THE SOUTH EAST ASIAN CENTRAL BANKS (SEACEN)
RESEARCH AND TRAINING CENTRE

SEACEN CENTRE

# ASPECTS OF INTEREST RATE STRUCTURES IN SEACEN COUNTRIES

ZETI AKHTAR AZIZ

Kuala Lumpur
Malaysia
November 1986

# ASPECTS OF INTEREST RATE STRUCTURES IN SEACEN COUNTRIES

Zeti Akhtar Aziz

SEACEN Research and Training Centre
Kuala Lumpur
Malaysia

November 1986

# FOREWORD

The study on Aspects of Interest Rate Structure in the SEACEN countries examines interest rate issues within the context of the different financial structures and different stages of economic growth of the various countries.

The study as proposed covers three parts. Part I covers the institutional aspects of the interest rate systems. It discusses the interest reforms that have taken place in the SEACEN countries. The second part analyses the effects of interest rates on the demand for financial variables by the non-bank and the commercial banks. The final part of the study examines policy issues related to the appropriate structure of interest rates for the countries.

This present study contains Part I and Part II which in themselves are complete. The first part contains a description of the current systems and structure of the interest rate systems in SEACEN countries and discusses how the systems have evolved in recent years, in particular the interest rate reforms undertaken by the SEACEN countries. It provides an analysis and comprehensive compilation of information and data on the level and structure of interest rates. The second part is the empirical investigation which estimates equations to examine the effect of interest rates on financial variables. In most SEACEN countries, the empirical findings indicated the significance of interest rates in affecting demand for financial variables.

The study was conducted by Dr. Zeti Akhtar Aziz of Bank Negara Malaysia who was on secondment and served as Research Economist at the SEACEN Research and Training Centre from 1979 through 1985. The SEACEN Centre takes this opportunity to express its appreciation to Dr. Zeti for having completed Part I and Part II of this study. The Centre is also grateful to the staff of the Economic Research Departments, of the member central banks for their contribution and valuable comments.

The views expressed in this study are those of the author's and does not necessarily reflect those of the SEACEN Centre or its member central banks and monetary authorities.

Vinyu Vichit-Vadakan
Director
The SEACEN Research and Training Centre

Kuala Lumpur
November 1986

CONTENTS


Page

Foreword ... ... ... ... ... ... ... ... ... ... i
Table of Contents ... ... ... ... ... ... ... ... iii
List of Tables in the Text ... ... ... ... ... ... v
List of Tables in the Appendix ... ... ... ... ... vii

PART I

CURRENT SYSTEMS AND STRUCTURE OF INTEREST RATES IN SEACEN COUNTRIES ... ... ... ... ... ... ... ... 1

Interest Rate Systems and Policies ... ... ... ... 3
Interest Rate Pattern and Trends ... ... ... ... 15
Introduction ... ... ... ... ... ... ... ... 15
Deposit Rates ... ... ... ... ... ... ... ... 15
Lending Rates ... ... ... ... ... ... ... ... 23
Domestic and Foreign Rates ... ... ... ... ... ... 29

PART II

EFFECTS OF INTEREST RATES ON FINANCIAL VARIABLES ... ... 35
Framework of Analysis ... ... ... ... ... ... ... 37
Non-Bank Private Sector ... ... ... ... ... ... 43
Introduction ... ... ... ... ... ... ... ... 43
Demand for Currency ... ... ... ... ... ... 44
Demand Deposits ... ... ... ... ... ... ... 50
Demand for Time Deposits ... ... ... ... ... 53
Demand for Savings Deposits ... ... ... ... ... 60
Demand for Commercial Loans ... ... ... ... ... 64

LIST OF VARIABLES ... ... ... ... ... ... ... ... 68

Page

COMMERCIAL BANKING SECTOR ... ... ... ... ... ... 69
Introduction ... ... ... ... ... ... ... ... 69
Demand for Excess Reserves ... ... ... ... ... ... 69
Demand for Excess Cash Reserves ... ... ... ... ... 71
Demand for Excess Liquid Reserves ... ... ... ... 75
Demand for Treasury Bills ... ... ... ... ... ... 79
Demand for Government Securities ... ... ... ... 80
Demand for Borrowing from the Central Bank ... ... 82
Demand for Foreign Assets ... ... ... ... ... ... 85
Demand for Foreign Liabilities ... ... ... ... ... 86
Interbank Rate ... ... ... ... ... ... ... ... 88

LIST OF VARIABLES ... ... ... ... ... ... ... ... 94

# List of Tables in Text


| Table | | Page |
|---|---|---|
| 1 | Interest Rate on Savings Deposits by Institutions in SEACEN Countries, 1969-1982 ... ... ... | 18 |
| 2 | Real Rate of Interest on Savings Deposits at Commercial Banks, 1970-1982 ... ... ... ... | 20 |
| 3 | Real Rate of Interest on 12-months Time Deposits at Commercial Banks, 1970-1982 ... ... ... | 24 |
| 4 | Interest Rate Differential Between Deposit and Lending Rates at Commercial Banks ... ... ... | 28 |
| 5 | Euro-dollar Three-Month Deposit Rate Adjusted for Exchange Rate Changes and Domestic Three-Month Time Deposit Rates, 1971-1981 ... ... | 31 |
| 6 | U.S. Commercial Bank Prime Lending Rate Adjusted for Exchange Rate Changes and Domestic Prime/ Minimum Lending Rate, 1971-1981 ... ... ... | 33 |
| 7 | Ratio of Currency, Demand Deposits, Quasi-Money to Broad Money Supply, M2 ... ... ... ... | 45 |
| 8 | Non-Bank Private Sector Demand for Currency ... | 47 |
| 9 | Non-Bank Private Sector Demand for Demand Deposits | 51 |
| 10 | Non-Bank Private Sector Demand for Time Deposits | 55 |
| 11 | Non-Bank Private Sector Demand for Savings Deposits ... ... ... ... ... ... | 61 |
| 12 | Non-Bank Private Sector Demand for Commercial Loans ... ... ... ... ... ... ... ... | 65 |
| 13 | Commercial Bank Demand for Excess Cash Reserves | 73 |
| 14 | Commercial Bank Demand for Excess Liquid Reserves | 77 |
| 15 | Commercial Bank Demand for Treasury Bills ... | 81 |
| 16 | Commercial Bank Demand for Government Securities | 83 |
| 17 | Commercial Bank Demand for Borrowing from the Central Bank ... ... ... ... ... ... ... | 84 |
| 18 | Commercial Bank Demand for Foreign Assets ... | 87 |

| Table | | Page |
|---|---|---|
| 19 | Commercial Bank Demand for Foreign Liabilities | 89 |
| 20 | Interbank Rate ... ... ... ... ... ... ... | 92 |

## List of Tables in the Appendix


| Table | | Page |
|---|---|---|
| A 1.1 | Burma: Interest Rates on Deposits at Commercial Banks. | 97 |
| A 2.1 | Indonesia: Interest Rates on Deposits at State Banks. | 98 |
| A 3.1 | Malaysia: Interest Rates on Deposits at Commercial Banks. ... ... ... ... ... ... ... ... | 99 |
| A 3.2 | Malaysia: Interest Rates on Deposits at Finance Companies. ... ... ... ... ... ... ... ... | 100 |
| A 4.1 | Nepal: Interest Rates on Deposits at Commercial Banks. | 101 |
| A 5.1 | Philippines: Interest Rates on Deposits at Commercial Banks. ... ... ... ... ... ... ... ... | 102 |
| A 5.2 | Philippines: Interest Rates on Deposits at Finance Companies ... ... ... ... ... ... ... ... | 103 |
| A 6.1 | Singapore: Interest Rates on Deposits at Commercial Banks. ... ... ... ... ... ... ... ... | 104 |
| A 6.2 | Singapore: Interest Rates on Deposits at Finance Companies. ... ... ... ... ... ... ... ... | 105 |
| A 7.1 | Sri Lanka: Interest Rates on Deposits at Commercial Banks. ... ... ... ... ... ... ... ... | 106 |
| A 7.2 | Sri Lanka: Interest Rates on Deposits at National Savings Bank. ... ... ... ... ... ... ... | 107 |
| A 7.3 | Sri Lanka: Interest Rates on Deposits at Finance Companies. ... ... ... ... ... ... ... ... | 108 |
| A 8.1 | Thailand: Interest Rates on Deposits at Commercial Banks. ... ... ... ... ... ... ... ... | 109 |
| A 8.2 | Thailand: Interest Rates on Promissory Notes paid by Finance Companies. ... ... ... ... ... ... | 110 |
| A 8.3 | Thailand: Interest Rates on Deposits at Government Savings Bank. ... ... ... ... ... ... ... | 111 |
| B 1.1 | Burma: Lending Rates of Commercial Banks and Non-Bank Financial Institutions. ... ... ... ... ... | 112 |

| Table | | Page |
|---|---|---|
| B 2.1 | Indonesia: State Bank Lending Rate by Economic Sectors. | 113 |
| B 3.1 | Malaysia: Lending Rates at Commercial Banks and Finance Companies. ... ... ... ... ... ... ... ... | 115 |
| B 4.1 | Nepal: Commercial Banks' Loan Rates. ... ... | 116 |
| B 5.1 | Philippines: Lending Rates of Commercial Banks. | 119 |
| B 6.1 | Singapore: Lending Rates of Financial Institutions. | 120 |
| B 7.1 | Sri Lanka: Lending Rates of Commercial Banks Classified by Type of Security. ... ... ... ... ... ... | 121 |
| B 7.2 | Sri Lanka: Lending Rates of Non-Bank Financial Institutions. ... ... ... ... ... ... ... | 122 |
| B 8.1 | Thailand: Lending Rates at Commercial Banks and Finance Companies. ... ... ... ... ... ... ... ... | 123 |
| C 2.1 | Indonesia: Money Market Rates. ... ... ... ... | 124 |
| C 3.1 | Malaysia: Money Market Rates. ... ... ... ... | 125 |
| C 5.1 | Philippines: Interest Rates on Money Market Instruments | 127 |
| C 6.1 | Singapore: Money Market Rates. ... ... ... ... | 128 |
| C 7.1 | Sri Lanka: Money Market Rates. ... ... ... ... | 130 |
| C 8.1 | Thailand: Money Market Rates. ... ... ... ... | 132 |
| C 8.2 | Thailand: Commercial Banks' Discount Rates Classified by Purposes. ... ... ... ... ... ... ... | 134 |
| D 3.1 | Malaysia: Interest Rates On Government Securities. | 135 |
| D 4.1 | Nepal: Interest Rates on Treasury Bills and Government Bonds. ... ... ... ... ... ... ... ... | 136 |
| D 5.1 | Philippines: Interest Rates on Government Instruments. | 137 |
| D 8.1 | Thailand: Interest Rates on Government Securities. | 138 |
| E 2.1 | Indonesia: Percentage and Rate of Rediscount Facilities by Bank Indonesia to the State Bank. ... ... | 139 |
| E 4.1 | Nepal: Rastra Bank's Refinance Rate to Commercial Banks. ... ... ... ... ... ... ... ... | 141 |

| Table | | Page |
|---|---|---|
| E 5.1 | Philippines: Interest Margin Between Central Bank Rediscount Rates and Lending Rates of Banks. ... | 144 |
| E 5.2 | Philippines: Maximum Maturities of Discounts and Advances. ... ... ... ... ... ... ... ... | 145 |
| E 8.1 | Thailand: Official Rates. ... ... ... ... ... | 146 |
| E 8.2 | Thailand: Central Bank Refinance Rates. ... ... | 147 |

# PART I

# CURRENT SYSTEMS AND STRUCTURE OF INTEREST RATES IN SEACEN COUNTRIES

INTEREST RATE SYSTEMS AND POLICIES

While the role and relative importance of interest rates as an instrument of monetary policy differs amongst the SEACEN countries, it represents one of the main monetary instruments in most of the SEACEN countries. Interest rates have been used however to achieve different policy objectives. This is true not only across countries but also for an individual country during different time periods. Among the policy objectives of interest rate policy in the SEACEN countries are to influence the rate of savings, the composition and maturity structure of savings, the liquidity of the banking system, the cost of borrowing and thereby the volume of credit, the direction of credit in particular to priority sectors and also capital flows. An evaluation of the appropriateness of the level and structure of interest rates for any economy must therefore be made in the light of the policy objectives to be achieved.1/

The interest rate systems operating in the SEACEN countries also varies amongst the SEACEN countries. That is, the process by which interest rates are adjusted in the various financial markets in the individual SEACEN countries differ. At one end of the spectrum, interest rates are market determined while at the other they are completely regulated. In between, there are systems that can be described as intermediate in that, in certain markets the interest rates are determined by market forces while there also exists markets in which the rates are completely regulated. In view of the developing nature of the financial systems of the SEACEN countries, the interest rate systems in a number of countries have experienced

---

1/ See A.G. Chandavarkan, "Some Aspects of Interest Rate Policies in Less Developed Economics: The Experience of Selected Asian Countries", IMF Staff Papers, Vol. XVII, No.1. p.48. for a discussion of the impracticality of identifying optimum interest rate levels and the necessity of an empirical criteria to base the assessment.

reforms over the decade in response to changes that have taken place in the respective financial systems and economies.

It has been argued that a system in which interest rates are regulated would lead to distortions in the financial system and would not promote economic growth.2/ It has been recognised however that in a number of developing countries the conditions for the operation of market determined interest rates may not exist.3/ In these circumstances, in which the market would not establish an appropriate interest rate structure, intervention by the monetary authority would be necessary to assist the market in determining the appropriate rate. While it is not the intention of this study to make value judgements on the interest rate systems of the SEACEN countries, this present part of the study aims to examine the features and characteristics of the interest rate system prevailing in the SEACEN countries and in the subsequent part, an attempt will be made to empirically examine the consequences of such systems on financial variables. The study will concentrate on the period 1970 to 1981. It is hoped that this analysis would contribute to the increased understanding of the workings of the systems and enable conclusions to be drawn as to the options open to the monetary authorities with respect to their interest rate systems and policies to achieve desired objectives.

In a number of SEACEN countries, interest rates are determined by regulation. The Central Banks are empowered to set the maximum deposit and lending rates. While in certain countries, interest rates have remained rigid for most of the period, in others

---

2/ There is substantial literature initiated by Shaw, E.J. in "Financial Deepening in Economic Development" that argued that the liberalisation of financial markets would produce a more efficient system.

3/ A detailed discussion of conditions that are necessary for the deregulation of interest rates can be found in Interest Rate Management, Vincente Galbis, International Monetary Fund.

frequent adjustment were made by the monetary authority in response to the financial and economic conditions. In recent years however there is a movement towards market determined interest rate systems. By the end of the 1970s three of the SEACEN countries have allowed their rates to be determined by the market. Below is a description of the interest rate systems in the individual SEACEN countries.

In Burma, the Union of Burma Bank has the power to establish the "maximum rates of interest or payments which banks may charge for different types of loans, advances or other credit operations and which such banks may pay on various classes of deposits".4/ Interest rates in Burma have remained fairly rigid through most of the period under review. However, in April 1975 and in November 1977 there were significant adjustments in deposit rates. As a result of the adjustment in deposit rates, there was a significant increase in savings deposits and savings certificates. In November 1977 the adjustment was made in conjunction with other stabilisation measures. During this period, interest rates on loans were also increased. The measures in 1977 were implemented largely to slow-down the rate of monetary expansion and the rate of inflation during the period. The structure of lending rates were formulated with a view to promoting investment in priority areas.

Deposit and lending rates of all State Banks in Indonesia are regulated by the Central Bank. The Bank fixes "the rate and structure of interest".5/ No restrictions or ceilings are imposed on interest rates paid or charged by private banks and other financial institutions. It should be noted however, that for most of the period under review nearly 80 per cent of the credit originates from State Banks. While interest rates as an instrument of policy is important in Indonesia, Bank Indonesia relies more heavily on credit ceilings

---

4/ The Union of Burma Bank Act, 1952 (Act No.IX of 1952) p.20.

5/ Act of the Republic of Indonesia, Number 13 year 1968 on The Central Bank, Article 32 p.63.

which were introduced in 1974 as an instrument of policy to check monetary expansion. Interest rate regulation is mainly used to affect the mobilisation and allocation of credit to priority sectors rather than for controlling monetary expansion. As of October 1968, the Central Bank quarantees time deposits at the State Banks. The Central Bank has also, during different time periods paid subsidies on time deposits of various maturities. These subsidy which was introduced for the 6 and 9 months maturity time deposits in October 1968 were discontinued in May 1969. In December 1974, the subsidy was introduced on time deposits with a maturity of 18 and 24 months but the subsidies were gradually reduced in 1974 and 1978. Interest rate adjustment however have been applied to supplement other stabilisation measures. In 1974 deposit rates were increased to encourage the flow of domestic resources to the banking system and lending rates increased to affect domestic credit. Interest rates were subsequently adjusted downwards in December 1974 and in January 1977 as the inflation slowed down.

Prior to October 1978 in Malaysia, the Central Bank made recommendations to the commercial banks on "the rates of interest payable to or by banks, the rates of discount chargeable by banks or the rates of commission and other charges payable to banks".6/ The Central Bank in practice made these recommendations in consultation with the Association of Banks to determine the maximum interest rates to be paid by the commercial banks on deposits, as well as, the minimum rates to be charged by the banks on their loans and advances, that is, the prime rate and the preferential rate. The Central Bank also prescribed the maximum interest rates on loans to priority sectors. From October 1978, interest rates were deregulated and

---

6/ The Central Bank of Malaysia Ordinance, 1958 (As amended up to July 31, 1982) Part VII, Section (1)(b) p.24.

commercial banks determined their own rates.7/ However, the maximum rates for the priority sectors are still regulated. The liberalisation of interest rates was largely with a view to "fostering greater competition in the banking industry to the advantage of both savers and borrowers of funds and in particular the promotion of an optimal allocation of financial resources among alternative uses".8/ The measure was also introduced in view of the increased priority given to achieving greater efficiency of the financial markets and during a time when the effective mobilisation of funds was considered crucial. The Central Bank however continues to maintain control over the general level of interest rates through variation in the reserve requirements and open market operations.

In Nepal, a provision exists in the Commercial Bank Act for "the rates of interest payable to and by banks on credit or deposits, and the procedure of collecting such interest, shall be prescribed by themselves".9/ It is also "provided that banks shall comply with from time to time in respect to such rules of interest and procedure of collection".10/ In practice the Nepal Rastra Bank has fixed the ceiling on deposit rates and the minimum interest rates on loans although with respect to the loan rates, the commercial banks has the discretion of charging higher rates. The Central Bank also has empowered authority upon it under the Nepal Rastra Bank Act, 1955 to issue directives to banks on matters relating to their banking and credit operations.11/

---

7/ It should be noted that interest rates on deposits at finance companies were deregulated on August 1, 1973 and that merchant banks which began operations in Malaysia in 1970 were given flexibility in determining the deposit and lending rates.

8/ Bank Negara Malaysia Annual Report 1979, p.8.

9/ Commercial Bank Act, 1974 (As amended up to January 2, 1978) Section 47(b) p.21.

10/ ibid p.21.

11/ Nepal Rastra Bank Act, 1955 (As amended up to September 25, 1966) Section 22 p.16.

Banks and financial institutions are legally bound to comply with the directives. In cases for which no rates are fixed by the Central Bank, prior approval by the banks regarding such rates are required.

Until recently, interest rates in Nepal have generally been maintained at a low level. During the seventies, interest rates on deposits were adjusted five times in response to different economic and financial circumstances. Active financial management by the Nepal Rastra Bank began in 1971. Upon the recommendations of the Interest Rate Review Committee set up in April 1969, deposit and lending rates were revised a number of times. The Central Bank also extended its influence on the interest rate structure of other financial institutions namely those in the agricultural sector. While there is no bank rate as such, beginning 1966/67, a refinancing scheme was made available to commercial banks against specific loans. The refinance rates vary according to the purpose of the loan. Refinance rates are also set for other financial institutions specialised in the relevant activities. The refinance rates to banks and non-banks have also been revised upwards significantly.

In the Philippines, the Monetary Board of the Central Bank of the Philippines "may fix the maximum rates of interest, ... which banks may pay on deposits, on deposit substitutes and on other obligations. The Monetary Board may, within limits prescribed in the Usury Law (Act No. 2655, as amended), fix the maximum rates of interest which banks may charge for different types of loans and for any other credit operations".12/ The same clause also applies for non-bank financial institutions. Changes in the interest rate structures may be initiated by the Central Bank through the issuance of amendatory circulars. That is, the provision exists for the Monetary Board to "eliminate, exempt from or suspend the effectivity of, interest rate ceilings on certain types of loans or renewals thereof

---

12/ Banking Laws and Other Laws Relating to The Philippines Financial System. Republic Act No. 265 Article IX, Section 109.

or forbearance of money, goods or credit whenever warranted by prevailing economic and social conditions".13/

The deregulation of interest rates in the Philippines was carried out in stages. The move to deregulate interest rates in the Philippines was in response to the changes that had taken place in the economy during the seventies and to evolve a more dynamic and realistic interest rate structure so as to make it an effective instrument for mobilising savings and resource allocation. This was in line with other financial reforms that had been implemented. The deregulation of interest rates was to move towards a flexible and market oriented interest rate policy. Financial assistance however would continue to be provided to preferred sectors. From a long-term macro-economic point of view, the move was designed to promote increased efficiency in the utilisation of capital resources, the cost of which would be determined by market conditions. Thus, in addition to the positive effect it was anticipated to have on the savings rate, it was also expected to improve the efficiency of capital resources that would lead to increased industrial growth. Financial institutions could also under the new interest rate regime determine the spreads in their lending operations. It was expected that this would lengthen the maturity of the financial institutions and the credit worthiness of the borrowers. The deregulation of interest rates is also expected to achieve an increase in the competitiveness of the banks in relation to non-bank financial institutions and an increased growth of the money market.

---

13/ ACT NO. 2655 An Act Fixing Rates of Interest Upon Loans and Declaring the Effect of Receiving or Taking Usurious Rates and For Other Purposes. (As amended by Acts No. 2992, 3291, 3998 and 4070, C.A. No. 399 and P.Ds. No. 116, 858 and 1684. Section 4-a p.262.

The deregulation of interest rates began in August 1980 with the introduction of the amendment contained in Circular No.755 in which the rates on loans with more than four years maturity was floated. The rate however could not exceed the Manila Reference Rate (MRR) plus a margin not greater than 3 percentage points.14/ With effect of July 1, 1981, all ceilings except those on short-term loans with maturities of 730 days or less were lifted. More specifically ceilings on interest rates on savings and time deposits and NOW accounts, deposits substitutes and yields on purchases of receivable with maturities of more than 730 days were lifted. Interest rate ceilings on short term loans were however maintained at 16 per cent for secured loans and 18 per cent for unsecured loans. This was largely to set an informal limit for rates on short-term deposits to reduce the fluctuations that would take place while the market adjusted itself to the new circumstances. In addition, it was also a reference rate for the other rates. In October 1981, the definition of short-term rates was amended to 365 days. Under the deregulated rates, the financial institutions thus determined their own spreads in relation to their lending operations.

In the Philippines, interest rate policy has been an important monetary instrument. With interest rates being determined by the market, the Central Bank continued to influence interest rates through open market operations. Such operations were particularly important during the period immediately after the deregulation of the rates. This was largely to prevent drastic movements in the interest rates. Accompanying the deregulation of interest rates, the Central Bank also adjusted its rediscount rates, that is, the rate at which financial institutions borrow from the Central Bank on the basis of eligible paper to be reflective of the financial market conditions.

---

14/ The Manila Reference Rate (MRR) is based on the weighted average of the interest rates paid by the five banks with the largest volume of transactions in the 90 days immediately preceding on time deposits with maturities of greater than 730 days.

Reserves requirements on deposit and deposit substitutes were also revised to enable banks to adjust to the changes in the deposit rates resulting from the deregulation. The reduction in the reserves requirement would increase the loanable funds of the commercial banks in addition to lowering the cost of their reserve holding.15/

Interest rates in Singapore prior to July 1975 were fixed by the Association of Banks in consultation with the Monetary Authority. During this period interest rates were fairly rigid. Interest rates were liberalised in July 1975 to allow interest rates to be more responsive to domestic and external conditions. Under the new system, interest rates have become more flexible with finer and more frequent adjustments. In view of the openness of the Singapore economy, interest rates are expected to be strongly influenced by foreign interest rate developments. However, short run domestic money and credit conditions are important in affecting the interest rate movements at the margin. In view of the increased compeition, the spread between the loan and deposit rates have also decreased.

The Monetary Authority influences interest rates by affecting liquidity conditions through money and foreign exchange market operations. Interest rate movements are used as an indicator of monetary conditions and a basis on which to conduct money and foreign exchange operations. Short-term money market rates are influenced by the rate at which the Monetary Authority rediscount Treasury Bills and commercial bills as well as rate at which the Monetary Authority provides lender of the last resort facilities.

These measures are largely facilitated through the discount houses. Commercial banks experiencing a tight liquidity situation would discount their Treasury Bills or commercial bills with the discount houses. The rate at which such bills are discounted would in turn be influenced by the rate at which discount house can rediscount

---

15/ Central Bank of the Philippines Annual Report, 1981 p.10.

such bills with the Monetary Authority or the rate at which it can borrow from the Monetary Authority. Liquidity conditions and interest rates have also been influenced by variation in the quantity of Treasury Bills offered for tender during a week.

While foreign exchange operations previously complemented money market operations during the 1980s, these operations were dominated by exchange rate considerations. Prior to 1981, economic objectives "were achieved largely through the stabilisation of interest rates and money supply growth with minimal exchange rate considerations".16/ However, there was a shift in policy 1981, to take into consideration the exchange rate objective. "It was increasingly felt that openness of the Singapore economy and its high dependence on imports makes monetary policy aimed at interest rate and money supply targets, less effective as an anti-inflation instrument".17/ Therefore, the emphasis of monetary policy changed from interest rate and money supply targets to a policy of a strong exchange rate for the Singapore dollar. However, while exchange rate objectives dominated money market operations, money supply and interest rate movements were not ignored. Operations in the domestic money market continue to aim at reducing destabilising monetary and interest rate movements.

The Central Bank of Ceylon is empowered to specify "the maximum rates of interest at which commercial banks may pay upon various classes of deposits; or fixing the maximum rates of interest which commercial banks may charge for different types of loans or other credit operations".18/ This provision however does not cover the right to specify the minimum deposits or lending rates. Although the Central Bank has this power it has not at any time specified

---

16/ The Monetary Authority of Singapore Annual Report 1981/82 p.2.

17/ ibid. p.2.

18/ Monetary Law Act (Chapter 22), Part VII, Section 104 (1)(a)(b), p.422.

maximum interest rates either on deposits or advances of the commercial banks.

The Bank Rate is one of the most important monetary instruments of the Central Bank of Ceylon. This is the rate at which the commercial banks can borrow from the Central Bank. When the Central Bank raises the Bank Rate, commercial banks would in turn respond to the increased cost of borrowing by raising their lending rates. This would in turn affect the demand for loans. Thus, the Bank Rate is treated as the Apex rate in the short-term interest rate spectrum and represents an important guide to the commercial banks with regard to their interest rate policy. With effect of June 30, 1977, Central Bank accommodation in excess of the ceiling at the Bank Rate was subject to a penal rate. With effect of September 1974, accommodation in excess of the specified quota was subject to a graduated scale of penal rates. Short-term interest rates are thus influenced by the Central Bank by adjustments in the Bank Rate and penal rates. The Central Bank also employs preferential rates of interest on its rediscount and refinance facilities so as to direct the flow of bank credit to priority sectors such as exports, industry and agriculture. Refinance rates differ according to the type of loan granted.

Another means by which the Central Bank influences interest rates is to recommend revisions in deposit rates of the National Savings Bank. The deposit rates of the National Savings Bank are determined by the Ministry of Finance, in most instances on the recommendation of the Central Bank. Increases in deposit rates of the National Savings Bank would compel the commercial banks to increase their deposit rates to compete with the National Savings Bank and attract deposits.

In Thailand, the interest rate system operates under a number of Acts.19/ The Bank of Thailand is empowered "to issue prescriptions to be complied with by commercial banks concerning... (1) interest payable by a commercial bank; (2) interest or discounts chargeable by a commercial bank".20/ These prescriptions shall have approval of the Minister and shall be published in the Government Gazette. Similarly "interest charged on loans shall not exceed 15 per cent per annum".21/ However, in response to changes in the domestic and international monetary conditions, the following provision was made. "With a view to rectifying the economic conditions of the country, the Minister, upon recommendation of the Bank of Thailand shall be empowered to prescribe maximum rates of interest chargeable by financial institutions over and above 15 per cent per annum".22/ Effective January 15, 1980, the maximum rates of interest or discount chargeable was adjusted to not exceeding 18 per cent and effective July 1, 1981, it was raised further to 19 per cent per annum.

These adjustments were made in view of the changing financial conditions particularly in the international markets. It was felt that restricting the rates to the previous legally permitted limit would impinge on the economic development of the country and would adversely affect the flexibility of the monetary authority in using interest rate as an instrument of monetary policy to respond to the economic situation of the country.

---

19/ The Laws and Acts include the Civil and Commercial Code, Commercial Banking Act, Finances and Credit Foncier Act, Financial Institution Loan Interest Act and Central Bank Regulations.

20/ Commercial Banking Act B.E. 2505, Section 14. (As amended by Section 14 the Commercial Banking Act (No.2), B.E. 2522.

21/ Civil and Commercial Code, Section 654.

22/ Financial Institution Loan Interest Act, B.E. 2523, Section 4.

# INTEREST RATE PATTERNS AND TRENDS

## Introduction

This section attempts to present in a uniform and comparable manner the pattern and trends of interest rates in the SEACEN countries. Attention is focussed on the deposit and lending rates. The pattern of adjustment of the rates and the circumstances in which the adjustment took place are discussed. The analysis considers both the level and the structure of interest rates on deposits in real and nominal terms. While the prevailing levels interest rates are compared, an analysis of the differential between deposits and lending rates across countries are also considered. Loan rate structure according to type of activity is also examined. In particular, a comparison is made of the spread for priority and non-priority sectors across countries.

## Deposit Rates

In reviewing the deposit rates in the financial systems of the SEACEN countries, distinct patterns can be observed. While in many of the SEACEN countries interest rates are fixed, different degrees of rigidity in the rates can be observed. In certain countries, the rates were adjusted fairly frequently responding to market conditions and the economic environment while in others the rates remained fairly rigid. Changes in interest rate patterns can also be observed in the deposit rates of the three countries in which the interest rates have been deregulated. This section will examine the pattern and trends regarding the levels, structure and variability of the deposit rates.

In most SEACEN countries, commercial banks accept time deposits with a maturity of 3 months, 6 months, 12 months and 24 months. In certain countries, the commercial banks provided shorter and longer term maturities. For example, deposits of less than 3 months maturity are accepted by commercial banks in Indonesia and

Thailand. In Singapore and Malaysia, banks also accepted one-month deposits but this was abandoned in 1975 and 1982 respectively. The nine-months deposit maturities is also accepted in Malaysia and Singapore but was discontinued in Singapore in 1975. Deposits of longer term maturities, that is, deposits exceeding two years, were offered in Burma, Malaysia, Nepal and Sri Lanka but were discontinued after 1974 in Nepal and in 1977 in Sri Lanka. The 24 months maturity which was initially offered by banks in Sri Lanka was also eliminated in 1977 but was reintroduced in 1980.

In Thailand, however, the longer-term maturities of 12 months to three years, three to five years and five years were only introduced in 1980. In Indonesia, the 18 months and 24 months maturity deposits were also only introduced in 1974. The 18 months deposit was however subsequently eliminated in 1977. Longer-term maturity deposits of 18 months is also accepted by banks in Philippines. In Malaysia, the longer-term maturities of 24 months and 36 months were introduced in 1971. It can thus be observed that differences exist among the SEACEN countries in the maturity structure of time deposits. The commercial banks also accept savings deposits, largely in the form of passbook savings accounts. In Indonesia, a saving scheme was introduced in August 20, 1971. Tabanas is a saving scheme which is not restricted by maturity, amounts deposited or withdrawn. Taska, on the other hand, constitutes a saving scheme that is related to life insurance.1/

The series on time and savings deposit rates for the individual SEACEN countries are presented in Table A 1.1 to A 1.8 in the Appendix. Certain general observations can be made. In countries in which interest rates have been relatively more flexible, the savings deposit rate represent the lowest return in the interest rate structure. On the other hand, in countries such as Burma, Nepal and

---

1/ For further details on Tabanas and Taska, please see Bank Indonesia Report for Financial Year 1971/72, p.21-23.

Indonesia, where interest rates have been relatively less flexible the saving deposit rates tend to be higher. In Burma, the savings deposit rate was equivalent to the rate on the 1-5 years maturity time deposit for the period up to 1975. After 1975, the savings deposit rate exceeded the rate of return on time deposits. As a consequence, time deposit have become reduced in importance. In Indonesia, the saving deposit rate, taken to be the rate paid on Tabanas has also been relatively high. Prior to 1977, it was equal to the return on 12-months time deposits, thereafter, it exceeded the rate. In Nepal, the savings deposit rate also exceeded the 3-months deposit rate although it was less than the rate on the 6-months maturity.

With the deregulation of interest rates in Malaysia and the Philippines in 1978 and 1981 respectively, the differential between the savings and three-months time deposit rate became greater resulting in the return on savings deposits to be at the lowest end of the term structure. In Singapore, on the other hand, with the deregulation of interest rates in 1975, the pattern moved in the opposite direction. That is, the differential between the savings and time deposit rates became less and, in 1981 and 1982 the savings deposit rate exceeded the 3-months time deposit rate. In Thailand, the savings deposit rate represents the lowest end of the term structure of deposit rates.

In a number of countries there also exist competing financial institutions that accept saving deposits. In Malaysia, Philippines, Singapore, Sri Lanka and Thailand, there exist a National Savings Bank that operates through a wide network of branches and Post Offices. In Malaysia, Philippines, Singapore, and Thailand, the finance companies also accept deposits. In Indonesia, Tabanas and Taska are also accepted by Local Development Banks. Table 1 shows the interest rate series on savings deposits by type of institutions. As can be observed, with the exception of Sri Lanka, the savings deposit rate of the National Savings Bank followed closely to the rates at the commercial bank. In Sri Lanka, the savings deposit rate at the National Savings Bank far exceeded the rate at the commercial banks

Table 1
Interest Rates on Savings Deposits by Institutions
in SEACEN countries
1969-1982

| | | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Burma | CB | 3.5 | | | | | | 6.0 | | 8.0 | | | | | |
| Indonesia | Tabanasa/ | | | 18.0 | 18.0b/ (12.0) | 15.0 (9.09 | 18.0bb/ (9.0) | | | 15.0 (6.0) | | | | | |
| | Taskaa/ | | | 15.0 | | | | | | 9.0 | | | | | |
| Malaysia | CB | 3.5 | | | | 5.5 | 6.5 | 5.5 | | 5.0 | | | 6.0 | 7.0 | 7.5 |
| | SB | 4.0 | | | | 4.5 | 6.5 | | | | | | | | |
| | FCc/ | | | 4.5 | | 5.0 | | | | | 7.0 | | | | 7.5 |
| Nepal | CB | 4.5 | | 5.0 | | | 6.5 | 8.0 | | | | | | | 8.5 |
| Philippines | CBd/ | 6.0 | | | | | | | 7.0 | | | | 9.0 | 9.79 | 9.88 |
| | SB | | 6.0 | | | | 6.5 | | 7.0 | 7.5 | | 9.0 | 9.5 | | |
| Singapore | CB | 3.5 | | | | 4.0 | 5.5 | 3.5 | 3.52 | 3.68 | 4.2 | 6.38 | 9.52 | 7.9 | 6.43 |
| | SBe/ | 4.0 | | | | | 6.0 | 5.5 | | 5.00 | 5.25 | 6.00 | 8.50 | 9.50 | 7.00 |
| | | 4.0 | | | | | 6.0 | 5.5 | | 5.00 | 3.50 | 4.25 | 6.00 | 7.00 | 5.50 |
| | FC | | | | | 5.8 | 7.1 | 5.6 | 5.5 | 5.40 | 5.50 | 7.00 | 9.50 | 9.52 | 7.21 |
| Sri Lanka | CB | 3.25 | 4.5 | | | | | 5.5 | | 7.20 | | 9.00 | 14.00 | | |
| | SB | 3.00 | 3.6 | 7.2 | | | | | | 8.40 | | | 12.00 | | |
| Thailand | CB | 3.50 | | | | | 4.5 | | | | | 5.50 | 8.00 | 9.00 | |
| | SB | 3.00 | | | 3.50 | | | | | 4.5 | | 5.50 | 8.00 | 9.00 | |
| | FC | | | | | | 9.34 | 9.4 | 7.44 | 8.24 | 8.98 | 10.48 | 12.27 | 14.10 | 13.90 |

Notation CB - commercial banks, SB - National Savings Bank, FC - finance companies.

a/ Tabanas refers to the Development Saving SchemE. Taska refers to the Insurance Saving Scheme.

b/ From May 1972 to April 1974, the rate refers to interest payable on the first Rp100,000 of deposits. The rate in brackets is payable on deposits exceeding Rp200,000.

c/ Prior to February 1, 1971, deposit rates at finance companies were not regulated. With effect from August 1, 1973, finance companies were free to quote interest rates payable on deposits.

d/ Data from October 1981 to June 1982, refers to the actual weighted average interest rates of 10 selected banks, thereafter data are based on 8 selected banks.

e/ A two-tier interest rate system was introduced in September 1978 for deposits amounting to S$100,000 and those exceeding S$100,000.

over the period 1971-1978. Finance companies provided the most attractive rate of return on savings deposits.

In order to encourage savings in financial form, particularly in savings deposits a number of countries have given fiscal incentives. This would affect the relative attractiveness of the deposits. In Burma, tax exemption is given on interest income on saving deposits and saving certificates. In Indonesia, Tabanas and Taska are exempt from income tax for interest earned and from stamp-duty. Also, no investigation for taxation purposes is made as to the origin of the funds deposited. Previously only interest earned on savings deposits at the National Savings Bank was exempt from tax in Malaysia. In January 1979, this was extended to saving deposits with commercial banks and finance companies. In January 1981, the limit on deposits on which interest earned could be exempt from tax was raised. In Sri Lanka, only interest earned on deposits at the National Savings Bank is tax exempt. Interest earned on deposits with the commercial banks are subject to taxation. In Thailand, all income earned from deposits apart from savings deposits, the withdrawal of which must be done through passbook is subject to tax. In Nepal and Singapore, all interest income earned is subject to tax.

The rate of interest on savings deposit is of particular interest since the demand for such form of savings is generally by the lower income group who have less access to higher yielding instruments. It is widely recognised that there is a need to offer an adequate real rate of return in order to encourage financial savings. As can be observed from Table 1, the interest rate on savings deposit was generally low for all countries during the early seventies. There has been however, a general tendency for the rates to increase over the period under review. Most countries adjusted the rates during the period 1973/74 in response to the acceleration inflation. During this period, all SEACEN countries experienced sharp increases in prices. Table 2 shows the rate of interest on savings deposit at the commercial banks adjusted by the actual rate of inflation. Despite the interest rate adjustment in 1973/74, all

Table 2
Real Rate of Interest on Savings Deposits at
Commercial Banks, 1970-1982

| | Burma[a]/ | Indonesia | Malaysia | Nepal | Philippines | Singapore | Sri Lanka | Thailand |
|---|---|---|---|---|---|---|---|---|
| 1970 | 3.47 | | | | | | | |
| 1971 | 1.17 | 15.23 | 0.68 | 4.71 | -6.02 | 0.98 | -1.42 | 2.17 |
| 1972 | -11.31 | 6.20 | 0.10 | -8.38 | 1.53 | 2.17 | 0.48 | -4.87 |
| 1973 | -20.63 | -9.73 | -10.74 | -11.09 | -16.79 | -22.68 | -8.73 | -13.89 |
| 1974 | -18.25 | -11.41 | -4.91 | -9.44 | -17.27 | -6.88 | -5.52 | -11.29 |
| 1975 | -26.24 | -1.42 | 4.35 | -0.92 | 5.06 | 4.33 | 4.35 | 0.10 |
| 1976 | 9.96 | 3.33 | 1.64 | 2.75 | 0.38 | 5.10 | 2.93 | 1.06 |
| 1977 | 14.53 | 2.86 | -0.28 | -3.75 | -2.46 | -2.56 | 5.51 | -4.04 |
| 1978 | 1.89 | 7.68 | 0.96 | 6.11 | -0.93 | 1.56 | -8.38 | -3.06 |
| 1979 | 6.19 | -9.45 | 0.19 | -6.14 | -13.88 | 0.95 | -4.97 | -8.18 |
| 1980 | 8.32 | -1.79 | -1.03 | -2.40 | -6.49 | 3.32 | -8.51 | -6.36 |
| 1981 | 4.20 | 7.12 | -1.56 | -2.65 | -1.06 | -2.26 | n.a. | -2.94 |
| 1982[b]/ | n.a. | 8.94 | 5.72 | 16.63 | -6.94 | 9.36 | n.a. | 3.71 |

Note: The following formula was used to compute the real rate of interest:

$$R_t = (rt - \frac{\Delta P}{P}) / (1 + \frac{\Delta P}{P}) \cdot 100$$

where $r_t$ = nominal rate of interest (end of period)

$\frac{\Delta P}{P}$ = the rate of change in Consumer Price Index (CPI)

a/ Figures are based on fiscal year covering April to March. 1970 refers to fiscal year 1970/71, etc.

b/ The CPI and nominal rates of interest of all countries for 1982 are as at the end of June 1982 except for Nepal, Indonesia where the CPI is at the end of May 1982 and the Philippines where CPI is at the end of January 1983.

countries experienced negative rate of return during this period. This also was true for most countries for the period 1979/80. During this period, with the exception of Burma, Nepal and Indonesia, the savings deposit rates were revised upwards in response to the sharp increase in inflation. Nevertheless, all countries with the exception of Burma experienced negative real rates of return. Burma experienced a low rate of inflation during this period. Also, the savings deposit rate had previously been adjusted upwards by two percentage points in 1977.

The structure of time deposit rates can be observed from Tables A 1.1 to A 1.8. The degree to which the rates are differentiated according to maturity varies across countries. In certain countries, there has been some attempt to widen the differential across maturities. This is primarily to induce savers into longer-term maturities. That is, to encourage savings into longer-term maturities, savers need to be appropirately compensated. In Indonesia and Nepal, the longer-term maturities were adjusted relatively more frequently, thus resulting in a more highly differentiated term structure. In the case of Indonesia, with effect of April 9, 1974, the Government paid a subsidy of 8 per cent and 15 per cent on time deposits with a maturity of 18 and 24 months, respectively. This subsidy, however, was gradually reduced. Effective January 13, 1977, the subsidy on the 24-months maturity deposit was reduced to 6 per cent and the 18-months deposit was discontinued. On January 1, 1978, the subsidy on the reduced further to 4 1/2 per cent per annum for amounts up to Rp2.5 million and 1 1/2 per cent per annum on amounts in excess of Rp2.5 million. This was adjusted to a monthly basis, that is, 1 1/4 per month for amounts up to Rp2.5 million and 1 per cent per month for amounts in excess of Rp2.5. Also in 1978, deposit rates of time deposits with maturities of less than 3-months and 3-months were freed. In Nepal, the spread between maturities also

increased as the one and the one-year to two-years time deposit rates were adjusted upwards relatively more frequently. In Thailand, while the term structure of interest rates on time deposits is relatively less steep, after 1979, it increased slightly as the rate on the 12 months to 3 year time deposit was revised upwards. In Sri Lanka, with the interest rate reform in 1977, there was an increase in the interest rate differential across maturities. This pattern continued for most of the period up to 1982.

In the Philippines, interest rate policy has also been designed to increase the proportion of longer-term maturity deposits. In 1974, when the interest rates on time deposits was revised upwards, there was also a simultaneous increase in the spread across maturities. Also, the 730 maturity was introduced. The rates were revised upwards again in 1976. As a consequence, the term structure of time deposits lengthened considerably. During the period 1975 to 1978, the growth rate of time deposits of a maturity of more than two years grew at a compound rate of growth of approximately 65 per cent as compared to a rate of 21 per cent for time deposits with a maturity of less than two years.2/

With the deregulation of interest rates in the Philippines in 1981, the yield curve flattened. For certain periods a U-shaped yield curve could be observed. This pattern could also be observed for Singapore and Malaysia following the deregulation of interest rates in 1975 and 1978 respectively. In Singapore, an inverted yield curve was observed in 1980 when short-term interest rates rose considerably in the face of uncertainties experienced in world financial . In Malaysia with the deregulation of interest rates, the yield curve flattened for most of the period.

---

2/ World Bank, The Philippines, Aspects of the Financial Sector, A World Bank Country Study, May 1980. p.63.

In most of the SEACEN countries, the adjustment in the time deposit rates by the monetary authorities were largely in response to a deterioration or an improvement in the rate of inflation. The interest rate on 12-months deposits adjusted by the rate of inflation is presented in Table 3. It can be observed, that as in the case of savings deposits, negative real rates of return was experienced in the inflationary period 1973/74 and during the period 1979/80 despite upward revisions in the rate during this period. However, the negative rates are less pronounced in the case of the rate on the 1-2 months deposits.

Lending Rates

This section analyses the pattern of the structure and trends of lending rates of the commercial banks. The lending rates of the commercial banks in the SEACEN countries largely reflect domestic money market conditions, institutional factors, external factors as well as policy measures undertaken by the monetary authorities to achieve both short and long run objectives. The commercial bank lending rates of the individual SEACEN countries are presented in table B 1.1 to B 8.1 in the Appendix. It can be observed that lending rates are classified differently among the individual countries. In Burma it is by economic agency, in Indonesia, Nepal, Malaysia, Singapore and Thailand by activity or by economic sectors, in Sri Lanka according to security and in the Philippines according to maturity. In Nepal and Indonesia, the lending rates are described in great detail according to type of activity.

The influence by the monetary authorities on the lending rates in the SEACEN countries has largely been either by setting a maximum ceiling on the rates of by adjustment of the Bank rate. In certain countries, the prime rate, that is the minimum lending rate is set. Certain similarities can be observed in the trend and pattern of adjustment of the lending rates. In the early seventies, lending rates in most countries were low the series showed a general upward trend during the period under review. However, in a number of countries,

Table 3

Real Rate of Interest on 12-months Time Deposits

at Commercial Banks, 1970-1982

| | Burma[a]/ | Indonesia | Malaysia | Nepal | Philippines | Singapore | Sri Lanka | Thailand |
|---|---|---|---|---|---|---|---|---|
| 1970 | 1.05 | | | | | | | |
| 1971 | -1.03 | 21.09 | 3.11 | 7.22 | -5.13 | 3.41 | -1.18 | 5.63 |
| 1972 | 13.24 | -6.20 | 2.08 | -6.20 | 2.49 | -0.05 | 0.72 | -1.65 |
| 1973 | -22.35 | -9.73 | -8.63 | -8.98 | -16.01 | -20.26 | -8.52 | -10.98 |
| 1974 | -20.02 | -11.41 | -2.68 | -6.89 | -14.53 | -3.80 | -5.29 | -8.32 |
| 1975 | -29.54 | -3.93 | 6.33 | 5.50 | 8.53 | 6.64 | 6.33 | 3.45 |
| 1976 | 5.03 | 0.70 | 3.56 | 9.09 | 3.20 | 6.91 | 4.88 | 4.45 |
| 1977 | 8.70 | 0.18 | 1.14 | -0.19 | 0.27 | -0.82 | 13.19 | -0.83 |
| 1978 | -3.30 | 2.06 | 2.40 | 10.04 | 1.85 | 3.32 | -1.71 | 0.19 |
| 1979 | 0.79 | -14.17 | 1.71 | -2.67 | -9.85 | 0.23 | 0.26 | -5.13 |
| 1980 | 2.81 | -6.92 | 1.77 | 1.21 | -2.12 | 4.29 | -3.69 | -2.92 |
| 1981 | -1.11 | 1.53 | 2.12 | 0.96 | 0.18 | -1.31 | n.a. | 0.62 |
| 1982[b]/ | n.a. | 3.26 | 7.66 | 21.00 | -3.47 | 10.00 | n.a. | 7.52 |

Note: The following formula was used to compute the real rate of interest:

$$R_t = \left(r_t - \frac{\Delta P}{P}\right) / \left(1 + \frac{\Delta P}{P}\right) .100$$

where $r_t$ = nominal rate of interest (end of period)

$\frac{\Delta P}{P}$ = the rate of change in Consumer Price Index (CPI)

a/ Figures are based on fiscal year covering April to March 1970 refers to fiscal year 1970/71, etc.

b/ The CPI and nominal rates of interest of all countries for 1982 are as at the end of June, 1982 except for Nepal, Indonesia, where CPI is at the end of May, 1982 and the Philippines where CPI is at the end of January, 1982.

there was a lowering of loan rates for certain brief periods reflecting both domestic and foreign economic and monetary developments.

Following the easing off in the international money markets and the decline in foreign interest rates as well as the slowdown in demand for credit lending rates were adjusted downwards in a number of SEACEN countries. In Indonesia, the downward adjustment of the lending rate of State Banks in May 31, 1972 was across the categories according to economic activity. In Malaysia, in order to stimulate demand for credit by the private sector and to bring interest rates in line with declining foreign interest rates the minimum lending rate was reduced. In Singapore, the minimum lending rate was also adjusted downwards in view of a highly liquid system during the period owing to considerable inflow of funds into the banking system. However this resulted in only a slight change in the average rate of interest on loans.

In Thailand, in the face of slow credit expansion, the Bank of Thailand reduced its loan rate to commercial banks from 9 to 8 percent in April 1972, in order to stimulate investment in the private sector and to keep it in line with those abroad. There was also a marginal downward adjustment in lending rates in the Philippines.

In Nepal, the adjustment which was made in April 1971, was adjusted selectively according to type of activity. The new lending rates ranged from 7 to 13 percent compared to 7.50 to 13 percent in the previous period. The rates for priority purposes were fixed at a lower level ranging from 7 to 10 percent, while for non-priority purposes at a higher level ranging from 12 to 13 percent. In Burma, and Sri Lanka there was no adjustment in the rates during this period.

Against a background of inflationary pressures and high interest rates abroad in 1973/74, all countries with the exception of Burma adjusted the loan rates upwards. In Burma, the loan rates were

revised upwards in 1975. The measure was primarily in response to the rapid rate of inflation and the consequent expansion of credit to the private sector as well as the increases in interest rates abroad. For many of the countries the rates were raised substantially. In Singapore, particularly affected by international monetary conditions, the prime lending rate was raised by 2 percentage points. However in a number of countries, the revision was made selectively. In Nepal, for example, the loan rates for essential commodities were not increased and for certain items it was lowered. On the other hand, loans rates for unproductive purposes was raised by between 2 to 3 percentage points. In Malaysia, in response to increased inflation and high liquidity of the banking system policy was also directed to affect selective lending. That is interest rates were adjusted to allow for expansion of productive capacity of priority sectors of the economy on the one hand and to moderate the expansionary impact of bank credit on the growth of money supply on the other.

In Indonesia, the increase in interest rates during the period 1973/74 was part of an overall stabilisation policy package. The significant increase in money supply in 1973/74 was an important factor contributing to the sharp rise in the rate of inflation. However, the increase was made selectively leaving unchanged the rates on loans to high priority sectors. Similarly, in the Philippines, while interest rates were revised as part of the monetary and credit measures directed at containing inflation the structure of the lending rates was set specifically to affect credit allocation. That is, to affect the allocation of credit on a selective basis. While there were marginal adjustment of interest rates in Sri Lanks it was negligible. The relatively stable rates were maintained because of rising production costs. However, to restrain commercial bank lending a ceiling was imposed in May 1974. Commercial banks were also only permitted to lend for the purpose of production and export financing. The Central Bank thus resorted to affecting the availability of credit rather than to increase the cost of credit as a measure to deter borrowing.

While interest rate as an instrument of policy is important for affecting aggregate lending, it is also an important allocative instrument. Low maximum lending rates are set to ensure that certain sectors have credit at preferential rates. In Table 4, we can observe that countries in which this policy is intensively applied, the spread between the lending rate and the weighted average deposit rate is negative or low. This is particularly true for Burma, Indonesia, Nepal and the Philippines. In Malaysia and Sri Lanka, the spread has declined during the latter half of the seventies as the emphasis on the allocation of credit took on importance.

The purpose or activity for which the lowest rates were charged varied across countries. In Burma, the lowest rates were for term loans granted for Work Capital of State Corporations. In Indonesia it was for working capital credit for production of rice and secondary crops. In Malaysia it was for agriculture and small scale enterprises. In Nepal, the lowest rates were for agricultural loans. Finally, in Thailand it was for the export sector and industrial enterprises. However, after 1975 the rates were no longer differentiated. The differential between the highest lending rate and the weighted average deposit rate is also shown in Table 4. For most countries, lending rates for personal loans generally tend to be the highest. As at the end of 1980, the spread between the highest lending rate and the weighted average deposit rate ranged from 16 per cent for Burma to 2.94 per cent for Malaysia. It can be observed that the differential tends to be highest in countries where the interest rates are relatively more rigid and lowest in countries where the rates are relatively more flexible. The spread tends to be low in countries in which the rates have been deregulated.

Table 4

Interest Rate Differential Between Deposit and Lending Rates at Commercial Banks

| Period | Burma | | Indonesia | | Malaysia | | Nepal | | Philippines | | Singapore | | Sri Lanka | | Thailand | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DMAX | DMIN | DMAX | DMIN | DMAX | DMIN | DMAX | DMIN | DMAX | DMIN | DMAX | DMIN | DMAX | DMIN | DMAX | DMIN |
| 1969 | 20.50 | -0.50 | 12.97 | -11.03 | 4.45 | 2.82 | 1.85 | -0.65 | 7.69 | -1.81 | 3.41 | 2.51 | 7.10 | 1.85 | 7.49 | 2.49 |
| 1970 | 20.50 | -0.50 | 15.94 | -8.06 | 4.38 | 2.75 | 5.38 | -0.38 | 7.66 | -1.84 | 3.46 | 2.56 | 7.37 | 1.87 | 7.43 | 2.43 |
| 1971 | 20.50 | -0.50 | 16.31 | -7.69 | 4.37 | 2.72 | 5.87 | 0.37 | 7.69 | -1.81 | 3.61 | 2.61 | 7.38 | 1.88 | 7.39 | 2.39 |
| 1972 | 20.50 | -0.50 | 8.84 | -3.16 | 4.71 | 2.57 | 5.85 | 0.35 | 7.71 | -1.79 | 3.74 | 2.44 | 7.39 | 1.89 | 7.38 | 1.88 |
| 1973 | 20.50 | -0.50 | 5.84 | -3.16 | 3.70 | 2.25 | 5.92 | -0.58 | 7.78 | -1.72 | 3.58 | 2.68 | 7.40 | 1.90 | 7.39 | 1.89 |
| 1974 | 20.50 | -0.50 | 1.24 | -13.76 | 3.95 | 2.21 | 6.14 | -2.36 | 7.15 | -2.35 | 3.81 | 2.36 | 8.90 | 1.90 | 7.39 | 4.89 |
| 1975 | 18.00 | -3.00 | 5.02 | -9.98 | 4.20 | 1.92 | 3.66 | -8.34 | 7.14 | -2.36 | 4.01 | 2.09 | 7.72 | 0.22 | 7.38 | 4.88 |
| 1976 | 18.00 | -3.00 | 3.83 | -11.17 | 4.34 | 1.86 | 4.33 | -7.67 | 5.87 | -3.63 | 4.28 | 2.46 | 7.77 | 0.27 | 7.38 | 4.88 |
| 1977 | 16.00 | -3.00 | 8.56 | -6.44 | 4.53 | 1.63 | 3.99 | -6.01 | 5.59 | -3.91 | 3.83 | 2.25 | 8.94 | -1.06 | 7.35 | 4.85 |
| 1978 | 16.00 | -3.00 | 7.52 | -4.48 | 4.47 | 1.67 | 4.12 | -5.88 | 5.59 | -3.91 | 3.64 | 2.29 | 8.21 | -1.79 | 7.39 | 4.89 |
| 1979 | 16.00 | -3.00 | 7.52 | -4.34 | 4.03 | 1.38 | 4.18 | -5.82 | 4.92 | -4.58 | 3.30 | 2.28 | 8.02 | -2.98 | 6.43 | 6.43 |
| 1980 | 16.00 | -3.00 | 7.85 | -4.15 | 2.94 | 0.52 | 4.17 | -5.83 | 3.84 | -5.66 | 3.35 | 2.75 | 11.59 | -7.41 | 6.61 | 6.61 |
| 1981 | | | 6.35 | -5.65 | | -0.88 | | | 1.67 | -7.83 | | 3.84 | 11.72 | -9.28 | 6.74 | |

Notation: DMAX - refers to the differential between the maximum lending rate charged by the commercial banks and the weighted average deposit rates.

DMIN - refers to the differential between the minimum lending rate charged by the commercial banks and weighted average deposit rates.

## DOMESTIC AND FOREIGN INTEREST RATES

Interest rate adjustments in a number of SEACEN countries have been influenced in varying degrees by foreign interest rate movements, depending on the interest systems operating in the respective financial systems of the individual SEACEN countries. Such interest rate adjustments either reflect the reaction of the monetary authorities to the changes in the foreign interest rates or the response of the market resulting from international capital flows. Certain factors exist that allow for interest rate differentials between foreign and domestic rates to continue. At one extreme, controls on foreign capital movements permit countries autonomy over their domestic interest rate policies. Even in unregulated systems, other factors may contribute to reducing the degree of capital mobility which would also generate differentials between foreign and domestic rates.

Under a floating exchange rate system, an important factor generating interest rate differentials is expectations of future changes in the exchange rate and the risk premium related to the fluctuation in the exchange rate. For these reasons, it is expected that very short-term interest rates may be less likely to be affected by foreign rates. Such factors may however account for the differentials experienced for the relatively longer-term rates. It should be noted also that the demand for foreign instruments may not only be influenced by rate of return or exchange rate considerations alone but also due to other factors. Such factors includes, for example, the development of the domestic money market and the availability of domestic instruments. In the second part of this study, an investigation will be made as to the responsiveness of economic units to generating capital flows in response to interest rate differentials.

The increased access to international money markets by economic units in the domestic economy would restrict the scope for monetary policy. For example, commercial banks could respond to

monetary policy by adjusting their foreign portfolio either by the purchase or sale of foreign assets or by borrowing from external money markets and therby leave their domestic liquidity position unchanged. In such circumstances domestic rates cannot be determined without regard to interest rates prevailing abroad. Any significant interest rate differentials would result in an outflow of funds. Under these circumstances, the ability of the Monetary Authorities to carry out independent policies is reduced.

In comparing domestic and foreign interest rates, adjustment needs to be made of the rate of change in the exchange rate. That is, foreign rates need to be adjusted by the expected change in the exchange rate. Since expectations of future exchange rates are not observable, it is necessary to formulate some indirect representation of the variable. There is however, no general agreement on the form of expectations to use. Furthermore, the evidence seems to indicate that it is difficult to accurately forecast exchange rates. However, despite this, it is likely that any portfolio investor would attempt to use all the available information to forecast future exchange rates in order to avoid losses. For purposes of our empirical analysis, we have made the assumption of perfect foresight and used the actual change in the exchange rate.

From Table 5, it can observed that the differential between domestic and foreign rates largely vary on account of changes in the exchange rates as well as movements in the foreign rates. In comparing the three-months adjusted Eurodollar rates and the domestic deposit rates it can be seen that domestic rates generally tend to be lower. This differential is particularly marked towards the end of the period with the strengthening of the dollar and the high interest rates abroad during the period. The interest rate differential between the domestic deposit rate and the rate adjusted for actual changes in the exchange rate is thus affected by the levels of domestic interest rates but also the relative strength of the domestic currency against the foreign currency. In countries where there were controls on capital flows and where interest rates were less flexible,

Table 5

Euro-dollar Three-Month Deposit Rate Adjusted for Exchange Rate Changes and Domestic Three-Month Time Deposit Rate, 1971-1981

| Country | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Burma | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| | (n.a.) | (n.a.) | (n.a.) | (46.8) | (8.2) | (12.9) | (-0.8) | (10.0) | (14.5) | (27.3) | (17.0) |
| Indonesia | 18.0 | 12.0 | 9.0 | 9.0 | 9.0 | 6.0 | n.a. | n.a. | n.a. | n.a. | n.a. |
| | (6.4) | (5.9) | (10.1) | (10.2) | (5.8) | (5.0) | (57.0) | (12.7) | (14.4) | (19.9) | (19.7) |
| Malaysia | 5.5 | 5.0 | 6.0 | 6.5 | 5.5 | 5.0 | 5.0 | 5.5 | 5.5 | 8.5 | 10.0 |
| | (4.0) | (-7.0) | (4.2) | (22.2) | (3.8) | (-1.8) | (0.6) | (10.8) | (15.8) | (18.0) | (16.3) |
| Nepal[a/] | - | - | - | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| | (6.7) | (9.2) | (9.0) | (31.9) | (6.9) | (5.6) | (2.3) | (8.5) | (11.3) | (27.1) | (23.8) |
| Philippines | - | - | - | 8.0 | 8.0 | 8.5 | 8.5 | 8.5 | 10.5 | 10.5 | 13.3 |
| | (11.8) | (5.1) | (59.9) | (16.3) | (4.9) | (4.2) | (7.3) | (12.2) | (16.9) | (25.0) | (20.3) |
| Singapore | 5.5 | 5.0 | 6.5 | 7.5 | 4.3 | 3.8 | 4.5 | 5.3 | 7.2 | 11.2 | 7.4 |
| | (-1.6) | (-7.7) | (8.7) | (15.0) | (4.7) | (2.1) | (-1.4) | (11.3) | (10.9) | (14.9) | (17.5) |
| Sri Lanka | 4.8 | 4.8 | 4.8 | 4.8 | 6.8 | 6.8 | 8.5 | 8.5 | 8.8 | 16.0 | 20.0 |
| | (13.9) | (11.3) | (9.3) | (25.5) | (20.8) | (80.5) | (6.8) | (11.3) | (30.7) | (31.3) | (24.9) |
| Thailand | 5.0 | 5.0 | 5.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 9.0 | 10.0 |
| | (6.4) | (5.9) | (8.9) | (10.2) | (5.9) | (5.0) | (6.9) | (12.1) | (15.4) | (28.6) | (13.8) |

a/ The rates refer to those as at end of the financial year (mid-July).

Note: The figures in brackets refer to foreign rates adjusted for changes in the exchange rate. (No attempt is made in this table to approximate exchange rate expectations. Actual changes in the exchange rate are used for comparison of domestic and foreign rates). The figures not in brackets refer to domestic rates.

the differential was very pronounced. However, in certain countries, the changes in exchange rates accounted for the marked differential. A similar pattern can also be found when a comparison is made with the US three-months deposit rate and the UK three-months deposit rate adjusted for exchange rate changes.

In the case of lending rates, the pattern is less distinct. However, this may largely be influenced by the domestic rate chosen in the comparison. In view of the importance of selective credit policies in certain of the SEACEN countries, the minimum interest rates tend to be particularly low and therefore the differential in favour of the domestic rates is more pronounced. In Table 6, a comparison is made between the US Commercial Bank Prime Lending Rate adjusted for the exchange rate changes and the domestic prime or minimum lending rate. In certain SEACEN countries where the rate on certain priority sectors are kept particularly low, the differential tends to be wide. For certain countries, however, the domestic rate was higher. In comparing other instruments including the US and UK three-months Treasury Bill rate, adjusted for exchange rate changes, with the domestic three-months Treasury Bill rate, the figures indicate a widespread prevalence of interest rate differentials in favour of the foreign rate. For certain countries, these differentials were particularly wide.

Table 6

U.S. Commercial Bank Prime Lending Rate Adjusted for Exchange Rate Changes and Domestic Prime/Minimum Lending Rate[a], 1971-1981

| Country | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Burma [b] | 9.0 | 9.0 | 9.0 | 9.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | n.a. |
| | (n.a.) | (n.a.) | (n.a.) | (46.9) | (9.7) | (13.9) | (-0.2) | (10.9) | (15.3) | (31.7) | (19.0) |
| Indonesia | 27.0 | 27.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 13.5 | 13.5 | 13.5 | 13.5 |
| | (5.3) | (5.8) | (9.8) | (10.3) | (7.3) | (6.0) | (57.5) | (12.7) | (15.2) | (24.3) | (21.7) |
| Malaysia | 8.0 | 7.5 | 9.0 | 10.0 | 8.5 | 8.5 | 7.5 | 7.5 | 7.5 | 8.5 | 8.5 |
| | (2.9) | (-7.1) | (3.8) | (22.3) | (5.2) | (-0.8) | (1.1) | (10.9) | (16.6) | (22.4) | (18.3) |
| Nepal [c] | 7.5 | 7.5 | 7.5 | 9.0 | 15.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| | (6.0) | (9.2) | (8.8) | (30.5) | (7.5) | (7.0) | (2.5) | (9.0) | (11.8) | (31.5) | (25.8) |
| Philippines [d] | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | 12.7 | 12.7 | 13.5 | 15.2 |
| | (10.7) | (5.0) | (59.5) | (16.4) | (6.3) | (5.2) | (7.8) | (12.3) | (17.7) | (29.4) | (22.3) |
| Singapore | 8.0 | 7.5 | 9.0 | 10.3 | 7.1 | 6.8 | 7.0 | 7.7 | 9.5 | 13.6 | 11.8 |
| | (-2.8) | (-7.9) | (8.3) | (15.0) | (6.2) | (3.1) | (-0.8) | (11.4) | (11.7) | (19.3) | (19.5) |
| Sri Lanka [e] | 6.5 | 6.5 | 6.5 | 7.0 | 7.5 | 7.5 | 12.5 | 12.5 | 12.5 | 15.0 | 15.0 |
| | (12.7) | (11.2) | (8.9) | (25.5) | (22.2) | (81.5) | (7.4) | (11.4) | (31.5) | (35.7) | (26.9) |
| Thailand | n.a. | n.a. | n.a. | n.a. | 11.5 | 10.5 | 10.8 | 12.0 | 14.5 | 16.5 | 17.0 |
| | (5.3) | (5.8) | (8.5) | (10.3) | (7.3) | (6.0) | (7.4) | (12.2) | (16.2) | (33.0) | (15.8) |

[a] Since data on the prime lending rate is not available, the minimum lending rates for manufacturing/industry were used for Indonesia (textile & public transport) and Nepal (priority industries).
[b] The minimum lending rate refers to rate charged on loans to farmers.
[c] The rates refer to those as at end of the financial year (mid-July).
[d] The minimum lending rates refer to the average lending rates.
[e] The minimum lending rate refers to rate charged on loans against Government Securities.

Notes: The figures in brackets refer to foreign rates adjusted for changes in the exchange rate. (No attempt is made in this table to approximate exchange rate expectation. Actual changes in the exchange rate are used for comparison of domestic and foreign rates). The figures not in brackets refer to domestic rates.

# PART II

# EFFECT OF INTEREST RATES ON FINANCIAL VARIABLES

FRAMEWORK OF ANALYSIS

The approach adopted by this study to examine the relative significance of interest rates in the financial system is to analyse sectoral financial behaviour within a flow of funds data base1/. Flow of funds modelling is essentially concerned with the study of behavioural relationship of entries in the accounts. Financial transactions undertaken are categorised according to sectors and the various types of financial instruments used in the transactions. The sectors and markets to be analysed are determined by the objective of the study and based on the data available. This study considers two main sectors, the non-bank private sector and the commercial banking sector. The non-bank private sector and commercial banking sector are the fundamental sectors in most of the SEACEN countries. The main objective is to examine the relative significance of interest rate versus non-interest rate factors in explaining the elements in the balance sheet of the respective sectors. This basically involves estimating sectoral asset demand and supply functions.

The primary objective of this part of the study is to empirically investigate the sectoral financial behaviour. Modelling portfolio adjustment by different economic units is a subject that has been extensively written on. An approach that has been extensively applied to the study of portfolio behaviour is the partial stock

---

1/ See for example, Hendershott, P.H., Understanding Capital Markets Vol. 1: A Flow-of-Funds Financial Model (Toronto, Lexington Books, (1977) for comprehensive study based on a Flow-of-Funds Model

adjustment model2/. In theory, it assummed that funds should flow into areas that have the highest rate of return. Funds should move with relatively small inducement as a result of changes in interest rate. It is hoped that the analysis of demand for financial instruments by the non-bank private sector would shed some light on the role of interest rates in the mobilisation of financial saving. This study also intends to examine the extent to which alternative forms of financial saving are substitutes. More specifically, the analysis aims to examine, in the context of the demand functions, the own iterest rate elasticities as well as the cross elasticities. The study also intends to examine the extent to which relative costs of borrowing effects demand for commercial loans by the non-bank private sector. For the case of the commercial banking sector, an attempt is made to analyse the role of interest rates in explaining the portfolio allocation of funds into alternative forms of financial instruments. The interest rate responsiveness of commercial bank demand and supply of financial instruments has important implications for monetary policy. Of particular interest is whether domestic and foreign interest rates are important in explaining the demand for domestic versus foreign instruments. An investigation of the role of interest rates in explaining the demand for domestic assets, especially government instruments, would provide empirical evidence as to whether interest rate incentives would unable increased mobilisation of funds for the public sector through the commercial banks. This includes the demand for assets and liabilities. This

---

2/ Early studies based on this approach include Goldfeld, S.M., Commercial Bank Behaviour and Economic Activity: A Structural Study of Monetary Policy in Post War United States, Amsterdam, North-Holland Publishing Co., 1966 and Silber, W.L.,Portfolio Behaviour of Financial Institutions, An Empirical Study with Implications for Monetary Policy, Interest Rate Determination, and Financial Model Building, New York, Holt, Rinehart and Winston, Inc, 1970.

study intends to examine the role of interest rates in explaining the behaviour of commercial banks in generating capital flows abroad.

The non-bank private sector which includes the household and business sector tends to be a diverse group. As noted earlier, this study only considers the effect of interest rates on the demand of the non-bank private sector for financial instruments. Non-financial saving and investments items will not be included in the analysis. It is noted that for most of the SEACEN countries the spectrum of asset choice is relatively narrow due to the absence of a well developed capital market. Holdings of foreign instruments by the non-bank private sector are also not included in the analysis. This is largely due to data availability. However, it should be noted that access to foreign instruments is generally open only to large savers. Further, such transactions involve high information and transaction costs.

The identity of the non-bank private sector can be defined as follows:

$$NWP = CP + GSB + TODP - LP$$

NWP - net claims of the private sector against the monetary authorities and the commercial banking sector

CP - monetary base held by the non-bank private sector

GSB - Government securities held by the non-bank private sector

TODP - commercial bank deposits held by the non-bank private sector

LP - commercial bank loans held by the non-bank private sector

The identity can be said to define net claims of the non-bank private sector against the monetary authorities and banking sectors. It does not represent the balance sheet of the sector since it does not include the entire spectrum of financial assets held by the sector.

In this study, the following financial assets held by the non-bank private sector are estimated. That is, demand for currency, demand deposits, time deposits, savings deposits at commercial banks as well as time deposits at finance companies. Only one category of liabilities is considered, that is, the demand by the non-bank private sector for commercial bank loans. Short-term securities, bonds, equities are excluded from the analysis.

While the commercial banking sector is a more homogenous group as a unit, the composition of their portfolio is relatively more diverse than other sectors. The identity of the commercial banking private sector can be defined as follows:

$$CRB + LRB + GSB + TL + FAB = TODB + BCB + FLB + CAB$$

where

CRB - cash reserves of the commercial banks including balances at the Central Banks
LRB - liquid reserves at the commercial banks
GSB - Government Security holdings by the commercial banks
TL - total loans at the commercial banks
PAB - foreign assets held by the commercial banks
TODB - total deposits at the commercial banks
BCB - borrowing from Central Bank by the commercial banks
FLB - Foreign Liabilities held by the Central Bank
CAB - capital and reserves of the commercial banks

It should be noted that certain items in the commercial banks balance sheet are items that are determined independently of portfolio considerations. Such items may for example be held due to legal requirements.

The banks are likely however to pay attention to movements in such exogenously determined balances since such balances will affect the funds available to the banks for allocation into other assets and liabilities. While certain items can be clearly classified

as exogenously determined independent of portfolio considerations, others are less obvious. Exogenous items can be classified into two types, those determined by the monetary authorities and those determined by demand from the non-bank private sector to which the banks accommodate. The former includes legal reserve and liquidity requirements while the latter includes deposit. The volume of total deposits are assumed to be determined by preferences of depositors.

Five categories of assets are considered for the commercial banking sector. They include excess cash reserves which includes cash balances and balances at the Central Banks net of reserve requirements (ECR). Excess liquid reserves (ELR) comprising of short-term money market instrument and Treasury Bills, Government Securities (GSB), and Foreign Assets (FAB). For certain countries, for which data is available, the individual components of liquid reserves are also estimated. Two categories of liabilities are considered. They include borrowing from the Central Bank (BCB) and borrowing from international money market (FLB).

The study applied the standard type portfolio demand equation:

$$X_t = d_0 + d_1 + d_1 R_t + d_2 X_{t-1} + d_4 W_t + E_t$$

where $X_t$ is the demand for the financial instrument
$R_t$ is an n vector of interest rates
$G_t$ is an m vector of exogenous and dummy variables
$W_t$ is the total portfolio size at time t or the scale variables

In the above equation, the variables enter linearly. The equations were estimated using ordinary least squares. The estimation of most of the equations is based on quarterly data for the period 1971.1 to 1981.4. It is acknowledged that while there are limitations to the

use of the single equations method, it is nevertheless felt that the method is useful in that it does shed some light on the issues which is of concern in this study.

## NON-BANK PRIVATE SECTOR

### Introduction

There has been substantial work done on demand for financial instruments by the non-bank private sector for the SEACEN countries. A large part of this work is concentrated on the aggregate demand for money.1/ There are studies however that disaggregated the demand for money into its respective components, that is, into the demand for currency, demand deposits, time and savings deposits.2/ For the main part, these specifications have generally treated the demand for money and its respective demand components as a transactions demand rather than a portfolio demand. The main explanatory variables being income and the expected rate of inflation - the latter variable reflecting the opportunity cost of holding the financial balances. In most specifications, no role was given to interest rates. At most, the equation includes a single interest rate variable.

It is the intention of this study to specifically examine the role of interest rates in the demand for financial instruments by the non-bank private sector. In particular, the study aims to provide empirical evidence on the relative importace of the own-rate of return as well as competing rates of return in explaining alternative forms of savings channelled through the financial interemediaries. This

---

1/ See for example Aghevli, B.B., Khan, M.S., Narvekar P.R. and Short, B.K., "Monetary Policy in Selected Asian Counries, IMF Staff Papers and Chung, T.F., The Money Supply Process and the Stability of Money Demand, SEACEN Centre Research Report, SEACEN Research and Training Centre, December 1981.

2/ See for example, The Relationship of Money and Credit to Economic Activity, The South-East Asian Central Banks (SEACEN) Research and Training Centre, December 1980.

disaggregated analysis of the components of money demand is made on the argument that the non-bank private sector regards these as distinct instruments.3/ The relative importance of the components of money demand (M2) for the individual SEACEN countries is shown in Table 1. The role of interest rates in explaining commercial loan demand by the non-bank private sector is also examined.

Demand for Currency (CP)

The demand for currency by the non-bank private sector represents the most liquid form of financial saving. The demand for currency is generally viewed as arising for the purposes of making transactions. Therefore, the greater the volume of transactions, the larger the demand for cash balances. The existence of alternative interest earning of financial instruments suggests that there is an opportunity cost in holding cash balances. The higher the rate of return on the alternative forms of financial saving, the lower the cash balances held. In most SEACEN countries the proportion of currency balances in relation to other forms of financial instrument is high. That is, currency is an important repository of wealth. As can be observed in Table 7, the average currency-money (M2) ratio for the SEACEN countries was 37.2 in 1970 ranging from 18 per cent for Singapore and 69.6 per cent for Burma. The average ratio declined to 28.4 per cent in 1980.

It is widely recognised that savings need to be in financial form so that funds from surplus sectors can be efficiently channelled

---

3/ See Goldfeld, M.S., Commercial Bank Behavior and Economic Activity. A Structural Study of Monetary Policy in Post-war United States, North-Holland Publishing Company, Amsterdam (1966), p.78-82 and Modigliani, Rashe and Cooper, "Central Bank Policy, the Money Supply and Short-Term Rate of Interest", Journal of Money, Credit and Banking, May 1970, p. 166-180.

Table 7

Ratio of Currency, Demand Deposits, Quasi-Money to Broad Money Supply, M2

| Country | C/M2 | | DD/M2 | | QM/M2 | |
|---|---|---|---|---|---|---|
| | 1970 | 1980 | 1970 | 1980 | 1970 | 1980 |
| Burma | 69.6 | 73.4 | 12.2 | 6.3 | 18.2 | 20.3 |
| Indonesia | 47.0 | 28.0 | 29.1 | 37.0 | 24.2 | 35.0 |
| Malaysia | 24.3 | 17.2 | 25.0 | 18.1 | 50.7 | 64.7 |
| Nepal | 57.4 | 32.8 | 18.5 | 19.0 | 24.1 | 48.2 |
| Philippines | 25.7 | 18.4 | 24.4 | 22.3 | 50.0 | 59.3 |
| Singapore | 18.0 | 19.5 | 23.6 | 18.7 | 58.3 | 61.8 |
| Sri Lanka | 30.0 | 21.1 | 33.1 | 26.4 | 36.9 | 52.5 |
| Thailand | 25.7 | 16.8 | 16.4 | 8.8 | 57.9 | 74.4 |
| Average | 37.2 | 28.4 | 22.8 | 19.6 | 40.0 | 52.0 |

Notation:
- C - Currency held by non-bank private sector.
- DD - Demand deposits at commercial banks held by the non-bank private sector.
- QM - Quasi-money (includes time and saving deposits at commercial banks held by the non-bank private sector. For Indonesia, it also includes time and savings deposits as well as foreign currency deposits held by domestic private sector. For Malaysia, it also includes Bank Negara Malaysia Certificates and Negotiable Certificates of Deposits. For Singapore, 1980 figures include Singapore dollar Certificates of Deposits. For Thailand, Quasi-money includes time and saving deposits of government savings bank.
- M1 - Money supply defined to include currency plus demand deposits held by the non-bank private sector.
- M2 - M1 plus Quasi-money.

to deficit sectors to finance investment. Thus, financial assets other than currency needs to be mobilised if savings are to be used for financing investment. This is particularly important for the household sector since in most developing countries the household sector is primarily the surplus sector while the corporate and government sectors are the deficit sectors.4/ It is the intention here to provide empirical evidence on the relative importance of interest rates in explaining currency demand. It is also hypothesised that currency balances are likely to decline as the non-bank private sector is given increased access to the banking facilities. The effect of increased banking facilities is measured by the number of banking offices (NBO). The inflation rate ($\dot{P}$) is included in the equation to reflect the opportunity cost of not consuming. Dummy variables were also included to take into account seasonal factors. The inclusion of the lagged dependent variable is to reflect the assumption that the non-bank private sector is not able to adjust actual currency balances to desired levels immediately.

The following equation was estimated in nominal terms:

$$CP = a_{10} + a_{11}Y + a_{12}i_d + a_{13}\dot{P} + a_{14}NBO + a_{15}CP_{-1} + a_{16}DUMS1 + a_{17}DUMS2 + a_{18}DUMS2$$

Based on the above specification, currency demand is to be positively related to income (Y) and negatively related to the rate of interest on deposit ($i_d$), the rate of inflation ($\dot{P}$) and number of banking offices (NBO).

The result of the estimation for the demand for currency in nominal terms by the non-bank private sector for the eight individual SEACEN countries are reported in Table 8. The demand for currency

---

4/ See Khatkhate, D.R., Analytical Basis of the Working of Monetary Policy in Less Developed Countries, IMF Staff Papers, Vol.XIX, No.3, p.533-538.

Table 8

Non-Bank Private Sector Demand for Currency

BURMA - ESTIMATION PERIOD: 1972 (IV) TO 1980 (I)

$$CP = 200.85 + 0.722CP_{-1} + 0.205Y - 28.92i_s + 420.03DUMS1$$
$$(1.55)\ (4.18)\quad (1.93)\quad (-0.65)\quad (5.07)$$
$$- 12.36DUMS2 + 36.56DUMS3$$
$$(-0.13)\quad (0.42)$$
$$R^2 = 0.985 \qquad DW = 1.87$$

INDONESIA - ESTIMATION PERIOD: 1971 (IV) TO 1979 (IV)

$$CP = -127.25 + 0.96CP_{-1} + 0.09Y - 1.20\ \dot{P}_{-1}$$
$$(-1.75)(20.14)\quad (1.775))(-1.56)$$
$$+ 24.33DUMS1 + 27.75DUMS2 + 16.15DUMS3$$
$$(1.05)\quad (1.74)\quad (0.733)$$
$$R^2 = 0.996 \qquad DW = 2.01$$

MALAYSIA - ESTIMATION PERIOD: 1972 (I) TO 1980 (IV)

$$CP = 87.97 + 0.91CP_{-1} + 0.04Y - 17.03i_{wts} + 8.62\dot{P}$$
$$(2.17)(28.14)\quad (3.98)\quad (-2.08)\quad (1.68)$$
$$- 18.26DUMS1 - 52.36DUMS2 + 30.65DUMS3$$
$$(-0.77)\quad (-2.22)\quad (1.4)$$
$$R^2 = 0.999 \qquad DW = 2.24$$

NEPAL - ESTIMATION PERIOD: 1970 (III) TO 1981 (II)

$$CP = -14.98 + 0.90CP_{-1} + 0.05Y - 8.19i_s + 1.9\dot{P}$$
$$(-0.36)(11.75)\quad (2.05)\ (-0.99)\quad (0.69)$$
$$+ 101.42DUMS1 - 30.49DUMS2 - 122.54DUMS3$$
$$(4.52)\quad (-1.39)\quad (-5.06)$$
$$R^2 = 0.999 \qquad DW = 2.24$$

PHILIPPINES - ESTIMATION PERIOD: 1970 (III) TO 1981 (III)

$$CP = 2033.21 + 0.41CP_{-1} + 0.09Y - 179.99i_{td}$$
$$(6.21)\ (4.37)\qquad (6.69)\quad (-3.17)$$
$$- 538.48DUMS1 - 476.68DUMS2 - 502.90DUMS3$$
$$(-3.80)\qquad (-3.75)\qquad (-4.14)$$
$$R^2 = 0.99\qquad DW = 1.77$$

SINGAPORE - ESTIMATION PERIOD: 1971 (IV) TO 1981 (IV)

$$CP = 115.21 + 0.94CP_{-1} + 0.07Y - 27.53i_{wts}$$
$$(6.40)(35.77)\qquad (4.06)\quad (-6.11)$$
$$- 104.07DUMS1 - 119.48DUMS2 - 67.52DUMS3$$
$$(-7.81)\qquad (-8.74)\qquad (-5.06)$$
$$- 86.001DUMC$$
$$(-2.70)$$
$$R^2 = 0.999\qquad DW = 1.59$$

SRI LANKA - ESTIMATION PERIOD: 1971 (II) TO 1979 (IV)

$$CP = -32.15 + 0.85CP_{-1} + 0.06Y - 0.06NBO$$
$$(-0.62)\ (9.94)\qquad (2.21)\ (-0.29)$$
$$+ 106.07DUMS1 + 33.27DUMS2 - 40.68DUMS3$$
$$(2.17)\qquad (0.52)\qquad (-0.83)$$
$$R^2 = 0.988\qquad DW = 1.89$$

THAILAND - ESTIMATION PERIOD: 1970 (II) TO 1981 (IV)

$$CP = 4796.56 + 0.63CP_{-1} + 0.10Y - 555.28i_{s}$$
$$(6.44)\ (5.93)\qquad (4.04)\quad (-2.62)$$
$$- 497.65DUMS1 - 2898.41DUMS2 - 2137.97DUMS3$$
$$(-1.11)\qquad (-5.24)\qquad (-5.42)$$
$$R^2 = 0.993\qquad DW = 1.52$$

Note: For the Philippines, $i_{td}$ is the 6-month time deposit rate at commercial banks. For Malaysia and Singapore, $i_{wts}$ is the weighted average interest rate on 3-month time deposit and savings deposit at commercial banks.

equation for most of the SEACEN countries performed reasonably well. The results show that currency demand is essentially a transactions demand. The income variable had the expected sign and was significant in all countries.

The performance of the interest rate variable varied amongst the SEACEN countries. In countries where the deposit rates tended to be more flexible, interest rates were found to be significant in explaining the equation. That is, in Malaysia, the Philippines, Singapore and Thailand where the deposit rates were adjusted relatively to change in interest rates. On the other hand, in countries where interest rates have remained relatively rigid, the variable was not an important explanatory variable. Thus, in Burma, Indonesia, Nepal and Sri Lanka, currency demand is basically a transactions demand. While interest rates had the expected sign, the variable was insignificant. The relevant interest rate in most of the estimations was the savings deposit rate. It can be assumed that in the case of the household sector the relevant substitute may be savings deposits while in the case of large firms and corporations, the relevant substitute is demand and time deposits. Thus, in certain countries a weighted interest rate on savings and time deposits was used.

With the exception of Indonesia, the rate of inflation was found to be insignificant in explaining currency holdings. In Malaysia, the relationship was found to be positive implying that larger balances were held as the rate of inflation increased. Seasonal factors were found to be important explanatory variables in Nepal, Singapore and Thailand in affecting the demand for currency. Seasonal factors for the other countries are not reported as the variables were found to be insignificant explanatory variables. The coefficient of the lagged dependant variable showed slow adjustment in most countries.

Demand Deposits

Demand deposits are non-interest bearing deposit accounts. Regulations with respect to demand deposits vary according to countries. In Nepal, the Philippines and Thailand, no charges are imposed. In Burma, Malaysia, Singapore and Sri Lanka, service charges are imposed generally if the balances fall below a certain minimum. With the exception of Indonesia and Nepal, the proportion of demand deposits to total deposits is declining. At the end of 1980, the average ratio of demand deposits to money supply (M2) ranged from 6.3 per cent for Burma to 37.0 per cent for Indonesia.

The equation for the demand for demand deposits at the commercial banks by the non-bank private sector is specified to be a function of nominal income (Y) as measured by GDP, interest rates on competing instruments, ij, the rate of inflation ($\dot{P}$), the number of banking offices and the lagged dependant variable. The interest rates included in the equation are of those financial instruments that are the closest substitute to demand deposits. As the non-bank private sector includes corporations as well as individuals, the relevant instruments for both have to be considered. For large corporations and high income groups, time deposits and other short-term money market instruments are relevant, while in the case of households the savings deposit rate is relevant. The equation is specified as:

$$DP = a_{20} + a_{21} Y + a_{22} i_j + a_{23} \dot{P} + a_{24} NBO + a_{25} DP_{-1} + A_{26} DUMS1 + a_{27} DUMS2 + a_{28} DUMS3$$

where ij is the vector of relevant rates of return on substitute instruments.

The estimation results for the individual countries are presented in Table 9. As in the demand for currency, the demand for demand deposits is largely explained by the income variable. The

Table 9

Non-Bank Private Sector Demand for Demand Deposits

BURMA - ESTIMATION PERIOD: 1970 (III) TO 1980 (III)

$$DD = 21.95 + 0.86DD_{-1} + 0.01Y + 16.51DUMS1 + 26.25DUMS2$$
$$(0.95)\ (8.37)\quad (1.56)\quad (0.75)\quad (1.20)$$
$$- 9.92DUMS3$$
$$(-0.46)$$
$$R^2 = 0.969 \qquad DW = 1.83$$

INDONESIA - ESTIMATION PERIOD: 1971 (III) TO 1979 (IV)

$$DD = -292.53 + 0.93DD_{-1} + 0.17Y - 0.93i_s$$
$$(-1.16)(11.01)\quad (1.74)\ (-0.12)$$
$$+ 3.46\ \overset{B}{P}_{-1} + 0.006NBO$$
$$(1.19)\quad (0.45)$$
$$R^2 = 0.983 \qquad DW = 2.08$$

MALAYSIA - ESTIMATION PERIOD: 1970 (II) TO 1981 (IV)

$$DP = 1638.95 + 0.49DP_{-1} + 0.15Y - 309.33i_{td}$$
$$(3.85)\ (3.33)\quad (3.12)\quad (-3.75)$$
$$+ 165.63DUMS1 + 248.80DUMS2 + 194.94DUMS3$$
$$(1.16)\quad (1.76)\quad (1.39)$$
$$R^2 = 0.88 \qquad DW = 1.89$$

NEPAL - ESTIMATION PERIOD: 1970 (III) TO 1981 (II)

$$DD = -104.41 + 0.29DD_{-1} + 0.02Y - 5.69i_s$$
$$(-3.85)\ (2.13)\quad (2.85)\ (-0.97)$$
$$+ 2.47NBO - 5.34DUMS1 - 1.79DUMS2 - 26.26DUMS3$$
$$(4.85)\quad (-0.35)\quad (-0.11)\quad (-1.65)$$
$$R^2 = 0.991 \qquad DW = 2.04$$

PHILIPPINES - ESTIMATION PERIOD: 1971 (I) TO 1981 (III)

$$DD = 1667.05 + 0.67DD_{-1} + 0.05Y - 168.17i_s - 488.26DUMS1$$
$$(2.37)\ (6.04)\quad (2.89)\quad (-1.20)\quad (-2.59)$$
$$- 464.49DUMS2 - 560.00DUMS3$$
$$(-2.52)\quad (-3.03)$$
$$R^2 = 0.980 \qquad DW = 1.96$$

SINGAPORE - ESTIMATION PERIOD: 1971 (IV) TO 1981 (IV)

$$DD = 124.01 + 0.21DD_{-1} + 0.41Y - 19.8i_{wts}$$
$$(2.97)\ (2.06)\quad (8.32)\quad (-2.28)$$
$$R^2 = 0.988 \qquad DW = 0.92$$

SRI LANKA - ESTIMATION PERIOD: 1970 (III) TO 1979 (IV)

$$DD = -60.77 + 0.88DD_{-1} + 0.05Y - 9.33\dot{P}$$
$$(-1.20)(11.68)\quad (2.62)\ (-1.9)$$
$$+ 95.977DUMS1 - 54.35DUMS2 + 31.89DUMS3$$
$$(1.35)\quad (-1.08)\quad (0.46)$$
$$R^2 = 0.99 \qquad DW = 1.95$$

THAILAND - ESTIMATION PERIOD: 1970 (II) TO 1980 (IV)

$$DP = 1534.61 + 0.45D\dot{P}_{-1} + 0.04Y - 54.60i_{wts} + 2.71NBO$$
$$(1.23)\ (3.94)\quad (3.02)\ (-0.43)\quad (1.50)$$
$$+ 47.41DUMS1 - 509.21DUMS2 - 779.96DUMS3$$
$$R^2 = 0.99 \qquad DW = 1.73$$

Note: For Indonesia, NBO is the number of commercial, development rural and savings banks and $i_s$ is the savings deposit (Taska) rate at State banks. $i_{td}$ is the 3-months time deposit rate at State banks. For Singapore, $i_{wts}$ is the weighted average interest rate on 3-months time and savings deposits at commercial banks. For Thailand, it is the weighted average interest rate on 12-months time and savings deposits at commercial banks.

income variable was found to be significant in all countries. On the other hand, while the interest rate coefficient had the expected sign in all countries it was only significant for Malaysia and Singapore. In order to test for the substitutability between assets various alternative deposit rates were included in the equation. In most countries, the weighted average time deposit rate performed best. Unlike the demand for savings deposits, which is largely held by small savers, time deposit holders are likely to comprise higher income groups including business firms. Such deposit holders are likely to hold their liquid funds in terms of demand deposits. The results thus conform to a priori expectation that the relevant rate in the equation should be the weighted average of the time deposit according to maturity.

With the exception of Sri Lanka, the rate of inflation was found not to be significant in explaining demand for demand deposit. Seasonal factors were found to be significant for Malaysia, the Philippines, Sri Lanka and Thailand. An attempt was also made to evaluate the effect of institutional changes on the demand for demand deposits. These include the expansion of the network of banks, the introduction of new savings instruments and exemption from taxes on interest earnings. Such shifts in demand due to structural change was generally introduced using a shift parameter. The variables however did not improve the explanatory power of the equation, and therefore not reported. However, the number of banking offices were found to be a significant explanatory variable in Sri Lanka and Thailand.

Demand for Time Deposits (TP)

As noted in Part I of the study, the commercial banks in most of the SEACEN countries offer a wide range of maturities for time deposits. A weighted average rate of return ($i_{tw}$) is used to represent the own rate. The rate of return on time deposits in competing financial institutions ($i_j$) is included as the interest rate on substitute instruments. For certain countries, a foreign rate of

return adjusted for expected change in the exchange rate ($i_f$) was introduced in the equation. However, it is noted that not all savers have access to foreign instruments. Usually the minimum denominations of such form of savings are high. Furthermore, such transactions generally involve high costs. As in the above demand equations, the demand for time deposits is also assumed to be a function of income (Y), the rate of inflation ($\dot{P}$) and the lagged dependent variable TP. The equation is given below:

$$TP = a_{30} + a_{31}Y + a_{32}i_j + a_{33}i_j + a_{34}i_f + a_{35}\dot{P} + a\ TP_{36} + a_{37}INC$$

In most cases, $i_j$ represented a weighted average rate of return on time deposits at finance companies. Alternative foreign rates adjusted for exchange rate changes were attempted. The rates included the Eurodollar rate and the ACU rate. A shift parameter was also included for certain countries to take into account institutional changes. Tax incentives introduced such as tax exemption on interest earned on such deposits and the introduction of new alternative maturities are assumed to induce an increase in savings in time deposits. The introduction of new competing instruments such as negotiable certificate of deposits and deposit substitutes are also assumed to affect the demand for time deposits.

The demand for time deposit equation was estimated for seven of the SEACEN countries. The estimation results of the equation are presented in Table 10. The demand for time deposit for Burma was not estimated as the demand for this instrument over the decade has decreased substantially and is currently negligible. In the case of Sri Lanka, the demand for time deposit at the National Savings Bank was also estimated in view of its significance and implications. In contrast with the demand for currency and demand deposits, income is not a significant explanatory variable in the demand for time deposits for most of the countries with the exception of Malaysia and Singapore.

Table 10

Non-Bank Private Sector Demand for Time Deposits

INDONESIA - ESTIMATION PERIOD: 1971 (IV) TO 1980 (III)

$$TP = -109.12 + 0.89TP_{-1} + 0.05Y + 3.69i_{tw} - 2.15\dot{P} - 0.62i_s$$

(-0.79)(13.37) (1.70) (1.40) (-1.23) (-0.07)

$R^2 = 0.960$ DW = 1.78

MALAYSIA - ESTIMATION PERIOD: 1971 (I) TO 1981 (IV)

$$TP = -1094.04 + 0.92TP_{-1} + 0.11Y + 147.18i_{tw} - 4.12i_f - 47.29\dot{P}$$

(-3.59)(16.29) (2.40) (3.08) (-1.229) (-1.54)

$R^2 = 0.993$ DW = 1.43

NEPAL - ESTIMATION PERIOD: 1973 (III) TO 1981 (II)

$$TD = 16.32 + 1.05\,TD_{-1} + 11.38i_{td} - 1.01\,\dot{P}_{-1} - 18.37i_s$$

(0.90) (124.15) (3.63) (-1.11) (-1.48)

$R^2 = 0.999$ DW = 2.06

PHILIPPINES - ESTIMATION PERIOD: 1971 (I) TO 1980 (IV)

$$TP = 1076.17 + 0.92TP_{-1} + 0.006Y + 150.0i_{tw} - 247.77\ DUMDS$$

(-2.33)(16.00) (0.35) (1.83) (-1.56)

$R^2 = 0.99$ DW = 2.59

SINGAPORE - ESTIMATION PERIOD: 1971 (IV) TO 1981 (IV)

$$TD = -552.16 + 0.91TD_{-1} + 0.17Y + 68.42i_{tw}$$

(-3.85) (14.06) (2.15) (3.08)

$R = 0.992$ DW = 1.59

SRI LANKA - ESTIMATION PERIOD: 1971 (II) TO 1979 (IV)

$$TD = -354.96 + 1.05TD_{-1} + 0.003Y + 61.5i_{td}$$
$$(-2.48)\quad (21.07)\quad (0.12)\quad (1.54)$$
$$R^2 = 0.984 \qquad DW = 2.47$$

- ESTIMATION PERIOD: 1972 (III) TO 1979 (IV)

$$TND = 0.42 + 0.95TND_{-1} + 25.16i_{tn} - 22.5i_{sn} + 125.42DUMTXI$$
$$(0.002)\ (26.58)\quad (6.22)\quad (-0.76)\quad (3.72)$$
$$R^2 = 0.998 \qquad DW = 2.59$$

THAILAND - ESTIMATION PERIOD: 1974 (III) TO 1981 (IV)

$$TP = 391.70 + 1.00TP_{-1} + 0.01Y + 1775.26i_{tw}$$
$$(0.21)\ (22.42)\quad (0.14)\quad (3.96)$$
$$-1296.58i_{tn} + 44.49\,\dot{P} - 1699.87\,DUMT$$
$$(-3.01)\quad (0.34)\quad (-1.32)$$
$$R^2 = 0.999 \qquad DW = 2.27$$

Note: For Malaysia, $i_f$ is the 3-months ACU deposit rate. For Indonesia, $i_s$ is the savings deposit (Tabanas) rate at State banks. For Sri Lanka, $i_{sn}$ is the savings deposit rate at the National Savings Bank. For Nepal, $i_{td}$ is the 12-months time deposit rate at commercial banks while for Sri Lanka, it is the 3-months time deposit rate at commercial banks. For Thailand, $i_{tn}$ is the 3-months time deposit rate at finance companies while it is the 12-month time deposit rate at National Savings Bank for Sri Lanka.

On the other hand, interest rates on time deposits at the commercial banks were found to be significant for all countries except Indonesia. The coefficient for Indonesia, however, had the expected sign and was significant at the 90 per cent level. In most SEACEN countries, interest rates have been used as an instrument to mobilise savings in financial form. In particular, efforts have been made to lengthen the maturity structure of time deposits to induce banks into longer term financing.

Major steps were taken in the Philippines in 1974 to provide incentives particularly for longer-term savings. Not only were the rates of return on deposits increased but there was also a simultaneous increase in the differential between the short and longer term maturities. In 1976, there was a further adjustment in the interest rates. This policy had the effect of lengthening the term structure of time deposits indicating the responsiveness of the non-bank private sector to both changes in the level as well as the term structure of interest rates.

A shift variable was introduced to take into account the introduction of deposit substitutes in the Philippines in 1973. Over the period 1973 up to 1975, there was a rapid increase of deposit substitutes. During this period, the rate of growth of time deposit was affected. In 1976, as a consequence of a policy package introduced in seven circulars, the relative attractiveness of deposit substitutes was reduced. This resulted in a distinct shift in the form of financial savings in the Philippines. A ceiling was imposed on interest rates of deposit substitutes with a maturity of 730 days or less.5/ In addition, effective July 1, 1976, the minimum denomination of the deposit substitute was also increased.6/ The interest rates on time and savings deposits were also increased

---

5/ Circular No. 493.

6/ Circular No. 495.

effective January 2, 1976.7/ The introduction of a reserve requirement on deposit substitutes of 20 per cent for commercial banks also increased the cost of such deposits. Thus, after 1975 deposit substitutes became a relatively less attractive form of savings in relation to time deposits. This is confirmed by the significance of the shift variable introduced in the equation.

In Indonesia, the introduction of 18 and 24 months maturity in April, 1974 and the widening of the spread of interest rates also had an effect on the demand for time deposits. In order to induce higher rates, Bank Indonesia subsidised the rates on the 18 and 24 months maturities. During the year 1975/76, the 24 months maturity comprised 80 to 88 per cent of total time deposits. Also no tax exemption was given for short-term maturities. In Nepal, interest rates on deposits which had been maintained at a low level prior to 1966 have been adjusted and revised on a number of occasions. One of the main aims of the policy has been to increase the rate at which savings is mobilised. In April 1975, the rate on the 12-month maturity, was revised by 5.5 percentage points. It was reduced marginally, however, in July 1976 and February 1977. As in the case of the Philippines the spread of the rate of return according to maturity was also increased substantially after 1974. As can be observed in the equation estimated for Nepal, the coefficient for the interest rate on the 12-month time deposit was found to be statistically significant.

In Sri Lanka, the monetary authorities influence the deposit rates through its influence on the deposit rates of the National Savings bank. As part of an overall stabilisation and liberalisation program in 1977, the interest rates were adjusted in September 1977. The major objective of the interest rate reform was to provide an

---

7/ Circular No. 495.

incentive to increase financial savings.8/ In November 1978, tax concessions were also granted to interest-earned on time deposits. Interest payments were also paid monthly. The commercial banks, to remain competitive followed the adjustment in interest rates. This substantially increased the demand for time deposits. This is confirmed by the relative significance of the interest rate variable in both the demand equations for time deposits at commercial banks and at the National Savings Bank. In addition, the shift variable introduced for the period when tax concessions were granted for interest rates earned at The National Savings Bank was also found to be statistically significant. However, the introduction of new instruments, namely, Premium Savings Bond in February 1979, Save as You Earn Scheme in April 1979 and the Regular Monthly Income Savings Plan in May 1979 was found to have no appreciable effect on the demand for time deposits.

In Thailand, the relatively high interest rates which are tax exempt have been an important factor accounting for increases in the demand for time deposits. The estimation results confirm the importance of the deposit rate in explaining the demand for time deposits. While the interest rates according to maturity is less highly differentiated in Malaysia and Singapore the interest rates have been relatively more flexible. The statistically significant coefficient of the interest rate variable implies demand for time deposits are responsive to adjustment in interest rates.

---

8/ See Wirasinghe, A.D., Mobilisation of Personal Savings in Sri Lanka Behavior of Savers and its policy complications in Savings for Development, Report of the International Symposium of Mobilisation of Personal Savings in Developing Countries. United Nations, February 1980 for detail discussion.

Demand for Savings Deposits (SP)

The demand for savings deposits at commercial banks are largely held by small savers. Commercial banks compete with the National Savings Bank and finance companies for such savings deposits. The independent variables explaining the demand for savings deposits at commercial banks include income (Y), the own rate that is the interest rate on savings deposits ($i_s$), the competing rates ($i_j$), the actual rate of inflation ($\dot{P}$), the number of banking offices (NBO) and the lagged dependent variable ($SP_{-1}$). The equation estimated is given below:

$$SP = a_{40} + a_{41}Y + a_{42}i_s + a_{43}i_j + a_{44}\dot{P} + a_{45}NBO + a_{46}SP$$

The competing rates considered were the savings deposit rate at finance companies and the national savings banks as well as the weighted time deposit rates.

The estimation results for the above equation is presented in Table 11. In most countries with the exception of Thailand and Nepal income was found to be an important explanatory variable. This is in contrast to the demand for time deposits where the coefficient of the income variable was found to be less significant. As noted earlier, the demand for savings deposits is largely by the lower income groups. In many countries, the choice of savings instruments for such income groups tend to be limited.

In view of the limited choice of instruments for such savers, interest rate considerations may not be an important factor. On the other hand, in certain countries particular attention has been paid to the rate of return on such savings due to income distribution considerations. The rate was only found to be significant in Indonesia and Thailand. In Malaysia the sign of the coefficient on the own-rate of return was negative. In many of the SEACEN countries, the rates on savings deposits were low particularly during the early

Table 11

Non-Bank Private Sector Demand for Savings Deposits

INDONESIA - ESTIMATION PERIOD: 1977 (II) TO 1977 (IV)

$$SP = -40.644 + 1.04SP_{-1} + 0.01Y + 1.97i_s - 0.06\dot{P}$$
$$(-2.71)\ (28.53)\qquad (1.83)\ \ (2.88)\qquad (-0.42)$$
$$- 0.54i_{tw}$$
$$(-2.24)$$
$$R^2 = 0.996 \qquad DW = 1.99$$

MALAYSIA - ESTIMATION PERIOD: 1971 (II) TO 1981 (IV)

$$SP = -752.66 + 0.80SP_{-1} + 0.02Y - 9.85i_s$$
$$(-3.08)\ (15.86)\qquad (2.63)\ (-1.07)$$
$$-19.50i_{sn} + 2.77NBO - 117.89DUMASN$$
$$(-1.18)\qquad (3.75)\qquad (-3.47)$$
$$R^2 = 0.999 \qquad DW = 2.00$$

NEPAL - ESTIMATION PERIOD: 1970 (III) TO 1981 (II)

$$SD = 9.54 + 0.999SD_{-1} - 0.00094Y + 2.93i_s$$
$$(1.62)\ (598.4)\qquad (-0.49)\qquad (1.45)$$
$$-3.52i_{tw} - 1.02\dot{P}^{e} + 1.18T$$
$$(-5.22)\ \ (-4.05)\ \ (4.73)$$
$$R^2 = 0.999 \qquad DW = 2.12$$

PHILIPPINES - ESTIMATION PERIOD: 1970 (III) TO 1981 (IV)

$$SD = 2692.92 + 0.72SD_{-1} + 0.11Y + 14.26i_s - 493.04i_{sn}$$
$$(3.35)(11.69)\qquad (6.62)\ \ (0.06)\qquad (-1.71)$$
$$-467.93DUMDS$$
$$(-2.86)$$
$$R^2 = 0.996 \qquad DW = 1.74$$

SINGAPORE - ESTIMATION PERIOD: 1971 (IV) TO 1981 (IV)

$$SP = 0.03 + 0.59SP_{-1} + 0.014Y + 21.14i_s - 27.29i_{tw}$$
$$(0.001)\ (6.82)\qquad (6.77)\qquad (1.40)\ \ (-2.42)$$
$$R^2 = 0.941 \qquad DW = 1.79$$

SRI LANKA - ESTIMATION PERIOD: 1971 (II) TO 1979 (IV)

$$SP = -117.74 + 0.97SP_{-1} + 37.86i_s - 5.79\dot{P}$$
$$(-1.49) \quad (17.18) \quad (1.56) \quad (-2.02)$$
$$R^2 = 0.99 \quad DW = 2.06$$

- ESTIMATION PERIOD: 1970 (II) TO 1979 (IV)

$$SND = 92.41 + 0.80SND_{-1} + 0.02Y + 0.71i_{sn} - 11.87i_{tn} + 0.30NBO$$
$$(1.60) \quad (6.43) \quad (2.90) \quad (0.07) \quad (-2.96) \quad (1.38))$$
$$R^2 = 0.99 \quad DW = 2.22$$

THAILAND - ESTIMATION PERIOD: 1974 (III) TO 1981 (IV)

$$SF = -2081.36 + 0.92SP_{-1} + 0.01Y + 508.69i_s$$
$$(-2.47) \quad (9.22) \quad (0.96) \quad (2.13)$$
$$R^2 = 0.989 \quad DW = 2.64$$

Note: For Indonesia, $i_s$ is the savings deposit (Tabanas) rate at State banks. For Sri Lanka, $i_{sn}$ is the savings deposit rate at the National Savings Bank and $i_{tn}$ is the 12-months time deposit rate at the National Savings Bank.

rates on savings deposits were low particularly during the early seventies. Adjustment of the rates were also only made more frequently towards the second half of the seventies. In Indonesia, savings refers to the savings deposits under the Tabanas Savings Scheme. The rate for such deposits are high in view of the priority on the mobilisation of savings in this form. The demand for such deposits was found to be particularly responsive to the interest rate adjustments.

For the competing rate both the rates on savings deposits at alternative financial institutions as well as short-term time deposit rates were used. The variable was found to be statistically significant in Indonesia, Nepal, the Philippines, Singapore and Sri Lanka. For Sri Lanka, it was the case only for the demand for savings deposits at the National Savings Bank. This implies substitution between instruments based on interest rate considerations. The introduction of new savings instruments have different impact on the demand for savings deposits.

In Malaysia, a new savings instrument under the National Unit Trust Scheme was introduced in April 1981. The introduction of this new instrument in the equation using a shift variable was found to be statistically significant. This variable was found to be statistically insignificant in the demand for time deposits. Under this scheme a minimum dividend rate of 10 per cent per annum is guaranteed. In addition, bonus is issued from time to time. In Sri Lanka, the coefficient of the shift variable for the introduction of the savings instruments in 1979, that is the Prime Savings Bond, the Savings As You earn scheme and the regular monthly income savings plan was not found to be statistically significant. In the Philippines, the importance of deposit substitutes over the period 1973 to 1975 also had a significant effect on demand for savings deposits. The variable was introduced as a shift variable taking on a value of one over the period of its relative importance prior to the monetary measures implemented in 1976 was found to be statistically

significant. Other non-interest rate variables found to be significant were the number of banking offices for certain countries.

Demand for Commercial Loans (LP)

The demand for commercial loans by the non-bank private sector is assumed to be positively related to economic activity and negatively related to the loan rate (ic). For a number of the countries exports plus imports (EM) was used as an indicator of economic activity, in others Gross Domestic Product was used. For countries for which data is available, the average commercial bank lending rate is used to represent the cost of borrowing. In certain countries, the rate against the main category of loans is used. In principle, a domestic rate on a competing source of funds should be included as an explanatory variable. This may even include the corporate bond rate. However, in most SEACEN countries, this series is not available. A foreign borrowing rate adjusted for exchange rate changes is also included as an explanatory variable. A high foreign rate would make domestic bank financing relatively attractive. The demand for loans is also assumed to be positively related to the rate of inflation. The equation estimated is given below:

$$LP = a_{50} + a_{51}EM + a_{52}i_c + a_{54}i_{jd} + a_{55}i_{jf} + a_{56}\overset{o}{P} + a_{57}LP_{-1}$$

where $i_{jd}$ and $i_{jf}$ refer to domestic and foreign competing loan rates respectively.

The estimation results of the equation for the demand for commercial loans for the individual SEACEN countries is presented in Table 12. The equation for the demand for commercial loans performed fairly well for all SEACEN countries. An examination of the interest rate coefficient suggests that the own rate is an important explanatory variable in this equation. With the exception of the

Table 12

Non-Bank Private Sector Demand for Commercial Loans

INDONESIA - ESTIMATION PERIOD: 1974 (II) TO 1980 (I)

$$LP = 128.93 + 0.87LP_{-1} + 0.39Y - 50.64i_c + 10.97\dot{P}$$
$$(0.26)\quad (20.88)\quad (2.99)\quad (1.58)\quad (1.86)$$
$$R^2 = 0.995 \quad DW = 2.46$$

MALAYSIA - ESTIMATION PERIOD: 1970 (III) TO 1980 (IV)

$$LP = 928.21 + 0.96LP_{-1} - 132.04i_c + 15.04i_f$$
$$(2.09)\quad (21.15)\quad (-2.81)\quad (2.43)$$
$$+35.35\dot{P} + 0.13EM$$
$$(1.66)\quad (2.48)$$
$$R^2 = 0.998 \quad DW = 2.03$$

NEPAL - ESTIMATION PERIOD: 1970 (IV) TO 1980 (I)

$$LP = 91.19 + 0.74 - 24.34i_c + 0.19Y$$
$$(1.72)\quad (6.33)\quad (-3.30)\quad (5.14)$$
$$R^2 = 0.949 \quad DW = 1.47$$

PHILIPPINES - ESTIMATION PERIOD: 1970 (III) TO 1981 (III)

$$LP = -4154.96 + 0.86LP_{-1} + 0.20Y + 219.69i_c$$
$$(-1.34)\quad (9.14)\quad (4.20)\quad (0.84)$$
$$+24.40i_f + 77.13\dot{P}$$
$$(3.24)\quad (1.52)$$
$$R^2 = 0.998 \quad DW = 1.57$$

SINGAPORE - ESTIMATION PERIOD: 1970 (II) TO 1980 (I)

$$LP = 416.10 + 0.88LP_{-1} + 0.10EM - 43.06i_c$$
$$(1.29)\quad (14.80)\quad (2.94)\quad (-1.25)$$
$$+33.17\dot{P}$$
$$(3.62)$$
$$R^2 = 0.995 \quad DW = 2.11$$

THAILAND - ESTIMATION PERIOD: 1970 (II) TO 1980 (IV)

$$LP = \underset{(3.42)}{20989.0} + \underset{(14.10)}{0.89LP_{-1}} + \underset{(2.86)}{0.27Y} - \underset{(-4.64)}{2697.17i_c} + \underset{(3.01)}{618.35i_f}$$

$R^2 = 0.997$ DW = 1.52

Note: For Indonesia, $i_c$ is the State bank lending rate while it is the average lending rate at commercial banks for Malaysia, the Philippines and Singapore. For Nepal, it is the lending rate of commercial banks for export bills while it is the loan rate for industrial enterprises for Thailand. For Malaysia, $i_f$ is the Singapore prime lending rate and for the Philippines, it is the United Kingdom prime lending rate while for Thailand, it is the Euro prime lending rate.

Philippines, own rate had a priori expected sign. It was particularly significant in the case of Indonesia, Malaysia, Nepal and Thailand. The series for a domestic competing rate is not available for most of the SEACEN countries. In the case of Singapore, the average lending rate of the finance company was attempted but was found to be statistically insignificant.

In the three countries for which the foreign interest rate on alternatives sources of funds was an explanatory variable the coefficient of the foreign rate also had the expected sign in all equtions. That is in the case of Malaysia, the Philippines and Thailand. The variable was also statistically significant for all countries. This suggests that as foreign interest rates increase, the demand for loans from domestic commercial banks increases. This implies some degree of substitutability between domestic and foreign borrowing by the non-bank private sector. Economic activity was also an important explanatory variable in the demand for loan equation in all SEACEN countries. Exports plus imports was used for Malaysia and Singapore while GDP was used for Indonesia, Nepal, the Philippines and Thailand. The variables were particularly significant for Malaysia, Nepal, Singapore and Thailand.

The rate of inflation was only a significant explanatory variable in Indonesia. The coefficient however had the expected priori sign but was insignificant for the remaining countries. As the experience with most empirical work on the demand for loan equation the lagged adjustment shows slow adjustment for all SEACEN countries.

# LIST OF VARIABLES

| | | |
|---|---|---|
| CP | - | Currency held by non-bank private sector. |
| DD | - | Total demand deposits at commercial banks. |
| DP | - | Demand deposits held by non-bank private sector. |
| DUMASN | - | Dummy variable for the Amanah Saham Nasional in Malaysia. |
| DUMC | - | Dummy variable for termination of Currency Inter-Changeability Agreement in May 1973 for Singapore. |
| DUMD3 | - | Dummy variable for the introduction of new monetary instruments in Sri Lanka. |
| DUMDS | - | Dummy variable for deposit substitutes. |
| DUMIC | - | Dummy variable for institutional change in Burma. |
| DUMTXI | - | Dummy variable for tax concession in Sri Lanka. |
| DUMTX2 | - | Dummy variable for tax amnesty in Sri Lanka. |
| EM | - | Exports plus imports. |
| $i_c$ | - | Commercial banks loan rate. |
| $i_f$ | - | Foreign interest rate. |
| $i_s$ | - | Interest rate on savings deposit at commercial banks. |
| $i_{sn}$ | - | Interest rate on savings deposit at finance companies. |
| $i_{td}$ | - | Interest rate on time deposits at commercial banks. |
| $i_{tn}$ | - | Interest rate on time deposits at finance companies. |
| $i_{tw}$ | - | Weighted average interest rate on time deposits at commercial banks. |
| $i_{tws}$ | - | Weighted average interest rate on time plus savings deposit. |
| NBO | - | Number of bank offices. |
| $\dot{P}$ | - | Actual current inflation. |
| $\dot{P}_{-1}$ | - | Actual lag in inflation. |
| SD | - | Total savings deposits at commercial banks. |
| SND | - | Total savings deposits at the National Savings Bank. |
| SP | - | Savings deposits held by non-bank private sector. |
| TD | - | Total time deposits at commercial banks. |
| TND | - | Total time deposits at National Savings Bank. |
| TP | - | Time deposits held by non-bank private sector |
| Y | - | Nominal income. |

## COMMERCIAL BANKING SECTOR

### Introduction

Most empirical work done on commercial bank behaviour in the SEACEN countries has been concentrated on the analysis of their excess or total reserve position. This is in large part due to the fact that policy is often directed to affecting the reserve position of the commercial banks. Very often the equation has not performed well. This could partially reflect the fact that the banks regard a large part of this as residual and not systematically responsive to a specific set of variables. The excess reserve position may passively adjust to temporary movements in deposits or loan demand.

It is the intention of this section to examine the relative importance of interest rates versus non-interest rate variables in affecting the portfolio behaviour of the commercial banks. This study examines the factors that explain the allocation of funds to a spectrum of instruments in the portfolio of the commercial banks. More specifically, an analysis will be made of the degree to which the alternative instruments are substitutes for each other. The sensitivity of commercial bank liability management to interest movements will also be examined. Finally, the role of interest rates in affecting the extent to which commercial banks generate inflows and outflows of funds abroad will also be analysed. The specifications of behavioural equations for the commercial banking sector and the estimation results are discussed below.

### Demand for Excess Reserves

The excess reserve position of the commercial banks provides an indication of the liquidity of the banking system. This is generally measured in terms of the excess cash position of the banks. Excess cash reserves represents the most liquid item in the banks portfolio. Cash reserves generally comprise of cash and balances held at the Central Bank. As banks do not earn interest on such funds, it

is likely that banks will attempt to minimise such balances. Commercial banks however also rely on short-term money market instruments to meet their liquidity needs. These include instruments that can be converted into cash within a short period of time without appreciable loss. This would depend on the existence of such marketable instruments in the financial system. Such funds are also regarded as liquid since banks may also use such short-term government instruments to secure advances from the Central Bank to meet their liquidity needs.

The definition of excess reserves varies amongst the SEACEN countries. The definition is dependant on the reserve requirement imposed on the commercial banks. In Indonesia and Sri Lanka, there is only a cash reserve requirement comprised of cash and balances held at the Central Bank. In Nepal, the Philippines and Thailand, the reserve requirement includes other short-term money market instruments. In Malaysia and Singapore, the commercial banks are subject to both a cash as well as a liquid reserve requirement. In the latter two groups of countries, it is generally required that a minimum proportion of the liquid funds be held in the form of cash.

In order to facilitate analysis, it is desirable to disaggregate the banks liquid reserves into a non-interest earning component and an interest earning component. Thus for the first group of countries, excess cash reserves (ECR) will comprise of total cash reserves (TCR) less cash required reserves (CRR), that is,

$$ECR = TCR - CRR$$

In the second group of countries, the total excess (TER) reserves will be disaggregated into a non-interest earning component (NER) and an interest earning component, (IER), that is,

$$TER = NER + IER$$

In this case, the non-interest earning component of excess reserves (NER) is equivalent to the excess cash reserves (ECR). The same disaggregation is also made for the group of countries where the reserve requirement does not distinguish between the cash and liquid components. However, since it is not possible to identify the composition of excess reserves, the following assumption is made. That is, commercial banks hold their total cash reserves as part of their excess reserves. This assumption is basically made on the basis of data considerations. As the cash component of the total reserves, that is, (TCR), is generally known from the balance sheet of the commercial banks, it can be substracted from total excess reserves (TER) to give interest earning excess reserves (IER).

Demand for Excess Cash Reserves (ECR)

By active reserve management the commercial banks can maximise their returns. For the demand for excess cash reserves (ECR), the opportunity cost of not reducing these balances is the rate of return foregone on interest earning instruments. Any excess cash balances at the end of the day may be lent in the interbank money market or placed at the discount house or used to purchase Treasury Bills. Higher interest rates on these instruments will thus lead banks to reduce their excess cash holdings. In the event the banks are short of reserves, the banks may borrow from the Central Bank or the domestic money market. It is assumed that a higher cost of borrowing will induce banks to maintain larger cash balances.

The level of total deposits is included as a scale variable. It is assumed that excess reserves will increase as the banking system expands as indicated by total deposits. The deposit structure of the bank can also be an important factor affecting the cash position of the banks. In contrast to demand deposits, time deposits are less volatile and are thus more predictable. Moreover, time deposits incur a higher cost to banks. Thus, it is likely that with a higher proportion of time deposits banks would reduce their cash holdings in favour of income earning instruments.

The equation estimated is given below:

$$ECR = b_{10} + b_{11} i_m + b_{12} i_b + b_{13} TODB + b_{14} TCL + b_{15} ECR_{-1} + B_{16} T/D$$

The explanatory variables include alternative rate of return on money market instruments ($i_m$), interest rate on borrowing ($i_b$), total deposits (TODB), the relative importance of time deposit relative to demand deposits measured by the ratio of time deposits to total demand deposits T/D and the lagged dependant variable. For certain countries it is also necessary to capture the effects of developments in the domestic money market. This would for example include the introduction of new alternative liquid instruments, improved efficiency in which financial transactions can take place as well as improvement in accounting information. It is hypothesised that these developments will induce banks to economise on their cash balances. If the period of the institutional change is specific, it can be introduced in the equation using a shift parameter. Finally, in certain countries, the cash reserve position is also effected by seasonal factors.

For Sri Lanka, Indonesia, Malaysia and Singapore for which there was a cash reserve requirement, the demand for excess cash reserves by the commercial banks was estimated. For Thailand and the Philippines where cash balances represents a component of the reserve requirement, the demand for total cash holdings was estimated. That is the reserves were disaggregated into an interest earning and a non-interest earning component. The estimation results are presented in Table 13.

TABLE 13

Commercial Bank Demand for Excess Cash Reserves

INDONESIA - ESTIMATION PERIOD: 1974 (III) TO 1980 (IV)

$$ECR = -213.86 - 0.31\ ECR_{-1} - 10.25\ i_c + 38.81\ i_{bc}$$
$$(-4.57) - (-1.94) \quad (-4.38) \quad (4.81)$$
$$+0.21\ TODB$$
$$(8.41)$$
$$R^2 = 0.94 \quad DW = 2.17$$

MALAYSIA - ESTIMATION PERIOD: 1971 (I) TO 1981 (IV)

$$ECR = 227.99 + 0.29\ ECR_{-1} + 24.75 i_{bk} - 29.63 i_{md}$$
$$(4.02) \quad (2.19) \quad (3.19) \quad (-3.17)$$
$$+0.01\ TODB - 88.22\ TDR - 13.11\ DUMSS1$$
$$(4.60) \quad (-2.57) \quad (-0.77)$$
$$-23.79\ DUMSS2 - 25.40\ DUMSS3$$
$$(-1.38) \quad (-1.52)$$
$$R^2 = 0.90 \quad DW = 1.92$$

PHILIPPINES - ESTIMATION PERIOD: 1970 (II) TO 1980 (IV)

$$ECR = 684.06 + 0.21\ ECR_{-1} + 45.05 i_{bc} - 76.57 i_{tb}$$
$$(1.28) \quad (1.49) \quad (1.42) \quad (-1.87)$$
$$-174.68\ DUMSS1 - 339.15\ DUMSS2 - 315.55\ DUMSS3$$
$$(-1.31) \quad (-2.60) \quad (-2.50)$$
$$+0.10\ TODB$$
$$(6.08)$$
$$R^2 = 0.96 \quad DW = 1.63$$

SINGAPORE - ESTIMATION PERIOD: 1972 (I) TO 1980 (IV)

$$ECR = 15.58 + 0.25\,ECR_{-1} - 1.71 i_{bk} + 2.77 i_{md}$$
$$(1.86)\quad (1.52)\qquad (-1.72)\quad (1.14)$$
$$+0.01\ TODB - 16.10\ DUMSS1 - 16.80\ DUMSS2 - 12.42\ DUMSS3$$
$$(4.11)\qquad (-2.34)\qquad (-2.66)\qquad (-2.03)$$
$$R^2 = 0.93 \quad DW = 1.93$$

SRI LANKA - ESTIMATION PERIOD: 1973 (II) TO 1980 (IV)

$$ECR = -73.38 + 0.55\,ECR_{-1} - 2.56 i_{bk}$$
$$(-0.88)\quad (2.96)\qquad (-0.34)$$
$$+18.94 i_{bc} + 0.02\ TODB - 97.42\ DUMSS1$$
$$(1.53)\qquad (1.50)\qquad (-2.48)$$
$$-66.88\ DUMSS2 - 83.52\ DUMSS3$$
$$(-1.84)\qquad (-2.32)$$
$$R^2 = 0.92 \quad DW = 1.99$$

THAILAND - ESTIMATION PERIOD: 1970 (II) TO 1980 (IV)

$$ECR = 290.84 + 0.45\,ECR_{-1} - 151.54 i_{bk} + 216.51 i_{bc}$$
$$(0.43)\quad (3.23)\qquad (-1.70)\quad (1.71)$$
$$+0.02\ TODB$$
$$(3.31)$$
$$R^2 = 0.96 \quad DW = 2.11$$

Note: For the Philippines and Thailand, the total cash reserves equation was estimated instead of the excess cash reserves. For Indonesia, $i_{bc}$ is the Central Bank refinance rate against permanent working capital while $i_c$ is the State Bank lending rate for small investment capital. For Malaysia and Singapore, $i_{bk}$ is the overnight interbank rate while it is the interbank call money rate for Thailand. $i_{md}$ is the discount house rate for Malaysia and Singapore and $i_{tb}$ is the 6-month treasury bill rate for the Philippines.

The results showed that the commercial banks tended to economise on their excess cash holdings in response to changes in money market rates. Any excess cash at the end of the day may be lent in the inter-bank money market or placed at the discount house or alternatively used to purchase Treasury Bills. Alternatively funds may also be placed in foreign inter-bank money markets. The relevant rates that entered relatively significantly are the Treasury Bill rate for Malaysia and the Philippines, the inter-bank rate for Singapore, Thailand and Sri Lanka and the money at call rate for Malaysia. For Indonesia, the commercial loan rate was used. In Malaysia, the Singapore inter-bank rate was also an important explanatory variable.

In some countries, the cost of borrowing by the commercial banks was also an important explanatory variable. That is, the higher cost of borrowing will induce banks to increase their holdings of cash reserves. The rates used were the Central Bank lending rate and the Central Bank rediscount rate. In Malaysia, and Singapore the discount house rate is used to represent cost of funds as this rate moves closely to the rate at which the Central Bank rediscounts Treasury Bills.

Only a small proportion of the increase in deposits resulted in an increase in cash holdings. The variable was however statistically significant for all countries. The deposit mix was not found to be an important explanatory variable. Seasonal factors were important explanatory variables in Sri Lanka, Singapore and the Philippines.

Demand for Excess Liquid Reserves

The holding of liquid reserves are largely to allow banks to adjust to unforseen outflow of funds. To facilitate analysis, liquid reserves are defined according to the official definition of the respective member banks. As a consequence, the definition varies across countries. It is argued that this is the aggregate that is monitored and to which monetary policy is directed. Furthermore, the

instruments included are either marketable or eligible for collateral for securing funds from the Central Bank. They can thus be viewed as liquid in the sense that they can be easily converted into cash. The demand for such liquid reserves would be positively related to the rate of return of assets included in the definition and negatively related to alternative competing instruments. Higher borrowing costs would also induce banks to hold larger liquid reserves.

The equation estimated is specified as follows:

$$ELR = b_{20} + b_{21} i_r + b_{22} i_{jt} + b_{23} i_b + b_{24} TODB + B_{25} ELR_{-1}$$

where $i_r$ represents interest on the major instrument included in liquid reserves, $i_{jt}$ represents the rate on competing instruments. In certain countries, the rate on commercial loans was used while in others, the commercial bills rate or money at call rate was used. In the above equation $i_b$ represented the cost of borrowing. The equation was estimated for five of the SEACEN countries. In all countries, it represented the interest earning component of liquid reserves.

In all countries, interest rates were found to be an important explanatory variable. That is the own rate, taken to be the Treasury bill rate was found to be significant in most equations. In Nepal, the government securities rate was used and the coefficient was found to be statistically significant. The cost of borrowing was also important in most countries. The variable was found to be statistically significant. In Malaysia, the various competing rates used were also statistically significant that is, the more attractive the rate of return on alternative assets, the less the liquid reserves will be held. Finally, in Malaysia, foreign competing rates were also found to be significant. The estimation results are presented in Table 14.

TABLE 14

COMMERCIAL BANK DEMAND FOR EXCESS LIQUID RESERVES

MALAYSIA - ESTIMATION PERIOD: 1971 (II) TO 1981 (IV)

$$ELR = 11.12 + 0.90ELR_{-1} + 147.60i_{md} - 154.32i_{bk} + 0.01TODB - 5.50i_{fk}$$

(0.11) (4.47) (2.73) (-3 41) (3.01) (-2.99)

$R^2 = 0.87$ DW = 1.33

NEPAL - ESTIMATION PERIOD: 1975 (IV) TO 1980 (IV)

$$ELR = 726.47 + 0.48ELR_{-1} + 72.65i_{g} + 51.89i_{bc} - 125.04i_{c} - 0.16TODB$$

(2.84) (2.87) (2.84) (2.84) (-2.59) (-2.49)

$R^2 = 0.65$ DW = 1.81

PHILIPPINES - ESTIMATION PERIOD: 1970 (II) TO 1980 (IV)

$$ELR = 1672.24 + 0.38ELR_{-1} - 174.73i_{c} + 37.35i_{bc} + 0.03TODB - 482.25TDR$$

(1.96) (2.24) (-2.27) (1.93) (2.96) (-1.90)

$R^2 = 0.28$ DW = 1.82

SINGAPORE - ESTIMATION PERIOD: 1972 (I) TO 1980 (III)

$$ELR = 552.07 - 0.01ELR_{-1} + 63.08i_{c} - 44.91i_{bc} - 21.17i_{bk} - 0.14i_{fk} - 0.02TODB$$

(2.59)(-0.05) (2.18) (-1.60) (-3.11) (-0.13) (-2.12)

$R^2 = 0.52$ DW = 2.12

THAILAND - ESTIMATION PERIOD: 1973 (IV) TO 1980 (IV)

$$ELR = -1667.16 - 0.13ELR_{-1} - 376.94i_{bk} + 483.48i_{bc} + 1992.70LDR$$
$$(-0.86)(-0.63) \quad (-2.48) \quad (2.68) \quad (0.74)$$

$R^2 = 0.14$ DW = 1.88

Note: For Malaysia and Singapore, $i_{bk}$ is the overnight interbank rate while it is the interbank call money rate for Thailand. For the Philippines and Singapore, $i_c$ is the commercial bank average lending rate while for Nepal, it is the commercial bank lending rate export bills. $i_{fk}$ for Malaysia and Singapore is the London overnight interbank rate. $i_{md}$ is the discount house rate for Malaysia while $i_{tb}$ is the 91-days treasury bill rate for Singapore.

In Malaysia and the Philippines, total deposits was used as the constraint variable. An increase in total deposits was assumed to result in an increase in reserve holdings. In Nepal, the variable was found to be statistically insignificant. In Singapore and Thailand, the loan deposit ratio was used. That is, an increase in loans relative to the increase in deposits is assumed to lead to a decline in reserve holds.

Demand for Treasury Bills (TBB)

Treasury Bills represent a liquid adjustment instrument for the commercial banks. The explanatory variables in the demand equation includes its own rate of return, competing rates of return, portfolio constraint variables and the lagged dependant variable. As an alternative to holding Treasury Bills, commercial banks may place funds with other banks, or at the discount house or alternatively in longer term instruments such as government securities. In many SEACEN countries, a certain portion of the demand for Treasury Bills is captive. That is, it is required to be held to meet the liquidity reserve requirement. However, other money market instruments permitted in the requirement may be regarded as substitutes. In countries where the domestic market is not developed or alternatively where the rate of return on government instruments are kept low, commercial banks may place funds in international money markets. In such cases, a foreign rate adjusted for exchange rate changes is included in the equation. Finally, it should be noted that the demand for Treasury Bills may be a residual demand in the sense that it may absorb the adjustment in excess funds by the bank. In this case, the portfolio constraint variables would be significant explanatory variables. An increase in deposits would lead to an increase in demand for Treasury Bills while an increase in the demand for loans would be financed in the shortrun by running down Treasury Bill holdings.

The following equations was estimated for the demand for Treasury Bills:

$$TBB = b_{30} + b_{31} i_t + b_{32} i_m + b_{33} i_g + b_{34} i_f + b_{35} TODB + b_{36} TL + b_{37} TBB_{-1}$$

where $i_t$ represents the own rate of return, $i_m$ money market rate of return and $i_g$ the government bond rate. For most countries the three month Treasury Bill rate was taken as the representative rate. For certain countries a weighted average rate was used. The interbank rate and money at call rate were included to represent the money market rate. Preliminary estimation results for the above equation are reported in Table 15 for Malaysia and Singpore.

Demand for Government Securities (GSB)

As in the case of Treasury Bills, in a number of SEACEN countries, a portion of the demand for government securities by commercial banks is assured by the liquidity requirements. While the banks may to some extent substitute between instruments permitted in the requirement it is expected that, the government securities rate may not be a significant explanatory variable in most countries. In a number of countries, the rate of three year government securities rate is less than the rate paid on the one year time deposit. In view of the change in the structure of deposits in most countries towards an increase in the proportion of time deposits, the relative cost to the banks would have increased thus increasing the relative unattractiveness of the bonds.

In addition to the own rate of return and competing rates of returns, the independent variables include the portfolio constraint variables and lagged dependent variables. The general demand equation estimated is given below:

$$GSB = b_{40} + b_{41} i_g + b_{42} i_t + b_{43} i_f + b_{44} TODB + b_{45} TL + b_{46} GSB_{-1}$$

TABLE 15

COMMERCIAL BANK DEMAND FOR TREASURY BILLS

MALAYSIA - ESTIMATION PERIOD: 1972 (I) TO 1981 (IV)

$$TBB = \underset{(0.51)}{76.04} + \underset{(7.49)}{0.77}TBB_{-1} + \underset{(1.33)}{33.75}i_{tb} - \underset{(-1.34)}{3.50}i_{fk} + \underset{(2.47)}{0.01}TODB$$

$R^2 = 0.91$ DW = 2.01

SINGAPORE - ESTIMATION PERIOD: 1972 (I) TO 1980 (IV)

$$TBB = \underset{(-2.07)}{-237.32} + \underset{(9.36)}{0.72}TBB_{-1} + \underset{(4.68)}{103.34}i_{tb} - \underset{(-3.79)}{54.01}i_{md} - \underset{(-1.11)}{2.33}i_{fk} + \underset{(2.46)}{0.11}TODB - \underset{(-2.34)}{0.10}tl$$

$R^2 = 0.91$ DW = 2.44

Note: For Malaysia, $i_{fk}$ is the Singapore overnight international rate which for Singapore, it is the Malaysian 7-days interbank rate. For Singapore, $i_{md}$ is the discount hourse rate, $i_{tb}$ for Malaysia is the 6-months treasury bill rate while for Singapore, it is the 91-days treasury bill rate.

The demand for government securities is expected to be positively related to its own rate, $i_g$ and total deposits TDDB and negatively related to the Treasury Bill rate $i_t$, the foreign competing rate $i_f$ and total loans. Preliminary estimation results for the above equation are reported in Table 16 for Malaysia, the Philippines, Singapore and Thailand.

Demand for Borrowing from the Central Bank (BCB)

Commercial banks may borrow from three alternative sources, from the Central Bank, from other banks in the domestic money market and from banks abroad in the international money market. For certain countries, this constitute an important source of funds. Borrowing from the Central Bank may be directly or may be in the form of rediscounting eligible bills. The demand for borrowing is negatively related to the borrowing rate and positively related to alternative sources of borrowing. An increase in the rate at which banks may borrow on the inter-bank money market or international money markets may result in increased borrowing from the Central Bank. An increase in total deposits may result in repayments of borrowing, while an increase in the demand for loans leads to increased borrowing.

The equation estimated is given below:

$$BCB = b_{50} + b_{51} i_{bc} + b_{52} i_{bd} + b_{53} i_{bf} + b_{54} TDDB + b_{55} TL + b_{56} BCB_{-1}$$

where $i_{bc}$ is the Central Bank rate taken to be the bank rate or rediscount rate, $i_{bd}$ is the borrowing rate in the domestic money market and $i_{bf}$ is the representative rate on borrowing from international sources.

The results for borrowing from the Central Bank are presented in Table 17. The results show the borrowing rate to be significant variables in the case of the Philippines, Indonesia and Thailand. In Nepal, the coefficient had the expected a priori sign

TABLE 16

COMMERCIAL BANK DEMAND FOR GOVERNMENT SECURITIES

MALAYSIA - ESTIMATION PERIOD: 1971 (I) TO 1981 (IV)

$$GSB = -1200.11 + 0.32GSB_{-1} + 268.47i_g - 110.94i_{tb} - 3.44i_f' + 0.15TODB - 0.08TL$$
$$(-2.25)\ (2.15)\qquad (2.50)\qquad (-1.49)\quad (-1.41)\quad (3.07)\quad (-1.59)$$
$$R^2 = 0.95 \qquad DW = 1.58$$

PHILIPPINES - ESTIMATION PERIOD: 1971 (I) TO 1980 (IV)

$$GSB = 593.80 + 0.48GSB_{-1} - 22.86i_{tb} - 3.93i_f' + 0.02TODB$$
$$(2.56)\ (3.06)\qquad (-1.21)\qquad (-1.22)\quad (3.46)$$
$$R^2 = 0.92 \qquad DW = 2.12$$

SINGAPORE - ESTIMATION PERIOD: 1972 (I) TO 1980 (IV)

$$GSB = 95.72 + 0.87GSB_{-1} - 33.08i_{tb} + 0.02TODB$$
$$(4.54)(18.04)\qquad (-3.94)\qquad (2.59)$$
$$R^2 = 0.99 \qquad DW = 1.93$$

THAILAND - ESTIMATION PERIOD: 1970 (II) TO 1980 (IV)

$$GSB = -1725.01 + 0.68GSB_{-1} + 883.94i_g - 378.01i_{tb} - 152.84i_c - 82.72i_f' + 0.27TLR + 103.77T$$
$$(-0.90)\ (6.04)\qquad (3.39)\qquad (-2.73)\qquad (-1.79)\quad (-1.48)\quad (1.80)\qquad (1.25)$$
$$R^2 = 0.99 \qquad DW = 2.26$$

Note: For Thailand, $i_c$ is the commercial banks discount rate on export bills. For Malaysia, $i_f'$ is the 3-months Eurodollar deposit rate while for Thailand and the Philippines, it is the United States treasury bill rate. $i_g$ for Malaysia is the 3 years government security rate. For Malaysia and the Philippines, $i_{tb}$ is the 6-months treasury bill rate while for Singapore, it is the 91-days treasury bill rate. For Thailand, it is the weighted average treasury bill rate.

TABLE 17

COMMERCIAL BANK DEMAND FOR BORROWING FROM THE CENTRAL BANK

INDONESIA - ESTIMATION PERIOD: 1974 (III) TO 1980 (III)

$$BCB = 68.44 + 0.61BCB_{-1} + 10.61i_{bk} - 29.13i_{c}$$
$$(0.32)\ (3.49)\qquad (3.73)\quad (-0.68)$$
$$+ 1.36i_{fk} + 0.22TODB - 0.14TL$$
$$(1.64)\quad (2.70)\quad (-1.76)$$
$$R^2 = 0.98 \qquad DW = 1.79$$

NEPAL - ESTIMATION PERIOD: 1975 (IV) TO 1980 (IV)

$$BCB = -98.78 + 0.09BCB_{-1} - 7.06i_{c} + 451.71LDR$$
$$(-2.00)\ (0.46)\qquad (-2.00)\qquad (2.76)$$
$$R^2 = 0.31 \qquad DW = 1.87$$

PHILIPPINES - ESTIMATION PERIOD: 1973 (IV) TO 1980 (I)

$$BCB = -3098.53 + 0.58BCB_{-1} + 74.71i'_{f} - 173.58i_{bc}$$
$$(-1.78)\ (4.05)\qquad (1.94)\qquad (-2.16)$$
$$- 101.07i_{bk} + 4086.03LDR$$
$$(-1.83)\qquad (2.62)$$
$$R^2 = 0.86 \qquad DW = 2.03$$

THAILAND - ESTIMATION PERIOD: 1970 (II) TO 1980 (IV)

$$BCB = -8267.32 + 0.62BCB_{-1} - 395.33i_{bc} + 607.92i_{bk}$$
$$(-2.32)\ (7.36)\qquad (-1.09)\qquad (3.18)$$
$$+ 7482.77LDR$$
$$(1.58)$$
$$R^2 = 0.91 \qquad DW = 1.79$$

Note : $i_{bc}$ for Thailand is the Bank of Thailand rediscount rate against agricultural bills while $i_{fk}$ is its interbank call money rate. For Indonesia, $i_{c}$ is the central bank refinance rate for small investment credit while $i_{fk}$ is the London (3- months) interbank rate. For the Philippines, $i'_{f}$ is the Euro-prime rate.

but was insignificant. The rate on borrowing from the inter-bank money market represented by the inter-bank rate was a significant variable in the case of Indonesia and Thailand. Foreign interest rate is not significant explanatory variable in the demand for borrowing from the Central Bank with the exception of Indonesia.

The loan/deposit ratio was statistically significant for Thailand and the Philippines. In the case of Indonesia the scale variable did not have a priori expected sign. The adjustment coefficient shows more rapid adjustment except in the case of the Philippines.

Demand for Foreign Assets (FAR)

In addition to the rate of return on foreign instrument adjusted for exchange rate changes, trade flows is also assumed to be an important factor explaining international financial transactions. That is, an increase in exports would increase holdings of deposits abroad as receipts from exports are deposited abroad. Also loans to foreigners would also increase with increase in exports. Another variable introduced in the demand equation is to take into account structural developments in the financial system. These changes include developments in the domestic money market that can explain the increased demand for domestic instruments given interest rates. Further, factors such as a change in the exchange rate system from fixed to floating exchange rates introduce a greater degree of uncertainty due to exchange rate risk for foreign instruments thus making domestic instruments relatively more attractive. It is thus necessary to measure the effect of these exogenously produced changes so that earning yield effect can be separated from the effect of structural changes.

It is likely that the effects of these developments on demand for domestic instruments are gradual. Ideally, the effects of these developments should be measured as they occur. However, because of the diversity of these changes and difficulties with respect to

some of the changes a more simplified approach will be adopted. As has been done in previous studies, concerned with incorporating technological or structural changes in a demand for asset equation, a time trend variable is introduced to measure these effects.

The equation estimated is given below:

$$FAB = b_{60} + b_{61}i_f + b_{62}i_d + b_{63}TODB + B_{64}TL + b_{65}EX + b_{66}T + b_{67}FAB_{-1}$$

where $i_f'$ is the representatiive foreign rate adjusted for exchange rate changes, $i_d$ , the vector of domestic competing rates, (EX) exports and (T) the time trend. Preliminary estimation results for the above equation and reported in Table 18 for Indonesia, Malaysia, Singapore and Sri Lanka.

Demand for Foreign Liabilities (FLB)

Foreign liabilities mainly comprise of balances with banks abroad and borrowing from banks abroad. In this analysis, such funds will be treated as being determined simultaneously with the other instruments in the banks portfolio. Further, that banks are concerned with their gross foreign position rather than their net. If banks were concerned with the latter it would imply that foreign assets were largely financed by foreign funds. In this study foreign liabilities are treated as negative assets simultaneously determined with other assets.

As in the case of assets, where banks maximise their expected return, banks will also diversify their liabilities so as to minimise expected costs. Foreign and domestic borrowing are considered as a substitute. Increase in the borrowing rate from one source will lead to an increase in borrowing from the alternative source. In other words, one form of borrowing should be negatively

Table 18

COMMERCIAL BANK DEMAND FOR FOREIGN ASSETS

INDONESIA - ESTIMATION PERIOD : 1974 (III) TO 1980 (III)

$$FAB = -1794.27 + 0.68FAB_{-1} + 22.80i_f$$
$$(-8.74)\ (4.86)\qquad (1.54)$$
$$R^2 = 0.63 \qquad DW = 1.29$$

MALAYSIA - ESTIMATION PERIOD : 1971 (I) TO 1981 (IV)

$$FAB = 120.29 + 0.36FAB_{-1} - 35.15i_{md} + 0.91i_f$$
$$(1.37)\ (2.52)\qquad (-1.58)\qquad (0.49)$$
$$+ 0.03TODB + 0.11EX - 40.67DUMEX$$
$$(1.70)\qquad (2.50)\qquad (-0.58)$$
$$R^2 = 0.94 \qquad DW = 1.93$$

SINGAPORE - ESTIMATION PERIOD : 1972 (IV) TO 1982 (I)

$$FAB = -707.28 + 0.23FAB_{-1} + 2.48i_f - 122.67i_{md}$$
$$(-4.15)\ (1.47)\qquad (0.90)\qquad (-2.24)$$
$$+ 0.34TODB$$
$$(5.02)$$
$$R^2 = 0.98 \qquad DW = 1.51$$

SRI LANKA - ESTIMATION PERIOD : 1970 (II) TO 1980 (III)

$$FAB = -73.27 + 0.64FAB_{-1} + 0.63i_f + 0.06TODB$$
$$(-2.39)\ (5.01)\qquad (2.33)\qquad (3.10)$$
$$R^2 = 0.98 \qquad DW = 2.00$$

THAILAND - ESTIMATION PERIOD : 1970 (II) TO 1980 (IV)

$$FAB = 1047.99 + 0.68FAB_{-1} + 14.17i_f - 111.23i_c$$
$$(1.52)\ (7.61)\qquad (1.41)\qquad (-1.47)$$
$$+ 0.19EX$$
$$(3.57)$$
$$R^2 = 0.96 \qquad DW = 1.89$$

Note: $i_f$ for Indonesia, Sri Lanka and Thailand is the United Kingdom treasury bill rate. For Malaysia, $i_f$ is the 3-month ACU deposit rate while it is the London overnight interbank rate for Singapore. For Malaysia and Singapore, $i_{md}$ is the discount house rate. For Thailand, $i_c$ is the commercial bank discount rate on export bills.

related to its own rate and positively related to the rate on an alternative form of borrowing.

The other explanatory variables include imports (IM) total deposits (TODB) and total loans (TL). An increase in imports (IM) could lead to an increase in foreign borrowing or as payments for imports are deposited by foreign banks with the commercial banks. An increase in total deposits is assumed to lead to a decline in borrowing as repayments are made while an increase in loan demand is positively related to borrowing. The equation estimated is given below:

$$FLB = b_{70} + b_{71} i'_f + b_{72} i_{bd} + b_{73} i_{bc} + b_{74} TODB + b_{75} TL + b_{76} IM + b_{77} FLB$$

where $i'_f$ is the foreign borrowing rate adjusted for exchange rate changes; $i_{bd}$, the rate charged on domestic inter-bank borrowing; and $i_{bc}$, the rate on commercial bank borrowing from the Central Bank. Preliminary estimation results for the above equation are reported in Table 19 for Singapore, Sri Lanka and Thailand.

Inter-bank Rate

Interest rates in this study have thus far been assumed to be exogenous. That is, in view of the non-market determination of the rates, they have been taken as exogenously given. This largely reflects the control exercised by the monetary authorities over the interest rate. In contrast to the rates that are administered by the Central Bank the interest rates in the inter-bank money market are determined by the market conditions. A number of models have been developed to explain the determination of interest rates. It will be assumed in the analysis that the inter-bank rate is determined by the equilibrium of the demand and supply of funds in the market.

TABLE 19

COMMERCIAL BANK DEMAND FOR FOREIGN LIABILITIES

SINGAPORE - ESTIMATION PERIOD: 1972 (I) TO 1981 (IV)

$$FLB = \underset{(0.49)}{139.22} + \underset{(5.83)}{0.69}FLB_{-1} - \underset{(-2.01)}{16.57}i_{fk} + \underset{(4.58)}{0.38}TL - \underset{(-2.07)}{0.22}TODB$$

$R^2 = 0.97$ DW = 1.94

SRI LANKA - ESTIMATION PERIOD: 1970 (II) TO 1980 (III)

$$FLB = \underset{(-2.09)}{-28.13} + \underset{(6.26)}{0.75}FLB_{-1} + \underset{(2.69)}{6.62}i_{bk} - \underset{(-1.18)}{0.09}i_{fk}$$

$R^2 = 0.91$ DW = 1.86

THAILAND - ESTIMATION PERIOD: 1970 (II) TO 1980 (IV)

$$FLB = \underset{(2.24)}{858.72} + \underset{(8.73)}{0.94}FLB_{-1} - \underset{(-2.62)}{240.84}i_{f} + \underset{(2.24)}{174.75}i_{bc} + \underset{(0.98)}{0.02}TL$$

$R^2 = 0.98$ DW = 1.41

Note: For Thailand, $i_{bc}$ is the Bank of Thailand rediscount rate against agriculture bills. For Singapore, $i_{fk}$ is the Malaysian overnight interbank rate while it is the United Kingdom representative money market rate for Sri Lanka. $i_f$ for Thailand is the one-month Euro loan rate.

The demand for inter-bank funds is assumed to be a function of the cost of such funds $i_{md}$, the cost of funds from competing sources $i_{cm}$ and a scale variable, w. That is,

$$IND = f\ (i_{md},\ i_{cm},\ L)$$

where $i_{md}$ is the inter-bank money market and $i_{cm}$ is a vector of interest rates on competing sources of funds. This may include domestic and foreign competing rates assuming that banks may also borrow short-term funds from the international money market. The scale variable is represented by total loans. The demand for inter-bank funds is assumed to be negatively related to its own rate, and positively related to the competing rate and the scale variable.

The supply of inter-bank funds by the commercial banks INS is assumed to be positively related to the own rate $i_{md}$ and negatively related to the rate on competing instruments $i_{sm}$. The latter includes the return of other short-term assets both domestic and foreign. The supply of inter-bank funds is also assumed to be positively related to the scale variable, taken to be total deposits. That is,

$$INS = f\ (i_{md},\ i_{sm},\ TL,\ TODB)$$

Solving for $i_{md}$ at equilibrium results in the following relation,

$$i_{md} = f\ (i_{cm},\ i_{sm},\ DTL,\ TODB)$$

In the above relation, it is assumed the inter-bank rate is positively related to the interest rate on competing sources of funds, $i_{cm}$ and on competing substitute assets $i_{sm}$. Also, it is assumed that $i_{md}$ is positively related to total loans and negatively to total deposits.

Thus, the following reduced form equation was estimated:

$$i_{md} = c_{10} + c_{11} i_{dcm} + c_{12} i_{fcm} + c_{13} i_{dsm} + c_{14} i_{fm} + c_{15} TL + c_{16} TODB$$

where d and f in the subscript of the interest rate variables denotes domestic and foreign rates respectively. In certain countries, the interaction of demand and supply is modified by the monetary authorities policy operations. On the commercial banks. For those countries, the equation was augmented by a policy variable, that is, it is assumed that the inter-bank rate is negatively related to open-market operations. Preliminary estimation results are reported in Table 20 for Indonesia, Malaysia, the Philippines, Singapore, Sri Lanka and Thailand.

TABLE 20

INTERBANK RATE

INDONESIA - ESTIMATION PERIOD: 1974 (III) TO (IV)

$$INBR = -13.80 + 0.65i_{md} + 0.006_{if} + 2.22i_{bc}$$
$$(-1.36)\ (2.10)\quad (2.39)\ (1.05)$$
$$R^2 = 0.37 \qquad DW = 0.62$$

MALAYSIA - ESTIMATION PERIOD: 1972 (I) TO 1980 (III)

$$INBR = -2.06 + 1.01i_{md} + 0.04i_{fk} + 3.16LDR$$
$$(-1.36)\ (9.41)\quad (2.69)\quad (1.36)$$
$$R^2 = 0.88 \qquad DW = 1.52$$

- ESTIMATION PERIOD: 1979 (I) TO 1982 (I)

$$INBR7 = -0.69 + 1.62i_{md} + 0.03i_{fk} + 0.08LDR$$
$$(-0.52)\ (5.92)\quad (1.70)\quad (0.27)$$
$$R^2 = 0.42 \qquad DW = 1.74$$

PHILIPPINES - ESTIMATION PERIOD: 1974 (IV) TO 1980 (IV)

$$INBR = 3.66 + 1.19i_{md} + 0.14i_{f} - 4.81LDR$$
$$(0.75)\ (4.76)\quad (2.08)\ (-1.36)$$
$$R^2 = 0.50 \qquad DW = 1.20$$

SINGAPORE - ESTIMATION PERIOD: 1972 (I) TO 1980 (IV)

$$INBR1 = 9.63 + 1.73i_{md} + 0.07i_{fk} - 9.79LDR$$
$$(1.80)\ (4.19)\quad (1.99)\quad (-1.62)$$
$$R^2 = 0.48 \qquad DW = 1.45$$

- ESTIMATION PERIOD: 1975 (I) TO 1982 (I)

$$INBR3 = -7.81 + 1.38i_{md} + 7.94LDR$$
$$(-2.13)\ (5.55)\quad (2.31)$$
$$R^2 = 0.66 \qquad DW = 2.06$$

SRI LANKA - ESTIMATION PERIOD: 1970 (III) TO 1980 (III)

$$INBR = -6.71 + 0.93i_{tb} + 0.70i_{bc} + 0.008i_f + 0.04LDR$$
$$(-2.27)\ (4.57)\quad (2.20)\quad (2.49)\qquad (1.19)$$

$R^2 = 0.65$ DW = 1.88

THAILAND - ESTIMATION PERIOD: 1970 (II) TO 1980 (IV)

$$INBR = -3.14 + 0.66i_{bc} + 0.28i_{tb} + 0.11i_f + 4.14LDR$$
$$(-2.21)\ (4.00)\quad (2.45)\quad (1.92)\qquad (1.84)$$

$R^2 = 0.90$ DW = 1.58

Note: For Indonesia, $i_{bc}$ is the Central Bank refinance rate for small investment credit. $i_f$ for Indonesia and the Philippines is the 3-months Eurodollar deposit rate while it is the United State prime rate for Thailand. For Sri Lanka, it is the United Kingdom representative money market rate. For Malaysia, $i_{fk}$ in the interbank equation is the Singapore overnight interbank rate while in the 7-days interbank equation, it is the Singapore 1-month interbank rate. For Singapore, $i_{fk}$ is the London overnight interbank rate. $i_{md}$ is the discount house rate for Malaysia and Singapore while it is the 6-months NCD rate for Indonesia. For the Philippines, it is the promissory note rate. $i_{tb}$ for Thailand is the weighted average treasury bill rate.

# LIST OF VARIABLES

| | | |
|---|---|---|
| BCB | - | Borrowing from the Central Bank by the commercial banks. |
| DUMEX | - | Dummy variable for exchange control. |
| DUMSS | - | Seasonal dummy variable. |
| ECR | - | Excess cash reserves held by commercial banks. |
| ELR | - | Excess liquid reserves held by commercial banks. |
| EX | - | Exports. |
| FAB | - | Foreign assets held by commercial banks. |
| FLB | - | Foreign liabilities held by commercial banks. |
| GSB | - | Government securities held by commercial banks. |
| INBR | - | Interbank rate. |
| INBR1 | - | Interbank (overnight) rate. |
| INBR3 | - | Interbank (3 months) rate. |
| INBR7 | - | Interbank (7 days) rate. |
| $i_{bc}$ | - | Bank rate or Central Bank rediscount rate. |
| $i_{bk}$ | - | Interbank competing or borrowing rate. |
| $i_c$ | - | Commercial banks loan rate. |
| $i_f$ | - | Foreign interest rate adjusted for exchange rate changes. |
| $i_{fk}$ | - | Foreign interbank interest rate. |
| $i_g$ | - | Interest rate on government securities. |
| $i_{md}$ | - | Domestic money market rates. |
| $i_{tb}$ | - | Treasury bill rate. |
| LDR | - | Loan to deposit ratio. |
| T | - | Trend. |
| TBB | - | Treasury bills held by commercial banks. |
| TDR | - | Time deposit to demand deposit ratio. |
| TL | - | Total loans at commercial banks. |
| TLR | - | Excess liquid reserves held by commercial banks. |
| TODB | - | Total deposits at commercial banks. |

# APPENDICES

Table A 1.1
Burma
Interest Rates on Deposits
at Commercial Banks

| End of period | Time deposits | | | | Savings Deposits |
|---|---|---|---|---|---|
| | 3-mths | 6-mths | 12-mths | 1-5 yrs | |
| 1969 | 0.50 | 0.75 | 1.25 | 3.25-3.00 | 3.5 |
| 1970 | | | | | |
| 1971 | | | | | |
| 1972 | | | | | |
| 1973 | | | | | |
| 1974 | | | | | |
| 1975 | | | | | 6.0 |
| 1976 | | | | | |
| 1977 | 1.00 | 1.50 | 2.50 | 3.50 | 8.0 |
| 1978 | | | | | |
| 1979 | | | | | |
| 1980 | | | | | |
| 1981 | | | | | |
| 1982 | | | | | |
| 1983 | 1.00 | 1.50 | 2.50 | 3.50 | 8.0 |
| 1984 | 1.00 | 1.50 | 2.50 | 3.50 | 8.0 |
| 1985 | 1.00 | 1.50 | 2.50 | 3.50 | 8.0 |

Table A 2.1
Indonesia
Interest Rates on Deposits
at State Banks

| End of Period | Time Deposits | | | | | | Savings Deposits | |
|---|---|---|---|---|---|---|---|---|
| | less than 3-mths | 3-mths | 6-mths | 12-mths | 18-mths | 24-mths | Tabanas* | Taska* |
| 1969 | 12.0 | 18.0 | 24.0 | 30.0 | - | - | | |
| 1970 | | | 21.0 | 24.0 | - | - | | |
| 1971 | | | | | - | - | 18.0 | 15.0 |
| 1972 | 9.0 | 12.0 | 15.0 | 18.0 | - | - | 18.0a/ (12.0) | |
| 1973 | 6.0 | 9.0 | 12.0 | 15.0 | - | - | 15.0 ( 9.0) | |
| 1974 | | | | 18.0 | 24.0 | 30.0 | 18.0b/ ( 9.0) | |
| 1975 | | | | 15.0 | 21.0 | 24.0 | | |
| 1976 | | | | | | | | |
| 1977 | 3.0 | 6.0 | 9.0 | 12.0 | - | 18.0 | 15.0 ( 6.0) | 9.0 |
| 1978 | freed | freed | 6.0 | 9.0 | - | 15.0c/ (12.0) | | |
| 1979 | | | | | | | | |
| 1980 | | | | | | | | |
| 1981 | | | | | | | | |
| 1982 | | | | | | | | |
| 1983d/ | | | freed | freed | freed | freed | 15.0 (2.0) | |
| 1984 | | | | | | | | |
| 1985 | | | | | | | | |

a/ From May 1972 to April 1974, the rate refers to interest payable on the first Rp 100,000 of deposits. The rate in brackets is payable on deposits exceeding Rp 100,000.

b/ From April, 1974, the rate refers to interest payable on the first Rp 200,000 of deposits. The rate in brackets is payable on deposits exceeding Rp 200,000.

c/ From 1978 1st quarter, the rate refers to interest payable on deposits up to Rp 2.5 million. Rate in brackets refers to interest payable on deposits exceeding Rp 2.5 million.

d/ Since June 1, 1983, State Commercial banks and State Development banks are free to determine the maturity and interest rate of time deposits.

* Tabanas refers to the Development Saving Scheme.
Taska refers to the Insurance Saving Scheme.

Table A 3.1
Malaysia
Interest Rates on Deposits
at Commercial Banks

| End of Period | Time Deposits | | | | | | | Savings Deposits |
|---|---|---|---|---|---|---|---|---|
| | 1-mth | 3-mths | 6-mths | 9-mths | 12-mths | 24-mths | 36-mths | |
| 1969 | 3.00 | 5.50 | 5.75 | 6.00 | 6.00 | - | - | 3.50 |
| 1970 | | | | | | | | |
| 1971 | | | | | | 6.25 | 6.75 | |
| 1972 | | 5.00 | 5.25 | 5.50 | 5.75 | 6.00 | 6.50 | |
| 1973 | 4.00 | 6.00 | 6.25 | 7.00 | 8.00 | neg. | neg. | 5.50 |
| 1974 | 4.50 | 6.50 | 7.00 | 8.00 | 9.00 | | | 6.50 |
| 1975 | 3.50 | 5.50 | 6.00 | 6.50 | 7.50 | | | 5.50 |
| 1976 | | | | | | | | |
| 1977 | 3.00 | 5.00 | 5.50 | 5.75 | 6.50 | | | 5.00 |
| 1978 | 5.00 | 5.50 | 5.75 | 6.00 | 6.50 | | | |
| 1979 | 5.25 | | | | 7.00 | | | |
| 1980 | 8.50 | 8.50 | 8.50 | 9.00 | 9.00 | | | 6.00 |
| 1981 | 9.00 | 10.00 | 10.50 | 10.50 | 11.00 | | | 7.00 |
| 1982 | 9.00 | 9.00 | 9.25 | 9.25 | 10.00 | | | 6.50 |
| 1983 | 8.25 | 8.50 | 8.50 | 8.75 | 9.00 | | | 6.00 |
| 1984 | 10.00 | 10.50 | 10.50 | 10.50 | 10.75 | | | 7.50 |
| 1985 | 8.00 | 8.50 | 8.75 | 9.00 | 9.00 | | | 6.75 |

a/ Data for 1985, refers to those at the end of September, 1985.

Table A 3.2
Malaysia
Interest Rates on Deposits
at Finance Companies

| End of Period | Time Deposits | | | | | | | | Savings Deposits |
|---|---|---|---|---|---|---|---|---|---|
| | 3-mths | 6-mths | 9-mths | 12-mths | 24-mths | 36-mths | 48-mths | 60-mths | |
| 1971a/ | 6.50 | 6.75 | 7.00 | 7.00 | 7.25 | 7.50 | 7.75 | 8.00 | 4.50 |
| 1972 | 5.75 | 6.00 | 6.25 | 6.50 | 6.75 | 7.25 | neg. | neg. | ↓ |
| 1973b/ | 6.25 | 6.50 | 6.75 | 7.00 | neg. | neg. | ↓ | ↓ | 5.00 |
| 1974 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| 1975 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| 1976 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| 1977 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| 1978 | 5.30 | 6.00 | 7.00 | 7.30 | ↓ | ↓ | ↓ | ↓ | 7.00 |
| 1979 | 6.50 | 7.00 | 7.50 | 8.00 | ↓ | ↓ | ↓ | ↓ | ↓ |
| 1980 | 9.50 | 9.50 | 10.00 | 10.00 | ↓ | ↓ | ↓ | ↓ | ↓ |
| 1981 | 10.50 | 11.00 | 11.00 | 12.00 | ↓ | ↓ | ↓ | ↓ | ↓ |
| 1982 | 9.00 | 9.25 | 9.50 | 10.00 | ↓ | ↓ | ↓ | ↓ | 8.00 |
| 1983 | 9.00 | 9.50 | 9.50 | 9.75 | ↓ | ↓ | ↓ | ↓ | 8.00 |
| 1984 | 10.75 | 11.00 | 11.00 | 11.00 | ↓ | ↓ | ↓ | ↓ | 9.00 |
| 1985c/ | 9.00 | 9.00 | 9.25 | 9.50 | ↓ | ↓ | ↓ | ↓ | 8.00 |

a/ Prior to February 1, 1971, deposit rates at finance companies not regulated.

b/ With effect from August 1, 1973, the finance companies were free to quote interest rates payable on deposits.

c/ Data for 1985 refers to those at the end of September, 1985.

Table A 4.1
Nepal
Interest Rates on Deposits
at Commercial Banks

| End of Period | Time Deposits | | | | | | | Savings Deposits |
|---|---|---|---|---|---|---|---|---|
| | 3-mths | 6-mths | 1-yr | 1-2 yrs | 2-3 yrs | 3-5 yrs | 5-7 yrs | |
| 1970 | 5.00 | 5.50 | 6.00 | 6.00 | 6.50 | 6.75 | 7.00 | 4.50 |
| 1971 | 4.00 | | 7.50 | 7.75 | 8.00 | 8.25 | 8.50 | 5.00 |
| 1972 | | | | | | | | |
| 1973 | | | | | | | | |
| 1974 | | | 9.50 | 9.75 | 10.00 | 10.25 | 10.50 | 6.50 |
| 1975 | | 10.00 | 15.00 | 16.00 | - | - | - | 8.00 |
| 1976 | | | 14.00 | 15.00 | - | - | - | |
| 1977 | | 9.00 | 12.00 | 13.00 | - | - | - | |
| 1978 | | | | | - | - | - | |
| 1979 | | | | | - | - | - | |
| 1980 | | | | | - | - | - | |
| 1981 | | | | | - | - | - | |
| 1982 | 4.50 | 9.50 | 12.50 | 13.50 | - | - | - | 8.50 |
| 1983 | | | | | | | | |
| 1984a/ | | | | | - | - | - | |

a/ Data for 1984 refers to those at the end of October 1984.

Table A 5.1
Philippines
Interest Rates on Deposits
at Commercial Banks

| End of Period | Time Deposits1/ | | | | | Savings2/ Deposits |
|---|---|---|---|---|---|---|
| | 90 days | 180 days | 360 days | 540 days | 730 days | |
| 1969 | 6.00 | 6.50 | 7.00 | - | - | 6.00 |
| 1970 | | | | 8.00 | - | |
| 1971 | | | | | - | |
| 1972 | | | | | - | |
| 1973 | | | | | - | |
| 1974a/ | 8.00 | 8.50 | 9.50 | | 11.00 | |
| 1975 | | | | | | |
| 1976 | 8.50 | 9.00 | 10.00 | 11.00 | 12.00 | 7.00 |
| 1977 | | | | | | |
| 1978 | | | | | | |
| 1979 | 10.50 | 11.00 | 12.00 | 13.00 | 14.0 | |
| 1980 | | | | | | 9.00 |
| 1981 | 13.35 | 15.29 | 12.90 | - | 17.13 | 9.79 |
| 1982 | 14.10 | 14.09 | 14.16 | - | 17.08 | 9.78 |
| 1983b/ | 12.72 | 13.51 | 14.41 | - | 15.14 | 9.78 |

a/ Starting from the third quarter of 1974, banks could accept time deposits with maturities of 2 years and more and the rates are negotiable.

b/ Data for 1983 refers to those at the end of July, 1983.

1/ Starting October 1981, data refers to the actual weighted average interest average interest rates of 8 selected banks.

2/ Data from October 1981 to June 1982 refer to the actual weighted average interest rates of 10 selected banks, thereafter, data are based on 8 selected banks.

Table A 5.2
Philippines
Interest Rate on Deposits
at Finance Companies

| End of Period | Time Deposits | | | | | Savings Deposits |
|---|---|---|---|---|---|---|
| | 90 days | 180 days | 360 days | 540 days | 730 days | |
| 1969 | | | | | | |
| 1970 | | | | | | |
| 1971 | | | | | | |
| 1972 | | | | | | |
| 1973 | | | | | | |
| 1974 | | | | | | |
| 1975 | | | | | | |
| 1976 | | | | | | |
| 1977 | 9.00 | 9.50 | 10.50 | 11.50 | 12.50 | 7.50 |
| 1978 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| 1979 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| 1980 | 11.00 | 11.50 | 12.50 | 13.50 | 14.50 | 9.50 |
| 1981 | no ceiling | no ceiling | no ceiling | - | - | no ceiling |
| 1982 | ↓ | ↓ | ↓ | | | ↓ |
| 1983 | ↓ | ↓ | ↓ | | | ↓ |

a/ Data for 1983 refers to those at the end of June, 1983.

Table A 6.1
Singapore
Interest Rates on Deposits
at Commercial Banks

| End of Period | Time Deposits[a] | | | | | Savings Deposits |
|---|---|---|---|---|---|---|
| | 1-mth | 3-mths | 6-mths | 9-mths | 12-mths | |
| 1969 | 3.00 | 5.50 | 5.75 | 6.00 | 6.00 | 3.50 |
| 1970 | | | | | | |
| 1971 | | | | | | |
| 1972 | | 5.00 | 5.25 | 5.50 | 5.75 | |
| 1973 | 4.50 | 6.50 | 6.75 | 7.00 | 7.25 | 4.00 |
| 1974 | 6.00 | 7.50 | 8.00 | 8.50 | 9.00 | 5.50 |
| 1975 | - | 4.31 | 4.96 | - | 5.79 | 3.50 |
| 1976 | - | 3.76 | 4.34 | - | 5.31 | 3.52 |
| 1977 | - | 4.54 | 4.98 | - | 5.53 | 3.68 |
| 1978 | - | 5.29 | 5.55 | - | 6.01 | 4.20 |
| 1979 | - | 7.15 | 7.40 | - | 7.65 | 6.38 |
| 1980 | - | 11.22 | 10.92 | - | 10.55 | 9.52 |
| 1981 | - | 7.43 | 8.40 | - | 8.95 | 7.90 |
| 1982 | - | 6.16 | 6.55 | - | 7.08 | 6.43 |
| 1983 | - | 6.53 | 6.55 | - | 6.75 | 6.30 |
| 1984 | - | 6.00 | 6.35 | - | 6.80 | 6.53 |
| 1985 | - | 4.58 | 4.70 | - | 4.88 | 5.18 |

a/ Prior to 15 July, 1975, banks' interest rates were fixed by the Association of Banks in Singapore in consultation with the Monetary Authority of Singapore. From 15 July, 1975 when banks were permitted to quote their own rates, the rates refer to the average quoted by 10 leading banks.

Table A 6.2
Singapore
Interest Rates on Deposits
at Finance Companies

| End of Period | Time Deposits | | Savings Deposits |
|---|---|---|---|
| | Up to 3-months | More than 3-months to 12-months | |
| 1969 | - | - | - |
| 1970 | - | - | - |
| 1971 | - | - | - |
| 1972 | - | - | - |
| 1973 | 6.70 | 7.50 | 5.80 |
| 1974 | 8.30 | 9.80 | 7.10 |
| 1975 | 5.00 | 6.80 | 5.60 |
| 1976 | 4.90 | 6.70 | 5.50 |
| 1977 | 5.30 | 6.50 | 5.40 |
| 1978 | 6.40 | 6.80 | 5.50 |
| 1979 | 8.10 | 7.60 | 7.00 |
| 1980 | n.a. | n.a. | n.a. |
| 1981a/ | n.a. | n.a. | n.a. |
| 1982 | 6.60 | 7.03 - 7.58 | 7.21 |
| 1983 | 6.90 | 7.08 - 7.38 | 7.21 |
| 1984 | 6.48 | 6.75 - 7.18 | 6.93 |
| 1985b/ | 4.88 | 5.03 - 5.30 | 5.41 |

a/ The series was discontinued after September 1981. After this period, a new series is compiled based on average rates quoted by 10 leading finance companies.

b/ The data for 1985 refers to those at the end of November, 1985.

Table A 7.1
Sri Lanka
Interest Rates on Deposits
at Commercial Banks

| End of Period | Time Deposits | | | | | | Savings Deposits |
|---|---|---|---|---|---|---|---|
| | 3-mths | 6-mths | 12-mths | 24-mths | 36-mths | 48-mths | |
| 1969 | 4.00 | 4.00 | 4.00 | 4.25 | 4.50 | 4.75 | 3.75 |
| 1970 | 4.75 | 4.75 | 4.75 | 5.00 | 5.25 | 5.50 | 4.50 |
| 1971 | | | | | | | |
| 1972 | | | | | | | |
| 1973 | | | | | | | |
| 1974 | | | | | | | |
| 1975 | 6.75 | 7.00 | 7.50 | 7.50 | 7.50 | 7.50 | 5.50 |
| 1976 | | | | | | | |
| 1977 | 8.50 | 12.00 | 15.00 | - | - | - | 7.20 |
| 1978 | | | | - | - | - | |
| 1979 | | | | - | - | - | 9.00 |
| 1980 | 16.00 | 18.00 | 20.00 | 22.00 | - | - | 14.00 |
| 1981 | 20.00 | 21.50 | 22.00 | 23.00 | - | - | |
| 1982 | 17.00 | 18.50 | | | - | - | 14.50 |
| 1983 | 22.00 | 25.00 | 25.00 | 20.00 | - | - | 15.00 |
| 1984 | 19.00 | 19.00 | 22.00 | 22.00 | - | - | |
| 1985 | 17.00 | | 18.00 | 18.00 | - | - | 13.50 |

Table A 7.2
Sri Lanka
Interest Rates on Deposits
at National Savings Bank

| End of Period | Time Deposits | | | | | Savings Deposits |
|---|---|---|---|---|---|---|
| | 3-6 mths | 6-9 mths | 9-11 mths | 12-mths | 18-mths | |
| 1969 | 5.5 | 6.0 | 6.5 | 4.5 | - | 3.5 |
| 1970 | | | | | | 4.0 |
| 1971 | | | | 7.5 | - | 7.0 |
| 1972a/ | - | - | - | 7.5 | - | 7.2 |
| 1973 | - | - | - | | - | |
| 1974 | - | - | - | | - | |
| 1975 | - | - | - | | - | |
| 1976 | - | - | - | | - | |
| 1977 | 12.0 | - | - | 15.0 | 18.0 | 8.4 |
| 1978 | | - | - | | | |
| 1979 | | - | - | | | |
| 1980 | 15.0 | - | - | 20.0 | | 12.0 |
| 1981 | | - | - | | | |
| 1982 | | - | - | | | |
| 1983 | 14.0 | - | - | 18.0 | | 12.0 |
| 1984 | 14.0 | - | - | 20.0 | 20.0 | 12.0 |
| 1985 | 13.0 | - | - | 16.0 | | 12.0 |

a/ The National Savings Bank took over the assets and liabilities of the Ceylon Savings Bank with effect from 1st April, 1972.

Table A 7.3
Sri Lanka
Interest Rates on Deposits
at Finance Companies

| End of Period | Time Deposits | | | |
|---|---|---|---|---|
| | 1-mth | 6-mths | 12-mths | 3-yrs |
| 1970 | | | | |
| 1971 | | | | |
| 1972 | | | | |
| 1972 | | | | |
| 1973 | | | | |
| 1974 | | | | |
| 1975 | | | | |
| 1976 | | | | |
| 1977 | | | | |
| 1978 | | | | |
| 1979 | 6.0 | 10.0-16.0 | 12.0-19.0 | 16.0-20.0 |
| 1980 | 10.0 | 15.0-18.0 | 17.0-24.0 | 20.0-30.0 |
| 1981 | - | 20.0-25.0 | 22.0-30.0 | - |
| 1982 | - | 15.0-19.0 | 20.0-26.0 | 21.0-30.0 |
| 1983 | - | 17.0-19.0 | 19.0-23.0 | 21.0-28.0 |
| 1984 | - | 17.0-21.0 | 21.0-24.0 | - |
| 1985a/ | - | 15.0-18.0 | 17.0-21.0 | - |

a/ Data for 1985 refers to those at the end of August, 1985.

Table A 8.1
Thailand
Interest Rates on Deposits
at Commercial Banks

| End of Period | Time Deposits | | | | | | Savings Deposits |
|---|---|---|---|---|---|---|---|
| | less than 3-mths | 3-mths -6-mths | 6-mths -12-mths | 12-mths - 3-yrs | 3-yrs -5-yrs | more than 5-yrs | |
| 1969 | 0.01 | 5.00 | 6.00 | 7.00 | - | - | 3.50 |
| 1970 | | | | | - | - | |
| 1971 | | | | | - | - | |
| 1972 | | | | | - | - | |
| 1973 | | | | | - | - | |
| 1974 | | 6.00 | 7.00 | 8.00 | - | - | 4.50 |
| 1975 | | | | | - | - | |
| 1976 | | | | | - | - | |
| 1977 | | | | | - | - | |
| 1978 | | | | | - | - | |
| 1979 | - | | | 9.00 | - | - | 5.50 |
| 1980 | - | 9.00 | 10.00 | 12.00 | 13.00 | 14.00 | 8.00 |
| 1981 | - | 10.00 | 11.00 | 13.00 | 14.00 | 14.00 | 9.00 |
| 1982 | - | | | | | | |
| 1983 | - | | | | | | |
| 1984 | - | 13.00 | 13.00 | 13.00 | 14.00 | - | 9.00 |
| 1985a/ | - | 13.00 | 13.00 | 13.00 | 14.00 | - | 9.00 |

a/ Data for 1985 refers to those at the end of August, 1982.

Table A 8.2
Thailand
Interest Rates on Promissory Notes
paid by Finance Companies

| End of Period | at call | 1-mth | 3-mths | 6-mths | 12-mths |
|---|---|---|---|---|---|
| 1969 | | | | | |
| 1970 | | | | | |
| 1971 | | | | | |
| 1972 | | | | | |
| 1973 | | | | | |
| 1974 | 9.34 | 9.82 | 10.12 | 10.45 | 10.89 |
| 1975 | 9.40 | 9.37 | 9.70 | 10.03 | 10.77 |
| 1976 | 7.44 | 8.01 | 8.45 | 8.97 | 9.97 |
| 1977 | 8.24 | 8.40 | 8.84 | 9.30 | 10.05 |
| 1978 | 8.98 | 9.40 | 9.73 | 10.04 | 10.65 |
| 1979 | 10.48 | 10.73 | 11.08 | 11.46 | 11.90 |
| 1980 | 12.27 | 12.57 | 13.12 | 13.38 | 13.59 |
| 1981 | 14.10 | 14.20 | 14.60 | 14.90 | 15.40 |
| 1982 | 11.90 | 12.60 | 13.10 | 13.40 | 13.70 |
| 1983a/ | 11.80 | 12.10 | 12.30 | 12.60 | 12.80 |

a/ Data for 1983 refers to those at the end of October, 1983.

Table A 8.3
Thailand
Interest Rates on Deposits
at Government Savings Bank

| End of Period | Time Deposits | | Demand Deposits | Savings Deposits |
|---|---|---|---|---|
| | 6-months | 12-months | | |
| 1969 | 5.00 | | 0.50 | 3.00 |
| 1970 | | | | |
| 1971 | | | | |
| 1972 | 6.00 | 7.00 | | 3.50 |
| 1973 | | | | |
| 1974 | | | | |
| 1975 | | 8.00 | | |
| 1976 | | | | |
| 1977 | | | | 4.50 |
| 1978 | | | | |
| 1979 | 7.00 | | | 5.50 |
| 1980 | 10.00 | 12.00 | | 8.00 |
| 1981 | | 11.00 | | 9.00 |
| 1982 | 11.00 | | | |
| 1983 | 11.00 | 12.50 | | 8.50 |
| 1984 | 11.00 | 12.50 | | 9.00 |
| 1985a/ | 10.00 | 11.00 | | 9.00 |

a/ Data for 1985 refers to those at the end of August, 1985.

Table B 1.1
Burma
Lending Rates of Commercial Banks
and Non-Bank Financial Institutions
(per cent per annum)

| | Lending Rates by Type of Loans | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Prime lending Rate | Average lending Rate | State Corporation Working Capital | | Co-operatives Working Capital | | Private Sector Agriculture | | Small Personal Loans |
| | | | Loans | Terms Loans | Loans | Terms Loans | To Village Banks | To Farmers | |
| 1970 | | | | | 4.0 | 5.0 | 3.0 | 9.0 | 24.0 |
| 1971 | | | | | 4.0 | 5.0 | 3.0 | 9.0 | 24.0 |
| 1972 | | | | | 4.0 | 5.0 | 3.0 | 9.0 | 24.0 |
| 1973 | | | | | 4.0 | 5.0 | 3.0 | 9.0 | 24.0 |
| 1974 | | | | | 4.0 | 5.0 | 3.0 | 9.0 | 24.0 |
| 1975 | | | 6(10)a/ | 3.0 | 6.0 | 7.0 | 6.0 | 12.0 | 24.0 |
| 1976 | | | 6(10)a/ | 3.0 | 6.0 | 7.0 | 6.0 | 12.0 | 24.0 |
| 1977 | | | 6(10)a/ | 5.0 | 8.0b/ | 9.0 | 8.0 | 12.0 | 24.0 |
| 1978 | 5.0 | 7.9 | 6(10)a/ | 5.0 | 8.0b/ | 9.0 | 8.0 | 12.0 | 24.0 |
| 1979 | 5.0 | 7.9 | 6(10)a/ | 5.0 | 8.0b/ | 9.0 | 8.0 | 12.0 | 24.0 |
| 1980 | 5.0 | 7.9 | 6(10)a/ | 5.0 | 8.0b/ | 9.0 | 8.0 | 12.0 | 24.0 |
| 1981 | 5.0 | 7.9 | | | | | | | |
| 1982 | 5.0 | 7.9 | | | | | | | |
| 1983 | 5.0 | 7.9 | | | | | | | |
| 1984 | 5.0 | 7.9 | | | | | | | |
| 1985 | 5.0 | 7.9 | | | | | | | |

a/ penal rates
b/ Special rates for Co-operatives to operate advanced paddy procurement scheme with effect from 25 April 1980.
Repayments within 6 months - 4%
6 - 9 months - 6%
after 9 months - 8%

Table B 2.1
Indonesia
State Bank Lending Rate by Economic Sectors
(In percentage per annum)

| Category1/ | 10 Jul 1969 | 12 Sep 1969 | 31 May 1972 | 12 Apr 1973 | 9 Apr 1974 | 28 Dec 1974 | 1 Apr 1976 | 1 Jan 1978 | 18 Jan 1982 | 1 Jun 1983 |
|---|---|---|---|---|---|---|---|---|---|---|
| Investment Credit2/ | | | | | | | | | | |
| I. Up to Rp 75 million | - | - | 12 | 12 | 12 | 12 | 12 | 10.5 | 10.5 | 12 |
| II. Above Rp 75 million-Rp 200 million | - | - | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| III. Above Rp 200 million-Rp 500 million | - | - | 12 | 12 | 15 | 15 | 15 | 13.5 | 13.5 | 12 |
| IV. Above Rp 500 million | - | - | 12 | 12 | 15 | 15 | 15 | 13.5 | 13.5 | 12 |
| Small Investment Credit (KIK) | - | - | - | - | 12 | 12 | 12 | 10.5 | 10.5 | 12 |
| Permanent Working Capital Credit (KMKP) | - | - | - | - | 15 | 15 | 15 | 12 | 12 | 12 |
| Working Capital Credit | | | | | | | | | | |
| I. Supply and distribution of rice/paddy and corn by BUUDs/KUDs | - | - | - | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| II.1. Bimas and Inmas credit for rice and secondary crops | - | - | 12 | 12-15 | 12 | 12 | 12 | 12 | 12 | 12 |
| 2. Collection and distribution of smallholders salt by BUUDs/KUDs dan PN Garam | - | - | - | - | 15 | 12 | 12 | 12 | 12 | 12 |
| 3. Operation of wheat flour mills | 36 | 36 | 24 | 18 | 12 | 12 | 12 | 12 | 12 | 12 |
| 4. Export and production of export good | 27-36 | 27-30 | 18-21-24 | 15 | 18-21 | 15 | 12 | 12 | 12 | 9 |
| 5. Production, import and distribution fertilizer and insecticides for use by smallholders | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| 6. Aid financed import and distribution of non food commodities | 12-48s/d | 12-36s/d | 60 12 | 12-18s/d | 24 12-18 | 12-18 | 12-18 | 12 | 12 | 12 |
| 7. Collection and distribution of agricultural products animal husbandary and fishery by BUUDs/KUDs & Cooperative | - | - | - | - | 15 | 15 | 15 | 12 | 12 | 12 |
| 8. Smallholders agriculture and handicraft | 27-30 | 27-30 | 24 | 18 | 18 | 15-18 | 15-18 | 12 | 12 | |
| 9. Smallholder animal husbandary, poultry farming and fishery | 27 | 27 | 15-24 | 18 | 15-18-21 | 15-18 | 15-18 | 12 | 12 | |

Table B 2.1 (contd)
Indonesia
State Bank Lending Rate by Economic Sectors
(In percentage per annum)

| 1) Category | 10 Jul 1969 | 12 Sep 1969 | 31 May 1972 | 12 Apr 1973 | 9 Apr 1974 | 28 Dec 1974 | 1 Apr 1976 | 1 Jan 1978 | 18 Jan 1982 | 1 Jun 1983 |
|---|---|---|---|---|---|---|---|---|---|---|
| III 1. Manufacturing and service rendering industries | | | | | | | | | | |
| a. Rice mills/hullers | 36 | 36 | 24 | 18 | 18 | 15 | 15 | 13.5 | 13.5 | |
| b. Sugar mills | 36 | 36 | 24 | 18 | 18 | 15 | 15 | 13.5 | 13.5 | |
| c. Coconut oil/palm oil | 36 | 36 | 24 | 18 | 21 | 18 | 18 | 13.5 | 13.5 | |
| d. Textile | 27 | 27 | 24 | 18 | 18 | 15 | 15 | 13.5 | 13.5 | |
| e. Agriculture equipment | 36 | 36 | 24 | 18 | 21 | 18 | 18 | 13.5 | 13.5 | |
| f. Paper | 30 | 30 | 24 | 18 | 21 | 18 | 18 | 13.5 | 13.5 | |
| g. Cement | 36 | 36 | 24 | 18 | 21 | 18 | 18 | 13.5 | 13.5 | |
| h. Public transportation | 30 | 30 | 24 | 15 | 18 | 15 | 15 | 13.5 | 13.5 | |
| i. Printing and publishing | 36 | 36 | 24 | 18 | 21 | 18 | 18 | 13.5 | 13.5 | |
| j. Tourism | 30 | 30 | 24s/d 36 | 18s/d 24 | 24 | 24 | 24 | 13.5 | 13.5 | |
| 2. Other production activities | 30-36 | 36 | 18-24 | 18 | 21 | 18 | 18 | 13.5 | 13.5 | |
| 3. Import and distribution of supervised goods | 48s/d 72 | 36s/d 60 | 24s/d 36 | 18 | 18 | 18 | 18 | 13.5 | 13.5 | |
| 4. Sugar stock | - | - | 24 | 18 | 18 | 18 | 18 | 13.5 | 13.5 | |
| 5. Domestic trade | 48s/d 72 | 36s/d 60 | 24s/d 36 | 18s/d 24 | 21 | 18 | 18 | 13.5 | 13.5 | |
| 6. Contractors of DIP, INPRES and local government financed projects and contractors of low cost housing projects | 48s/d 72 | 36s/d 60 | 24s/d 36 | 18s/d 24 | 24 | 21 | 21 | 13.5 | 13.5 | |
| IV. Other contractors | 48s/d 72 | 36s/d 60 | 24s/d 36 | 18s/d 24 | 24 | 21 | 21 | 13 | 15.0 | |
| V. Imports and distribution of others import goods | 48s/d 72 | 36s/d 60 | 24s/d 36 | 18s/d 24 | 24 | 24 | 24 | 13 | 18 | |
| VI. Others n.i.e. | 48s/d 72 | 36s/d 60 | 24s/d 36 | 18s/d 24 | 24 | 24 | 24 | 21 | 21 | |

1/ Category as defined in January 1, 1978 regulation
2/ Before January 1, 1978 the maximum amount for each category is as follows:-
I. Up to Rp 25 million
II. Above Rp 25 million - 100 million
III. Above Rp 100 million - 300 million
IV. Above Rp 300 million

Table B 3.1
Malaysia
Lending Rates at Commercial Banks and Finance Companies
(per cent per annum)

| End of Period | Commercial Banks | | | | | | | | Finance Companies |
|---|---|---|---|---|---|---|---|---|---|
| | Prime Lending Rate | Average Lending Rate | Lending Rates by Economic Sectors | | | | | | Average Lending Rate |
| | | | Agriculture | Mining & Quarrying | Manufacturing | Construction | General Commerce | Miscellaneous | |
| 1970 | 8.0 | 9.11 | 9.13 | 9.01 | 8.81 | 9.47 | 9.01 | 9.63 | |
| 1971 | 8.0 | 9.09 | 9.19 | 9.18 | 8.63 | 9.65 | 9.04 | 9.59 | |
| 1972 | 7.5 | 8.80 | 8.58 | 9.10 | 8.38 | 9.64 | 8.70 | 9.27 | |
| 1973 | 9.0 | 9.92 | 9.95 | 9.99 | 9.68 | 10.45 | 9.82 | 10.01 | |
| 1974 | 10.0 | 11.29 | 11.35 | 11.44 | 11.09 | 11.74 | 11.24 | 11.32 | |
| 1975 | 8.5 | 10.32 | 10.48 | 10.41 | 10.22 | 10.78 | 10.13 | 10.38 | |
| 1976 | 7.5 | 10.18 | 10.14 | 10.27 | 10.05 | 10.98 | 10.23 | 10.00 | |
| 1977 | 7.5 | 9.60 | 9.57 | 9.97 | 9.33 | 10.40 | 9.61 | 9.57 | |
| 1978 | 7.5 | 9.47 | 9.41 | 9.67 | 9.19 | 10.30 | 9.55 | 9.38 | |
| 1979 | 7.5 | 9.53 | 9.52 | 10.15 | 9.20 | 10.15 | 9.58 | 9.48 | 10.23 |
| 1980 | 8.5 | 10.59 | 10.51 | 10.61 | 10.14 | 10.92 | 10.48 | 10.07 | 10.39 |
| 1981 | 8.5 | 11.98 | 12.46 | 12.47 | 12.02 | 12.88 | 11.98 | 11.23 | 11.76 |
| 1982 | 8.5 | 12.30 | 12.56 | 12.30 | 12.12 | 13.22 | 12.20 | 11.41 | 12.33 |
| 1983 | 8.5 | 11.60 | 11.85 | 11.20 | 11.15 | 12.31 | 11.58 | 11.16 | 12.01 |
| 1984 | 8.5 | 12.81 | | | | | | | 12.23 |
| 1985a/ | 11.25 | 12.25 | | | | | | | 11.80 |

a/ Data for 1985 refers to those at the end of September, 1985.

Table B 4.1
Nepal
Commercial Banks' Loan Rates
(per cent per annum)

| Existing | | Effective 14th April, 1971 | |
|---|---|---|---|
| SECURITY: | | PURPOSE: | |
| 1. Jute Manufacturers | 9 1/2 | 1. Jute Manufactuers | 9 |
| 2. Textiles | 9 1/2 | 2. Raw Jute | 9 1/2 |
| 3. Gold and Silver | 9 1/2 | 3. Synthetic Textiles and Stainless Steel Utensils | 12 |
| 4. Foodgrains | 9 1/2 | 4. Other Textiles | 10 |
| 5. House and Land | 10 | 5. Gold and Silver | 9 1/2 |
| 6. Miscellaneous Import (Except industrial credit | 9 1/2 | 6. Foodgrains | 10 |
| 7. Imports | 10 | 7. Export Bills | 7 |
| 8. A. B. C. | 7 1/2 | 8. A. B. C. | |
| 9. Overdrafts | 11 | (a) Exports Documents | 7 1/2 |
| 10. Export Bills | | (b) Others | 10 |
| (a) Indian | 8 1/2 | 9. Overdrafts | 12 |
| (b) Other than Indian | 7 1/2 | 10. Hire Purchase : | |
| 11. Hire Purchase | 12 | (a) Domestic Products | 9 |
| 12. Fixed Deposit Receipts per cent more than corresponding deposit rate | 1 | (b) Foreign Products | |
| | | (i) Machineries for Agriculture, Industry and Cottage Industry | 10 |
| | | (ii) Truck, Bus and Lorry | 10 |
| | | (iii) Luxury Goods | 13 |
| | | 11. Industrial Requisites | 8 |
| | | 12. Agricultural Requisites | 7 1/2 |
| | | 13. Development Requisites | 7 |
| | | 14. Essential Consumables (Other than Textiles) | 9 |
| | | 15. Other Imports | 12 |
| | | 16. Priority Industries | |
| | | (a) Against the security of raw materials, and finished goods; against security of house and land for machineries and spare parts; and against security of house and land for working capital needs of industries | 7 1/2 |
| | | (b) Overdrafts | 10 |
| | | 17. Stainless Steel Utensils and Synthetic Textile Industries | 12 |
| | | 18. Fixed Deposit Receipt: One per cent higher than deposit rates in the case of receipts upto two years. One and a half per cent higher than deposit rates in the case of receipts for more than two years | |
| | | 19. Others | 13 (Minimum) |

Source: Nepal Rastra Bank
Quarterly Economic Bulletin - Mid-April 1971

Table B 4.1 (contd.)
Nepal
Commercial Banks' Loan Rates
(per cent per annum)

B. Commercial Bank's Loan Rates
Per cent per annum

| | Effective April 28, 1975 | | Effective July 16, 1976 | Effective February 12, 1977 | Effective April 10, 1978 | Effective June 15, 1982 |
|---|---|---|---|---|---|---|
| Small Sector | 15 | 1. Industrial Loan | | | | |
| | | 1.1 For Fixed | | | | |
| Agricultural Loan | 15 | Capital | | | | |
| | | (a) Basic Industries, Import Substituting | | | | |
| Export Bills | 15 | Industries, Export promoting industries, Forest and Agri-culture-based | | | | |
| HMG Development Bonds | 15 | Industries and | | | | |
| Fixed Deposit Receipts | 2 per cent more than fixed deposit rates | Tourism Industries | 11 | 11 | 11 | 12 |
| | | (b) Luxury Goods Producing Industries | 16 | 16 | 16 | 17 |
| Other Loans | 18 (minimum) | 1.2 For Working Capital | 14 | 14 | 14 | 17 |
| | | 1.3 Cottage and Village | | | | |
| Overdue Loans | 2 per cent more than specified rates | Industries1/ | 10 | 10 | 10 | |
| | | 2. Agricultural Loans2/ | | | | |
| | | (a) Cardamom, Horticulture, Tea and Cotton Cultivation | 8 5/ | 8 | 8 | 10 |
| | | (b) Livestock, Poultry, Fishery, Sericulture and Bee-keeping | 11 5/ | 11 | 11 | 12 |
| | | (c) Irrigation | 14 | 14 | 11 | 12 |
| | | (d) Other Agriculture Loans | 14 | 14 | 14 | 15 |
| | | 3. Services Sector | 14 | 14 | 14 | 15 |
| | | 4. Export Bills | 12 | 12 | 12 | 13 |
| | | 5. HMG Development Bonds3/ | 14 | 14 | 14 | |
| | | 6. Fixed Deposit Receipts | 2 per cent more than fixed deposit rates | 2 per cent more than fixed deposit rates | 2 per cent more than fixed deposit rates | |
| | | 7. Other Loans | 18 (minimum)6/ | 16 (minimum)6/ | 16 (minimum)6/ | 17 (minimum) |
| | | 8. Overdue Loans4/ | 2 per cent more than specified rates | 2 per cent more than specified rates | 2 per cent more than specified rates | |

1/ Industries with fixed assets valued at Rs 200 thousands and less.
2/ For both fixed and working capital.
3/ Development bonds issued after April 28, 1975.
4/ Overdue loans are those loans which are not paid back within the due date as stipulated in the loan agreement. Penal rates (2 per cent more than specified rates) will be charged from the date of expiry of loan repayment till the loan is repaid. Penal rates will also be charged on theloans renewed or extended.
5/ For fixed capital only.
6/ Commercial banks may charge higher rates at their discretion. Commercial banks can fix the margin rates if not fixed by the Rastra Bank.

Source: Nepal Rastra Bank Quarterly Economic Bulletin, mid-April, 1983.

Table B 4.1 (Contd)
Nepal
Commercial Banks' Loan Rates
(per cent per annum)

| Before July 16, 1974 | | Effective July 16, 1974 | |
|---|---|---|---|
| PURPOSE: | | | |
| 1. Jute Manufacturers | 9 | 1. Foodgrains, pulses and oil-seeds | 13 |
| 2. Raw Jute | 9 1/2 | 2. Cloths and Yarns: | |
| 3. Coarse and Medium Type of Cotton Textiles | 10 | (a) Cotton (medium and coarse) | 10 |
| 4. Other Textiles | 13 | (b) Others | 14 |
| 5. Gold and Silver | 9 1/2 | 3. Essential Consumer goods (other than foodgrains, cloths) and development requisites | 9 |
| 6. Foodgrains and Oil Seeds | 10 | | |
| 7. Export Bills | 6 1/2 | 4. Export Bill Credit: | |
| 8. A. B. C. | | (a) Against L/c | 8 |
| (a) Export Documents | 8 | (b) Against documents for collection | 9 |
| (b) Others | 10 | 5. Other bills except export bills | 12 |
| 9. Pre-Export Credit | 9 | 6. Gold and Silver : | |
| 10. Overdrafts (except to priority industries | 12 | (a) Rural area | 10 |
| 11. Hire Purchase : | | (b) Urban area | 11 |
| (a) Domestic Products | 9 | 7. Fully secured documents : | |
| (b) Foreign Products : | | (a) HMG Bonds | 1/2 to 1 1/2 per cent above bond rate fixed by NRB |
| (i) Machineries for Agriculture Industry and Cottage Industry | 10 | | |
| (ii) Trucks, Bus and Lorry | 10 | | |
| (iii) Other Goods | 13 | | |
| 12. Industrial Requisites | 8 | (b) Fixed Deposit Receipts etc. | 2 per cent higher than deposit rate |
| 13. Agricultural Requisites | 7 1/2 | | |
| 14. Development Requisites | 7 1/2 | | |
| 15. Essential Consumables (other than Textiles) | 9 | 8. Hire Purchase: | |
| 16. Exportable Goods | 9 | (a) Domestic products, foreign made agricultural and industrial machineries and transport vehicles | 11 |
| 17. Priority Industries: | | | |
| (a) Against the security of raw materials and finished goods; against security of house and land for machineries and spare parts; and against security of house and land for working capital needs of industries | 7 1/2 | (b) Others | 14 |
| | | 9. Exportables | 10 |
| | | 10. Production Loans : | |
| | | (a) Agricultural Credit for farmers | 10 |
| (b) Overdrafts | 10 | (b) Credit against the security of agricultural goods | 9 |
| 18. Stainless Steel Utensils and Synthetic Textiles Industries | 12 | (c) Credit to priority industries, including working capital | 9 |
| 19. Fixed Deposit Receipts: One per cent higher than deposit rates in the case of receipts upto two years. One and a half per cent higher than deposit rates in the case of receipts for more than two years | | (d) Credit to industries, other than priority industries, including working capital | 12 |
| | | 11. Pre-export credit | 10 |
| | | 12. Supervised credit to small sector | 10 |
| | | 13. All Others | 15 (Minimum) |
| 20. Others | 13 (Minimum) | | |

Note : (a) The rate of interest on loans to the institutions entrusted by HMG with the task of supplying foodgrains and other goods to the population at reasonable prices will be only 9 per cent.

(b) The importers other than these institutions which are entitled to the loans at concessionary rates, are to be given one per cent rebate on regular rate of interest on import credit, if the import is under AR-1 Form.

(c) The Commercial Banks may impose Penal rates on overdue Loans according to their own regulations.

Source: Nepal Rastra Bank Quarterly Economic Bulletin Mid-January 1975.

Table B 5.1
Philippines
Lending Rates of Commercial Banks
(per cent per annum)

| End of Period | Weighted Average Lending Rate |
|---|---|
| 1970 | 11.41 |
| 1971 | 11.83 |
| 1972 | 11.58 |
| 1973 | 12.13 |
| 1974 | 11.76 |
| 1975 | 11.82 |
| 1976 | 12.25 |
| 1977 | 12.08 |
| 1978 | 12.10 |
| 1979 | 11.96 |
| 1980 | 12.01 |

Table B 6.1
Singapore
Lending Rates of Financial Institutions
(per cent per annum)

| End of Period | Commercial Banks | | Finance Companies Average Rates1/ | Asian Currency Units Average Lending Rates2/ |
|---|---|---|---|---|
| | Prime Rate | Average Rate | | |
| 1970 | 8.0 | 8.9 | - | 9.8 |
| 1971 | 8.0 | 9.0 | - | 7.8 |
| 1972 | 7.5 | 8.8 | - | 7.5 |
| 1973 | 9.0 | 9.9 | 10.4 | 10.6 |
| 1974 | 10.25 | 11.7 | 12.6 | 12.3 |
| 1975 | 7.08 | 9.0 | 11.5 | 9.5 |
| 1976 | 6.78 | 8.6 | 10.8 | * |
| 1977 | 7.02 | 8.6 | 10.2 | |
| 1978 | 7.65 | 9.0 | 9.8 | |
| 1979 | 9.48 | 10.5 | 9.9 | |
| 1980 | 13.6 | 14.2 | 11.8 | |
| 1981 | 11.83 | * | * | |
| 1982 | 9.33 | | | |
| 1983 | 8.98 | | | |
| 1984 | 9.40 | | | |
| 1985 | 7.20 | | | |

* series of data discontinued
1/ These rates are weighted by loans or deposits outstanding as at the end of every period.
2/ These average lending rates are weighted by outstanding loans.
Source: MAS Quarterly Bulletins.

Table B 7.1
Sri Lanka
Lending Rates of Commercial Banks Classified
by type of Security[a]/
(per cent per annum)

| End of Period | Loans and Overdrafts secured by | | | | | |
|---|---|---|---|---|---|---|
| | Government Securities | Shares of joint stock companies | Stock in Trade | Immovable Property | Others | Secured Loans |
| 1970 | 9.5 | 11.0 | 12.0 | 11.0 | 12.0 | 12.0 |
| 1971 | 9.5 | 11.0 | 12.0 | 11.0 | 12.0 | 12.0 |
| 1972 | 9.5 | 11.0 | 12.0 | 11.0 | 12.0 | 12.0 |
| 1973 | 9.5 | 11.0 | 12.0 | 11.0 | 12.0 | 12.0 |
| 1974 | 10.0 | 12.0 | 12.5 | 12.0 | 12.5 | 13.5 |
| 1975 | 11.0 | 12.0 | 13.0 | 12.0 | 13.0 | 14.0 |
| 1976 | 14.0 | 13.0 | 14.0 | 14.0 | 14.0 | 14.0 |
| 1977 | 18.0 | 19.0 | 19.0 | 19.0 | 20.0 | 20.0 |
| 1978 | 18.0 | 19.0 | 19.0 | 19.0 | 20.0 | 20.0 |
| 1979 | 18.0 | 19.0 | 20.0 | 19.0 | 20.0 | 21.0 |
| 1980 | 28.0 | 28.0 | 28.0 | 28.0 | 28.0 | 30.0 |
| 1981 | 28.0 | 28.0 | 28.0 | 28.0 | 28.0 | 30.0 |
| 1982 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| 1983 | 30.0 | 30.0 | 30.0 | 28.0 | 28.0 | 30.0 |
| 1984 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 33.0 |
| 1985 | 29.0 | 29.0 | 30.0 | 30.0 | 30.0 | 33.0 |

a/ Rates refer to the maximum rates. These rates relate only to the larger commercial banks in Sri Lanka.

Table B 7.2
Sri Lanka
Lending Rates of Non-Bank Financial Institutions
(per cent per annum)

| End of Period | Agricultural & Industrial Credit Corporation | | | | State Mortgage and Investment Bank[a] |
|---|---|---|---|---|---|
| | Development loans Secured by | | Non-Development Loans Secured by | | |
| | Immovable Property | Movable Property | Immovable Property | Movable Property | |
| 1970 | 9.0 | 10.0 | 10.0 | 12.0 | |
| 1971 | 9.0 | 10.0 | 10.0 | 12.0 | |
| 1972 | 9.0 | 10.0 | 10.0 | 12.0 | |
| 1973 | 9.0 | 10.0 | 10.0 | 12.0 | |
| 1974 | 9.0 | 10.0 | 10.0 | 12.0 | |
| 1975 | 9.0 | 10.0 | 10.0 | 12.0 | |
| 1976 | 9.0 | 10.0 | 10.0 | 12.0 | |
| 1977 | 9.0 | 10.0 | 12.0 | 12-14 | |
| 1978 | 11.0 | 11-14.0 | 12.0 | 12-14 | |
| 1979 | | | | | 5-18 |
| 1980 | | | | | 5-20 |
| 1981 | | | | | 12-24 |
| 1982 | | | | | 12-24 |
| 1983 | | | | | 12-24 |
| 1984 | | | | | 12-14 |
| 1985 | | | | | 10-24 |

a/ The State Mortgage Bank and Agricultural and Industrial Credit Corporation were amalgamated from January 1st, 1979 to form the State Mortgage and Investment Bank. The rates for 1981 are as follows:-

1. Construction of houses and agricultural development: 12%-18%
2. Purchase of property : 18%-22%
3. Other loans : 24%

Table B 8.1
Thailand
Lending Rates at Commercial Banks and Finance Companies
(per cent per annum)

| End of Period | Commercial Banks | | | Finance Companies Loan Rates |
|---|---|---|---|---|
| | Loans to Industrial Enterprises* | Loan for Exports | Others | |
| 1970 | 12.0 | 9.0 | 14.0 | |
| 1971 | 12.0 | 9.0 | 14.0 | |
| 1972 | 11.5 | 8.5 | 14.0 | |
| 1973 | 11.5 | 8.5 | 14.0 | |
| 1974 | 12.5 | 15.0 | 15.0 | |
| 1975 | 12.5 | 15.0 | 15.0 | |
| 1976 | 12.5 | 15.0 | 15.0 | |
| 1977 | 12.5 | 15.0 | 15.0 | |
| 1978 | 12.5 | 15.0 | 15.0 | 20.0 |
| 1979 | 15.0 | 15.0 | 15.0 | 20.0 |
| 1980 | 18.0 | 18.0 | 18.0 | 20.0 |
| 1981 | 19.0 | 19.0 | 19.0 | 21.0 |
| 1982 | 19.0 | 19.0 | 19.0 | 21.0 |
| 1983 | 17.5 | 17.5 | 17.5 | 19.5 |
| 1984 | 17.5-19.0 | 17.5-19.0 | 17.5-19.0 | 21.0 |
| 1985a/ | 17.5-19.0 | 17.5-19.0 | 17.5-19.0 | 21.0 |

a/ Data for 1985 refers to those at the end of August, 1985
* Against collateral for immovables and movables

Source: Bank of Thailand Monthly Bulletin

Table C 2.1
Indonesia
Money Market Rates
(Per Cent Per Annum)

| | | Interbank Call Money | |
|---|---|---|---|
| | | Lowest | Highest |
| 1977 | I | 6.00 | 24.00 |
| | II | | 28.80 |
| | III | | |
| | IV | 6.50 | |
| 1978 | I | 5.0 | |
| | II | | 25.20 |
| | III | | |
| | IV | | |
| 1979 | I | 11.50 | 28.80 |
| | II | 12.50 | |
| | III | | |
| | IV | | |
| 1980 | I | 12.25 | 28.80 |
| | II | 11.00 | 25.20 |
| | III | 8.50 | 28.80 |
| | IV | 10.50 | 28.50 |
| 1981 | I | 14.00 | 28.80 |
| | II | 12.00 | 23.40 |
| | III | 14.00 | 22.50 |
| | IV | 10.00 | 25.00 |
| 1982 | I | 14.00 | 28.80 |
| | II | 16.00 | 28.80 |
| | III | 14.75 | 24.00 |
| | IV | 14.50 | 22.50 |
| 1983 | I | 15.00 | 36.00 |
| | II | 7.00 | 28.80 |
| | III | 3.50 | 19.00 |
| | IV | 10.00 | 20.50 |
| 1984 | I | 12.00 | 31.00 |
| | II | 11.75 | 25.00 |
| | III | 13.00 | 90.00 |
| | IV | 6.00 | 45.00 |
| 1985 | I | 8.00 | 24.50 |
| | II | 7.50 | 16.75 |
| | III | 7.50 | 15.75 |
| | IV | 10.00 | 14.50 |

Table C 3.1
Malaysia
Money Market Rates
(Per Cent Per Annum)

| End of Period | | Inter-bank rates1/ | | Call money rates for funds with Discount Houses | | | Discount rates on Treasury Bills4/ | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Overnight Money | Seven-day2/ Call Money | Minimum | Maximum | Predominant3/ | 3 months | 6 months | 12 month |
| 1977 | I | 3.8 | 4.0 | 2 | 5 3/8 | 4.6 | 3.107 | 3.901 | 4.173 |
| | II | 2.9 | 4.4 | 1 | 5 1/4 | 2.1 | 2.986 | 3.496 | 3.864 |
| | III | 3.1 | 4.9 | 2 1/8 | 4 1/4 | 3.2 | 3.280 | 3.569 | 4.945 |
| | IV | 4.8 | 5.7 | 3 3/4 | 5 | 4.8 | 3.564 | 3.853 | 4.046 |
| 1978 | I | 3.711 | 4.661 | 2.875 | 4.875 | 3.438 | 4.106 | 4.173 | 4.255 |
| | II | 4.617 | 7.197 | 3.750 | 6.00 | 4.25 | 4.144 | 4.244 | 4.257 |
| | III | 4.682 | 8.115 | 2.625 | 6.00 | 5.25 | 4.188 | 4.265 | 4.285 |
| | IV | 2.47 | 4.116 | 0.5 | 5.25 | 1.75 | 4.212 | 4.296 | 4.345 |
| 1979 | I | 3.461 | 5.074 | 1.25 | 5.75 | 3.188 | 3.702 | 3.856 | 4.042 |
| | II | 2.848 | 4.485 | 1.0 | 4.5 | 2.9 | 2.877 | 3.321 | 3.959 |
| | III | 3.902 | 5.553 | 1.50 | 5.0 | 3.5 | 3.238 | 3.794 | 4.021 |
| | IV | 4.372 | 5.258 | 3.00 | 6.50 | 4.60 | 3.467 | - | - |
| 1980 | I | 3.121 | 6.358 | 1.0 | 5.040 | 2.870 | 3.659 | 4.074 | 4.201 |
| | II | 5.083 | 6.813 | 3.0 | 7.0 | 4.69 | 4.174 | - | 4.444 |
| | III | 7.912 | 11.00 | 4.250 | 7.0 | 5.25 | 4.264 | 4.519 | 4.658 |
| | IV | 3.308 | 5.946 | 1.0 | 5.1 | 4.26 | 4.453 | - | - |
| 1981 | I | 6.326 | 7.622 | 3.500 | 5.25 | 4.9 | 4.79 | 4.801 | 4.973 |
| | II | 9.3 | 12.382 | 4.0 | 6.0 | 5.32 | 4.329 | - | 4.831 |
| | III | 4.434 | 9.719 | 1.0 | 5.25 | 4.62 | 4.549 | 4.817 | 4.902 |
| | IV | 3.647 | 6.297 | 2.0 | 5.1 | 4.25 | 4.502 | - | - |

Table C 3.1 (Contd.)
Malaysia
Money Market Rates
(Per Cent Per Annum)

| End of Period | | Inter-bank rates1/ | | Call money rates for funds with Discount Houses | | | Discount rates on Treasury Bills4/ | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Overnight Money | Seven-day2/ Call Money | Minimum | Maximum | Predominant3/ | 3 months | 6 months | 12 month |
| 1982 | I | 6.622 | 10.637 | 1.000 | 10.000 | 5.150 | 4.792 | 4.893 | 4.999 |
| | II | 3.924 | 5.964 | 1.000 | 5.350 | 4.770 | 5.079 | 5.217 | - |
| | III | 6.522 | 8.570 | 3.000 | 7.000 | 5.280 | 5.146 | 5.211 | 5.200 |
| | IV | 5.237 | 7.947 | 3.000 | 5.500 | 5.280 | 5.124 | - | - |
| 1983 | I | 5.907 | 7.044 | 1.000 | 7.000 | 5.250 | 5.088 | 5.139 | 5.208 |
| | II | 6.268 | 7.440 | 4.500 | 6.000 | 5.300 | 5.099 | - | 5.211 |
| | III | 5.702 | 7.041 | 3.000 | 5.500 | 5.320 | 5.160 | 5.207 | 5.222 |
| | IV | 8.354 | 9.412 | 5.250 | 5.500 | 5.320 | 5.196 | - | - |
| 1984 | I | 6.527 | 7.748 | 2.000 | 5.400 | 5.310 | 5.111 | 5.195 | 5.231 |
| | II | 8.424 | 9.017 | 5.200 | 5.500 | 5.330 | 5.082 | - | 5.180 |
| | III | 8.478 | 9.992 | 4.000 | 5.400 | 5.330 | 5.092 | 5.174 | 5.180 |
| | IV | 5.931 | 9.087 | 3.000 | 5.400 | 5.310 | 5.060 | - | - |
| 1985 | I | 8.316 | 9.670 | 5.000 | 5.450 | 5.300 | 5.008 | 5.112 | 5.153 |
| | II | 6.175 | 8.007 | 5.350 | 5.300 | 4.828 | 4.825 | 5.102 | 5.102 |
| | III | 6.833 | 6.597 | 4.500 | 5.200 | 5.100 | 4.702 | 4.735 | 4.851 |

1/ Rates refer tothe inter-bank lending rates of 10 banks.
2/ Data prior to March 1979 refer to those for eight day money.
3/ The rates at which most transaction are affected. The rates reported refer to the average of the predominant rates of the discount houses.
4/ Average rate of discount.

Table C 5.1
Philippines
Interest Rates on Money Market Instruments

| | | Weighted Average Interest Rates | Interbank Call Loans | Promissory Notes | Repurchase Agreements | Certificates of Assignments | Certificates of Participation | Commercial Papers (non-financial) | Commercial Papers (financial) | Central Bank Certificates Indebtedness | Treasury Bills |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1977 | I | 13.974 | 13.153 | 13.986 | 14.618 | 13.721 | - | 15.336 | 17.161 | 13.825 | 9.994 |
| | II | 11.257 | 8.962 | 11.244 | 12.750 | 14.646 | - | 13.522 | 13.705 | 10.263 | 10.257 |
| | III | 11.811 | 12.573 | 11.706 | 12.421 | 15.674 | - | 22.361 | 11.895 | 9.675 | 9.902 |
| | IV | 12.741 | 14.444 | 12.390 | 13.370 | 12.836 | - | 12.774 | 12.498 | 10.153 | 10.229 |
| 1978 | I | 10.013 | 8.751 | 9.920 | 10.785 | 13.867 | 10.205 | 11.102 | 11.139 | 10.971 | 11.608 |
| | II | 9.860 | 8.953 | 9.870 | 10.812 | 10.549 | 9.944 | 10.919 | 10.843 | 9.183 | 9.025 |
| | III | 12.173 | 13.364 | 12.123 | 11.769 | 12.358 | 10.703 | 11.777 | 12.033 | 11.180 | 13.211 |
| | IV | 12.619 | 13.221 | 12.419 | 12.820 | - | 10.879 | 12.250 | 12.427 | 10.727 | 10.796 |
| 1979 | I | 12.467 | 13.137 | 11.989 | 12.321 | 12.496 | 11.702 | 12.538 | 14.712 | 13.255 | 11.352 |
| | II | 13.318 | 14.921 | 12.445 | 13.976 | 13.822 | 13.153 | 14.144 | 14.790 | 13.081 | 11.889 |
| | III | 12.489 | 11.747 | 11.440 | 14.387 | 15.000 | 15.000 | 15.855 | 16.831 | 10.507 | 12.513 |
| | IV | 14.516 | 16.252 | 13.246 | 16.000 | 17.000 | 16.429 | 16.744 | 17.392 | 11.388 | 10.995 |
| 1980 | I | 13.873 | 14.087 | 12.801 | 15.662 | 18.256 | 16.126 | 16.103 | 18.086 | 10.736 | 15.196 |
| | II | 12.320 | 11.335 | 12.354 | 15.532 | 16.993 | 16.400 | 16.151 | 17.832 | 14.216 | 12.395 |
| | III | 12.293 | 9.711 | 10.984 | 15.197 | 15.729 | 15.698 | 16.329 | 15.878 | 12.940 | 12.120 |
| | IV | 15.286 | 15.699 | 14.913 | 15.160 | 15.094 | 14.032 | 17.027 | 16.859 | 13.638 | 13.609 |
| 1981 | I | 16.189 | 17.339 | 15.687 | 15.557 | 16.435 | 14.850 | 17.133 | 17.676 | 14.700 | 9.00 |
| | II | 16.010 | 16.119 | 15.954 | 16.031 | 17.309 | 15.214 | 16.346 | 18.635 | 14.189 | - |
| | III | 14.725 | 12.815 | 15.385 | 15.490 | 17.265 | 18.068 | 16.126 | 17.143 | 11.143 | 13.052 |
| | IV | 15.917 | 14.704 | 16.232 | 15.938 | 17.640 | 17.360 | 16.388 | 18.186 | 13.009 | 17.575 |

Table C 6.1
Singapore
Money Market Rates
(per cent per annum)

| | Inter-bank[1] | | | Average Buying of Discount Houses | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Singapore Dollars | | | |
| | Overnight | 1 month | 3 months | 3 months Treasury Bills | 3 months Commercial Bills | Negotiable Certificates of Deposits 3 months | 6 months | Discount Houses Average Deposits[2] | 3 months Treasury Bills Tender |
| 1977 I | 1.81 | 3.62 | 4.00 | 3.00 | 3.88 | 4.06 | 4.38 | 3.00 | 2.94 |
| II | 5.63 | 4.50 | 4.32 | 3.00 | 4.12 | 4.50 | 4.62 | 3.00 | 2.93 |
| III | 7.13 | 5.50 | 5.38 | 3.19 | 4.88 | 5.50 | 5.75 | 3.24 | 3.04 |
| IV | 4.57 | 5.25 | 5.31 | 3.25 | 4.88 | 5.44 | 5.88 | 3.25 | 3.19 |
| 1978 I | 3.09 | 4.58 | 4.97 | 3.25 | 4.81 | 5.00 | 5.31 | 3.25 | 3.16 |
| II | 3.98 | 4.56 | 4.88 | 3.31 | 4.94 | 4.94 | 5.19 | 3.25 | 3.24 |
| III | 5.63 | 6.51 | 7.00 | 3.56 | 6.56 | 7.06 | 7.19 | 3.63 | 3.50 |
| IV | 3.36 | 6.94 | 7.44 | 4.12 | 7.44 | 7.44 | 7.69 | 4.13 | 4.04 |
| 1979 I | 2.48 | 6.25 | 6.65 | 4.50 | 7.50 | 6.62 | 7.00 | 4.46 | 4.40 |
| II | 5.08 | 7.00 | 7.13 | 4.62 | 7.69 | 7.12 | 7.25 | 4.63 | 4.60 |
| III | 6.15 | 7.87 | 8.50 | 5.75 | 8.38 | 8.56 | 8.75 | 5.49 | 5.75 |
| IV | 14.13 | 10.63 | 10.06 | 6.50 | 10.19 | 10.38 | 9.50 | 6.00 | 6.57 |
| 1980 I | 7.76 | 11.03 | 11.28 | 7.00 | 11.00 | 11.38 | 11.50 | 6.98 | 6.96 |
| II | 9.49 | 9.41 | 9.13 | 6.88 | 9.81 | 9.19 | 9.06 | 6.85 | 6.76 |
| III | 13.26 | 11.00 | 10.55 | 7.25 | 11.06 | 10.62 | 10.62 | 7.20 | 7.01 |
| IV | 13.10 | 13.13 | 13.00 | 6.88 | 14.06 | 13.00 | 12.94 | 7.25 | 6.78 |
| 1981 I | 7.5 | 11.44 | 11.94 | 6.44 | 12.25 | 11.31 | 11.21 | 7.25 | 6.35 |
| II | 7.0 | 11.88 | 12.00 | 6.19 | 12.13 | 12.00 | 11.69 | 6.49 | 6.10 |
| III | 11.50 | 13.12 | 13.19 | 6.25 | 14.25 | 13.25 | 13.25 | 7.00 | 6.27 |
| IV | 7.50 | 8.00 | 7.50 | 2.25 | 8.50 | 8.38 | 9.38 | 4.24 | 2.38 |

Table C 6.1 (Contd.)
Singapore
Money Market Rates
(per cent per annum)

| | | Inter-bank[1] | | | Average Buying of Discount Houses | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Overnight | 1 month | 3 months | 3 months Treasury Bills | 3 months Commercial Bills | Singapore Dollars Negotiable Certificates of Deposits 3 months | Singapore Dollars Negotiable Certificates of Deposits 6 months | Discount Houses Average Deposits[2] | 3 months Treasury Bills Tender |
| 1982 | I | 8.50 | 8.50 | 8.63 | 3.38 | 9.44 | 8.63 | 8.75 | 3.50 | 3.33 |
| | II | 4.00 | 9.00 | 9.25 | 4.00 | 9.56 | 9.38 | 9.38 | 4.00 | 3.92 |
| | III | 7.00 | 7.31 | 7.75 | 3.06 | 7.94 | 7.75 | 7.94 | 3.50 | 3.01 |
| | IV | 10.75 | 8.75 | 8.50 | 2.75 | 8.50 | 8.38 | 7.75 | 3.25 | 2.57 |
| 1983 | I | 5.50 | 6.25 | 6.31 | 2.38 | 6.63 | 6.31 | 6.75 | 3.00 | 2.31 |
| | II | 6.50 | 7.06 | 7.06 | 2.56 | 7.88 | 7.13 | 7.25 | 3.00 | 2.62 |
| | III | 5.75 | 6.63 | 6.81 | 2.69 | 7.31 | 6.75 | 7.00 | 3.00 | 2.64 |
| | IV | 9.38 | 7.88 | 7.75 | 2.63 | 8.50 | 7.56 | 7.56 | 3.00 | 2.59 |
| 1984 | I | 8.50 | 7.88 | 7.69 | 2.69 | 8.50 | 7.81 | 7.81 | 3.00 | 2.64 |
| | II | 8.38 | 8.19 | 8.25 | 3.13 | 9.06 | 8.31 | 8.56 | 3.25 | 3.01 |
| | III | 8.13 | 8.25 | 8.25 | 3.13 | 8.88 | 8.31 | 8.38 | 3.25 | 3.01 |
| | IV | 6.81 | 6.19 | 6.25 | 2.88 | 7.06 | 6.19 | 6.50 | 3.13 | 2.91 |
| 1985 | I | 2.25 | 5.75 | 5.94 | 3.00 | 6.13 | 5.94 | 6.25 | 2.99 | 2.98 |
| | II | 5.00 | 5.13 | 5.00 | 2.81 | 5.38 | 5.19 | 5.25 | 2.88 | 2.87 |
| | III | 9.00 | 7.00 | 6.25 | 3.13 | 6.50 | 6.50 | 6.25 | 3.13 | 3.05 |
| | IV | 5.25 | 5.31 | 5.31 | 3.00 | 5.81 | 5.38 | 5.44 | 3.00 | 2.95 |

1/ Rates are the modes quoted by money brokers.
2/ Weighted average cost of funds of discount houses.

Table C 7.1
Sri Lanka
Money Market Rates
(Per Cent Per Annum)

| | | Inter-bank Call Loans | Bills Purchased and Discounted | Government Treasury Bills | | | Bank Rate[b] |
|---|---|---|---|---|---|---|---|
| | | | | Primary Market[a] | Secondary Market | | |
| | | | | | Discount | Rediscount | |
| 1977 | I | 5-8 | 8 1/2-13 | 5.0 | - | - | 8.5 |
| | II | 5-8 | 8 1/2-13 | ↓ | - | - | 8.5 |
| | III | 7-9 1/2 | 11-21 | - | - | - | 10.0 |
| | IV | 7-9 1/2 | 11-21 | 9.0 | - | - | ↓ |
| 1978 | I | ↓ | ↓ | ↓ | - | - | |
| | II | | | | - | - | |
| | III | | | | - | - | |
| | IV | | | | | | |
| 1979 | I | | | | - | - | |
| | II | 9-10 | | | - | - | |
| | III | 9 1/2-13 1/2 | | | | | |
| | IV | 9-11 | 13-21 | ↓ | - | - | |
| 1980 | I | 10-14 | 13-21 | 9.0 | - | - | 10.0 |
| | II | 15 1/2-19 1/2 | 15-25 | 13.0 | - | - | 12.0 |
| | III | 15 1/2-19 3/4 | ↑ | ↑ | - | - | 20.0 |
| | IV | 21 1/2-25 | ↑ | ↑ | - | - | 12.0 |
| 1981 | I | 11-14 | ↑ | ↑ | - | - | 12.0 |
| | II | 19 1/4-23 | ↑ | ↑ | 16.0 | 16.5 | 12.0 |
| | III | 18-21 | ↑ | ↑ | 16.0 | 16.5 | 14.0 |
| | IV | 15-18 | ↓ | ↓ | 15.0 | 15.25 | 14.0 |

Table C 7.1 (Contd.)
Sri Lanka
Money Market Rates
(Per Cent Per Annum)

| | | Inter-bank Call Loans | Bills Purchased and Discounted | Government Treasury Bills | | | Bank Rate[b] |
|---|---|---|---|---|---|---|---|
| | | | | Primary Market[a] | Secondary Market | | |
| | | | | | Discount | Rediscount | |
| 1982 | I | 15.5-17 | 15-25 | 13.0 | 12.0 | 14.0 | 14.0 |
| | II | 12.75-15 | 15-25 | 13.0 | 12.0 | 14.0 | 14.0 |
| | III | 10-17 | 15-25 | 13.0 | 12.0 | 13.5 | 14.0 |
| | IV | 15.75-18.5 | 14-28 | 13.5 | 12.25 | 13.25 | 14.0 |
| 1983 | I | 16.75-19.5 | 14.28 | 13.91 | 12.75 | 13.75 | 13.0 |
| | II | 11.5-15 | 14-28 | 13.0 | 12.0 | 12.50 | 13.0 |
| | III | 19-24 | 14-28 | 12.0 | 12.0 | 12.75 | 13.0 |
| | IV | 20-37 | 14-28 | 12.0 | 12.0 | 12.50 | 13.0 |
| 1984 | I | 14-35 | 13-28 | 12.0 | 12.0 | 14.2 | 13.0 |
| | II | 12-17 | 11-28 | 15.0 | 12.0 | 14.2 | 13.0 |
| | III | 12-16 | 11-28 | 14.0 | 14.0 | 14.2 | 13.0 |
| | IV | 14-15 1/2 | 13-28 | 14.0 | 14.0 | 14.2 | 13.0 |
| 1985 | I | 12-14 1/2 | 11 4/5-25 | 14.0 | 14.0 | 14.2 | 13.0 |
| | II | 12-15 | 11 4/5-25 | 14.0 | 14.0 | 14.2 | 13.0 |
| | III | 11-13 3/4 | 11-25 | 13.0 | 12.8 | 13.0 | 13.0 |
| | IV | | | | | | |

a/ Weighted average of bills sold on tender. From August 15, 1969, the rate paid on Treasury bills purchased by the Central Bank is 3.24 per cent. Beginning November 1977 the Central Bank purchases Treasury Bills at the current market rate.

b/ This is the rate at which Central Bank grants advances to commercial banks for their temporary liquidity purposes. However, since August 1977 each bank, depending on selected assets items was allocated a certain quota of such borrowing at the Bank Rate. Borrowings in excess of this quota was subjected to a penal interest rate of 15 per cent per annum. In September 1979, a graduated scale of penal rates ranging between 15 and 25 per cent was introduced. It was further revised upward to a range between 20-30 per cent effective from April 1980.

Table C 8.1
Thailand
Money Market Rates
(per cent per annum)

| | | Commerial Bank Call Money Rates | Sold at tender* Total Accepted Bid | Sold at tender* Excluding Bank of Thailand's Bid | Sold from Bank of Thailand's Portfolio1/2/ 1-30 days | 31-60 days | 61-120 days | 121-182 days | Rediscount at Bank of Thailand1/ 2-30 days | 31-60 days | 61-120 days | 121-182 days |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1977 | I | | | | | | | | | | | |
| | II | | | | | | | | | | | |
| | III | 8.29 | 4.47 | 6.43 | 6.025 | 6.025 | 6.33 | 6.66 | 6.45 | 6.45 | 6.50 | 6.86 |
| | IV | 9.32 | 6.84 | 6.84 | 6.28 | 6.28 | 6.43 | 6.69 | 6.71 | 6.71 | 6.77 | 6.88 |
| 1978 | I | 10.42 | 6.59 | 6.59 | 6.30 | 6.30 | 6.60 | 6.76 | 6.85 | 6.85 | 6.94 | 6.99 |
| | II | 10.21 | 7.23 | 7.11 | 6.30 | 6.48 | 6.66 | 6.80 | 6.60 | 6.78 | 6.90 | 6.98 |
| | III | 10.43 | - | - | 5-6.68 | 6.85 | 6.85 | 6.96 | 5.50-6.68 | 7.05 | 7.05 | 7.14 |
| | IV | 12.00 | 7.20 | 7.09 | 5.40-6.70 | 6.85 | 7.10 | 7.25 | 6.55-6.90 | 7.10 | 7.25 | 7.40 |
| 1979 | I | 12.66 | 6.85 | - | 5.73-6.88 | 6.97 | 7.15 | 7.27 | 6.84-7.12 | 7.15 | 7.28 | 7.40 |
| | II | 12.89 | 6.84 | 6.84 | 5.71-6.87 | 6.96 | 7.14 | 7.27 | 6.84-7.12 | 7.15 | 7.28 | 7.40 |
| | III | 13.24 | 7.51 | 7.51 | 5.85-6.91 | 6.97 | 7.14 | 7.27 | 6.84-7.12 | 7.15 | 7.28 | 7.40 |
| | IV | 14.76 | 7.58 | 7.52 | 5.89-6.75 | 7.20 | 7.38 | 7.49 | 6.84-7.25 | 7.59 | 7.72 | 7.84 |
| 1980 | I | 16.78 | 8.45 | 8.73 | 7.65-8.45 | 8.85 | 9.25 | 9.65 | 8.15-8.75 | 9.35 | 7.75 | 10.15 |
| | II | 12.49 | 8.98 | 9.28 | 6.98-7.32 | 7.75 | 8.17-8.59 | 9.50 | 7.48-7.82 | 8.25 | 8.67-9.09 | 10.00 |
| | III | 12.75 | 8.70 | 8.70 | 7.41-7.75 | 8.17 | 8.59-9.01 | 9.91 | 7.91-8.25 | 8.67 | 9.09-9.51 | 10.41 |
| | IV | 16.55 | 10.86 | 10.86 | 8.26-8.59 | 9.01 | 9.42-9.87 | 10.59 | 8.76 9.09 | 9.51 | 9.92-10.37 | 11.09 |
| 1981 | I | 16.69 | 11.00 | 10.92 | 8.38-8.72 | 9.13 | 9.54-9.97 | 10.71 | 8.88-9.22 | 9.63 | 10.04-10.47 | 10.21 |
| | II | 17.94 | 11.24 | 11.24 | 8.84-9.18 | 9.70 | 10.03-10.20 | 10.75 | 9.34-9.83 | 10.42 | 10.75-10.92 | 11.49 |
| | III | 18.55 | 12.54 | 12.54 | 10.07-10.46 | 10.09 | 11.52-11.60 | 12.05 | 10.57-11.11 | 11.82 | 12.26-12.33 | 12.78 |
| | IV | 14.29 | 11.70 | 11.70 | 9.80-10.35 | 10.80 | 10.9 -10.95 | 11.00 | 10.30-10.85 | 11.45 | 11.60-11.65 | 11.70 |

Table C 8.1 (Contd.)
Thailand
Money Market Rates
(per cent per annum)

| | | Commerial Bank Call Money Rates | Sold at tender* Total Accepted Bid | Sold at tender* Excluding Bank of Thailand's Bid | Sold from Bank of Thailand's Portfolio1/2/ 1-30 days | 31-60 days | 61-120 days | 121-182 days | Rediscount at Bank of Thailand1/ 2-30 days | 31-60 days | 61-120 days | 121-182 days |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1982 | I | 16.21 | 12.73 | 12.73 | 10.5-11.00 | 11.40 | 11.55-11.70 | 11.95 | 11.05-11.75 | 12.25 | 12.40-12.55 | 12.80 |
| | II | 17.22 | 13.62 | 13.62 | 10.95-11.45 | 11.78 | 11.98-12.20 | 12.42 | 11.5 -12.20 | 12.63 | 12.83-13.05 | 13.32 |
| | III | 13.53 | 10.26 | 10.26 | 8.20-8.45 | 8.60 | 8.80-9.00 | 9.20 | 8.95-9.40 | 9.55 | 9.75-9.95 | 10.15 |
| | IV | 11.99 | 9.21 | 9.21 | 7.86-8.15 | 8.36 | 8.63-8.90 | 9.26 | 8.61-9.12 | 9.34 | 9.62-9.91 | 10.31 |
| 1983 | I | 10.49 | 8.41 | 8.41 | 7.61-7.90 | 8.15 | 8.2-8.74 | 9.20 | 8.61-8.91 | 9.19 | 9.46-9.81 | 10.31 |
| | II | 11.14 | 9.54 | 9.54 | 8.21-8.51 | 8.77 | 9.10-9.49 | 9.97 | 9.22-9.52 | 9.81 | 10.15-10.55 | 11.08 |
| | III | 13.27 | 9.85 | 10.44 | 8.41-8.71 | 8.98 | 9.31-9.70 | 10.75 | 9.42-9.73 | 10.01 | 10.36-10.77 | 11.36 |
| | IV | 14.94 | 10.24 | 10.24 | 8.71-9.02 | 9.29 | 9.68-10.13 | 10.75 | 9.72-10.03 | 10.32 | 10.73-11.20 | 11.87 |
| 1984 | I | 15.25 | 10.92 | 10.92 | 8.87-9.17 | 9.50 | 9.83-10.29 | 10.92 | 9.87-10.18 | 10.53 | 10.88-11.36 | 12.03 |
| | II | 12.79 | 9.42 | 9.42 | 8.51-8.81 | 9.14 | 9.47-9.91 | 10.53 | 8.52-9.83 | 10.17 | 10.52-10.98 | 11.64 |
| | III | 13.73 | 10.26 | 10.26 | 8.61-8.91 | 9.19 | 9.47-9.91 | 10.53 | 9.62-9.93 | 10.22 | 10.52-10.98 | 11.64 |
| | IV | 10.97 | 12.00 | 12.00 | 7.20 | 7.86-9.15 | 7.86-9.15 | 7.86-9.15 | 9.32 | 9.92-11.37 | 9.92-11.37 | 9.92-11.37 |
| 1985 | I | 17.54 | 12.11 | 12.11 | 10.08 | 10.70-12.21 | 10.70-12.21 | 10.70-12.21 | 11.61 | 12.26-13.91 | 12.26-13.91 | 12.26-13.91 |
| | II | 11.35 | 11.34 | 11.34 | 9.07 | 9.66-11.09 | 9.66-11.09 | 9.66-11.09 | 10.59 | 11.22-12.77 | 11.22-12.77 | 11.22-12.77 |

1/ Since April 1978, the periods are changed to 1-28 days, 29-63 days, 64-126 days and 127-183 days respectively.
2/ Since May 1980, the periods are changed to 3-30 days, 31-60 days, 61-120 days and 121-183 days respectively.
* Rates are per bills previously sold from Bank of Thailand's portfolio. For bills previously sold at tender, the rates are the same as those bills previously from Bank of Thailand's portfolio.

Table C 8.2
Thailand
Commercial Banks' Discount Rates
Classified by purpose
(per cent per annum)

| | Discount Rates on: | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Commercial bills | Export bills | Bills on raw materials of Industrial use | Bills on sales on Credit of industrial products | Export bills1/ | Bills Arising from industrial under-takings1/ | Bills Arising from industrial agricul-tural products1/ | Agricultural Bills1/ |
| 1970 | 14.0 | 9.0 | 10.0 | 10.0 | 7.0 | 7.0 | 7.0 | 12.0 |
| 1971 | 14.0 | 8.0 | 10.0 | 10.0 | 7.0 | 7.0 | 7.0 | 12.0 |
| 1972 | 14.0 | 8.5 | 9.5 | 9.5 | 7.0 | 7.0 | 7.0 | 10.0 |
| 1973 | 14.0 | 8.5 | 9.5 | 9.5 | 7.0 | 7.0 | 7.0 | 10.0 |
| 1974 | 15.0 | 15.0 | 10.5 | 10.5 | 7.0 | 7.0 | 7.0 | 10.0 |
| 1975 | 15.0 | 15.0 | 10.5 | 10.5 | 7.0 | 7.0 | 7.0 | 10.0 |
| 1976 | 15.0 | 15.0 | 12.5 | 12.5 | 7.0 | 7.0 | 7.0 | 10.0 |
| 1977 | 15.0 | 15.0 | 12.5 | 12.5 | 7.0 | 7.0 | 7.0 | 10.0 |
| 1978 | 15.0 | 15.0 | 12.5 | 12.5 | 7.0 | 7.0 | 7.0 | 10.0 |
| 1979 | 15.0 | 15.0 | 15.0 | 15.0 | 7.0 | 7.0 | 7.0 | 10.0 |
| 1980 | 18.0 | 18.0 | 18.0 | 18.0 | 7.0 | 7.0 | 7.0 | 10.0 |
| 1981 | 19.0 | 19.0 | 19.0 | 19.0 | 7.0 | 7.0 | 7.0 | 10.0 |
| 1982 | 19.0 | 19.0 | 19.0 | 19.0 | 7.0 | 7.0 | 7.0 | 10.0 |
| 1983 | 17.5 | 17.5 | 17.5 | 17.5 | 7.0 | 7.0 | 7.0 | 10.0 |
| 1984 | 17.5-19.0 | 17.5-19.0 | 17.5-19.0 | 17.5-19 | 8.0-9.0 | 8.0-9.0 | - | - |
| 19852/ | 17.5-19.0 | 17.5-19.0 | 17.5-19.0 | 17.5-19 | 8.0-9.0 | 8.0-9.0 | - | - |

1/ Applicable to those bills rediscounted at the Bank of Thailand
2/ Data for 1985 refers to those at the end of August, 1985.

Source: Bank of Thailand Quarterly Bulletins

Table D 3.1
Malaysia
Interest Rates on Government Securities
(Per Cent Per Annum)

| | Coupon Rate on Federal Government Securities | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 3 yrs | 5 yrs | 10 yrs | 11 yrs | 15 yrs | 18 yrs | 20 yrs | 15-20 yrs |
| 1972 | 5.75 | 6.0 | 6.5 | | | | 7.0 | |
| 1973 | 6.5 | 6.75 | 7.25 | | | | 7.75 | |
| 1974 | 6.75 | 7.0 | 7.5 | | | | 8.0 | |
| 1975 | 6.75 | 7.0 | 7.5 | | | | 8.0 | 8.0 |
| 1976 | - | - | - | | | | | 8.0 |
| 1977 | 6.125 | 6.375 | | | 7.625 | | | - |
| 1978 | - | 6.375 | | - | 7.625 | | | - |
| 1979 | - | - | | 7.150 | - | 7.7 | - | - |
| 1980 | - | - | - | - | 8.0 | - | 8.5 | |
| 1981 | - | - | - | - | 8.0 | 8.3 | 8.5 | |
| 1982 | 6.500 | 7.000 | - | - | 8.0 | - | 8.6 | - |
| 1983 | - | - | 7.7a/ | - | - | - | 8.6 | - |
| 1984 | - | - | - | - | - | - | - | 8.6 |
| 1985 | - | - | - | - | - | - | - | 8.6 |

a/ Refers to 12 years

Table D 4.1
Nepal
Interest Rates on Treasury Bills and Government Bonds
(Per Cent Per Annum)

| End of Period | Treasury Bill (3 months) | Development Bonds |
|---|---|---|
| 1970 | 3.0 | 7.25 |
| 1971 | | 7.50 |
| 1972 | | 8.50 |
| 1973 | | |
| 1974 | 4.0 | 10.0 |
| 1975 | | |
| 1976 | | |
| 1977 | 5.0 | |
| 1978 | | |
| 1979 | | |
| 1980 | | |
| 1981 | | |
| 1982 | | |
| 1983 | | |
| 1984 | | |

Table D 5.1
Philippines
Interest Rates on Government Instruments
(per cent per annum)

| | Repurchase Agreements | Certificate of Assignment | Certificate of Participation | Development Bank of Philippines Bonds | Other Government Securities |
|---|---|---|---|---|---|
| 1974 | 11.308 | - | - | 15.607 | - |
| 1975 | 17.529 | - | - | 13.957 | 26.00 |
| 1976 | 15.255 | - | - | 13.803 | 5.027 |
| 1977 | 13.235 | 11.666 | - | 11.00 | 11.359 |
| 1978 | 13.139 | - | - | - | 13.448 |
| 1979 | 15.459 | - | - | 10.152 | - |
| 1980 | 15.111 | - | - | 17.760 | 9.000 |
| 1981 | 15.488 | - | - | 17.814 | 9.058 |

Table D 8.1
Thailand
Interest Rates on Government Securities
(Per Cent Per Annum)

| End of Period | Government Securities |
|---|---|
| 1970 | 7.9 |
| 1971 | 7.5-9.5 |
| 1972 | 7.5-8.5 |
| 1973 | 7.5-8.5 |
| 1974 | 8.5 |
| 1975 | 8.5 |
| 1976 | 8.5 |
| 1977 | 8.5-9.0 |
| 1978 | 8.5-9.25 |
| 1979 | 9.5-10.25 |
| 1980 | 9.5-13.25 |
| 1981 | 13.0-13.5 |
| 1982 | 12.5-14.0 |
| 1983 | 11.0-11.75 |
| 1984 | 12.5 |
| 1985a/ | 11.25-12.00 |

a/ Data for 1985 refers to those at the end of August, 1985

Table E 2.1
Indonesia
Percentage and Rate of Rediscount facilities
by Bank Indonesia to the State Bank

| Category3/ | Rediscount Percentage2/ | | | | | | Rediscount Rates1/ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Apr.9 1974 | Dec.28 1974 | Apr.1 1976 | Jan.1 1978 | Jan.18 1982 | Aug.27 1982 | Apr.9 1974 | Dec.28 1974 | Apr.1 1976 | Jan.1 1978 | Jan.18 1982 | Aug.27 1982 |
| Investment (medium-term) credits by category4/ | | | | | | | | | | | | |
| I. Up to Rp 75 million | 80 | 80 | 80 | 80 | 80 | 85 | 4 | 4 | 4 | 3 | 3 | 3 |
| II. Above Rp 75 million - Rp 200 million | 75 | 75 | 75 | 75 | 75 | 75 | 4 | 4 | 4 | 4 | 4 | 4 |
| III. Above Rp 200 million - Rp 500 million | 70 | 70 | 70 | 70 | 70 | 70 | 4 | 6 | 6 | 4 | 4 | 4 |
| IV. Above Rp 500 million | 65 | 65 | 65 | 65 | 65 | 65 | 4 | 6 | 6 | 4 | 4 | 4 |
| Small Investment Credits (KIK) | | | | | | | | | | | | |
| Credit of no more than Rp 5 million5/ | 80 | 80 | 80 | 80 | 80 | 80 | 4 | 4 | 4 | 3 | 3 | 3 |
| Permanent Working Capital Credits (KMKP) | | | | | | | | | | | | |
| Credits ofno more than Rp 5 million5/ | 70 | 70 | 70 | 75 | 75 | 75 | 8 | 8 | 8 | 4 | 4 | 4 |
| Short-term credits | | | | | | | | | | | | |
| I. Supply and distribution of rice, paddy & corn by BUUDs/KUDs | 100 | 100 | 100 | 100 | 100 | 100 | 3 | 3 | 3 | 3 | 3 | 3 |
| II. 1. BIMAS and INMAS credits for rice and secondary crops | 100 | 100 | 100 | 100 | 100 | 100 | 3 | 3 | 3 | 3 | 3 | 3 |
| 2. Collection and distribution of small-holders salt by BUUDs/KUDs and PN Garam and working capital credits for PN Garam | 50 | 80 | 60 | 75 | 75 | 75 | 6 | 6 | 6 | 4 | 4 | 4 |
| 3. Operation of wheat flour mills | 75 | 70 | 70 | 75 | 75 | 75 | 6 | 6 | 6 | 4 | 4 | 4 |
| 4. Export & production of export goods | 50 | 70 | 70 | 75 | 75 | 75 | 10 | 10 | 5 | 4 | 4 | 4 |
| 5. Production,import and distribution of fertilizer and insecticides for use by small-holders | 85 | 85-80 | 85-80 | 75 | 75 | 75 | 6 | 6 | 6 | 4 | 4 | 4 |
| 6. Aid financed import and distribution of non food commodities | 100 | 100-50 | 100-50 | 75 | 75 | 75 | 6 | 6-10 | 6-10 | 4 | 4 | 4 |
| 7. Collection and distribution of agricultural product, animal husbandry & fishery by BUDDs/KUDs & Cooperatives | - | 70 | 70 | 75 | 75 | 75 | - | - | 10 | 4 | 4 | 4 |
| 8. Smallholders agriculture and handicraft | 25 | 70 | 50-70 | 75 | 75 | 75 | 10 | 10 | 10 | 4 | 4 | 4 |
| 9. Smallholders animal husbandry, poultry farming and fishery | 25 | 70 | 50-70 | 75 | 75 | 75 | 10 | 10 | 10 | 4 | 4 | 4 |

Table E 2.1 (contd.)
Indonesia
Percentage and Rate of Rediscount facilities
by Bank Indonesia to the State Bank

| Category3/ | Rediscount Percentage2/ | | | | | | Rediscount Rates1/ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Apr.9 1974 | Dec.28 1974 | Apr.1 1976 | Jan.1 1978 | Jan.18 1982 | Aug.27 1982 | Apr.9 1974 | Dec.28 1974 | Apr.1 1976 | Jan.1 1978 | Jan.18 1982 | Aug.27 1982 |
| III. 1. Manufacturing and Service Rendering industries | | | | | | | | | | | | |
| a. Rice mills/millers | 25 | 70 | 70 | 70 | 70 | - | 10 | 10 | 10 | 6 | 6 | - |
| b. Sugar mills | 25 | 70 | 70 | 70 | 70 | - | 10 | 10 | 10 | 6 | 6 | - |
| c. Coconut oil & palm oil | - | 50 | 50 | 70 | 70 | - | - | 10 | 10 | 6 | 6 | - |
| d. Textile | 25 | 70 | 70 | 70 | 70 | - | 10 | 10 | 10 | 6 | 6 | - |
| e. Agricultural equipment | - | 50 | 50 | 70 | 70 | - | - | 10 | 10 | 6 | 6 | - |
| f. Paper | - | 50 | 50 | 70 | 70 | - | - | 10 | 10 | 6 | 6 | - |
| g. Cement | - | 50 | 50 | 70 | 70 | - | - | 10 | 10 | 6 | 6 | - |
| h. Public transportation | 50 | 70 | 70 | 70 | 70 | - | 10 | 10 | 10 | 6 | 6 | - |
| i. Printing and publishing | - | 50 | 50 | 70 | 70 | - | - | - | - | 6 | 6 | - |
| j. Tourism | - | - | - | 70 | 70 | - | - | - | - | 6 | 6 | - |
| 2. Other production activities | 25 | 50 | 50 | 70 | 70 | - | 10 | 10 | 10 | 6 | 6 | - |
| 3. Import and distribution of supervised goods | - | 50 | 50 | 70 | 70 | - | - | 10 | 10 | 6 | 6 | - |
| 4. Sugar stock | 75 | 75 | 75 | 70 | 70 | - | 10 | 10 | 10 | 6 | 6 | - |
| 5. Domestic trade | 25 | 50 | 50 | 70 | 70 | - | 10 | 10 | 10 | 6 | 6 | - |
| 6. Contractors of DIP, IMPRES and local government financed projects and contractors of low-cost housing projects | - | 20 | 20 | 70 | 70 | - | - | 10 | 10 | 6 | 6 | - |
| IV. Other contractors | - | 20 | 20 | 60 | 60 | - | - | 10 | 10 | 6 | 6 | - |
| V. Imports and distribution of other import goods | - | - | - | 40 | 40 | - | - | - | - | 6 | 6 | - |
| VI. Other credits n.i.e. | - | - | - | 25 | 25 | - | - | - | - | 6 | 6 | - |

1/ Annual percentage rates.
2/ Percentage of loan refinanced by Bank Indonesia.
3/ Category as defined in January 1, 1978 regulations
4/ Before January 1, 1978 the maximum amount for each category is as follows:
I. Up to Rp 25 million
II. Above Rp 25 million - Rp 100 million
III. Above Rp 100 million - Rp 300 million
IV. Above Rp 300 million.
5/ In February, 1977 the maximum amount of KIK and KMKP was increased from Rp 5 million to Rp 10 million.

Table E 4.1
Nepal
Rastra Bank's Refinance Rate to Commercial Banks
(Per Cent Per Annum)

| | Before April 14, 1971 | Effective April 14, 1971 |
|---|---|---|
| 1. Export Bills | 6 | 5 |
| 2. A.B.C. (Against Export Documents) | - | 5 1/2 |
| 3. Industrial Requisites | 6 | 6 |
| 4. Agricultural Requisites | 6 | 5 1/2 |
| 5. Development Requisites | - | 5 1/2 |
| 6. Credit to Priority Industries (Export Overdrafts) | 6 | 4 1/2 |

Table E 4.1 (Contd.)
Nepal
Rastra Banks Refinance Rate to Commercial Banks
(Per Cent Per Annum)

| | Before July 16, 1974 | Effective July 16, 1974 | Effective June 15,1982 |
|---|---|---|---|
| 1. Export bill credit: | | | |
| (a) Against L/C | 4 | 6 1/2 | 12 |
| (b) Against documents for collection | 6 | 7 1/2 | 13 |
| 2. Development Requisites | 5 1/2 | 7 1/2 | |
| 3. Specified institutions1/ | - | 7 1/2 | |
| 4. Production loan: | | | |
| (a) Agricultural credit for farmers | - | 6 | |
| (b) Credit against the security of agricultural goods | 5 1/2 | 7 | |
| (c) Credit priority industries, including working capital | 4 1/2 | 7 | |
| 5. Pre-Export Credit | 6 1/2 | 8 | |
| 6. Credit provided against the guarantee of HMG | - | One per cent less than commercial banks' lending rates. | |
| 7. Supervised credit to small sector2/ | - | 6 | |

1/ Specified by HMG with the task of supplying foodgrains and other essential goods at reasonable prices.
2/ Only on loans in excess of 5 per cent of total deposit liabilities of commercial banks.

Table E4.1 (Contd.)
Nepal
Rastra Bank's Refinance Rates to Commercial Banks
(Per Cent Per Annum)

| | Effective April 28, 1975 | | Effective July 16, 1976 | Effective Feb. 12, 1977 | Effective April 10, 1978 | Effective June 15, 1982 |
|---|---|---|---|---|---|---|
| Small Sector | 11 | 1. Industrial Sector1/ | | | | |
| Agricultural Loans | 13 | 1.1 For Fixed Capital | | | | |
| Industrial Loans | 13 | (a) Cottage and Village Industries | 6 | 6 | 6 | 7 |
| Export Bills | 14 | (b) Basic Industries, Import Substituting Industries, Export Promoting Industries, Industries Based on Agriculture and Forest and Tourism Industries | 9 | 9 | 9 | 10 |
| HMG Development Bonds | 15 | 1.2 For Working Capital | 12 | 12 | 12 | 13 |
| Over-due Refinance | 2 percent more than specified rates | 2. Agricultural Sector | | | | |
| | | (a) Cardamon, Horticulture, Tea and Cotton Cultivation | 4 3/ | 4 | 4 | 6 |
| | | (b) Livestock, Poultry, Fishery, Sericulture and Bee-keeping | 7 3/ | 7 | 7 | 7 |
| | | (c) Irrigation | 10 | 10 | 7 | 8 |
| | | (d) Other Agricultural Loans | 10 | 10 | 10 | 11 |
| | | 3. Service Sector | 12 | 12 | 12 | 11 |
| | | 4. Export Bills | 11 | 11 | 11 | 12 |
| | | 5. HMG Development Bonds2/ | 14 | 14 | 14 | 1.5 per cent more than specified rates for respective bonds |
| | | 6. Overdue Refinance | 2 percent more than rates specified | 2 percent more than rates specified | 2 percent more than rates specified | 2 per cent more than rates specified |

1/ Excluding luxury goods producing industries.
2/ HMG development bonds issued after April 28, 1975.
3/ For fixed capital only.
Note: Refinance given to commercial banks under the refinance scheme should be paid back within 6 months from the date of disbursement.

Table E 5.1
Philippines
Interest Margin Between Central Bank Rediscount Rates
and lending Rates of Banks*

| Type of Paper/Loan | Discount Rate | Maximum Lending Rate | Interest Margin |
|---|---|---|---|
| 1. Masagana 99 and Agrarian Reform | | | |
| a. Supervised | 1a/ | 12 | 11 |
| b. Non-Supervised | 5 | 12 | 7 |
| 2. Gold and copper | 4 | 6 | 2 |
| 3. Export activities | | | |
| a. Small Scale | 4 | 9 | 5 |
| b. Other | 5 | 9 | 4 |
| 4. NEDA and BOI/DOI listed small scale industries | 5 | 12 | 7 |
| 5. Basic | | | |
| Group A | 6 | 17-19b/ | 11-13b/ |
| Group B | 7 | 17-19b/ | 10-12b/ |
| Group C | 8 | 17-19b/ | 9-11b/ |
| 6. Emergency | c/ | b/ | c/ |
| 7. CB/IBRD | (6)9d/ | 12 | (6)3d/ |
| 8. IGLF Loans | 7 | 12 | 5 |
| 9. Long-Term Financing Institutions | 6 | 12-14e/ | 6-8e/ |

Source: Central Bank.

a/ For unsecured loans without guarantee coverage the rate is 5 per cent.

b/ No administrative ceiling, but under Circular 494 interest rate per annum shall not exceed 17 per cent for loans with maturity of 730 days or less and 19 per cent for loans with maturities of over 730 days. No administrative ceiling exists for the purchase of receivables with maturities of longer than 730 days.

c/ Rate is determined on the case-by-case basis.

d/ Rural banks obtain loans at 6 per cent, other banks at 9 per cent.

e/ Rate for secured papers is 12 per cent and for unsecured papers 14 per cent.

* Note: Not all of the above listed categories are quantitatively equally important. The most important categories are Items 1 and 3.

Table E 5.2
Philippines
Maximum Maturities of Discounts and Advances

| | Commercial banks | Thrift banks | Other a/ |
|---|---|---|---|
| 1. Production credits b/ | 360 days | 360 days | |
| 2. Commercial credits | 180 days | 180 days | |
| 3. Advances against eligible government securities other than Treasury Bills | 180 days | 180 days | |
| 4. Advances against Treasury Bills | 60 days | 60 days | |
| 5. Export credits | 180 days | | |
| 6. Negotiated sight or time export bills | 30 days | | |
| 7. IGLF loans | | | |
| a. For working capital | 3 years | 3 years | 3 years |
| b. For fixed assets | 5-10 yrs | 5-10 yrs | 5-10 yrs |
| 8. Credit extended by long-term financing institutions | | | 3 years |

a/ Nonbank financial intermediaries and other long-term financing institutions.
b/ Industrial and agricultural credits.

Source: Central Bank

Table E 8.1
Thailand
Official Rates
(Per Cent Per Annum)

| | Bank of Thailand Loan Rate | Rediscount Rates on | | | |
|---|---|---|---|---|---|
| | | Export Bills | Bills arising from Industrial Undertakings | Bills arising from purchase of Agricultural Products | Agricultural Bills |
| 1970 | 9.0 | 5.0 | 5.0 | 5.0 | 7.0 |
| 1971 | 9.0 | | | | 7.0 |
| 1972 | 8.0 | | | | 5.0 |
| 1973 | 10.0 | | | | |
| 1974 | 11.0 | | | | |
| 1975 | 10.0 | | | | |
| 1976 | 9.0 | | | | |
| 1977 | 9.0 | | | | |
| 1978 | 12.5 | | | | |
| 1979 | 12.50<br>15.0 | | | | |
| 1980 | 13.5<br>15.0 | | | | |
| 1981 | 14.5<br>11.0 | | | | |
| 1982 | 12.5 | | | | |
| 1983 | 13.0 | | | | |
| 1984 | 12.0 | 5.0-7.0 | 5.0-7.0 | - | |
| 1985a/ | 11.0 | 5.0-7.0 | 5.0-7.0 | - | |

a/ Data for 1985 refers to those at the end of August, 1985.

Table E 8.2
Thailand
Central Bank Refinance Rates
(per cent per annum)

| | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rediscount/discount rates on:- | | | | | | | | | | | |
| - Export bills | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| - Bills arising from industrial undertaking1/ | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| - Bills arising from livestock raising, the purchase of agricultural products, and loans secured by agricultural crops | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| - Agricultural bills2/ | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| - P/N arising from trading in agricultural produce | | | | | | | | | 12.0 | - | 12.5 |
| - P/N arising from second rice crop trading | | | | | | | | | | | 15.5 |
| - P/N arising from paddy price support scheme | | | | | | | | | | 5.0 | 5.0 |
| - P/N arising from construction work contracts | | | | | | | | | | 14.5 | 14.5 |
| - P/N arising from securities business (2nd pool) (discounted by Krung Thai Bank, Bangkok Bank, Thai Farmers Bank and Siam Commercial Bank) | | | | | | | | | 5.0 | 9.0 | |
| Rediscount rate on P/N arising from agricultural, industrial, and commercial undertakings (from finance companies) | | | | | | | | | 13.0 | 13.0 | 15.0 |

1/ Bank of Thailand provides financial assistance to manufactures by accepting for rediscount promissory notes arising from their operating expenses

2/ The Bank of Thailand began to rediscount promissory notes arising from the production of rice and maize from the BAAC in 1968. At present, the Bank of Thailand also rediscounts promissory notes arising from the production of rice and fruits from the Commercial banks.