs TK. Crore (Real seasonalized) | 5371.0 | 5967.0 | 5706.0 |
| Average net financing to government & SOEs TK. Crore (Real seasonalized) | -383.0 | 12.0 | -161.0 |

Source: Data compiled by FSRP and Bangladesh Bank Technical Unit.

During this period the interest rate spread (lending rate – deposit rate) has been constant with a very slight tendency to increase. Table 3.6.1 compares the behavior of interest rates over 14 quarters from 1986.2 up to 1989.4 with 14 quarters from 1991.1 to 1994.2. First, the real interest rates have increased. The average lending rate has increased by 5 points. The average deposit rate has increased by about 4.5%. The spread had thus increased by less than 0.5%. There is no doubt that the real interest rates for deposits and loans have increased substantially. But the spread has remained fairly stable. It is however,

notable that the private banks have maintained higher deposit and lending rates than the NCBs. Thus spreads have always been higher on the private bank's loans compared to the NCBs. That may also explain why the private banks have been demonstrating superior measures of productivity.

Borrowing by government and state enterprises from the financial system has been quite stable. There is evidence that the banking system has increased real resources being made available to the various government owned enterprises. While it is commonly claimed that these enterprises are a drain on the financial system there is no manifestation of this from the data for public sector borrowing (PSB) from banks.

Government organizations' deposits with financial system have been stable. These are approximately equal to the lending flows to them so that there is no net financing for the public sector. It is to be noted that the financing from the government securities and NSD certificates is not included the PSB figures. This neutrality refers to the impact on the banking system through loans and deposits. The growth of real deposits add real credit to the private sectors has however increased steadily while the ratio of credit to deposits has also remained stable.

5.7 THE IMPACT OF THE FSRP ON INTEREST RATE

The implementation of the interest rate policy by the commercial banks has generally followed the rules prescribed by the central bank. Only foreign banks have formally established risk classes for lending. The NCBs and the private banks have not set such categories. This results in a cross-subsidy with low risk borrowers paying more and high-risk borrowers paying less than what the cost of funds to the banks. This generally serves to limit the expansion of the better firms and increases investment in the weaker firms. After more than two years most of the commercial banks have simply refused to recognize risk differentials among borrowers. This undermined the working of the financial

system. This cross-subsidy from good to poor borrowers may thus prove to be an expensive error made by the private banks and the NCBs.

For NCBs it is argued that differential risks cannot be handled due to:

- Inability to work out procedures.
- Political pressure to put borrowers in to the lowest category.

Neither of these are very convincing arguments. A deeper appreciation of risk and lending is needed in order to sustain an effective financial system. The NCBs thus appear to be deviating from sound banking practices.

The private banks are better positioned to systematically negotiate interest rates on a case-by-case basis. Thus some private banks do adjust for risk differentials, but in a way that is not transparent. Loans are made at rates, which do not conform to the scheduled rates. Little is known about side conditions such as minimum deposit levels (compensating balance) or guarantees, which may be introduced by commercial banks. The private banks are probably not in compliance with the prevailing interest rate policy. The resort to 'insider' lending within the private banks has aggravated the non-transparency in the lending practices of these banks. As a result the costs of borrowing remain highly discretionary as between one borrower and another with those in positions of ownership or intimacy with private bank being put in an advantageous position vis-à-vis the general clients of the banks.

Agricultural loans, which are now effectively subsidized without compensation to the banks that is, i.e. the lending rate is too low. The NCBs thus resist lending to this sector by rationing the available credit. With banks inevitable incurring losses on these loans, loan officers tend only to make such disbursements under administrative pressure from senior bank officials. The NCBs staff may also demand transaction costs for lending this sector. The real volume of lending to agriculture has been constant over the past decade; the shadow interest rates to this sector, at the start of the period were recognized to

be about 25% nominal or 15% real. The gap has never really been closed between the shadow rate and the upper end of the band.

Changes in interest rate policy introduced under the financial reforms have effectively reduced the extent of direct control of interest rates by the central bank and the government. This has resulted in greater flexibility and more responsive rate setting. In comparison to the situation in June, 1980 there is now much greater flexibility in setting interest rates. However, the structure of the banking industry is such that there is still insufficient competition between the banks to take advantage of the flexibility permitted to them in pricing their loans to their clients.

The pricing policies followed by the NCBs thus seem to be driven by their compulsion to recoup past losses. This is probably not profit maximizing behavior. The past losses are a sunk cost and should not influence their current loan pricing. Sunk costs do not influence the price set by a profit-maximizing firm. It is highly likely that there is consultation among NCBs, and some pressure of the Ministry of Finance to lower rates. This is not to suggest there is profit-maximizing behavior at the NCBs. Given the inability to control costs, the large over-staffing, and the lack of diligent work on loan recovery, the NCBs are far from profit maximizing enterprises. However, the management remains convinced that large bad debts costs should be included in pricing new loans. Using old bad debt levels as the basis for pricing is valid only if one does not expect loan recovery to improve. But if loan recovery does not improve it is not possible to sustain viable banks. Whatever motivates the government banks, they have made only slow progress in lowering their lending rates. As noted above, this apparently arises from their attempts to recover bad debts costs from past loans. Sensible loan pricing would tend to ignore this bleak inheritance and concentrate on the future.

Private banks price loans following the NCBs, who act as price leaders with Sonali Bank, the largest bank in Bangladesh, traditionally playing the leading role among the NCBs. There are four aspects of private bank behavior that

have emerged in the last three years. The corruption at the NCBs means that the gap between the NCBs and the private bank lending rates may in practice be smaller than it appears. Borrowers may not thus capture the apparent benefit associated with the lower nominal interest rates charged at the government banks, as their associated transaction costs may erode this differential. It is thus unlikely that the NCBs can sustain a lower spread of 2-3% in their lending rates compared to the private banks.

Whilst the NCB's competitive edge in credit pricing may be largely illusory because of the uncosted element of transaction costs to the borrower, there is also some indication of collusive pricing by the private banks. Essentially, these banks are in agreement not to lower rates, hence competition is suppressed. Several of the banks have not fully provisioned for their bad debt costs but still maintain high interest rates. This permits appropriation of rent by such banks both at the expense of their being depositors and their borrowers. Since there is some evidence of differential interest rates being offered to favored customers, the true picture of loan pricing by the private banks cannot be established from their published rates.

The private banks have over the past three years increased the volume of deposits more rapidly than the NCBs and in real terms more rapidly than in the previous three years and hence appear to have increased their lending operations. Such behavior in the face of rising and high real interest rates suggests a resort to risky lending practices. The higher deposit rates were required to maintain the faster growth of deposits; the inflow of deposits was needed to fund the large, new, risky additions to the portfolio. Much of this may have been directed loans to 'insiders' but categorical evidence for this is unclear. It is, however, clear that the private bank portfolios have deteriorated over the past three years due to this adverse selection.

With these three factors at work, banks have maintained their high real rates and made significant paper profits. The loan classification rules provide an incentive to make high interest rate, high-risk loans that, through clever

accounting practices may escape classification for years. This makes it possible for the owners of the banks to appropriate the gains from 'insider' trading.

The consequences of the changes in interest rates have been rather remarkable. First, the inflation rate dropped sharply due to the reduced government deficit and improved food availability. This led to an unexpected increase in real interest rates. The higher real rates represent a completely different economic environment for business than had been previously experienced. The higher real rates for loans have reduced the demand for credit, while the corresponding high deposit rates increased the flow of funds into the banks.

The rigidities of the financial system kept real interest rates from falling. This led to the exact opposite of the pre-reform situation with limited demand for credit and an excess of liquidity, which has kept the financial sector in a state of disequilibria. There has been a marked difference in the NCBs and PSBs. The NCBs were slow to disburse credit up to mid-1993 and since then had to sharply increase credit. The PSBs were willing to expand loans rapidly, locating borrowers despite the high interest rates. It is believed that the PSBs fell victim to the process of adverse selection with the banks turning to riskier undertakings. The NCBs were more careful in lending compared to PSBs who appear to have made significant loans, which cannot now be confirmed from their documents, to their own bank directors. In effect the PSBs 'lowered' their real rate of lending by selecting clients who could avoid repayment and hence, were prepared to borrow at the higher rates. The NCBs, only in late 1993, began to increase their lending rates; this may have been due to the steady lowering of their real interest rates and greater willingness to take risks. Just as the PSB portfolios became much riskier during 1992/93, the NCBs have taken a similar path in 1993/94.

The desired flexibility of nominal interest rates and stability in real rates has not been achieved. The pricing by banks of their loans is not truly competitive, and the banks have not managed to reduce excess liquidity but have kept lending rates high.

Table: NCBs performance

| Year | Loan/Deposit Ratio | Excess Liquidity |
|------|--------------------|------------------|
| 1989 | 75.5% | 1.5% |
| 1990 | 77.0% | 2.6% |
| 1991 | 69.3% | 3.0% |
| 1992 | 61.5% | 4.0% |
| 1993 | 63.3% | 3.5% |

Source: Data compiled by FSRP and Bangladesh Bank Technical Unit.

Table 3.7.1 shows that the decline in the loan/deposit ratio is partly a matter of provisioning, but the continued existence of high liquidity indicates room for lending. The situation improved in 1993 and 1994 as the rigidity of loan pricing weakened.

Deposit rates have remained high due to the floors being maintained significantly above the inflation rate. The purpose of maintaining the floor has, however, been undermined. The resistance to keeping deposit floors just above the inflation rate was one factor in preventing the lending interest rates from adjusting downwards more rapidly.

5.8 FINANCIAL SECTOR REFORM: STATUS QUO

To ensure an effective role of financial sector in economic activities of the country, implementation of the measures adopted under the Financial Sector Reform Program (completed in December 1996) continued. To accelerate the recovery of overdue loans, activities of two *Artha Rin Adalat* (Financial Loan Court) and one *Dewlia Ain Adalat* (Bankruptcy Court) were established in Dhaka 1997-98 and one *Artha Rin Adalat* and one *Dewlia Ain Adalat* at Chittagong were set up. Moreover, Commercial Banking Restructuring Project (CBRP), which was initiated in 1997 continued to overcome the prevailing problems of the banking sector to foster dynamism in financial management.

CONCLUSION

Interest rate plays a vital role in a country's economy. It is predisposed by numerous macroeconomic factors and simultaneously influences several other macroeconomic parameters. Even a slight change in the interest rate structure can have major influence on country's balance of payments. On the other hand, and a more dominant one, interest rate is one of the key factors in a country's banking system. Banking activities are all dependent on interest rates.

A country's development is based on the mobilization of wealth or capital funds. The most important actor in such channeling is the business sector, where the life-blood is the consistent flow of investment that is provided by the banking sector of the economy.

A sudden change in the interest rates structure instantaneously influences the flow of such investment funds, which ultimately bears impact on the industrialization process. Such susceptibility has made interest rate an important tool that the government pays significant attention to.

The government has not been able to collect the optimum output by wielding the power it has over interest rates. Outside influences like natural disasters, hartals, load shedding etc, are regularly hampering business & industry.

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BEHAVIOR OF BANK DEPOSITS IN BANGLADESH

Growth of deposits with the banking system in any country is a welcome phenomenon. It is particularly more important in a capital scarce country because of the existence of imbalance the availability of funds and the demand for such funds. If the existing rates of interest do not truly reflect the 'scarcity value' of such funds, their demand naturally diverges from supply.

The study of the determinants of bank deposits is important both to the profit maximization bank and to the central bank. It is important to the former for efficient deposit mobilization schemes and to the latter for formulating a proper monetary policy since bank deposits form a part of monetary aggregate over which central bank wants to have control.

During the last nineteen years, bank deposits in Bangladesh have shown a tremendous rate of growth. Changes in the levels as well as some monetary ratios provide a broad indication of the behavior of bank deposits. Total deposits increased by TK. 1788.67 Crore (or 178%) to TK. 2806.86 Crore during 1975-80, which again increased, by TK. 6549.46 Crore (or 233%) to TK. 9356.32 Crore (1980-85) when major upward revision of interest rate was made (October 16, 1980). The same has again increased by TK. 11010.78 Crore (or 118%) during 1985-90. On an average basis the rate of growth of deposits was 22% during 1975-80. In 1985-90 it was 28%. But in real terms the ratio showed different trend. The progressive increase in the share of deposits to GDP, broad money clearly indicates that 'financial deepening' has been taking place in Bangladesh from 1970-1990.

There are hosts of factors that affecting the behavior of the growth of bank deposits in any country. At any point of time the volume of deposit in the bank is determined by the interaction of the supply of and demand for them by the

public. The supply of deposits by the banking system is generally determined by the components of reserve money. The demand for bank deposits is determined by factors like income, rate of interest, and sometimes by service variables like network of bank branches or per capita bank branches etc. and improvement in banking services. In addition to these traditional factors, some structural factors like monetisation, financial innovation, literacy rate etc. also affect the demand for bank deposit.

The demand for bank deposits is positively related to the return on itself and negatively to the return on assets considered to be its substitutes. Magnitudes of this influence depend on the portfolio choices of deposit holders. Holders and others may prefer to hold bank deposit if other financial assets are not available or not considered to appropriate substitute. On the other hand, if preference of the households for liquids and other financial assets is strong, their holdings of bank deposits may not be much influenced by changes in the interest rates offered on alternative financial assets.

From the theoretical point of view we know that income is the most important factor influencing deposits. The higher the income of the people, the greater will be the ability to acquire temporary surpluses, which can be deposited with the bank. Again the higher the income levels the greater will be the need for financial assets as a mean of payment. Income is also related to variety of factors such as monetization, urbanisation and education, which exert their influences on the growth of the deposit. The proportion stable and linear link between financial savings and current income dates back to Keynes. On the other hand the hypothesis advanced by Duesenberry states that the individual savings behaviour of the household not only depends upon his income also upon the income of others. Later, Milton Friedman linked savings behaviour with 'permanent income'.

The sensitivity of deposit to the rate of interest will mainly depend upon the portfolio preference of the depositors. In this context, the ownership pattern of the various types of deposits may have a significant bearing. The effect of the

structure of the interest rate is a controversial issue. The findings of [unclear] that the interest rate has no impact, was subsequently contradicted by [unclear] study, which stressed the importance of interest rate. The study shows that household saving is a function of the investment intentions of the household. Higher rates of interest rate might, by discouraging investments, discourage savings. Another study showed that rate of interest significantly and positively influences the per capita level of savings. Thus higher rate of interest generated higher real savings.

In general it has been seen that people have preference for current consumption over future consumption. Therefore, a person will forego present consumption only if he is paid a premium equal to or greater than his marginal rate of time preference. Presumably a higher rate of interest will induce an individual to forego some of his present consumption. In other words the higher the interest rate might be the higher will be the tendency to save. When the interest rate changes there is always a chance of changing one deposit to other. For example, when the rate of interest on fixed deposit rises, there is some probability of a shift from current /savings deposits to fixed deposits and vice-versa. This means that any type of deposit should respond positively to rise on its rate and negatively to interest rate on alternative assets. However, it may be statistically somewhat difficult to isolate these influences since interest rate were adjusted more and less at the same time and hence may create the problem of multicollinearity. Prior to January, 1990 interest rate in Bangladesh did not change from year to year, but they changed only at loan periodic intervals.

Fiscal policy in general not only affects the individual's capacity to save, but also exerts a direct influence on his decisions to save and in what form to save. For example, the imposition of tax/surcharge on the volume of the deposits exceeding a certain amount or a certain rate on the income earned on deposits might hinder the growth of overall deposits in the system.

It may be mentioned here that Bangladesh overtook a vigorous and massive program of opening bank branches in the rural areas during the late 70s and an active interest rate policy in the early 80s. The total number of bank branches is a measure of the availability of banking services in a country. The idea is that the growth of deposits will be larger if more branches in all possible regions are established in the country. The government policy required the commercial banks to open two rural branches for every urban branch.

The rate of inflation and the inflationary expectations might have some influence on the growth of overall deposits with the banking system. It is generally assumed that the growth of total deposits is to be negatively related with inflationary expectation. As the rate of the inflation increases, people will be tempted to divert their savings from bank deposits to any other kind of tangible assets because these assets act as a hedge against the inflation. But in a study of India it was found that inflationary expectation had a positive impact on savings in the form of bank deposits. In the case of Bangladesh, as research done by Bangladesh Bank shows that deposit is negatively related inflation rate.

CREDIT FLOW AFTER INTEREST RATE LIBERALIZATION

The financial repression paradigm and theory of financial liberalization has gathered momentum during 1970's and 1980's in the literature of development economics. The pioneering work of McKinnon and Shaw provided a convincing theoretical framework for financial repression and liberalization. It was widely argued that financial repression is an impediment to economic development. A repressed system interferes with economic development. Saving vehicles are underdeveloped and return on savings is negative on intermediaries who collect savings but do not allocate those savings efficiently. It was believed that being subject to numerous lending restrictions and facing mandatory interest rates ceiling on loanable funds at levels well below market rate. Commercial banks naturally tended to ration the available credit and allocate the rationed credit only to large institution in order to avoid uncertainty

and overhead cost. The net effect of the officially administered rate is to push away the large number of small investors to curb market.

THE THEORY OF FINANCIAL LIBERALIZATION

The suggested problem to the problem was to liberalize the financial sector by allowing interest rate to be freed from ceilings and allowing the market level to be. This would cause the real interest rate to positive level and remove explicit interest rate subsidy accorded to preferred borrowers. Higher real interest rate would also generate more domestic savings and investment and permit some borrowers to shift from borrowers to shift from curb market to organized credit market. The World Bank has cited evidence from a number of countries such as Turkey, Kenya, Thailand where the e liberalization where the liberalization of interest rate generated more savings and investment. Financial intermediation will develop and they will make available loan to small and large borrowers who are excluded under a repressed system.

McKinnon explained that more attractive the process of accumulating the money the greater the incentive to save and invest, in these situation the aggregate demand for money will be greater for money will be greater, the larger the proportion of investment in total expenditure. This is the basic complementary between the money and physical capital hypothesized by McKinnon. Shaw argued that as financial intermediations between savers and investors expand expands as the result of higher interest rate incentive to save and investors expands so does the efficiency of investment.

EXPERIENCE WITH FINANCIAL LIBERALIZATION

It has been increasingly felt that elimination of interest rate ceiling and other restrictions in the face of macro economic instability and market instability will hardly serve the desired purpose. The banking system which is only organized capital market in most of the least developed countries alone cannot allocate credit efficiently even though it freed from interest rate ceiling.

... worsen the course of abrupt waiving of the administratively imposed ceiling. This is not surprising. The repressed financial markets are not free and competitive; market imperfections and inefficiencies are rampant; oligopolistic manipulations holding down deposit rates and interest levels even though officially imposed ceilings may not exist.

CREDIT RATIONING FOR IMPERFECT INFORMATION

The information constraint can be a significant barrier to efficient credit allocation even when interest rate ceiling are eliminated. This is especially true when a country's capital is allocated only through banking system, which is not a well organized market as stated earlier.

Stiglitz and Wess (1981) showed that banks are concerned about the interest rate they receive on loan and the risky-ness of the loan. However the interest rate charges may itself affect the risky-ness of the pool of loan by either a. deterring potential borrowers b. effecting the actions of the borrowers. Both effects derive directly from the residual of the imperfect information, which is present in the loan market.

The adverse selection effect of interest rate is a consequence of different borrowers having different probabilities of paying their loans. The expected return of bank depends on the probabilities of repayments, so that the bank would be able to identify the borrowers who are likely to repay. To identify the borrowers bank use the interest rate as screening device. Those who are willing to pay highest interest rate are in the worse risk bracket, since they are willing to pay high interest rate they perceive their repayment to be low. As the interest rate rises, the average risky-ness of those borrowers increases, possibly lowering the banks profit.

Similarly as the interest rate and other terms of the contract changes, the behavior of the borrower is likely to change. For instance, raising the interest

the borrower's return on project. Higher interest rate induces borrowers to undertake riskier project for a greater return. When the project turn out to be successful, the borrower can get the entire excess of return on over the interest rate. If the bank is paid back the loan with the interest. On the other hand when the project fails the borrower simply loose the collateral (if any) but bank loses the capital minus collateral. Therefore, the expected profit of a borrower is an increasing function of the risky-ness of his project while the expected profit of the bank decreases with the risky-ness of the project when the collateral return and the rate of interest held constant. High interest rate may discourage the borrower, which the bank prefers. The adverse selection effect will be reinforced by the incentive effect, discouraging banks from raising their rate of interest in response to an excess demand of fund.

MACROECONOMIC INSTABILITY

Interest ceiling withdrawal alone may not serve the desired result if the liberalization occurs in the context of confined macroeconomic instability. High inflation, budget deficit etc. may work as impediments. In the mid 1970's Chile, Argentina and Uruguay went for interest rate liberalization along with other financial reforms. The process of Chile was plagued from the start with severe institutional imbalance but seemed initially to be going well in other two countries. However in all the three countries unsupervised laissez faire experiment lead to irresponsible risk taking by the highly unstable macroeconomic environment will not work properly as experienced in those countries. Freeing domestic financial market in the face of poor fiscal position may be a principal factor in accelerating inflation and instability.



Interaction between organized and curb market has to be taken into account while raising interest rate. Fund flows freely between organized and curb market. Savers and investors (especially in LDCs) either use one or both markets. When banking system raises the rate of interest the curb market also increase. This is because the fund flows freely between them. Some structural economists pointed out that effect of interest rate is to produce a reduction in total supply of credit. Increased rate of interest in banking system attracts funds from curb market and currency to transfer into time deposit. High reserve ratio is a characteristic in most of LDCs. Financial intermediation is not one to one. A part of the fund goes to the Central Bank as reserve requirement thus total flow of credit balances.

THE END