Appendix

Appendix I

Chronology of major financial reforms in Thailand since the second Oil shock

1979	Amendment of the first Commercial Banking Act 1962 to break up the family-controlled shareholding structure in most Thai banks and enable wider public participation. Banks were given five years to divest their shares to a point at which at least 250 individual shareholders would together hold at least 50 percent; no single shareholder can own more than 0.5 percent.
1979	Repurchase market established to help develop the money market and facilitate the free flow of money between foreign exchange and domestic markets, and to serve as a vehicle for the implementation of monetary policy.
1980	Interest rate ceilings for financial institutions freed from the 15 percent limit imposed by the Civil and Commercial Code 1924. From then on, interest rate charged by financial institutions would be set by the Minister of Finance upon the advice of the Bank of Thailand, thereby giving more flexibility in the determination of interest rate structure.
Sept. 1984	Amendment to the securities Exchange of Thailand Act 1974, to rectify the inadequacies or inconsistencies of the laws.
1986	To enable credit foncier companies to efficiently mobilize funds from the public through the issuance of promissory notes, credit foncier companies have been allowed to reduce the maturity of such notes from 3 year, to 1 year without premature redemption
1987	Amendment to allow limited companies whose securities were still under consideration for acceptance as listed or authorized securities the SET to offer debentures to the public was revoked in 1987. Only new shares, could be offered to the public.
Nov. 3, 1987	Further deregulation of commercial banks and finance companies businesses to include: - Custodian services, - Loan syndication, - Acquisition, merger or consolidation advisory for - Feasibility studies.

1988	Reform of the BOT rediscounting facilities to a new arrangement whereby commercial banks were required to finance 50 percent of the loan extended under this scheme. In this respect, banks receive 50 percent refinancing at the interest rate of 3-5 percent against lending rate of 10 percent charged on borrowers. A maximum limit was imposed on each bank by a credit line to be reviewed every six months.
1988	To provide opportunities for smaller banks to compete the BOT has recommended them to concentrate on particular regions of the country and has introduced the "mini-branch" concept, to save cost of operation of a full branch.
June 1, 1989	The interest rate ceiling on time deposit with more than one-year maturity was abolished.
July 1989	As a measure to relax foreign exchange control to facilitate outward transfer of capital for dividend, interest rate and principal payment for foreign loans, BOT granted permission to authorized banks to process such applications for transfer on BOT's behalf.
1989	BOT requested technical assistance from the Asian Development Bank to undertake a feasibility studies on the setting up of a credit rating agency in Thailand. The Agency is expected to help provide information and quidance to investors, and promote the development of the private debt market.
1989 Mar.	As a measure to help ease the tight situation in the domestic market and bridge the saving investment gap the Royal Decree under the Revenue Code Governing the Exemption of Revenue Tax (No. 23) B.E. 2532 was passed exempting withholding tax on interest rate income from loans denominated in foreign currencies under certain conditions.
Mar. 16, 1990	Ceilings of interest rates on time deposit with one-year maturity or less were lifted.
Apr. 9, 1990	Requirement for commercial banks' net position on foreign asset was increased from 20 to 25 percent of capital funds.
May 22, 1990	Thailand officially accepted article VIII of IMF agreements and also relaxed foreign exchange control by liberalizing all transactions on current basis and reducing restrictions on capital movements.
Nov. 3, 1990	Branch opening requirement for commercial banks to hold government bonds as a proportion of total deposit was reduced from 16 to 9.5 percent.

Nov. 26, 1990	Adjustment in the ceilings of commercial banks' net position on foreign assets and liabilities to capital to 20 and 25 percent respectively
Jan 4, 1991	Adjustment in reserve requirement calculation from weekly (5 working days) to fortnightly basis, including official holidays.
Jan. 1991	Adjustment in rural credit policy by broadening "rural credit" definition to include credits to crop wholesaler and industrial estate in rural areas.
Apr. 1, 1991	Second stage liberalization on foreign exchange control which include more liberal outward transfer of fund for investments, provision for investments, provision for foreign investor to repatriate investment dividends profits and proceeds from the sales of stocks, Thai individual and juristic person in Thailand are allowed to open foreign currency accounts under certain conditions.
May 20, 1991	Relaxation of the bank branch opening requirement by broadening the coverage of agricultural credits to include credit to small-scale industries, credit to savings cooperatives and credit unions, and credit to Thai workers abroad. Relax requirement for banks to extend credit to clients in the area where deposits have been mobilized, from not less than 60 percent of deposit mobilized from respective provinces where the branches are located, to not less than 60 percent of deposit mobilized from the region.
May 23, 1991	Increasing the minimum amount of asset which foreign bank branch have to maintain in Thailand from not less than 5 million baht to not less than 125 million baht. Expanding the types of securities to be maintained by foreign bank branch, i.e., debt instruments guaranteed by the Ministry of Finance in respect of both principles and interest, debenture, bond and debt instruments issued by state organizations or state enterprises established under special laws or other state enterprises as approved by BOT. Modifying the composition of foreign bank branch assets where formerly the value of the specified types of assets combined with that of immovable properties for use in the bank's business or for its own employees must not exceed 40 percent, to the new composition where the value of the immovable properties alone must not exceed 20 percent of total assets required to be maintained.

Jun. 5, 1991	In addition to government bond requirement for the bank branch opening, commercial banks were allowed to maintain bonds issued by state enterprises, of which principals and interest are not guaranteed by Ministry of Finance.
Jun. 23, 1991	Use liquidity reserve ratio instead of cash reserve requirement ratio at 7 percent and allow commercial banks to hold other liquidity securities. Of 7 percent, at least 2 percent must be cash held by the Bank of Thailand, vault cash can be a high a 2.5 percent and the remaining can be government securities and other liquidity securities such as BOT securities, debentures, bonds or other debt instruments issued by state organizations, state enterprises established under specific law or other state enterprise as being approved by BOT.
July 2, 1991	Extension of the service hour of ATM and authorized foreign exchange representatives from 7.00 a.m. to 10.00 p.m.
Sept. 13, 1991	Branch opening requirement for commercial banks to hold government bonds as a proportion of total deposit was reduced from 9.5 to 8 percent.
Sept. 23, 1991	Allowing commercial banks to hold securities which are guaranteed by the Ministry of Finance as part of their liquidity asset.
Dec. 12, 1991	Allowing finance companies to operate leasing business.
Jan 1992	Revision of the Rural Credit Policy: 1. Broadening the definition of rural credit's target groups as follow: - Credit extended directly to farmers was broadened to include credit for secondary occupation; - Crop product wholesaling was broadened to include other agricultural products; - Addition of credit to agricultural product export. 2. The definition of small rural industrial credit was changed from those with outstanding not exceeding 5 million baht to 10 million baht. 3. Adjustment of the computation of deposit for base in rural credit policy, by excluding interbank transaction from the total deposit of the previous year.
Jan. 8, 1992	The interest rate ceiling on savings deposit was removed.

Feb. 14, 1992	Requirement for opening branch of commercial banks to hold government securities as a proportion of total deposit was decreased from, 8 to 7 percent.
Mar. 18, 1992	Allow commercial banks to operate : 1) as sales agent for debt instrument of government and state enterprises, 2) information service including economic, investment and financial information and data, 3) financial advisory services.
Mar. 24, 1992	Allow finance companies to operate : 1) as underwriters and sales agents for government bond and debt instrument of state enterprises, 2) information service including economic, investment and financial information and data 3) sponsoring service including preparation documents required by the SET, and apply for listing for the company that wishes to be listed on SET.
Mar. 24, 1992	Allow securities companies to operate : 1) custodial services, 2) registration and paying agent for securities 3) information services, 4) sponsoring services.
April 5, 1992	Amendment of the Financial Institution's Loan Interest Rate Act, empowering the Minister of Finance to set the appropriate level of loan interest rate or to abolish the ceiling in line with prevailing economic situation.
April 8, 1992	The definitions of capital and risk asset in the Banking Act were adjusted in line with the BIS capital adequacy standard and now await the formal announcement by the Minister of Finance.

May 1, 1992	Further liberalization of foreign exchange control which includes:- 1. Allowing exporters to be paid in baht currency from a non-resident baht account without prior permission from the BOT. 2. Allowing exporters to use foreign currency export receipt to repay foreign debts without prior permission from the BOT. Moreover, foreign currency export receipt may also be used to pay for imports without the need to bring the currency into the country, as previously required. 3. Allowing foreign currency account holder to withdraw such currency to settle foreign debts of its affiliates. 4. Allowing government and state agencies to deposit unlimited amount of foreign currency in their account. 5. Allowing non-resident foreigner to deposit foreign currencies receipt from Thai residents into their foreign currency accounts.
June 1, 1992	Removal of ceiling on commercial bank loan interest rate. The borrowing rate and loan rate ceiling of finance and credit foncier companies were lifted. Abolish interest rate ceilings on:- - commercial banks' loans - finance and credit foncier companies' loans.
June 1, 1992	Allowing commercial bank to operate the following businesses: 1. arranging, underwriting and dealing in debt instruments 2. secured debenture holders representatives 3. mutual fund supervisor 4. securities registrar 5. selling agent for investment units
June 22, 1992	Requirement for finance and credit foncier companies to increase their minimum paid-up capitals - Finance companies are to increase their minimum paid-up capital from 60 million baht to 100 million baht by July 1993, and to 150 million baht by July 19 - Credit foncier companies are to increase minimum paid-up capital from 30 million baht to 50 million baht by July 1993, to 75 million baht by July 1994, and to 100 million baht by July 1995.

July 1, 1992	Allowing commercial banks to issue NCD (negotiable certificate of deposits) with minimum maturity of 3 months and maximum maturity of 3 years and minimum face value of not less than 500, 000 baht and subsequent denomination and multiples of 100,000 baht.
Aug. 1, 1992	Allowing credit foncier companies to hold debt instruments, guaranteed by Ministry of Finance, at not more than 20 percent of its capital.
Sept. 8, 1992	The Ministry of Finance approved the proposal for the setting up of Bangkok International Banking Facilities (BIBFs).
Sept. 14, 1992	Further relaxation of Foreign exchange control. Commercial bank located in Vietnam and in countries sharing common border with Thailand are allowed to withdraw baht. From their non-resident baht account up to the maximum limit of their outstanding balance, not including borrowed funds.
Sept. 18, 1992	Allowing finance companies and finance and securities companies to operate (under certain requirements) the business of : 1. debenture holders representatives; 2. mutual fund supervisor;
Sept. 23, 1992	Allowing commercial banks to hold IFCT debenture or IFCT secured bond as parts of liquidity reserve requirement.
Oct. 15, 1992	Allowing finance companies (with prior approval from the BOT) to operate the business of: 1. custodial service for NCD and debt instruments. 2. selling agents 3. registration of, and paying agent for securities 4. arranging for the issuance of, underwriting, and dealing in debt instrument
Oct. 22, 1992	Extend the daily service hour of ATM to cover 24 hours
Nov. 4, 1992	Branch opening requirement for commercial banks to hold government bonds as a proportion of total deposit was reduced from 7 percent to 6.5 percent
Nov. 25, 1992	Finance companies permitted to issue NCD

Jan 1, 1993	Adoption of the BIS standard for commercial banks. Commercial banks are required to maintain 7 percent of capital to risk asset ratio (the rate will be increased to 8 percent by Jan 95). Foreign bank branches are required to maintain 6 percent of tier 1 capital to risk asset ratio.
Feb. 14, 1993	Relaxation of branch opening requirement for commercial banks to hold government bonds as a proportion of total deposit was reduced from 6.5 to 5.5 percent.
Mar 16, 1993	Permission given to 46 commercial banks to operate international banking business known as the BIBFS
Mar. 19, 1993	Enlarging the maximum amount of baht outflow to bordering countries and Vietnam to B. 250,000 per trip.
May 17, 1993	Requirement for opening branch of commercial banks to hold government securities as a proportion of total deposit was removed.
July 15, 1993	Provide financial assistance to new investment projects in the investment promotion Zone 3.
July 26, 1993	The first credit rating agency -The Thai Rating and Information Service (TRIS) was established.
Aug. 26, 1993	Commercial banks, finance companies and credit foncier companies, and other types of financial institutions were allowed to apply for licenses to undertake trading or underwriting of debt securities.
Aug. 27, 1993	The Export-Import Bank of Thailand Act, B.E. 2536 was promulgated to be effective from Sept. 7, 1993.
Oct. 7, 1993	Commercial banks are required to announce the Minimum Loan Rate (MLR), the Minimum Retail Rate (MRR) and maximum margin to be added to MRR as a reference rate for customer other than those eligible for MLR.
Nov. 20, 1993	Relaxation of the scope of investment of Life and non life insurance companies, allow to invest in stock and unit trust not more than 60 percent of the company's total asset. In addition Life and non life insurance companies are allowed to invest in other business such as leasing, provident fund manager and mutual fund managers.

Dec. 14, 1993	The regulations, procedures and conditions concerning the operation of the IBF by a commercial bank were amended: - an amount of assets in terms of baht not exceeding 100 million baht may be maintained as a reserve for administrative expenses. - IBFs may accept transfers of asset, debts or undertaking arising from businesses similar to the IBFs, from other businesses of commercial bank authorized to operate the IBFs. - Loan disbursement made for domestic lending (out-in) by an IBF may be less than US$ 500,000 for the disbursement by a financial institution or in the case the amount already disbursed has an outstanding balance of not less than US$ 500,000. - IBF for domestic lending (out-in) may borrow each other to create a benchmark rate for interbank borrowing in foreign currencies. - IBF are allowed to undertake the underwriting of debt instruments in foreign currencies outside the country in order to mobilize fund from abroad. - IBF are allowed to undertake the underwriting of debt instruments in foreign currencies outside the country in order to mobilize fund from abroad.
Dec. 25, 1993	Increase the commercial bank's overall capital fund to risk asset rate to net less than 7.5 percent, with the first tier capital fund to risk asset rates at not less than 5 percent, by 1 April 1994. (8 percent, 5.5 percent by 1 Jan 1995) Increase the foreign bank branch's capital fund to risk asset rates to not less than 6.5 percent by 1 April 1994. (6.75 percent by 1 Jan 1995).
Dec. 28, 1993	Adoption of the BIS standard for finance companies, which are required to maintain 7 percent of capital risk asset ratio (5 percent 1st tier capital to risk asset ratio). Effective on July 1st 1994.
Jan 24, 1994	Allow commercial bank to hold ACN which are issued by the IFCT as part of their liquidity asset. Allow finance companies, finance and securities companies and credit foncier companies to hold ACN which are issues by IFCT and state enterprise bond in baht currency which are offered in foreign market as part of their liquidity asset.

Feb. 2, 1994	Further liberalization on foreign exchange control: 1. Enlarging the limit on the amount of baht that can be taken out to countries sharing contiguous border with Thailand, and Vietnam from 250,000 baht to 500,000 baht. 2. Abolishing the limit on the amount of foreign currencies that may taken out when traveling abroad. 3. Enlarging the limit on the amount of foreign investment by Thai residents (which require no prior approval) from BOT US$ 5 million to US$ 10 million. 4. Allow residents to use foreign exchange that originates from abroad to service external obligation without surrendering or depositing in domestic banking account.
Mar 1, 1994	Allow finance companies and finance and securities companies to open credit office outside Bangkok and its vicinity.
April 1, 1994	Increase the capital to risk asset ratio of commercial banks to 7.5 percent and of foreign bank branch to 6.5 percent.
May 4, 1994	Allow BIBFS to open branch outside Bangkok and the vicinity. The regional branch of the BIBFS are allowed to take deposit in both baht and foreign currency from in and outside the country but are allowed to grant credit only in baht currency in the regional area. In addition, they are allow to operate foreign exchange activities.
June 1, 1994	Allow commercial bank to invest in equity of not more than 20 percent of their total capital.
June 1, 1994	Impose the ceilings of finance companies and finance and security company's net position on foreign asset and liabilities to capital to 25 percent and 20 percent respectively.
June 30, 1994	Increase can banks' provision rate for doubtful debt which may be worthless or irrecoverable from 50 percent to 75 percent at the end of account period of 30 June 94 and to 100 percent at the end of account period of 31 Dec. 1995.

July 1, 1994	Adoption of BIS standard for finance companies. Finance companies are required to maintain 7 percent of capital to risk asset ratio. Limit the amount of credit or contingent liabilities granted by finance companies to any person of not exceed 25 percent of tier 1 capital, and the ceiling of the amount of credit and contingent liabilities to any person of not exceed 35 percent of tier 1 capital.
July 1, 1994	Impose the weight on risk asset related to IFCT and EXIM at 20 percent and conversion rate of guarantee related to securitization activities at 100 percent.
Sept. 1, 1994	Allow commercial banks to open ATM without seeking for approval.
Sept. 1994	Allow commercial bank to invest in any business or in its shares of not more than 10 percent of the total amount of share sold.
Aug. 10, 1994	Allow finance companies to open representative office abroad. Allow BIBFS to open PIBF.
Aug. 17, 1994	Guideline to separate Finance Business and Securities Business.
Nov. 4, 1994	Reduce the ceiling of commercial bank's net position on foreign asset and liabilities to capital to 20 percent and 15 percent respectively. - Allow BIBFS to mobilize fund by issuing NCD.

Source: *Financial System and Development Section, Department of Economic Research, Bank of Thailand.*

Appendix II

Financial Liberalization Experiences in Various Countries

Interest Rate Repression and Reform: Recent Experience

Mexico

Until the late 1980s, despite a period of gradual transformation and liberalization, the financial system in Mexico was characterized by interest rate restrictions, domestic, credit controls, high reserve requirement, fragmented financial markets, and other elements causing inefficiencies in the intermediation between borrowers and lenders. Capital markets were not well developed and firms often had to turn to informal markets for their long term financing needs. The lack of an established bond market and the existence of an informal credit market impeded the conduct of monetary policy by restricting the scope for open market operations and limiting the ability of the bank of Mexico to monitor overall credit market conditions.

In late 1988, the government substantially accelerated the process of financial reform in the context of its overall economic program. The objectives were to enhance efficiency, through greater reliance on market forces, to promote the growth and deepening of financial markets, and to improve the effectiveness of monetary policy. In addition, recognizing the increasing globalization of capital markets, the government sought to improve the capitalization and integration of Mexican financial institutions with a view to preparing them to be competitive internationally. The approach was based on the two complementary processes of liberalization and institutional reform. Key measures included the liberalization of interest rates, the elimination of direct controls on credit, the re-privatization of a universal banking system[23].

[23] Universal banking is a system that permits banks to accept deposits as well as engage in securities market activities. In Mexico, Universal banking signifies the horizontal integration of financial institutions, such as commercial banks, brokerage houses, and insurance companies, subject to certain restrictions on cross ownership; commercial banks are permitted to invest in equities.

Effect of financial liberalization

The 1989-1991 period when most of the significant financial reforms took place, some quantitative evidence on the effect of deregulation and liberalization on financial variables were analyzed.

The deregulation of interest rates and lifting of credit ceilings in early 1989 allow banks to complete effectively in financial markets and encourage private savings in financial assets. The relationship between currency and GDP remained relatively stable throughout the entire period, indicating that the expansion of bank deposits was mainly responsible for the growth in monetary aggregates after 1988.

In some contexts, interest rate deregulation has led to sharply higher real interest rates. In the case of Mexico, real interest rates remained mostly negative during the period of financial disintermediation, particularly in 1986-87. They appear to have risen sharply to high levels before the financial liberalization, and then to have increased again immediately after interest rate deregulation in early 1989, before reaching a peak in the middle of that year. Thereafter they declined steadily from 36 percent in mid-1989 to about 6 percent by mid 1991 as financial intermediation improved and the economic adjustment program gained credibility. Hence, there is little evidence that financial liberalization increased real interest rates, other than temporally.

Another aspect of financial developments in Mexico has been the evolution of the market for domestic public debt and the declining significance of monetary assets in relation to other financial assets.

A salient feature of the financial liberalization in Mexico has been the implementation of clearly defined strategy in gradual, well-ordered stages. The deregulation of interest rates and the liberalization of direct controls preceded the privatization of the banks, affording banks an opportunity to adapt to the more competitive environment and increase their market value. Non-bank financial institutions were first allowed to form financial groups on a limited basis before the more general relaxation of restrictions against universal banking. In addition, the legislation permitting the formation of financial groups was in place in advance of the privatization of the commercial banks, enabling the domestic financial sector to put together the necessary capital and expertise, Moreover, the liberalization was comprehensive and placed the domestic financial system on a competitive basis.

Argentina

The experience of Argentina during the period 1974-81, the effects of financial repression and the consequences of interest rate reform. The drastic changes in policies that took place in 1976 and 1977 allow an evaluation of alternative financial policies and their impacts on financial stability.

The full liberalization of interest rates occurred in 1977. The level of real time and savings deposits more than doubled over the year, while the banking sector's liabilities to the private sector grew considerably faster than credit, thus permitting a substantial buildup of net foreign assets. The increased flow of domestic resources to the banking system was caused by high domestic interest rates relative to those abroad, increased confidence in the peso, and increased competition among financial intermediaries. As a result of both the recovery of exports and increased capital inflows, the balance of payments had a large surplus in 1977 . Foreign exchange reserves increased by almost 120 percent. The increase in capital inflows, however, soon became excessive and complicated the task of monetary management. In order to moderate the expansion impact of capital inflows, the authorities were forced to undertake a series of measures, including a minimum maturity requirement on foreign loans, peso-denominated reserve requirements on private sector foreign borrowing, and, from May 12, 1978 to December 21, 1978, allowing the exchange rate to be determined by market forces. Nevertheless, the pattern of deposit growth and reserve accumulation continued through 1979.

Brazil

Brazil maintained positive, or only moderately negative, real interest rates throughout most of the 1970s. The indication of many financial instruments was a key element in preserving interest rates that generally stayed close to, if not always above, the rate of inflation. Correspondingly, there was a substantial increase in time and savings deposits, particularly during the 1976-78 period. The relative attractiveness of quasi-monetary assets led to a steady change in the composition of private sector holdings of financial assets[24], with the share of money declining and that of quasi-money increasing. Between 1975 and 1979, the share of quasi-monetary assets in

[24] Financial assets in Brazil consist of money and quasi-money, "compulsory" deposits in the banking system, "voluntary" deposits, and other "voluntary" assets. The "compulsory" and "voluntary" deposits one related to regulations pertaining to the proceeds of foreign loans and other foreign transactions.

private sector holdings of financial assets increased as a proportion of GDP from 12 to 18 percent. The rapid expansion of quasi-monetary assets was related to the liberalization of interest rates on time deposits paid by commercial and investment banks in 1975 . Moreover, the exemption of time deposits from legal reserve requirements enabled the banks to offer relatively high interest rates on such deposits. Also, because these quasi-monetary assets were subject to at least partial monetary correction, they were particularly attractive in periods of high and accelerating inflation.

In view of high domestic interest rates that were in excess of the cost of foreign borrowing, large capital inflows occurred, resulting in substantial reserve accumulation despite sizable current account deficits. Net foreign borrowing increased from US.$ 3.7 billion in 1975 to US.$ 8.4 million in 1978. The increase in net capital inflows complicated the conduct of monetary policy. In an attempt to postpone the monetary effects of capital inflows, the authorities froze the proceeds of foreign borrowing in mid-1978 for a period of time that was originally 30 days but was subsequently increased to 150 days. This policy effectively raised the cost of foreign borrowing to a level comparable with that of domestic borrowing.

Beginning in 1979 there was a significant shift in the interest rate policies of the authorities. In 1979 inflation accelerated rapidly to 76 percent, twice as high as in the previous year, while interest rates were raised only moderately. In September 1979, the authorities established ceilings on domestic interest rates, at 10 percent below the rates prevailing in August 1979. This measure, taken at a time of accelerating inflation, resulted in negative real interest rates. In 1980, in a further attempt to dampen inflationary expectations, the government prefixed, at 50 percent, the indication of financial assets. With the acceleration of inflation to 86 percent, substantial negative real interest rates resulted.

The effects of this changes in interest rate policy an financial intermediation were quite adverse. The acceleration of inflation produced a shift in the publics preferences from assets with pre-established monetary correction to assets with a posterior monetary correction. As a real interest rates fell in 1979, time and savings deposits began to decline in real terms. In 1980, they fell even more sharply, with a declined in real terms of 36 percent. Low interest rates also had a negative impact on capital inflows. Domestic borrowers shamed foreign sources for the cheaper domestic lenders. The reduction in capital inflows, coupled with sharply higher current account deficits, led to large overall deficits and resulted in a heavy drain an foreign exchange reserves, which by the end of 1980 had eroded to about half of their 1978 level. Moreover, there was also a substantial decline in the private sector's holdings of total financial assets, from 47 percent of GDP in 1978, to 37 percent in 1980. This reduction mainly reflected the diversion of funds into real estate, foreign exchange, and other non-financial assets in search of higher rates of return, as the banking system could not offer attractive interest rates to savers.

Korea

Since carrying out an interest rate reform in 1965, the Korean authorities have pursued a flexible interest rate policy. Although interest rates have continued to be administered after the reform, the authorities have generally been responsive to variations in the rate of inflation and have sought to maintain interest rates that were positive in real terms. As a result of these policies, there has been a strong growth in the demand for financial assets[25], in particular, time and savings deposits have expanded rapidly whenever positive real interest rates have prevailed.

In the wake of the interest rate reform of 1965, deposit interest rates were doubled from 15 percent to 30 percent and paved the way for an urgently needed mobilization of domestic savings. Initially, however, interest rates on general loans were set 4 percentage points lower than the deposit rates for comparable maturities, in order to reduce the interest costs of the enterprises. Following the initial surge in domestic savings, the authorities gradually reduced the interest rates in the latter half of the 1960s in response to the gradual decline in the rate of inflation. Because the downward adjustments in interest rates exceeded the deceleration of the inflation rate, real interest rates declined somewhat from their peak of about 20 percent in 1967 but remained positive through 1973. By 1973 interest rates on time and savings deposits and general loans were 12 percent and 15 percent, respectively, while the rate of inflation was about 8 percent. Throughout this period (1966-73) the ratio of quasi-money to GDP increased steadily from 5 percent in 1966 to 22 percent in 1977, corresponding to a compound growth rate of about 15 percent per annum.

This buildup of financial assets, however, was reversed quickly where the authorities allowed interest rates to become negative in real terms. Following the first round of oil price increases, inflation in Korea accelerated to an average of 25 percent, whereas interest rates were adjusted only inadequately. Moreover, the emergence of repressed interest rates was accompanied by uncertainties regarding the foreign exchange market,

---

[25] Financial assets in Korea consist predominantly of deposits in financial institutions.

and a large devaluation in 1974 created another disincentive to investment in the domestic banking system. Time and savings deposits declined by 5 percent in 1974 and in 1975, notwithstanding a moderate increase in real time and savings deposits, the ratio of quasi-money to GDP fell to 19 percent. At the initial stages of this two-year episode of interest rate repression, there was a shift in asset holders' preferences away from domestic deposits to foreign exchange. This portfolio shift contributed to a massive decline in foreign exchange reserves in 1974. However, with the restoration of confidence in the won in 1975, reserves recovered strongly. In subsequent years repression of interest rates was eliminated and real interest rates became positive. Accordingly, the healthy growth of financial savings resumed once again and exceeded 20 percent in real terms in each of the years 1976-78.

The second episode of negative real interest rates came in 1979-80. Link the first episode, it was associated with increases in oil prices. Following these increased, Korea experienced a rapid acceleration of inflation, which led to negative real interest rates despite some upward adjustments in the nominal rates. With interest rates falling in real terms, the growth of real deposits decelerated sharply in 1979 and became negative in 1980. Reserves fell slightly as well, partly because of the re-emergence of exchange market uncertainties.

Appendix III

List of Data

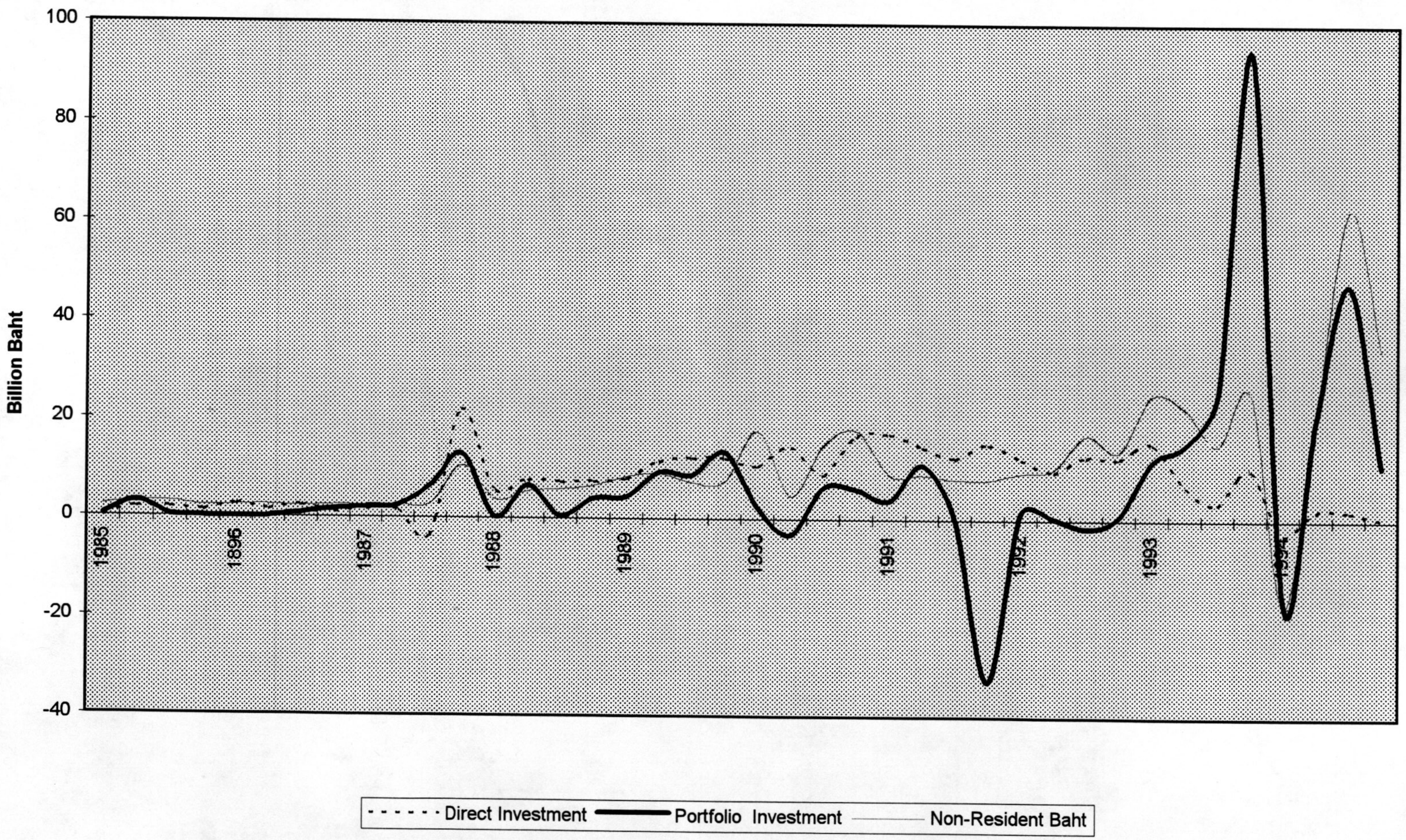
Table 5: List of Data

	Libor Rate plus forward premium (1 month)	Interbank (overnight)	CPI Index (change)	Private Investment Index	Money Supply (mb.)
Jan-85	13.5%	13.6%	26.4%	92.4	90,146.1
Feb-85	17.4%	16.2%	94.7%	88.3	92,125.6
Mar-85	19.3%	17.5%	36.5%	85.1	93,175.8
Apr-85	14.5%	16.6%	20.8%	83.3	89,940.1
May-85	12.5%	15.2%	67.4%	80.4	86,914.3
Jun-85	11.4%	13.7%	10.3%	80.5	82,756.5
Jul-85	11.0%	12.0%	-5.1%	79.4	83,500.4
Aug-85	10.7%	11.4%	36.0%	77.2	84,332.5
Sep-85	11.3%	11.5%	41.0%	78.8	85,359.8
Oct-85	14.1%	12.8%	46.0%	73.4	83,412.9
Nov-85	15.2%	14.2%	-35.6%	69.3	84,556.9
Dec-85	15.3%	15.4%	-10.2%	70.5	90,096.0
Jan-86	12.1%	13.3%	-15.3%	85.6	95,274.4
Feb-86	10.6%	11.4%	0.0%	86.2	101,565.7
Mar-86	8.6%	10.3%	46.0%	86.1	99,889.3
Apr-86	7.1%	9.3%	20.4%	86.1	97,353.0
May-86	7.9%	10.1%	40.7%	84.3	95,264.3
Jun-86	7.1%	8.4%	0.0%	82.2	92,706.4
Jul-86	7.6%	8.1%	-5.1%	80.9	91,695.6
Aug-86	7.2%	8.6%	35.4%	82.4	92,139.6
Sep-86	6.5%	7.5%	40.4%	80.8	96,268.4
Oct-86	6.6%	7.4%	30.2%	85.4	99,914.0
Nov-86	6.3%	7.2%	-5.0%	88.5	100,234.1
Dec-86	6.9%	6.5%	-20.1%	90.1	106,855.8
Jan-87	6.5%	6.4%	15.1%	81.2	114,186.6
Feb-87	6.8%	5.9%	-5.0%	85.0	114,448.1
Mar-87	6.2%	5.4%	5.0%	90.9	115,990.9
Apr-87	6.7%	6.0%	45.1%	93.5	113,453.7
May-87	7.1%	6.0%	49.9%	98.6	111,148.0
Jun-87	7.1%	5.8%	59.6%	104.1	112,229.4
Jul-87	6.8%	5.6%	4.9%	109.3	111,125.5
Aug-87	6.8%	5.7%	59.2%	112.7	112,118.0
Sep-87	7.5%	5.7%	54.0%	118.4	110,321.9
Oct-87	7.6%	5.8%	-9.8%	121.9	114,132.3
Nov-87	7.7%	6.4%	78.2%	130.4	119,732.8
Dec-87	8.6%	6.7%	4.8%	136.9	132,395.7
Jan-88	7.1%	6.7%	-29.1%	145.1	132,742.9
Feb-88	7.0%	6.6%	92.3%	151.9	140,791.9
Mar-88	7.3%	7.4%	38.5%	157.4	141,169.5
Apr-88	7.5%	7.5%	33.6%	163.7	140,036.9
May-88	7.7%	7.4%	14.3%	170.4	139,436.4
Jun-88	8.1%	7.6%	14.3%	173.2	135,470.7
Jul-88	8.3%	8.0%	9.5%	170.4	132707.7
Aug-88	9.2%	9.2%	47.6%	174.5	131,573.6
Sep-88	10.6%	10.3%	94.8%	177.9	130,348.9
Oct-88	11.0%	10.5%	46.9%	180.3	130,352.3
Nov-88	11.9%	10.9%	-32.7%	178.0	133,395.5
Dec-88	12.5%	10.5%	-18.8%	178.2	148,492.6
Jan-89	11.3%	10.3%	61.1%	174.5	152,312.2

	Libor Rate plus forward premium (1 month)	Interbank (overnight)	CPI Index (change)	Private Investment Index	Money Supply (mb.)
Feb-89	11.2%	10.5%	126.1%	169.0	160,665.5
Mar-89	11.2%	10.6%	0.0%	165.2	165,743.4
Apr-89	10.5%	9.9%	23.1%	161.4	166,697.9
May-89	10.2%	9.8%	73.6%	157.7	165,302.5
Jun-89	10.0%	9.8%	50.2%	155.9	160,760.1
Jul-89	9.7%	10.5%	136.3%	159.4	159,556.1
Aug-89	11.6%	11.1%	98.6%	158.1	162,554.6
Sep-89	10.6%	10.7%	44.4%	153.4	164,202.1
Oct-89	10.3%	10.3%	53.0%	150.0	164,035.4
Nov-89	10.9%	10.9%	-13.2%	151.7	162,738.0
Dec-89	12.7%	12.8%	-52.8%	147.5	174,700.9
Jan-90	12.5%	13.1%	60.0%	148.2	186,180.4
Feb-90	12.4%	11.2%	104.3%	148.4	199,189.6
Mar-90	11.2%	6.6%	34.4%	143.9	200,868.6
Apr-90	11.4%	10.5%	60.0%	142.5	196,357.2
May-90	12.1%	11.5%	68.2%	141.4	194,825.0
Jun-90	12.6%	14.1%	25.4%	139.4	181,952.5
Jul-90	13.0%	14.3%	25.3%	140.1	187,250.4
Aug-90	13.1%	13.6%	33.7%	140.1	187,572.4
Sep-90	14.4%	16.3%	42.0%	139.6	186,169.6
Oct-90	16.1%	15.7%	200.7%	139.3	186,909.8
Nov-90	16.0%	13.7%	41.0%	134.6	186,624.6
Dec-90	16.2%	13.9%	-49.0%	134.1	195,414.3
Jan-91	15.1%	15.6%	16.4%	132.2	188,652.8
Feb-91	14.1%	13.9%	65.5%	129.6	200,630.9
Mar-91	12.4%	11.4%	0.0%	129.8	201,216.5
Apr-91	11.7%	10.2%	138.3%	129.4	196,116.5
May-91	11.4%	12.1%	72.2%	127.3	199,339.0
Jun-91	12.8%	16.2%	15.9%	125.7	186,812.7
Jul-91	13.5%	13.8%	-39.8%	122.9	185,223.4
Aug-91	11.8%	8.9%	79.9%	118.8	186,979.4
Sep-91	11.4%	9.3%	103.0%	116.3	188,280.9
Oct-91	10.1%	6.2%	70.6%	114.6	190,077.1
Nov-91	9.3%	7.0%	-31.2%	111.6	199,287.9
Dec-91	9.3%	9.2%	-31.3%	108.3	222,400.7
Jan-92	8.8%	6.5%	47.0%	104.5	241,251.3
Feb-92	8.5%	6.1%	39.0%	102.4	234,608.1
Mar-92	7.8%	3.9%	-31.1%	101.8	238,807.2
Apr-92	7.7%	7.1%	39.0%	98.6	237,295.5
May-92	8.2%	7.8%	147.5%	95.3	234,363.0
Jun-92	8.7%	8.0%	45.9%	92.5	223,992.1
Jul-92	7.6%	5.4%	22.8%	88.6	228,139.9
Aug-92	7.4%	7.7%	83.6%	85.0	229,216.6
Sep-92	7.7%	9.0%	7.5%	85.4	225,054.6
Oct-92	7.7%	8.4%	-15.1%	85.7	230,328.3
Nov-92	7.4%	5.8%	-52.8%	86.9	234,519.6
Dec-92	7.6%	7.5%	-37.9%	91.0	249,717.0
Jan-93	7.5%	7.6%	38.1%	93.9	249,811.0
Feb-93	7.2%	6.5%	75.8%	97.1	249,312.3

	Libor Rate plus forward premium (1 month)	Interbank (overnight)	CPI Index (change)	Private Investment Index	Money Supply (mb.)
Mar-93	7.0%	10.2%	0.0%	99.1	249,540.1
Apr-93	7.5%	9.5%	82.8%	102.2	256,204.5
May-93	7.5%	7.7%	29.9%	107.8	259,152.5
Jun-93	7.6%	8.6%	706.8%	111.7	243,736.3
Jul-93	7.2%	6.9%	-576.8%	113.2	247,820.3
Aug-93	7.5%	6.9%	29.5%	116.4	257,859.4
Sep-93	7.4%	5.1%	88.2%	117.1	251,940.3
Oct-93	6.4%	2.4%	-7.3%	116.9	258,835.9
Nov-93	5.7%	2.4%	-29.2%	116.7	269,610.5
Dec-93	5.7%	4.5%	58.5%	115.3	269,148.8
Jan-94	5.9%	6.9%	58.2%	114.4	297,552.2
Feb-94	6.8%	7.6%	43.4%	112.2	303,084.5
Mar-94	7.4%	7.2%	43.2%	108.8	307,351.4
Apr-94	7.6%	5.5%	21.5%	107.2	303,710.6
May-94	8.2%	8.3%	107.3%	105.1	317,109.1
Jun-94	8.6%	10.1%	63.7%	104.0	290,715.5
Jul-94	9.5%	9.5%	7.0%	102.4	293,659.0
Aug-94	9.4%	5.6%	56.2%	105.1	314,101.6
Sep-94	9.3%	7.0%	97.8%	106.4	315,094.6
Oct-94	8.7%	5.6%	34.6%	110.7	305,306.3
Nov-94	8.6%	6.6%	-62.1%	112.5	315,640.6
Dec-94	9.1%	7.1%	-20.8%	115.1	357,200.0

Figure 1: Net Private Capital Movement



Source: Bank of Thailand

Figure 2: Interest Rates Movement

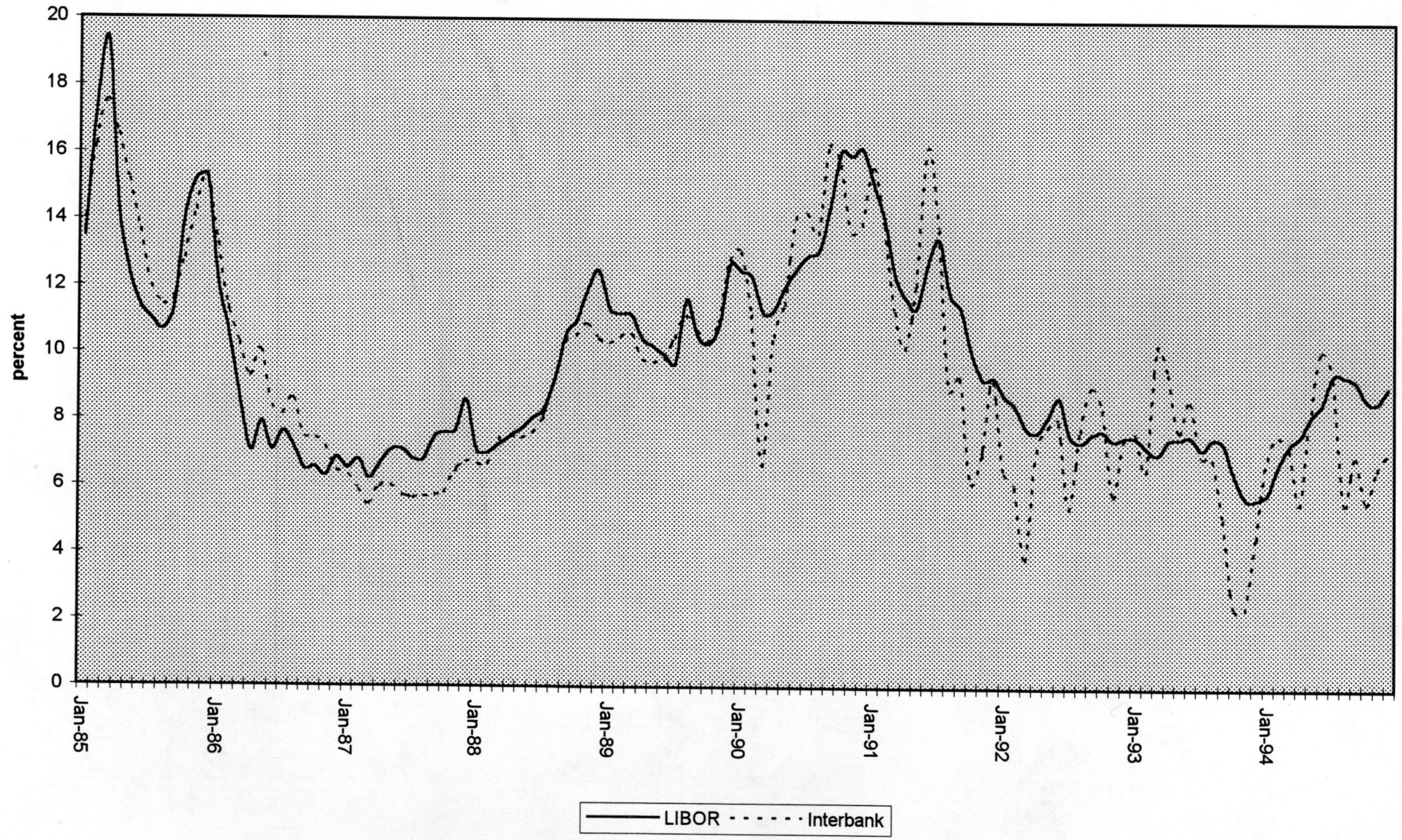


Figure 3: Spread of Domestic and Foreign Interest Rate

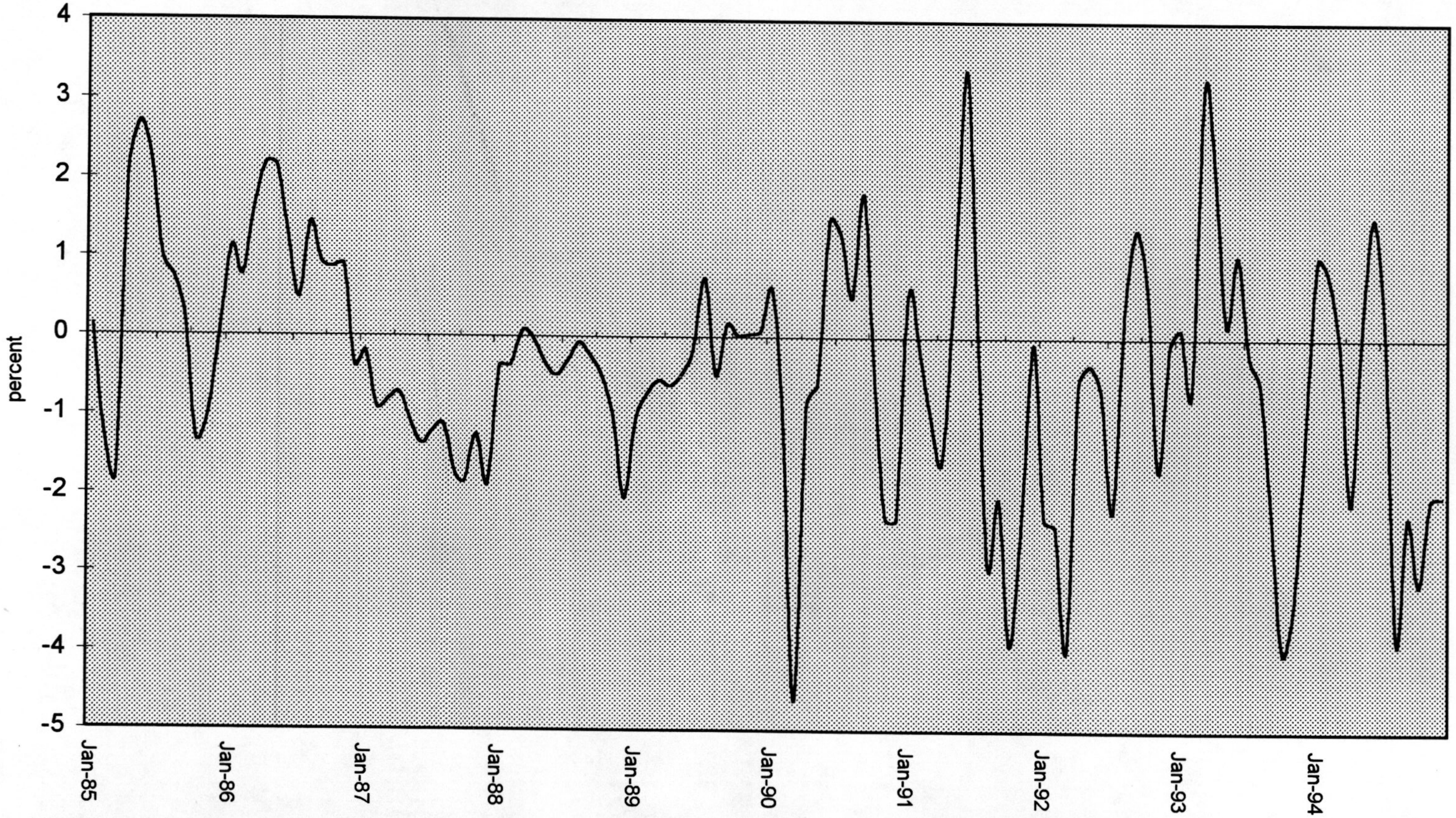


Figure 4: Private Investment Index

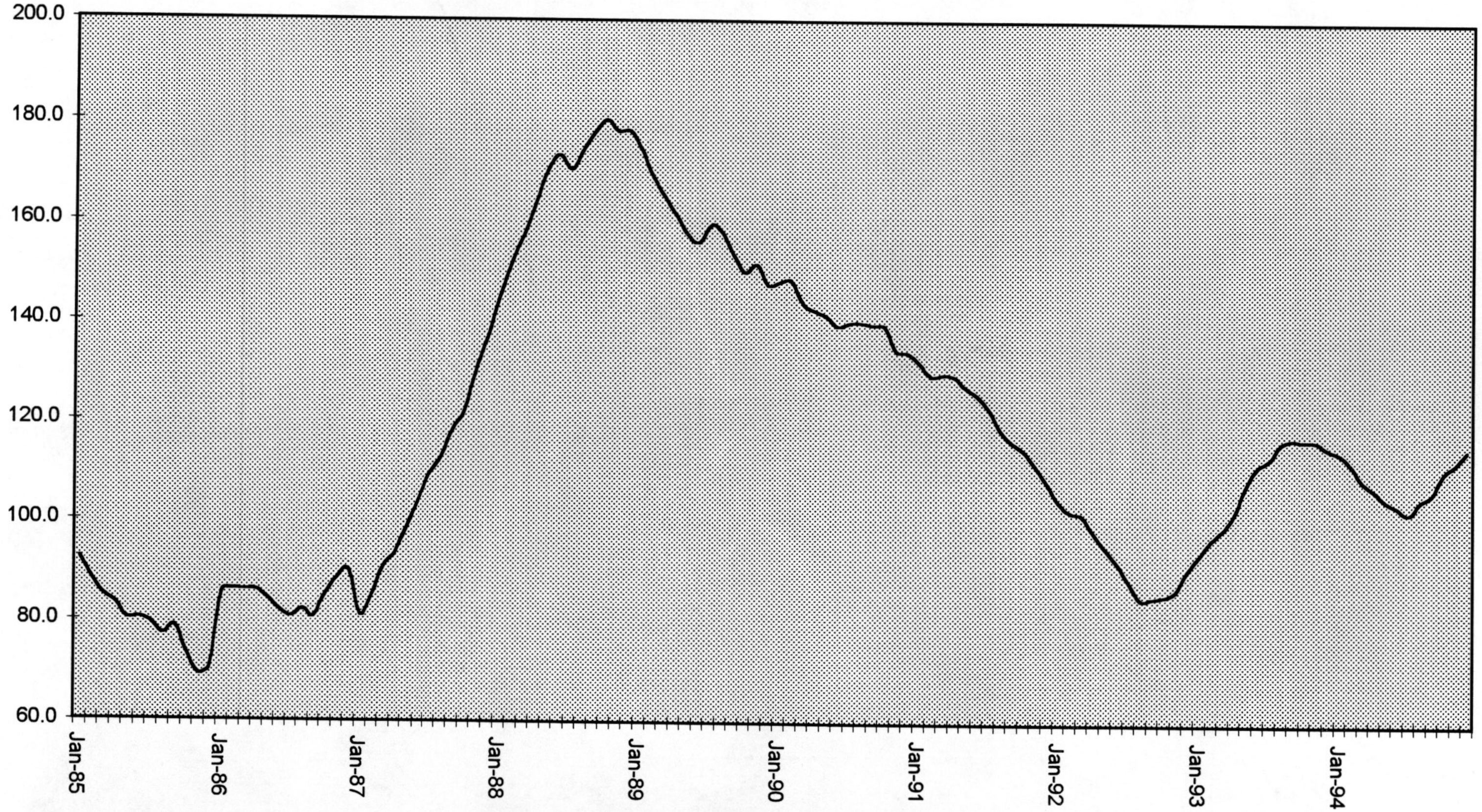


Figure 5: Money Supply

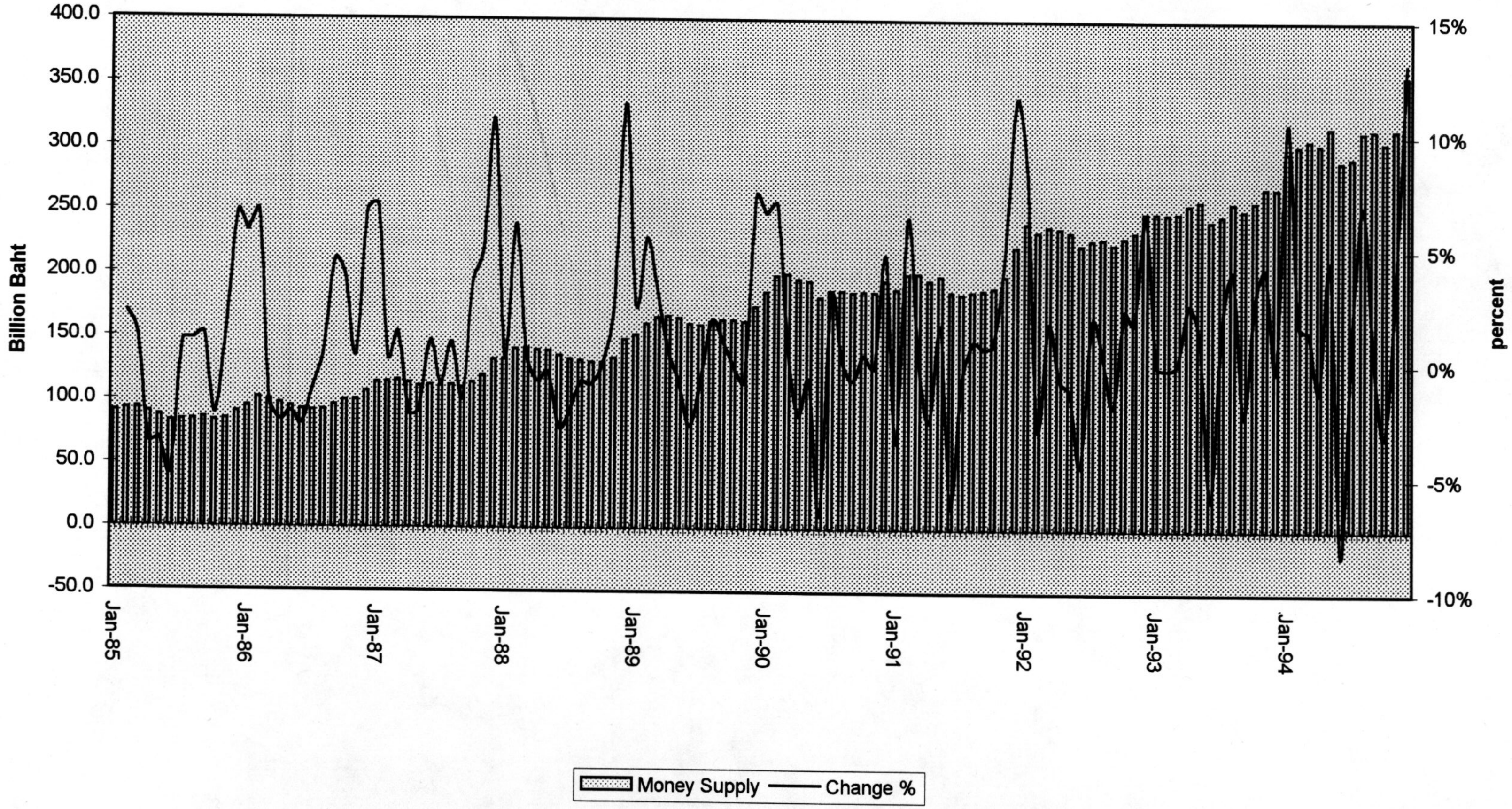


Figure 6: Consumer Price Index Change

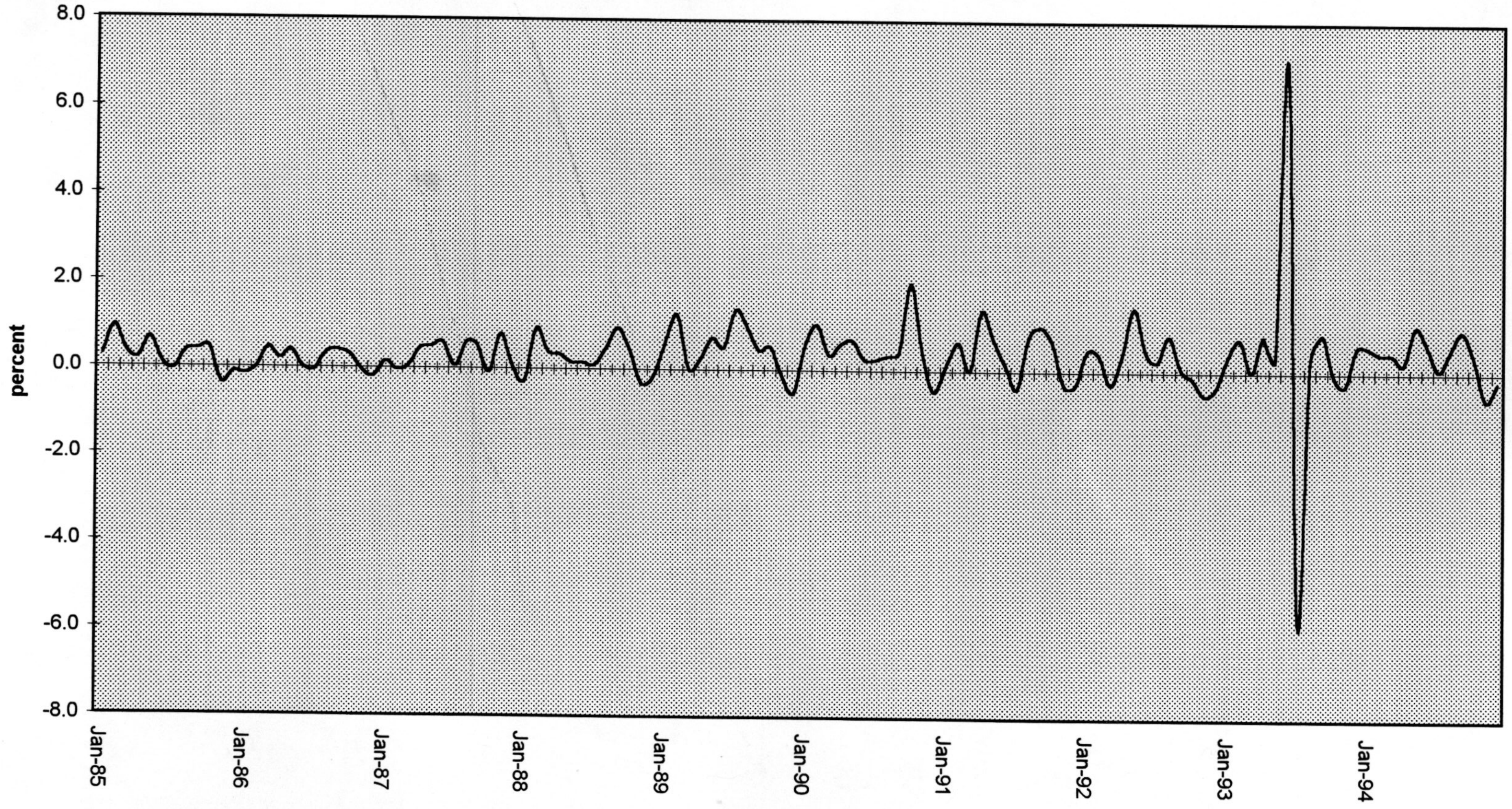
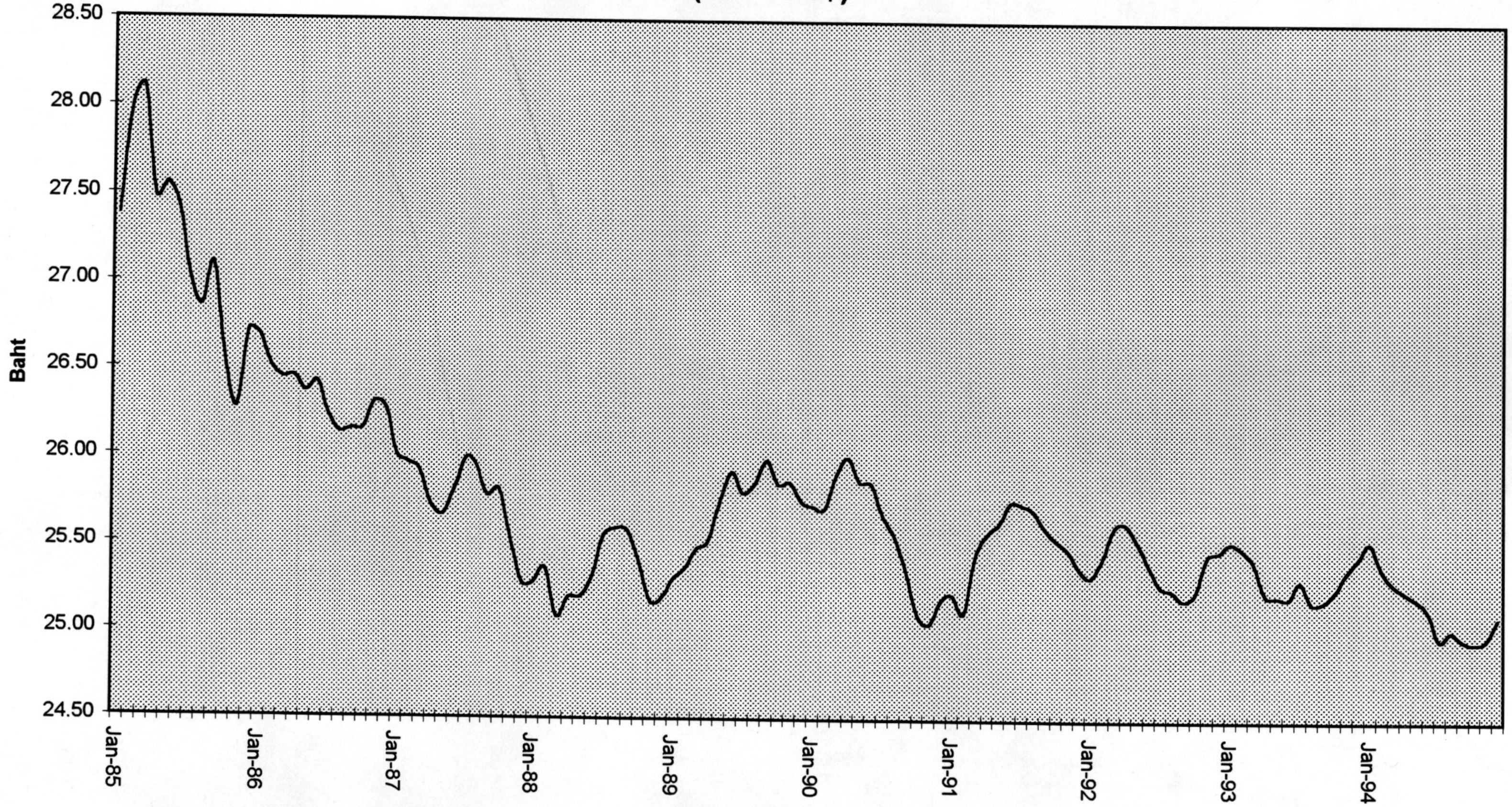


Figure 7: Foreign Exchange Rates
(Baht/US$)



Appendix IV

The Results of

A. Foreign exchange control and
B. BIBFs policy

Table 6: Foreign Exchange and BIBF Policies

Period	Foreign Interest Rate	Lagged Interest Rate	Real GDP	Lagged Money Supply	Lagged Inflation	R^2	D.W.	No. of Observations	Speed of Adjustment (Θ)	Openness Coefficient Long run (ψ)	Openness Coefficient Short run	Timing for Fully Adjustment
1985.01-1991.03	0.563	0.469	-0.018	-0.349	-0.589	0.93	1.530	74	0.55	1.03	0.56	0.83
	(8.050)	(6.987)	-(0.029)	-(0.511)	-(2.282)							
1991.04-1993.02	3.088	-0.339	-16.140	12.153	-0.107	0.76	1.072	23	1.12	2.75	3.09	-0.11
	(4.288)	-(1.346)	-(2.536)	(2.031)	-(0.173)							
1993.03-1994.12	-0.140	0.335	-24.350	0.700	-0.094	0.58	1.526	22	-0.72	0.20	-0.14	-2.39
	-(0.253)	(1.294)	-(2.824)	(0.128)	-(0.529)							

Table 7: BIBFs Policy

Period	Foreign Interest Rate	Lagged Interest Rate	Real GDP	Lagged Money Supply	Lagged Inflation	R^2	D.W.	No. of Observations	Speed of Adjustment (Θ)	Openness Coefficient Long run (ψ)	Openness Coefficient Short run	Timing for Fully Adjustment
1985.01-1993.02	0.648	0.380	-0.093	-0.667	-0.267	0.87	1.595	97	0.63	1.03	0.65	0.59
	(7.583)	(4.980)	-(0.187)	-(1.645)	-(0.967)							
1993.03-1994.12	-0.140	0.335	-24.350	0.700	-0.094	0.58	1.526	22	-0.72	0.20	-0.14	-2.39
	-(0.253)	(1.294)	-(2.824)	(0.128)	-(0.529)							

A. Foreign exchange control and the Bangkok International Banking Facilities or BIBFS policy.

1. Period I: January 1985 - March 1991

$$i_t = \underset{(0.69)}{3.95} + \underset{(8.05)}{0.56}(i_t^* + fw_t) - \underset{(-0.03)}{0.02}\log y_t - \underset{(-0.51)}{0.35}\log m_{t-1} - \underset{(-2.28)}{0.59}\pi_{t-1} + 0.47 i_{t-1}$$
$$(6.99)$$

$$R^2 = 0.93 \qquad D.W. = 1.53$$

The coefficient on foreign interest rate and lagged domestic interest rate are significant at 5 percent level and there was positive relationship, implying that the domestic interest rate are positively influenced by foreign interest rates and lagged domestic interest rate. The coefficient on foreign interest rate describes 1 percent increases in foreign rate will result in an increase in domestic interest rate by 0.56 percent by holding real GDP, lagged money supply, lagged inflation and lagged domestic interest rate constant. The other way, the coefficient on lagged domestic interest rate describes 1 percent increases in lagged domestic rate will result in an increase in domestic interest rate by 0.47 percent by holding real GDP, lagged money supply, lagged inflation and foreign interest rate constant. For coefficient on real GDP, lagged money supply and lagged inflation are all insignificant at 5 percent level, and there are unexpected sign on lagged money supply, lagged inflation and real GDP. The estimations in equation fit well that can interpreted the independent variables explains 93 percent of the variation dependent variable.

From this result of the first period, we can find speed of adjustment (Θ) to foreign interest by 0.56. However, adjustment is not instantaneous, with only 56 percent of the difference between domestic and foreign interest rate eliminated in each period, if it adjusted to foreign interest rate by 100 percent, it will need more 0.83 month. For ψ measures the degree of openness of the economy in the long term is 1.01 which suggests that the financial system is fully open.

2. Period II: April 1991 - February 1993

$$i_t = \underset{(-1.15)}{-91.74} + \underset{(4.29)}{3.09}(i_t^* + fw_t) - \underset{(-2.54)}{16.14}\log y_t + \underset{(2.03)}{12.15}\log m_{t-1} - \underset{(-0.17)}{0.11}\pi_{t-1} - \underset{(-1.35)}{0.34} i_{t-1}$$

$$R^2 = 0.76 \qquad D.W. = 1.07$$

The coefficient on foreign interest rate is significant at 5 percent level and there was positive relationship, implying 1 percent increases in foreign rate will result in an increase in domestic interest rate by 3.09 percent by holding real GDP, lagged money supply, lagged inflation and lagged domestic interest rate constant. In contrast, the coefficient on lagged domestic interest rate describes 1 percent increases in lagged domestic rate will result in an decrease in domestic interest rate by 0.34 percent by holding real GDP, lagged money supply, lagged inflation and foreign interest rate constant. Moreover, lagged money supply has positive relationship on domestic interest rate, suggests that 1 unit of money supply increased will lead domestic interest rate increased 12.15 percent over the period. For coefficient on real GDP, lagged inflation and lagged domestic interest rate are all insignificant at 5 percent level, and there are unexpected sign on real GDP, lagged inflation and lagged domestic interest rate The estimations in equation fit well that can interpreted the independent variables explains 76 percent of the variation dependent variable.

In second period, we can find speed of adjustment (Θ) to foreign interest by 1.12. That mean adjustment is instantaneous, with 100 percent of the difference between domestic and foreign interest rate eliminated in each month. For ψ measures the degree of openness of the economy in the long term is overshoot by 2.75 which mean fully opened supported with the timing of fully adjustment after short run adjustment has the unexpected sign.

3. Period III: March 1993 - December 1994

$$i_t = \underset{(1.34)}{111.35} - \underset{(-0.25)}{0.14}(i_t^* + fw_t) - \underset{(-2.82)}{24.35}\log y_t + \underset{(0.13)}{0.70}\log m_{t-1} - \underset{(-0.53)}{0.09}\pi_{t-1} + \underset{(1.29)}{0.33}i_{t-1}$$

$$R^2 = 0.58 \qquad D.W. = 1.53$$

The coefficient of foreign and domestic interest rates are insignificant and have unexpected signs at 5 percent level. For the coefficient on the variables are all insignificant at 5 percent level, and there are unexpected sign on real GDP, and lagged inflation but correct sign on lagged domestic interest rate and lagged money supply. Thus, we can implies that lagged domestic interest rate more important than lagged money supply which lends to domestic interest rate increase. The estimations in equation has not quite fit well that can interpreted the independent variables explains only 58 percent of the variation dependent variable.

For the speed of adjustment (Θ) to foreign interest and ψ measures the degree of openness of the economy in the long term in this period, we can not explained, because the speed of adjustment has unexpected sing by -0.72 and the degree of openness presented low degree is 20 percent. This may result from data constrain which is not well representative, such as, average overnight Interbank rates were not the same maturity as average LIBOR one month.

From observing structural change due to liberated foreign exchange control and BIBFS policies by comparing the coefficients, we may conclude that in the second period has more openness than period I, considered with the speed of adjustment in period II is higher than period I. On the other hand, the domestic interest rate was more closely to foreign interest rate after liberalized of foreign exchange policy. For the structural change due to liberated BIBFS policy, we may conclude that the domestic interest rates are not increasingly influenced by BIBFS policy that mean BIBF's nonbinding. However, interest rates are affected by external factors which are the high volume of capital inflows during this period for invested in equity market (see figure 1-2) which supported with low R^2 .

Importantly, a Chow test can reject the hypothesis of parameter stability for sample break at 1991.04 and 1993.03 with 3.81 of F-distribution at 5 percent level of significant and conclude that the subset of variables is statistically. As a general rule three separate regression equations must be estimated to apply the test correctly.

B. Bangkok International Banking Facilities or BIBFS policy.

1. Period I: January 1985 - February 1993

$$i_t = \underset{(1.72)}{7.93} + \underset{(7.58)}{0.65(i_t^* + fw_t)} - \underset{(-0.19)}{0.09 \log y_t} - \underset{(-1.64)}{0.67 \log m_{t-1}} - \underset{(-0.97)}{0.27\pi_{t-1}} + \underset{(4.98)}{0.38 i_{t-1}}$$

$$R^2 = 0.87 \qquad D.W. = 1.59$$

The coefficient on foreign interest rate and lagged domestic interest rate are significant at 5 percent level and there was positive relationship, implying that the domestic interest rate are positively influenced by foreign interest rates and lagged domestic interest rate. The coefficient on foreign interest rate describes 1 percent increases in foreign rate will result in an increase in domestic interest rate by 0.65 percent by holding real GDP, lagged money supply, lagged inflation and lagged domestic interest rate constant. Moreover, the coefficient on lagged domestic interest rate describes 1 percent increases in lagged domestic rate will result in an increase in domestic interest rate by 0.38 percent by holding real GDP, lagged money supply, lagged inflation and foreign interest rate constant. There are the unexpected sign on real GDP, lagged money supply and lagged inflation and coefficient on them are all insignificant at 5 percent level. The estimations in equation fit well that can interpreted the independent variables explains 87 percent of the variation dependent variable.

For this period, we can find speed of adjustment (Θ) to foreign interest by 0.63. However, adjustment is not instantaneous, with only 65 percent of the difference between domestic and foreign interest rate eliminated in each period, if it adjusted to foreign interest rate by 100 percent, it will need more 0.59 month. For ψ measures the degree of openness of the economy in the long term is 1.03 which mean fully opened.

2. Period II: March 1993 - December 1994

$$i_t = \underset{(1.34)}{111.35} - \underset{(-0.25)}{0.14}(i_t^* + fw_t) - \underset{(-2.82)}{24.35}\log y_t + \underset{(0.13)}{0.70}\log m_{t-1} - \underset{(-0.53)}{0.09}\pi_{t-1} + \underset{(1.29)}{0.33}i_{t-1}$$

$$R^2 = 0.58 \qquad D.W. = 1.53$$

The coefficient on variables are all insignificant at 5 percent level, and they have the wrong sign on foreign interest rate, real GDP, and lagged inflation but correct sign on lagged domestic interest rate and lagged money supply. Thus, we can implies that lagged domestic interest rate more important than lagged money supply which lends to domestic interest rate increase. The estimations in equation has not quite fit well that can interpreted the independent variables explains only 58 percent of the variation dependent variable.

For the speed of adjustment (Θ) to foreign interest and ψ measures the degree of openness of the economy in the long term in this period, we can not explained, because the speed of adjustment has wrong sing by -0.72 and the degree of openness presented low degree is 20 percent.

Observing the structural change after liberated BIBFS policy, we can conclude that the domestic interest rates are not increasingly influenced by BIBFS policy that mean BIBFS nonbinding, and there are affected by external factors which are the high volume of capital inflows during this period for invested in equity market (see figure 1-2). Once again, a Chow test can reject the hypothesis of parameter stability for sample break at 1993.03 and conclude that the subset of variables is statistically with 2.59 of F-distribution at 5 percent level of significant.

Appendix V

The Results of

EdWard and Khan Approach

Table 8: Whole Period

Period	Foreign Interest Rate	Lagged Interest Rate	Real GDP	Lagged Money Supply	Expected Inflation	R^2	D.W.	No. of Observations	Speed of Adjustment (Θ)	Openness Coefficient Long run (ψ)	Openness Coefficient Short run	Timing for Fully Adjustment
1985.01-1994.12	0.598 (7.080)	0.409 (5.494)	-0.333 -(0.643)	-0.523 -(1.563)	0.159 (1.237)	0.84	1.582	118	0.59	1.01	0.60	0.68

Table 9: Foreign Exchange Policy

Period	Foreign Interest Rate	Lagged Interest Rate	Real GDP	Lagged Money Supply	Expected Inflation	R^2	D.W.	No. of Observations	Speed of Adjustment (Θ)	Openness Coefficient Long run (ψ)	Openness Coefficient Short run	Timing for Fully Adjustment
1985.01-1991.03	0.549 (7.627)	0.471 (6.776)	-0.144 -(0.215)	-0.503 -(0.714)	0.194 (0.733)	0.92	1.632	74	0.54	1.02	0.55	0.86
1991.04-1994.12	0.719 (2.507)	0.312 (1.824)	-2.395 -(0.834)	0.414 (0.201)	0.144 (0.750)	0.54	1.492	45	0.70	1.03	0.72	0.43

Table 10: Foreign Exchange and BIBFs Policies

Period	Foreign Interest Rate	Lagged Interest Rate	Real GDP	Lagged Money Supply	Expected Inflation	R^2	D.W.	No. of Observations	Speed of Adjustment (Θ)	Openness Coefficient: Long run (ψ)	Openness Coefficient: Short run	Timing for Fully Adjustment
1985.01-1991.03	0.549	0.471	-0.144	-0.503	0.194	0.92	1.632	74	0.54	1.02	0.55	0.86
	(7.627)	(6.776)	-(0.215)	-(0.714)	(0.733)							
1991.04-1993.02	3.085	-0.338	-15.254	13.067	-0.406	0.76	1.123	23	1.12	2.75	3.08	-0.11
	(4.465)	-(1.404)	-(2.424)	(2.158)	-(0.671)							
1993.03-1994.12	-0.093	0.321	-23.338	0.254	0.148	0.59	1.447	22	-0.41	0.23	-0.09	-3.45
	-(0.173)	(1.287)	-(2.738)	(0.047)	(0.867)							

Table 11: BIBFs Policy

Period	Foreign Interest Rate	Lagged Interest Rate	Real GDP	Lagged Money Supply	Expected Inflation	R^2	D.W.	No. of Observations	Speed of Adjustment (Θ)	Openness Coefficient: Long run (ψ)	Openness Coefficient: Short run	Timing for Fully Adjustment
1985.01-1993.02	0.637	0.384	-0.175	-0.689	0.058	0.87	1.621	97	0.62	1.02	0.64	0.60
	(7.473)	(5.015)	-(0.347)	-(1.687)	(0.212)							
1993.03-1994.12	-0.093	0.321	-23.338	0.254	0.148	0.59	1.447	22	-0.41	0.23	-0.09	-3.45
	-(0.173)	(1.287)	-(2.738)	(0.047)	(0.867)							

Bibliography

Bandid Nijathaworn and Thanisorn Dejthamrong, "Capital Flows, Exchange Rate and Monetary Policy: Thailand's Recent Experience", Quarterly Bulletin, Bank of Thailand, Vol. 34 No. 3, September 1994

Bangkok Bank's Economic Monthly Review, March 1992

Carlos J.Glower, "Interest Rate Deregulation: A Brief Survey of the Policy Issues and The Asian Experience", Asian Development Bank, July 1994, p.6

Christopher Chamley and Qaizer Hussian, "The Effects of Financial Liberalization in Thailand, Indonesia and the Philippines", World Bank Working Paper WPS 125 (October 1988).

Dornbrusch Rudiger & Fischer Stanley, "Macro Economics", sixth edition 1994, International Edition, McGraw-Hill,Inc.

Easterly William and Honohan Patrick, "Financial Sector Policy in Thailand" A Macroeconomic Perspective, The World Bank, WPS 440 (June 1990)

Edwards Sebastian, "Financial Deregulation and Segmented Capital Markets: The Case of Korea", World Development, 16 (January 1988): 185-194

Eiteman K. David and Stonehill I. Arthur and Moffett H.Michael, "Multinational Business Finance (6th edition)" (Addison-Wesley Publishing Company), P.99, 148, 154-155.

Fry J.Maxwell, "Money, Interest and Banking in Economic Development", (Baltimore and London: The John Hopskins University Press, 1988), p.135-144.

Izak Atiyas, "The Private Sector's Response to Financial Liberalization in Turkey: 1980-82", World Bank Working Paper WPS 147 (January 18989).

Jose De Gregorio and Pablo E. Guidotti, "Financial Development and Economic Growth", IMF Working Paper, International Monetary Fund, WP/92/101, December 1992.

Kellison G.Stephen, "The Theory of Interest", (second edition, 1991), p.296-298

Kumihara Shigehara, "Japan's Experience with Use of Monetary Policy and the Process of Liberalization", Bank of Japan Monetary and Economic Studies 9 (March 1991): 1-21

Kuroda Akio, "International Dimensions of Japanese Financial Development: Implications for Asian and Thailand" Editor: Attacharn Pattanajidvilai (March 1989)

McKinnon I.Ronald, Money and Capital in Economic Development, (Washington: Brooking Institution, 1973), P. 71-77.

Miltiades Chacholiades, International Economics, (Singapore: McGraw-Hill, 1990), P.273

Montiel J.Peter, "Capital Mobility in Developing Countries: Some Measurement Issues and Empirical Estimates", The World Bank Economic Review, volume 8, September 1994, No. 3.

Rivera-Batiz L.Francisco and Rivera-Batiz A.Luis, "International Finance and Open Economy Macroeconomic (2nd edition)", (Macmillan Publishing Company), P.527.

Pakorn Vichyanond, "Thailand's Financial System: Structure and Liberalization" Thailand Development Research Institute Research Monograph No. (1994).

Pornpen Sodsrichai, An Economic Impact of Financial Liberalization in Thailand, Thesis, Master of Economics, Thammasat University, May 1993.

Robinson David, Yangho Byeon, and Ranjit Teja with Wanda Tseng, "Thailand: Adjusting to Success Current Policy Issues", International Monetary Fund, Occasional Paper 85, August 1991, p.39-42

Shaw Edward, Financial Deepening in Economic Development, (New York: Oxford University Press, 1973), P.81-87.

T.M. Rybczynski, "The Internationalization of the Financial System and the Developing Countries, The Evolving Relationship", The World Bank, WP/788, 1985.

Van Horne C.James, "Financial Market Rates & Flows", (third edition), Prentice-Hall International Editions, 1990, p.86-87

Wanda Tseng and Robert Corker, "Financial Liberalization, Money Demand and Monetary Policy in Asian Countries", International Monetary Fund Occasional Paper No. 84 (July 1991).

Yilmaz Akyuz, "Financial Liberalization: The Key Issues", United Nations Conference on Trade and Development, Discussion Papers, No. 56, March 1993.

Author's Profile

Mr.Anuchat Prakartchai

Mr.Anuchat Prakartchai is Senior Researcher in Planning Department of The Union Bank of Bangkok. Following his graduate school in International Economics and Finance, Department of Economics, Chulalongkorn University. Before joining The Union Bank of Bangkok, he worked at credit policy department of Bangkok Bank, private consulting firm, CP-Groups, and Siam Cement.