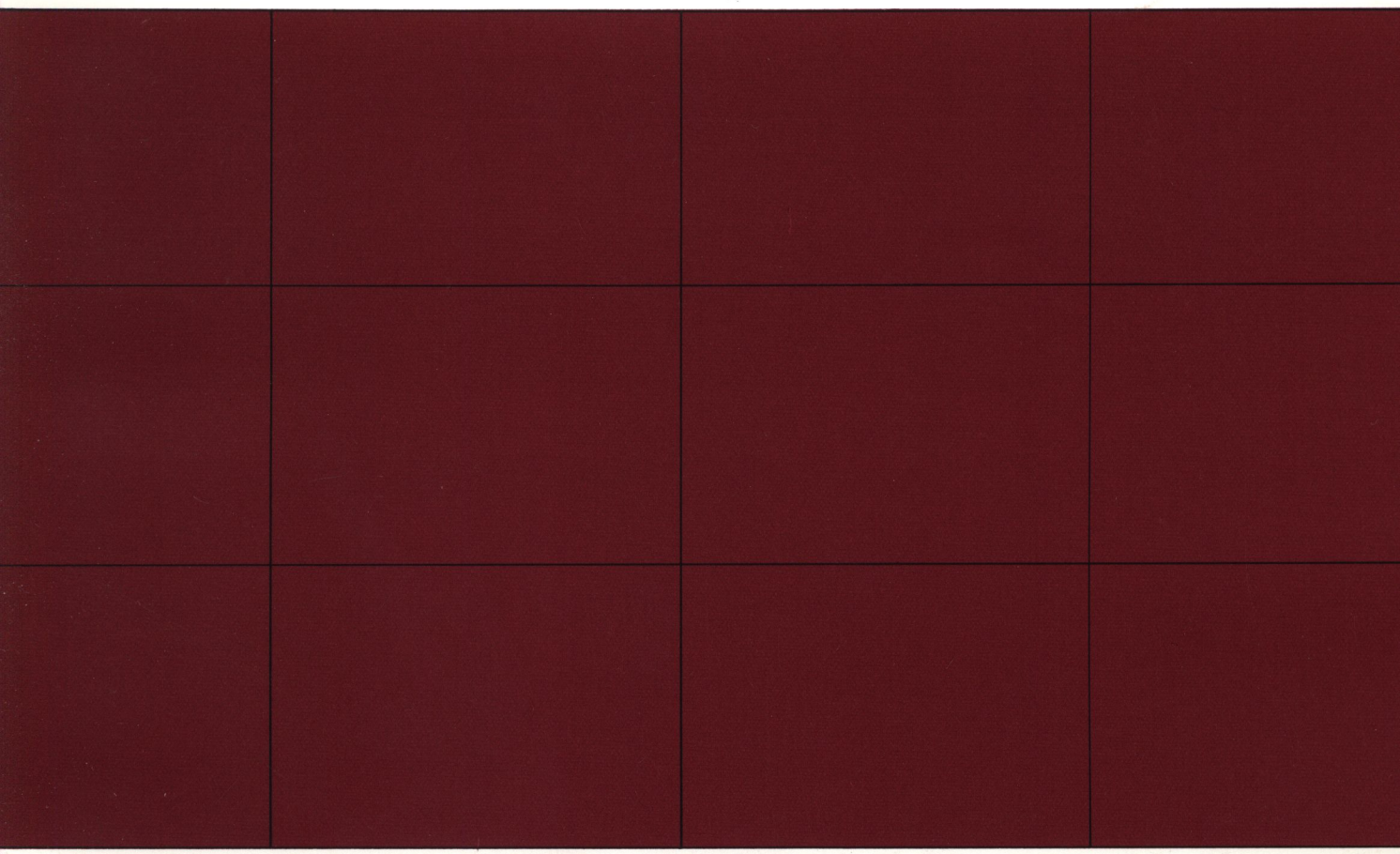
1986 TDRI Year-End Conference on

Resources Management

Financial Resources Management



Thailand Development Research Institute Foundation

TDRI 1986 YEAR—END CONFERENCE

ON

FINANCIAL RESOURCES MANAGEMENT

PREPARED BY

MACROECONOMIC POLICY PROGRAM

THAILAND DEVELOPMENT RESEARCH INSTITUTE
FOUNDATION

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FINANCIAL RESOURCES MANAGEMENT

Prepared by

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PREFACE

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CHAPTER 1

INTRODUCTION

The management of financial resources is essentially the management of the pace, direction, and stability of economic development. The basic issue is how to ensure that development proceeds in an appropriate direction and at a satisfactory rate, while at the same time maintaining the financial stability of the economy.

An analogy with the management of a company is partly appropriate. To ensure that the company will prosper and grow, management must be concerned with a number of issues:-

1. Efficiency:- Making the best use of available resources.

2. Profitability:- This is the ultimate source of surplus for long-term growth.

3. Investments:- To grow means to invest, and to invest in areas with the potential to yield future surpluses. The company needs to direct investable resources into areas in which it has a comparative advantage, being flexible enough to respond to market conditions.

4. Debt Management:- It is inevitable for a growing company to borrow. There is a need to ensure that the debt burden is under control, that cash flow does not become critical. In fact, for a newly emerging company, this is a critical issue, because much of the financing for investments is through borrowings. The company needs to manage its own pace of growth, being careful not to increase the debt burden to the point that some unforeseen set back will completely disrupt the future potential.

While issues concerning the financial management of the economy is inevitably much more complex than that for a company, the analogy has a number of relevant points.

First, productive resources should be used in the most efficient manner. In fact, in a capitalist economy, market forces do play an important role in ensuring efficiency in production: those sectors which are not efficient should have a hard time surviving. However, in a mixed economy with the public sector also playing a key role in production, many parts of the economy are shielded from market forces, and non-market control on the efficiency of these sectors needs to be exercise. Also, many policies, particularly protection policies and price support schemes, distort the market incentives, so that their impact on the efficiency in usage of productive resources should be carefully monitored.

Secondly, the economy must be able to generate sufficient surplus of investable resources, i.e. savings. The more savings are generated, the less need is there to rely on external borrowings to finance a given level of investments.

Third, investable resources should be channeled into sectors with the potential to generate future surpluses. These may be those with clear current comparative advantage in an international context, or those where the comparative advantage may develop in the future, or simply infrastructure development which will promote other sectors to improve their comparative advantage and efficiency. While some resources are inevitable allocated to alternate goals, such as equity considerations, a careful balance has to be reached. Flexibility must be maintained, particularly in a situation in which the international situation can change very rapidly, and for a small open economy such as Thailand, these changes can critically alter the most promising avenue of development.

Lastly, there must be careful debt management. That there must be reliance on debt to finance development to some extent is not the problem. The problem is to ensure that the debt burden does not get out off hand. In fact, this is closely related to all the other issues. It involves making sure that development moves along a path where the need for external resources does not grow disproportionately. Sufficient domestic savings must be generated, resources must be used efficiently, and investments should be of appropriate quality.

The point above on alternative goals indicate that there many other important issues in the managing the financial resources of a country compared to that of a company. Inevitably, the government has to be concerned with many issues

related to political and social goals which require financial resources to carry out. These could be national security, law and order, internation cooperation, income distribution considerations, and many, many others. The main thing to bear in mind is that there are trade offs to be made in the alternative ways current financial resources are used, and also in the use of resources for the benefit of the present compared to the future. The ideal is to reach a balance, political, economic and social, so that a fairly stable development can be maintained to the benefits of all members of the society, both present and future.

This manuscript presents a detailed examination of the financial resource management issues facing the Thai economy. The topics range from Savings mobilization, to Investment management, and to the important role of the Public Sector. Each of the areas is a crucial component of the overall picture on financial resource management in the economy. The report also considers the outlook on financial resource management over the next five years. This is quite crucial because 1986 appears to be a turning point for the outlook on financial resources. The large and rapid decline in oil prices have meant tremendous windfall gains. What does this imply for financial resource constraints on Thailand's economic development in the future?

The plan of the manuscript is as follows. The next chapter presents an overview of the past trends in the macroeconomic picture on financial resource balance for the Thai economy. This will give the broad view on the issues involved. Chapter 3 looks in detail at Private Savings, its volatility, and the institutional aspects of savings mobilizations. Chapter 4 turns to look at Private investments, how it is financed, and the roles of various government agencies in managing the direction of private investments through subsidies and other incentives. Chapter 5 examines the Public sector, which is the key to financial resource management. The chapter focuses on the role of the public sector as the major user of financial resources, and the way it manages its own use of resources. Chapter 6 gives the outlook for the future. It starts by trying to understand the crucial developments in 1986, where it is likely that the current account deficit will be the lowest in over 10 years. An understanding of the current development is crucial to a judgement of what may develop in the future. Finally, the outlook over the next 5 years is presented. Also presented will be alternative scenarios of different ways that the windfall made possible by the decline in oil prices may be used for development.

CHAPTER 2

AN OVERVIEW OF FINANCIAL RESOURCE BALANCE

This chapter presents an overview of the past trend in the financial resource balance for the economy. It looks at how past investments have been financed, its implications for the debt burden of the country, and factors that are important in influencing the national deficit.

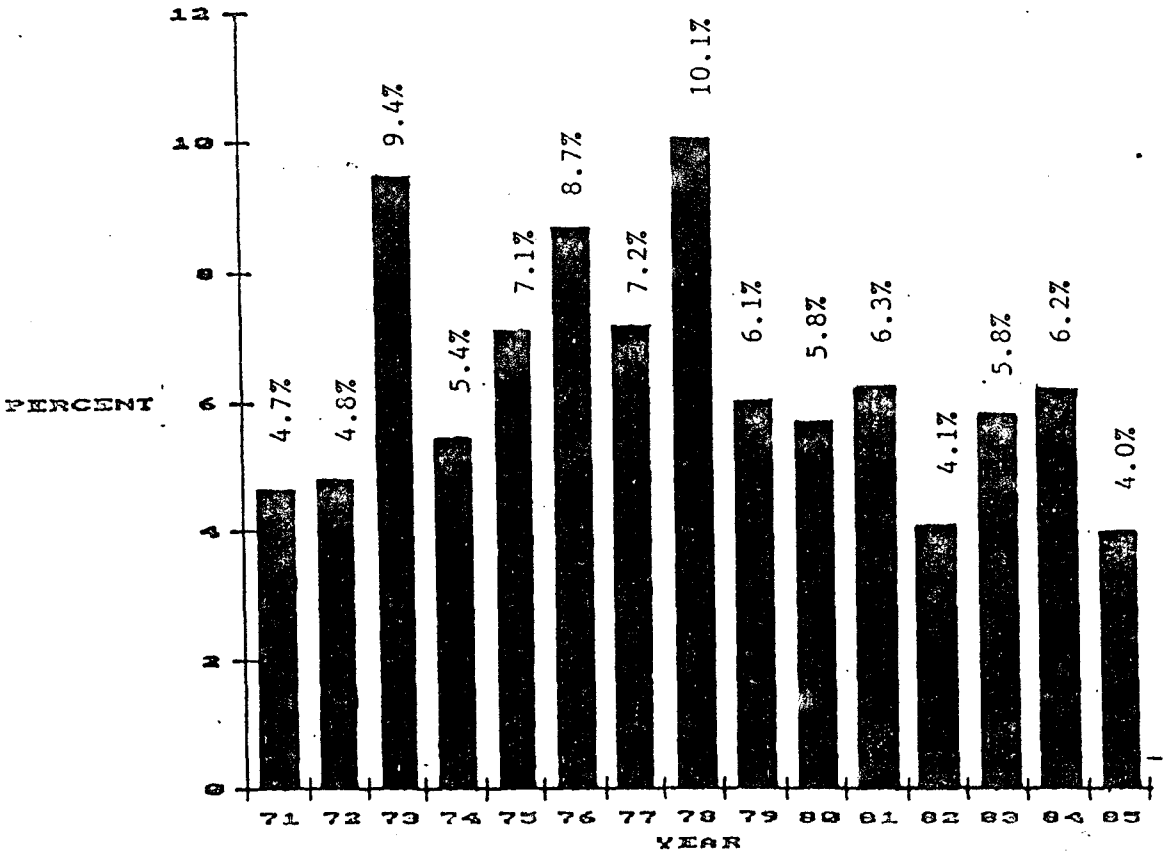
THE FINANCING OF GROWTH

The ultimate source from which financial resources are generated is production. This yields value added or incomes, and the aggregate picture on how these are spent or saved, and its implications for the pace, direction and stability of economic development is the focus of financial resource management.

Over the last decade and a half, the Thai economy has performed fairly well in terms of economic growth. Figure 2.1 shows annual growth rates of real GDP for 1970-1985. The average growth for this period was around 6.4%, which is fairly high. Thus, real GDP increased slightly more than 2.5 fold over the period. In addition to the upward trend, real GDP reveals the business fluctuations around the trend resulting from various external shocks. For example, an increase in the prices of primary commodities in the world markets raised the growth rate of real GDP in 1973 to 9.4%. In contrast, world-wide recessions in the early 1980's especially those in 1982 have slowed down the growth rates of real GDP. Its annual growth rate in 1982 was 4.10%, more than two and a quarter percent below the average growth rate for 1970-1985. Even worse, the annual growth rate of real GDP in 1985, from latest estimates, may be below 4%, the lowest rate for the period 1970-1985. What this means is that the performance of the Thai economy is heavily influenced by external developments. This should be borne in mind when thinking about the issue of financial resource management, because it implies that not all key variables are under the control of the policy makers, so that flexibility in response to external changes is as important as a coherent overall management strategy.

Figure 2.1

GROWTH RATE OF REAL GDP



Note:- A growth rate of real GDP was calculated as a percentage change from preceding year. Data are from Office of the National Economic and Social Development Board, National Income of Thailand, 1985 Edition, Tables 7, 8 and 9,pp. 16-18 and from Natinal Income Accounts, Research and Development Group, Consolidation of National Income Accounts Statistics, 1970-1984, Old and Revised Series, July 10, 1985, Table 1.5.

The overall growth rates since 1970 must be considered good, particularly given that the period has seen two major oil shocks, which involved massive transfers of resources from the oil importing nations to the oil producers. Of course, in this year of 1986, we have seen an equally major reverse shock, when oil prices declined by around 40%, bringing with it welcome windfall. However, in terms of the past trend, the question that will be addressed in the rest of this chapter is how have the satisfactory growth rates been financed, and what is the current financial situation of the economy.

It is clear that the engine to growth is through investments. For Thailand, the ratio of investments to GDP has averaged about 24.5% between 1970 and 1985. This has varied from about 28% of GDP during the fast period of economic growth from 1973 to 1980, to around 22% of GDP between 1982 and 1985. In an economy completely closed to external trade, it must of course be the case that the amount invested is simply the amount of savings. But for an open economy, this needs not be the case, and in any year the difference between investments and domestic savings is essentially equal to net foreign borrowing, or the current account deficit. In the Thai case, since the early 1970's, investments have been persistently higher than domestic savings, the difference being covered by borrowings from abroad.

TABLE 2.1
TRENDS IN FINANCIAL DEFICIT
(MILLIONS OF BAHT)

YEAR	SAVINGS	CAPITAL FORMATN	STATIST DISCREP	FINANCIAL BALANCE	CURRENT ACCOUNT	DISCREP
1970	29402	-35606	994	-5210	-5197	13
1971	29493	-34887	1767	-3627	-3633	-6
1972	37398	-33679	-4782	-1063	-1063	0
1973	59814	-51711	-9100	-997	-997	0
1974	73231	-67441	-7400	-1610	-1785	-175
1975	70867	-75747	-7373	-12253	-12368	-115
1976	75084	-78444	-5244	-8604	-8978	-374
1977	89942	-102240	-9787	-22085	-22392	-307
1978	111807	-126950	-7794	-22937	-23445	-508
1979	128308	-160287	-9733	-41712	-42591	-879
1980	157223	-186258	-15552	-44587	-42409	2178
1981	162012	-194479	-22433	-54900	-56049	-1149
1982	159561	-177772	-3722	-21933	-23138	-1205
1983	166340	-212271	-19791	-65722	-66286	-564
1984	179182	-236645	10292	-47171	-49468	-2297
1985	187106	-237641	7288	-43247	-39671	3576

TABLE 2.2
SAVINGS AND INVESTMENT
(PERCENT OF GDP)

YEAR	GROSS DOMESTIC SAVINGS	CAPITAL FORMATION	STAT DISCREP	CAPITAL FORMATION & DISCRP	NATIONAL FINANCIAL DEFICIT
1970	21.60	26.20	-.70	25.40	3.80
1971	20.40	24.10	-1.20	22.90	2.50
1972	22.70	20.50	2.90	23.40	.60
1973	27.60	23.90	4.20	28.10	.50
1974	27.00	24.90	2.70	27.60	.60
1975	23.70	25.30	2.50	27.80	4.10
1976	22.20	23.20	1.60	24.80	2.50
1977	22.90	26.00	2.50	28.50	5.60
1978	23.80	27.00	1.70	28.70	4.90
1979	23.10	28.80	1.70	30.60	7.50
1980	23.00	27.20	2.30	29.50	6.50
1981	20.60	24.70	2.90	27.60	7.00
1982	18.90	21.00	.40	21.40	2.60
1983	18.00	23.00	2.10	25.10	7.10
1984	18.10	23.90	-1.00	22.80	4.80
1985	17.90	22.70	-.70	22.00	4.10

Table 2.1 shows the financial deficit or savings investment gap for the Thai economy since 1970. The table also reconciles the investment savings gap data from the National Accounts with the Current Account data from the Bank of Thailand. In general, the two series can be reconciled fairly closely except for the large statistical discrepancy in the National Accounts. This latter is probably due to the difficulty in evaluating depreciation and stock changes.

Table 2.1 makes the point that the savings investment gap and the current account deficit are merely two sides of the same coin, as any text book on macroeconomics will attest to. In terms of the size of the deficit, because the data are in current baht, it is somewhat difficult to see how large the financial deficit is in relation to the size of the economy, although it seems fairly clear that the deficit have started growing quite fast since about 1975. To see the picture more clearly, Table 2.2 expresses gross domestic savings, investments, and the National financial deficit in terms of their ratio to GDP.

From about 1975, the financial deficit has been around 4.5-5.5% of GDP, with some years where it jumped to about 7% and other years when it fell to about 2.5%. Recently, even though

the shares of both savings and investments have been falling, the gap still remains approximately in this range. What this means is that the financial resources for investments which have driven the growth rate in the economy cannot be generated wholly from domestic savings, and part of investments have continually been financed by foreign borrowings.

Actually, as with a growing company which needs to borrow to finance its investment plans, this need not necessary be a source of concern. The issue is not so much whether external financing of investments have to be resorted to or not, but whether the accumulated debt can be kept under control.

QUANTIFYING EXTERNAL DEBT

What does the persistent external borrowings since the early 1970's mean in terms of the debt of the economy? Clearly, with the need to continually finance a part of investments through external borrowings, the stock of external debt will accumulate. This section will try to quantify the extent of external debt to see how fast it has been growing in relation to the size of the economy.

To obtain a profile of the past trend in external debt, it is possible to use the available data on flows of external financing as given in the balance of payments figures. Table 2.3 presents an estimate of the private external debt in millions of US dollars (including separate estimates for foreign direct investments and other financial loans).

Total net inflow of foreign debt to the private sector is composed of direct foreign investments, long-term loans and short loans. Direct foreign investments should also be looked at along with the financial borrowings because sooner or later they will lead to repatriation of profits, which is just foreign investment income, like the interest payments that the country must pay on foreign borrowing. Yearly net inflow of private debt was quite small up to 1978, averaging 209 million dollars or 4,252 million baht per year between 1970 and 1978. After 1978, the net borrowing increased sharply, and averaged 922 million dollars or 20,713 million baht per year up to 1985. The growth occurs for both direct foreign investments and for financial loans but much faster for the latter. On this estimate, the accumulated stock of direct foreign investments increased 7.7 folds between 1970 and 1985, from about $350 million in 1970 to around $2,690 million in 1985, while the stock of financial debt (cumulated

long and short term debt) increased 10.6 times from about $960 million to $6,510 million. The increase in financial debt, which is what people normally look at, actually increased about twice as fast as direct investments since about 1975. Between 1975 and 1985, the stock of financial debt increased 6 times, while the stock of direct investments only increased by just over 3 times.

TABLE 2.3
ESTIMATE OF PRIVATE SECTOR EXTERNAL DEBT

	NET INFLOWS TO PRIVATE SECTOR (MILLIONS OF DOLLARS)				STOCK OF DEBT		
YEAR	DIRECT INVEST	L-T LOANS	S-TERM	LONG&SH TERM LOANS	STOCK DIRECT INVEST	STOCK OTHER DEBT	TOTAL STOCK
1970	44	50	9	59	350	613	963
1971	40	20	8	27	390	640	1030
1972	70	69	15	84	460	724	1184
1973	79	-59	64	5	539	728	1267
1974	189	130	56	186	728	914	1642
1975	86	65	128	193	814	1107	1921
1976	80	34	137	171	894	1277	2171
1977	107	43	257	300	1000	1578	2578
1978	50	34	84	117	1050	1695	2745
1979	51	310	175	484	1101	2179	3281
1980	186	671	334	1005	1288	3184	4472
1981	293	873	115	988	1581	4172	5753
1982	189	394	42	436	1769	4608	6377
1983	356	216	128	343	2126	4951	7077
1984	410	1062	248	1310	2535	6261	8796
1985	151	115	140	255	2686	6516	9202

NOTE:Direct investment figures do not take into account depreciation or re-investment of profits

TABLE 2.4
ESTIMATE OF TOTAL NET EXTERNAL DEBT IN US DOLLARS
(MILLIONS)

YEAR	GOVT EXTERNAL DEBT	PRIV EXTERNAL DEBT	NET EXT ASSETS FIN INST (END-YEAR)	TOTAL NET EXTERNAL DEBT	TOTAL EXCL DIRECT INVEST
1970	321	963	788	495	145
1971	335	1,030	788	576	187
1972	378	1,184	936	626	166
1973	429	1,267	1,133	564	25
1974	504	1,642	1,478	668	-60
1975	606	1,921	1,379	1,147	333
1976	820	2,171	1,330	1,661	767
1977	1,145	2,578	1,091	2,631	1,631
1978	1,785	2,745	1,058	3,472	2,422
1979	2,713	3,281	1,241	4,753	3,652
1980	3,815	4,475	1,625	6,665	5,378
1981	5,112	5,754	1,049	9,817	8,236
1982	6,037	6,379	1,219	11,197	9,428
1983	6,876	7,079	148	13,807	11,681
1984	7,695	8,802	248	16,249	13,714
1985	9,339	9,208	752	17,794	15,109

Private borrowings to finance investments is of course only part of the foreign debt, the other very important part being that due to government borrowings. To see the total debt picture for the economy, these must be added to the private debts.

Table 2.4 combines the stock of private external debt with government debt, and subtract the end-year foreign assets of the financial institutions, to obtain the total stock of net external debt for the economy. In 1985, the total stock of outstanding net external debt amounted to around $17,800 million, or about $15,100 million when the direct foreign investments are excluded. The government debt has been increasing at an even more rapid rate than the private debt. In 1975, the stock of government outstanding external debt was in fact less than the stock of private financial debt. Since then the stock of government external debt has increased 15.4 times, and in 1985 it stands at about 50% more than the stock of private financial debt. In total, the external borrowings by the government and the private sector have cause the total indebtedness of the

country to rise spectacularly. If the net external assets of the financial institutions are accounted for, the net stock of debt of the economy increased 45 times between 1975 and 1985.

To see the magnitude of the debt burden, one can compare the net debt outstanding to GDP and to Exports of Goods and Services (Table 1.3). In 1985, the stock of net outstanding debt amounted to about 40% of GDP, or around 150% of annual exports of good and services.

TABLE 2.5
RATIO OF DEBT TO
GDP AND EXPORTS OF GOODS AND SERVICES

YEAR	GDP (MILLION	EXPORTS G & S DOLLARS)	RATIO OF DEBT TO GDP	EXPORTS
1970	6,702	1,119	2.2%	13.0%
1971	7,123	1,240	2.6%	15.1%
1972	8,110	1,570	2.0%	10.6%
1973	10,667	2,095	.2%	1.2%
1974	13,368	2,986	-.4%	-2.0%
1975	14,720	2,809	2.3%	11.9%
1976	16,632	3,508	4.6%	21.9%
1977	19,361	4,049	8.4%	40.3%
1978	23,150	4,976	10.5%	48.7%
1979	27,293	6,468	13.4%	56.5%
1980	33,477	8,198	16.1%	65.6%
1981	36,179	9,008	22.8%	91.4%
1982	36,821	9,174	25.6%	102.8%
1983	40,220	9,006	29.0%	129.7%
1984	42,266	10,313	32.4%	133.0%
1985	38,727	10,174	39.0%	148.5%

NOTE: Excluding Direct Investments

Even as a ratio to GDP, the growth of the external debt has been quite dramatic. In 1975 net debt (debt less assets) of the private and public sectors combined amounted to about 2% of annual GDP. By the end of 1985, the ratio of net external debt to GDP had risen to about 40%. About 60% of external debt (excluding direct investments) was incurred by the public sector (government and state enterprises) and about 40% by the private sector - mostly in the forms of loans and credits to companies. The public sector also has net domestic debt, roughly equal in

magnitude to its external debt. The private business sector's net domestic debt can only be estimated roughly since it is difficult to separate data for businesses and households. Probably the private business sector's domestic debt has also been similar in magnitude to its external debt - ie about 30% less than the public sector's domestic debt.

TABLE 2.6
BALANCE OF PAYMENTS CURRENT ACCOUNT
(MILLION BAHT)

YEAR	CURRENT ACCOUNT	INVESTMENT INCOME CREDITS	INVESTMENT INCOME DEBITS	INVESTMENT INCOME NET	(NON-INTEREST) GDS SVS & TRSF
1970	-5197	1637	-1257	380	-5577
1971	-3633	1423	-1394	29	-3662
1972	-1063	1207	-1534	-327	-736
1973	-997	1448	-1872	-424	-573
1974	-1785	2920	-2934	-14	-1771
1975	-12368	3887	-3776	111	-12479
1976	-8978	3146	-3993	-847	-8131
1977	-22392	3036	-4516	-1480	-20912
1978	-23445	3366	-8178	-4812	-18633
1979	-42591	4219	-13324	-9105	-33486
1980	-42409	5316	-17002	-11686	-30723
1981	-56049	5779	-26506	-20727	-35322
1982	-23138	5642	-30624	-24982	1844
1983	-66286	5227	-29160	-23933	-42353
1984	-49468	5211	-35430	-30219	-19249
1985	-39671	6598	-45361	-38763	-908

The fast growth of external debt has led to a fast growth of interest payments (including repatriated profits). Between 1970 and 1975, according to the balance of payments figures, net investment incomes was on average only 40 million baht in deficit per year. This was slightly less than 10% of the annual average current account deficit at that time. Between 1982 and 1985, the average deficit of net investment income was 29,474 million baht, representing about 66% of the average current account deficit. Thus, over the last few years around two thirds of the current account deficit can be attributed to the interest payments on external debt (Table 1.4). In fact, in 1985 almost all (98%) of the current deficit was due to the net profit and interest payments.

FACTORS CONTRIBUTING TO INCREASE IN DEBT TO GDP RATIO

To see the factors behind the rapid growth in external debt, the increase in the ratio of debt to GDP can be decomposed in a simple manner to see the relative influences of three factors:- (i) the deficit on goods, services and transfers, net of investment incomes (NI-GST). (ii) the payments of net profits and interest payments, and (iii) the growth in the dollar value of GDP. This is shown in Table 2.7

TABLE 2.7
CONTRIBUTIONS TO CHANGES IN RATIO OF NET DEBT TO GDP
(PERCENT OF GDP)

YEAR	DEFICIT ON GOODS SERVICES & TRSFS	NET PROFIT & INTRST PAYMTS	EFFECT OF $ GDP GROWTH	UNIDENT FLOWS & DEBT REVALNS	CHANGE IN DEBT RATIO TO GDP	RATIO YR-END NET DEBT TO GDP
1970	4.1	-.3		3.8		7.4
1971	2.5	-.0	-.4	-1.4	.7	8.1
1972	.4	.2	-1.0	-.0	-.4	7.7
1973	.3	.2	-1.9	-1.0	-2.4	5.3
1974	.7	.0	-1.1	.1	-.3	5.0
1975	4.2	-.1	-.5	-.9	2.8	7.8
1976	2.4	.3	-.9	.4	2.2	10.0
1977	5.3	.4	-1.4	-.7	3.6	13.6
1978	4.0	1.0	-2.2	-1.4	1.4	15.0
1979	6.0	1.6	-2.3	-3.0	2.4	17.4
1980	4.5	1.7	-3.2	-.5	2.5	19.9
1981	4.5	2.6	-1.5	1.6	7.2	27.1
1982	-.2	3.0	-.5	1.0	3.3	30.4
1983	4.6	2.6	-2.6	-.7	3.9	34.3
1984	1.9	3.0	-1.7	.8	4.1	38.4
1985	.1	3.7	3.5	.2	7.5	45.9

Column 2 in Table 2.7 shows the contribution of the balance on goods, services and transfers (net of profit and interest payments) in increasing the ratio of external debt to GDP. Thus, for example, in 1975, the deficit on NI-GST was about 12,479 million baht. This amount of net external borrowing to cover the deficit would increase the ratio of debt to GDP by 4.2% (ignoring other factors) or from 5.0% at the end of 1974 to 9.2%. Similarly, column 3 shows the effect of the net profit and interest payments. In 1975, there was a slight surplus of 111

million baht, which had a relatively insignificant, though negative, impact on the ratio of debt to GDP, reducing it by .1%. The next column shows the impact of nominal dollar GDP growth (all debts are calculated in dollars). In 1975, nominal dollar GDP grew by around 10%. Given the 1974 debt to GDP ratio of 5%, this served to decreased the ratio of debt to GDP by .5%, other things remaining the same. Table 1.5 also shows a column for unidentified factors, mostly due to unaccountable flows in the balance of payment figures, or debt revaluations due to changes in other exchange rates vis a vis the dollar. In sum, the increase in debt to GDP ratio between 1974 and 1975 of 2.8% can be attributed to an increase of 4.2% from the deficit on NI-GST, a decline of .1% from the surplus on net investment income, a decline of .5% from nominal GDP growth and a decline of .9% due to unaccountable factors.

From the table, one can generalize that the ratio of external debt to GDP has risen in two distinct phases.

Firstly, from 1975 to 1981 there were large deficits on external trade (NI-GST), amounting to a cumulative total of some 31% of GDP over the six-year period. Interest payments cost a further 7.5% of GDP, pushing the cumulative current account deficit up to about 38.5% of GDP.

The net debt would have increased from 5% of GDP at the end of 1974 to 43.5% of GDP at the end of the period, had it not been for GDP growth and, more particularly, inflation. During this period real GDP increased at an average rate of nearly 6% a year and inflation averaged over 10%. The result was that GDP increased 2.7 times in money terms and the ratio of net external debt to GDP was still only 27.1% at the end of 1981.

During the second phase since 1981 trade deficits have on average been much smaller but the ratio of debt to GDP has jumped from 27.1% to 45.9% in four years on account of high interest payments, low GDP growth, and devaluation of the Baht.

In the four years 1982-1985 trade deficits (NI-GST) came to a total of about 6.4% of GDP (1.6% average per year). Net payments of profits and interest came to 12.3% of GDP (3.1% average per year), almost double that of trade deficits. Although GDP increased in Baht terms, devaluation of the Baht meant that there was virtually no growth at all in dollar GDP and a fall in GDP measured in Yen. Thus, relative to the currencies in which most of the external debt is denominated, GDP has if anything declined. The large jump in the burden of external debt

since 1981 has therefore been imposed for the most part by financial circumstances rather than by deficits in external trade.

The current high level of net profits and interest payments imposes an important constraint on the ability of the country to manage the debt problem. As already seen, most of the increase in the recent ratio of debt to GDP was due to this factor. This is in fact the reason for making sure that the debt burden does not get out off hand. As debt accumulates, so do the interest payments, and one can easily get into a situation in which new borrowings are needed simply to cover the interest payments on the past debt. Such a situation means that the financial resources that have to be borrowed cannot be put to any productive use at all. Rather than financing productive investments, they simply cover the burden of past debt.

To some extent the rapid increase in the stock of total debt has been offset by the decline in interest rates (Table 1.6). The ratio of the net profit and interest payments to the stock of outstanding debt has been falling from around 12-14% in 1979 to 1981 to around 8.8% in 1985. This represents the effective interest rate paid on the debt. It is possible that this may be reduced further to the extent that the debt is increasingly denominated in Yen, and Yen loans offer lower rates. However, any advantages of lower Yen interest rates tend to be offset by appreciation of the Yen relative to the dollar, as clearly demonstrated recently, so one should be careful in selecting the appropriate basket of currencies for loans. Allowing for possible effects of future currency realignments, the dollar-equivalent effective interest rate on external debt must be assumed to average around 9% with little prospect of any major reduction.

TABLE 2.8
NET INTEREST PAYMENTS
AS % OF STOCK OF DEBT

YEAR	NET INTRST PAYMT
1971	-.3
1972	2.8
1973	3.3
1974	.1
1975	-.8
1976	3.6
1977	4.4
1978	9.0
1979	12.9
1980	12.0
1981	14.3
1982	11.1
1983	9.3
1984	9.3
1985	8.8

It is clear that the current level of the external debt burden is causing substantial drain on domestic investable resources. It has come about because of the inability of the economy to generate enough investable resources through domestic savings, particularly in the period of rapid growth in external debt since 1975. The reasons for this are many, and involve both factors external to the economy, and internal ones. Some of the key variables are however not difficult to identify and this is done below.

As already mentioned, the domestic financial gap can equivalently be viewed as the gap between domestic savings and investments, or as the current account deficit. The key variables that influence this gap, or at least have played key roles in the past, can be identified by looking at the details of the external trade situation and the domestic saving investment situations.

TRENDS IN EXTERNAL TRADE

Over the past fifteen years sustained real growth has been accompanied by persistent trade deficits, averaging about 4% of GDP. Combined with a growing burden of debt interest, these have pushed the overall external deficit up to 5-6% of GDP. The trade deficit has tended to be larger in boom years (such as 1983) and smaller in recession years (as in 1982). As already discussed, in more recent years, the main contribution to the current account deficit has been the payments of profit and interest on the accumulated external debt. Given that interest payments will continue to remain high, the performance of the balance on goods and services (net of interest payments) becomes crucial for the ability of the country to control the debt problem. This section examines in more detail the composition of external trades.

IMPORTS

An illuminating way to look at the trend of imports (excluding interest payments) is to separate out oil and non-oil imports. Table 2.9 shows the imports of goods and services from 1970 to 1985, expressed in millions of dollars. For oil imports, the pattern follows the two oil shocks predictably.

TABLE 2.9
IMPORTS OF GOODS AND SERVICES
(MILLION DOLLARS)

YEAR	NON-OIL	FUELS	TOTAL GOODS	SERV	TOTAL GOODS & SERV
1970	1,191	115	1,306	138	1,444
1971	1,178	134	1,312	153	1,465
1972	1,356	153	1,509	158	1,667
1973	1,842	230	2,072	198	2,269
1974	2,499	619	3,118	251	3,370
1975	2,477	701	3,179	326	3,504
1976	2,697	822	3,519	412	3,931
1977	3,703	1,029	4,732	387	5,119
1978	4,332	1,126	5,458	476	5,934
1979	5,945	1,600	7,546	618	8,164
1980	6,404	2,865	9,269	750	10,020
1981	6,954	3,000	9,954	869	10,823
1982	5,764	2,642	8,406	863	9,269
1983	7,706	2,481	10,188	931	11,118
1984	7,871	2,441	10,311	941	11,252
1985	7,257	2,093	9,350	916	10,266

The value of oil imports increased 2.7 times in 1974 as a result of the first oil shock. Between 1974 and 1979, there was a gradual rise in oil imports, with another very big jump occurring in 1980 after the second oil shock. Since 1981, with gradually falling oil prices, and more development of domestic energy sources, the value of oil imports gradually fell.

As far as non-oil merchandise import is concerned, there has been a persistent increase, except in 1982 and also in 1985, where in both years economic activity was depressed after the baht was devalued against the dollar. Between 1970 and 1975, non-oil imports grew on average 17% per annum. This increased to an average 22% per annum between 1975 and 1980, and as a result of the decline in 1982 and 1985, the dollar value of non-oil imports only increased an average 4% per year between 1980 and 1985.

Service imports, net of interest and profit repayments, grew by similar order of magnitudes to non-oil merchandise import. Between 1970 and 1975, service imports grew on average 19% per annum. This was also the rate of growth between 1975 and 1980, and between 1980 and 1985, service imports grew on average 4% per annum.

Table 2.10 shows the ratio of imports to GDP (excluding the repayment of profits and interest). An important point that emerges is that non-oil imports have on the whole been remarkably stable as a percentage of GDP. Non-oil imports of goods and services have averaged 20-21% of GDP with fairly small variations, except in the investment boom of 1979 (non-oil imports rose to 24%) and in the slump of 1982 (non-oil imports fell to 18%). This may reflect the ineffectiveness of import substitution policies, which have tended to be on finished consumer products, and require much imported raw materials to produce. In any case, it has meant that the main variability in the ratio of imports to GDP is due to the variability in oil imports, and particularly the price of oil.

TABLE 2.10
RATIO OF IMPORTS TO GDP
(EXCLUDING NET PROFIT AND INTEREST PAYMENTS)

	MERCHANDISE					
YEAR	NON-OIL	FUELS	TOTAL	SERV	GOODS & SERV	GOODS & SERV (Exc Oil)
1970	17.8	1.7	19.5	2.1	21.5	19.8
1971	16.5	1.9	18.4	2.1	20.6	18.7
1972	16.7	1.9	18.6	1.9	20.6	18.7
1973	17.3	2.2	19.4	1.9	21.3	19.1
1974	18.7	4.6	23.3	1.9	25.2	20.6
1975	16.8	4.8	21.6	2.2	23.8	19.0
1976	16.2	4.9	21.2	2.5	23.6	18.7
1977	19.1	5.3	24.4	2.0	26.4	21.1
1978	18.7	4.9	23.6	2.1	25.6	20.8
1979	21.8	5.9	27.6	2.3	29.9	24.0
1980	19.1	8.6	27.7	2.2	29.9	21.4
1981	19.2	8.3	27.5	2.4	29.9	21.6
1982	15.7	7.2	22.8	2.3	25.2	18.0
1983	19.2	6.2	25.3	2.3	27.6	21.5
1984	18.6	5.8	24.4	2.2	26.6	20.8
1985	18.7	5.4	24.1	2.4	26.5	21.1

The cost of oil imports rose from 2% of GDP in the early 1970's to around 5% after the first price increase (1973-4) and 8-9% after the second price increase (1979-80). The overall ratio of imports of goods and services to GDP increased correspondingly, from 21% in the early 1970's to 26% in the

mid-1970's and 30% in 1979-81. More recently, even before the dramatic price fall this year, the ratio of oil imports to GDP has been falling back to around the level of 1979 (6%). This allowed the ratio of total imports (excluding interest payments) to fall back to around 27% of GDP by 1985.

The fact that non-oil imports are a fairly stable proportion of GDP implies that in periods where the ratio of oil imports to GDP is rising, then exports must grow faster than nominal GDP to maintain the same ratio of deficit or surplus (excluding interest payments) to GDP. Conversely, if the ratio of oil imports to GDP is falling, as between 1981 and 1985, then exports could grow slower than GDP to maintain the same percentage gap.

EXPORTS

At about the time when rapidly rising value of oil imports cause the ratio of imports to GDP to rise in the 1970's, it was fortunate that export purchasing power grew rapidly (at an average rate of 15% per year in real terms in the 70's). This exceptional export performance was what made sustained rapid growth of GDP possible during this period. Table 2.11 presents the dollar value of export of goods and services, and Table 2.12, the four-year moving average growth rates from 1974 to 1985.

TABLE 2.11
EXPORTS OF GOODS AND SERVICES
(MILLION DOLLAR)

YEAR	FOOD & MATS	FUELS	MANUFS	OTHER	TOTAL GOODS	SERV	GOODS & SERV
1970	563	2	113	25	703	417	1,120
1971	644	6	132	40	822	418	1,240
1972	803	13	193	62	1,071	498	1,570
1973	1,103	20	347	69	1,540	555	2,095
1974	1,833	19	491	71	2,414	626	3,040
1975	1,674	12	434	65	2,185	624	2,809
1976	2,251	6	654	63	2,973	534	3,508
1977	2,568	1	824	78	3,471	578	4,049
1978	2,678	1	1,224	149	4,052	924	4,976
1979	3,393	2	1,685	160	5,239	1,223	6,462
1980	3,894	4	2,268	275	6,441	1,864	8,305
1981	4,540	2	2,190	191	6,922	2,102	9,025
1982	4,526	2	2,154	153	6,835	2,332	9,167
1983	3,996	1	2,208	102	6,308	2,692	8,999
1984	4,556	17	2,676	135	7,384	2,874	10,257
1985	3,979	90	2,926	78	7,074	2,992	10,067

TABLE 2.12
EXPORTS OF GOODS AND SERVICES
FOUR YEAR MOVING AVERAGE GROWTH RATES

YEAR	FOOD & MATS	FUELS	MANUFS	OTHER	TOTAL GOODS	SERV	GOODS & SERV
1970-1974	.36	.86	.46	.32	.37	.11	.29
1971-1975	.30	.30	.39	.15	.30	.11	.24
1972-1976	.32	-.10	.40	.01	.32	.02	.24
1973-1977	.27	-.44	.27	.04	.25	.02	.19
1974-1978	.11	-.50	.28	.26	.15	.13	.14
1975-1979	.20	-.08	.41	.30	.25	.22	.23
1976-1980	.15	.45	.37	.49	.21	.38	.24
1977-1981	.16	.51	.29	.35	.19	.39	.22
1978-1982	.14	.59	.17	.07	.15	.27	.17
1979-1983	.05	.19	.08	-.03	.05	.23	.09
1980-1984	.05	2.90	.05	-.13	.04	.11	.06
1981-1985	-.03	4.09	.08	-.16	.01	.09	.03

It can be seen that in the early to mid 1970's, merchandise export growth was very strong, averaging more than 30% per annum. In the latter part of the 70's merchandise exports slowed down some what, but the rate of growth was still very high, averaging over 20% per annum. However, in the 80's, the growth of merchandise exports has been disappointing, with the four-year average growth rates slowing down continually from the period 1977-1981 to the period 1981-1985. Service exports slowed down substantially after the pull out of the US from Vietnam, but later picked up again at very high growth rates due to the increase in tourism, and more recently, with the rapid increase in remittances from Thai workers abroad.

During the 1970's the structural pattern of export growth changed fundamentally.

In the first half of the 1970's service exports declined on account of the withdrawal of US forces from South-East Asia. Manufactured exports were still too small to contribute much. Export growth relied entirely on primary products for which world markets were exceptionally strong. Traditional exports such as rice, rubber, tin and maize were joined by important new primary export products - cassava, shrimps and sugar.

In the second half of the 1970's world markets for primary products were much weaker and growth of primary exports slowed down. But service exports started to grow very rapidly and exports of manufactures were by now large enough to make an important contribution.

Since 1980-81 growth of trade has slowed down. Exports of primary commodities have been badly affected by price falls in world markets. Exports of manufactures also were badly affected by the world slump in 1981-2. But in 1985-6, there are signs that exports of manufactures have started to pick up again, aided by devaluation of the Baht. Thus, export growth has been weak since 1980, although it is now picking up. But thanks to the reduced cost of imports, due to gradually falling oil prices, it has been possible for GDP growth to be maintained at a reasonable rate. Thus, the boom in exports in the 70's generated sufficient foreign currency earnings to pay for the sharp increase in oil imports while maintaining good GDP growth, and the drop in export growth in the 80's also coincided with the gradual decline in the ratio of oil imports to GDP. This helped to keep the current account from deteriorating to unacceptable levels.

Table 2.13 shows the shares of various components of exports to GDP.

TABLE 2.13
RATIO OF EXPORTS TO GDP
(PERCENT OF GDP)

YEAR	FOOD & MATS	FUELS	MANUFS	OTHER	TOTAL GOODS	SERV	TOTAL GOODS & SERV
1970	8.4	.0	1.7	.4	10.5	6.2	16.7
1971	9.0	.1	1.8	.6	11.5	5.9	17.4
1972	9.9	.2	2.4	.8	13.2	6.1	19.4
1973	10.3	.2	3.3	.6	14.4	5.2	19.6
1974	13.7	.1	3.7	.5	18.1	4.7	22.7
1975	11.4	.1	3.0	.4	14.8	4.2	19.1
1976	13.5	.0	3.9	.4	17.9	3.2	21.1
1977	13.3	.0	4.3	.4	17.9	3.0	20.9
1978	11.6	.0	5.3	.6	17.5	4.0	21.5
1979	12.4	.0	6.2	.6	19.2	4.5	23.7
1980	11.7	.0	6.8	.8	19.2	5.6	24.9
1981	12.5	.0	6.0	.5	19.1	5.8	24.9
1982	12.3	.0	5.9	.4	18.6	6.3	24.9
1983	9.9	.0	5.5	.3	15.7	6.7	22.4
1984	10.8	.0	6.3	.3	17.5	6.8	24.3
1985	10.3	.2	7.6	.2	18.3	7.7	26.0

From the table, it can be seen that on the whole the share of exports of goods and services to GDP has been continually rising, except for certain odd years such as 1974, when the share rose to 22.7%, and in 1983, when the share fell to 22.4% from the 1982 share of 24.9%. In 1974, agricultural prices, particularly rice prices, shot up to very high levels, causing the share of primary exports to GDP to rise to 13.7% compared to 10.3% in 1973. Conversely, in 1983, primary exports fell by over 500 million dollars compared to 1982 while GDP boomed, causing the share of primary exports to GDP to fall to 9.9% compared to 12.3% in 1982 (a year when GDP growth was also low).

The most striking thing about the data is the fact that since 1976, the share of merchandise exports to GDP has been remarkably stable at around 18-19% of GDP (except for 1983). There was clear rising trend in the share of merchandise export to GDP between 1970 and 1976, due to rapid export growth in the early 70's. Since that time, however, the increase in the share of total exports to GDP has essentially come from the rising share of service exports to GDP. The share of service exports to GDP was relatively high during the Vietnam era. This began to

decline around 1974-1975. But since the lowest level of 3% of GDP in 1977, the share of service exports to GDP has without exception been rising up to 1985. This has been due mainly to two factors; (i) the growth of tourism, and (ii) the growth of remittances from Thai workers overseas, particularly in the Middle East.

Table 2.14 shows the share to GDP of tourism and remittances. It can be seen that these only add up to 2.2% of GDP in 1970, and was a small part of total service exports. In 1985, their combined share rose to 6.16% of GDP, and represented 74% of total service exports. With few exception, the share of remittances to GDP has been rising through out the 15 years between 1970 and 1985. Tourism has also been rising fast between 1977 and 1981. Its share to GDP then stabilized at around 2.75% up until 1985 when, mostly because of the large devaluation of the baht, the share rose to 3.27%.

TABLE 2.14
RATIO OF MAJOR SERVICE EXPORTS TO GDP
(PERCENT OF GDP)

YEAR	TOURISM	REMITTANCES
1970	1.59	.61
1971	1.53	.64
1972	1.65	.63
1973	1.57	.65
1974	1.40	.74
1975	1.50	.72
1976	1.18	.61
1977	1.17	.72
1978	1.89	1.06
1979	2.02	1.30
1980	2.59	1.70
1981	2.73	1.90
1982	2.82	2.26
1983	2.71	2.67
1984	2.75	2.68
1985	3.27	2.89

NOTE: Tourism is assumed to be the "Travel" classification in the balance of payments, as reported by the Bank of Thailand, and Remittance is the "Other Services" classification

SUMMING UP ON EXTERNAL TRADE

The main points to emerge from the above discussions on the external trade patterns are that:-

1. In recent years the current account deficit is about equal to the interest and profit repayments, so excluding these trades in goods and services and transfers were almost balanced.

2. The factor causing changes in the share of imports (excluding interest payments) to GDP has primarily been the share of oil imports to GDP. The share of non-oil imports have been remarkably stable through out the last 15 years.

3. The share of total export of goods and services to GDP have generally been rising through out the period.

4. Since 1976, the share of merchandise exports to GDP has been very stable, with the rising share of total export of goods and services explained entirely by the rising share of service exports to GDP.

Thus, from the external trade front, there seems to be two crucial variables that will crucially influence the national financial balance:- (i) what happens to the share of oil imports to GDP, (ii) what happens to service exports. The other crucial variable, interest payments, is to some extent already determined by the past accumulated debt, and what happens to the balance in the other accounts, for this will determine the current account deficit (or surplus) and hence the change in the stock of external debt (and future interest payments).

As a final thought concerning the past trade pattern, the fact that the share of merchandise exports to GDP has been remarkably over the last 10 years is somewhat worrying for export prospects over the next 5-6 years. While high hopes is now put on the performance of Thai manufactured exports, there must be some fundamental change over the very stable share of the last 10 years to justify the optimism. This may be because now manufactured exports are a significant share of total exports, so the dynamism in manufactured exports may push up the share of merchandise exports to GDP in spite of likely sluggish behaviour

in primary exports. If merchandise exports continue to remain a fairly stable proportion of GDP, then hope will have to rest on services to continue to increase its share in GDP. This again may not be as easy in a world with relatively low oil prices such as likely to be the case over the next few years, as much of the remittances from abroad comes from Thai workers in the Middle East, and the demand for these workers may fall.

SOURCES OF DOMESTIC SAVINGS AND INVESTMENTS

Looking at the other side of the coin on national financial deficit, this section turns to look at the saving-investment gap. This will look at the financial balance for three main institutions:- households, private enterprises, and the public sector, and give some idea of their role in the national financial deficit, and identify the key variables which are important for determining the size of the financial deficit. Tables 2.15 and 2.16 show the saving-investment gap of the private and public sector in terms of ratio to GDP.

TABLE 2.15
PRIVATE SECTOR SAVINGS AND INVESTMENT
(PERCENT OF GDP)

	HOUSEHLD		PRIVATE BUSINESS		
YEAR	SAVINGS	HOUSING CAP FORM	SAVING	FIXED CAP FORM EXCL HSG	TOTAL PRIVATE BALANCE
1970	9.9	-2.6	8.0	-13.7	1.6
1971	9.3	-2.4	8.3	-13.0	2.2
1972	11.4	-2.6	8.4	-11.5	5.7
1973	16.0	-2.7	8.3	-12.8	8.8
1974	13.4	-2.8	7.8	-15.2	3.2
1975	12.6	-2.3	8.0	-14.6	3.7
1976	12.5	-2.4	7.9	-12.4	5.6
1977	11.2	-2.6	8.3	-14.9	2.0
1978	12.2	-2.9	8.5	-14.1	3.7
1979	12.4	-2.9	8.8	-15.3	2.8
1980	13.7	-2.5	7.9	-14.3	4.8
1981	11.2	-3.1	7.9	-12.2	3.8
1982	10.9	-3.2	7.8	-10.2	5.3
1983	7.9	-3.9	8.5	-10.5	2.0
1984	8.0	-3.7	9.0	-11.1	2.2
1985	7.8	-3.4	9.1	-10.2	3.3

TABLE 2.16
PUBLIC SECTOR SAVINGS AND INVESTMENT
(PERCENT OF GDP)

YEAR	NET INCOME	CURRENT EXPENDIT	NET SAVING	FIXED CAP FORM	FIN BALANCE
1970	15.2	11.5	3.7	-7.7	-4.0
1971	14.5	11.7	2.8	-7.2	-4.4
1972	13.8	10.9	2.9	-6.9	-4.0
1973	13.1	9.8	3.3	-5.0	-1.7
1974	15.3	9.6	5.7	-3.7	2.0
1975	13.5	10.4	3.1	-5.2	-2.1
1976	12.8	11.0	1.8	-6.9	-5.1
1977	14.0	10.6	3.4	-7.5	-4.1
1978	14.4	11.4	3.0	-7.8	-4.8
1979	14.0	12.0	2.0	-7.7	-5.7
1980	13.4	12.0	1.4	-9.1	-7.7
1981	13.7	12.2	1.5	-8.7	-7.2
1982	13.3	13.1	.2	-7.9	-7.7
1983	14.6	13.1	1.5	-7.9	-6.4
1984	14.2	13.2	1.0	-8.2	-7.2
1985	14.4	13.4	1.0	-8.1	-7.1

The first thing to notice is that the saving (including depreciation) share to GDP of the private business sector has been remarkably stable. Thus the net saving deficit share to GDP of the private business sector depends directly on the share of private investments to GDP. The household sector has only a little investment activity, in the form of housing investment, although this as a ratio of GDP has been increasing recently.

The public sector, including the State Enterprises, has very little net savings in relation to GDP, and since 1980, has consistently had a very large financial deficit of around 7-8% of GDP.

Therefore, it is important to note that the main variable element in domestic savings has been the household sector (see Figure 2.2).

It is true that government savings have fallen, from around 3% of GDP in the 1970's to about one percent or less in the past few years. But this reduction is slight when compared with the large swings in household savings which declined from a peak of 16% of GDP in 1973 to about 12.5% throughout the rest of the 1970's and as low as 8% between 1983 and 1985.

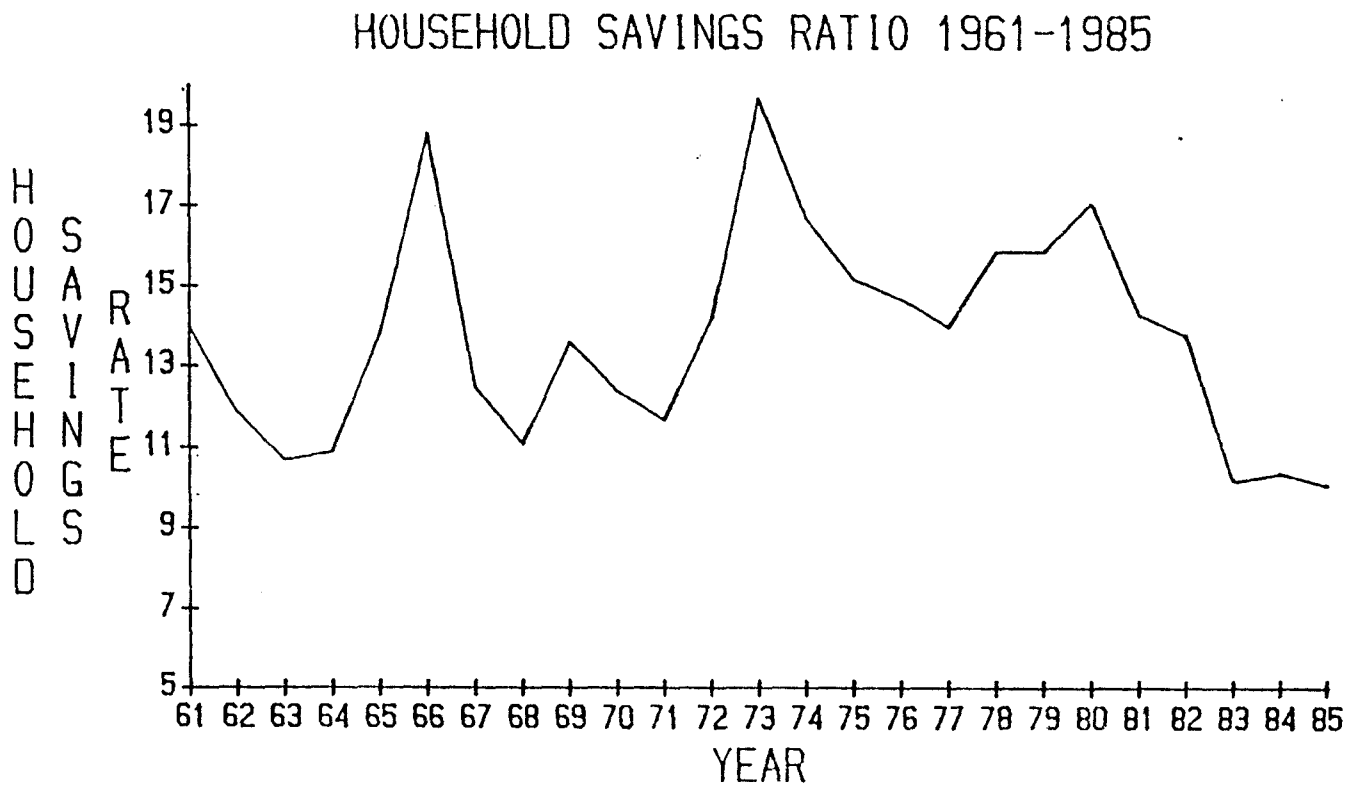

HOUSEHOLD SAVINGS RATIO 1961-1985
HOUSEHOLD SAVINGS RATE
19
17
15
13
11
9
7
5
61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85
YEAR

FIGURE 2.2

In fact, domestic savings of government, state enterprises and private enterprises combined have formed a rather stable share of GDP. There is a slight downwards trend since 1970, but since 1979, apart from the low of 8% in 1982, the combined savings of these sectors have been around 9.5-10.5%. The volatile element has been household savings. The question of what may be happening now, with the expected very low current account deficit in 1986, or what may be expected in future, thus turns to a considerable extent on a judgement about causes of fluctuation in household savings.

This is quite crucial in judging the possible development of the current account over the medium term, and has important implications for the formulation of government budget policies.

The share of household savings to GDP has fallen by 6 percentage points since 1980. If ones believes that this decline is an unusually phenomenon, and can, through better saving mobilization and other events, be easily pushed backed up to past high levels under climates similar to the present, then one can be guaranteed of vast amounts of additional domestic investable resources. This would ensure that the need for foreign borrowings would be minimal, particularly since the oil price has dropped so sharply. Then, the financial constraints on Thailand's economic development would hence forth be minimal or non-existence. It is therefore very important to try to understand the factors behind the decline in household savings share over the last few years. This analysis will be carried out in Chapter 3.

Another issue that emerges quite clearly from the above tables is that the private sector as a whole is a net saver. Although the private sector invests more than the public sector as a whole (about 2.3 times more on average between 1970-1985), it manages to save more than enough to cover it. The public sector on the other hand saves very little, and invests quite a lot. The fact that the public sector has an over all net financial deficit is not unusual as such, but, as with the management of financial resource for the whole economy, there are also questions concerning financial resource management within the public sector.

Since 1980, the share of government investment expenditures to total domestic investments has increased noticeably from the trend in the 1970's (see Figure 2.3). In the early 1970's, with still much infrastructure development, the government sector invested around 32% of total domestic investments. Between 1973 and 1975, the government share of investment expenditures fell a lot, but between 1976 and 1979, it was quite stable at around 30.5%. Since 1980, however, the share

of government investments has jumped to around 36% of total investments, and this is the period when the public sector financial deficit jumped to around 7% of GDP. Thus, in recent years, the use of investable resources has shifted towards the public sector, and at the same time the public sector savings has been falling.

CONCLUSIONS

Since the early 1970's there has been a persistent domestic financial deficit covered by borrowing from abroad. The consensus now appears to be that the external debt burden should not be increased further - possibly even that it should be substantially reduced.

Important arguments in favour of stabilizing or reducing the external debt burden are:

i) Further increases would soon bring the debt burden to a level at which managing the problem becomes difficult.

ii) There is no longer much safety margin in case the country encounters unexpected balance of payments difficulties.

iii) The external debt already imposes quite a high cost in terms of payments of interest and other investment incomes.

This chapter has presented the over all macroeconomic picture on financial resource balance for Thailand, and the accumulated debt burden that the persistent deficit has implied. Some key variables that have contributed to the financial deficit have been identified:- international oil prices, interest payments on past debt, household savings, and the public sector deficit. World oil prices are clearly not under domestic control. The same is generally true for interest payments on past debt, although there are clearly important management roles in the management of the portfolio of debt, through refinancing etc.. However, as already mentioned, in managing the portfolio of debt, the rate of interest should not be the only variable of interest, because exchange rates are fairly volatile, and any realignment may easily wipe out potential gains from the shift into currencies with lower interest rates.

Domestic savings and investments may be more amenable to control. Can household savings be mobilized more effectively to increase the ratio of savings to income, particularly of the household sector? Who should be using the investable resources? Should the public sector continue to account for as a high a proportion of domestic investments as at present, or may be try to reduce it to around 31% as during the late 1970's?

The next three chapters looks in more detail at each of these areas. Chapter 3 will cover private savings. Chapter 4 private investments, and Chapter 5 the public sector.

CHAPTER 3

PRIVATE SAVINGS

1. INTRODUCTION

Objective and Scope

The principal objectives of this Chapter are as follows.

(a) To measure the extent and trend of domestic savings/investment gap.

(b) To investigate sizes, trends, vital determinants and problems of private savings in Thailand.

(c) To identify selected formats of private savings so as to conclude how suitable these savings are for investment needs.

(d) To suggest directions or guidelines for domestic economic policies.

Section 1 presents an overview of the Thai savings/investment gap as well as an international comparison. After dwelling upon characteristics of savings behavior in the Thai household and business sectors as presented in Sections 2 and 3, respectively, one may wish to pause and reconsider the basic structure of the present financial system in Thailand as elaborated in the Appendix.

Also covered in the Appendix are the roles played by ordinary and special economic measures recently implemented by the central authorities. Once one is well aware of the evolution of credit and capital markets in Thailand, Section 4 will equip him with a rough profile of savings formats with regard to markets, institutions, instruments, and maturities. Then, all findings of previous Sections are tied up together in Section 5 in the manner that some policy directions can be recommended.

Prologue

Ever since the beginning of 1986 most economic statistics and projections seem to fit with each other in painting a rather inspiriting perspective of resource mobilization and utilization in Thailand to be attained in the next few years. For instance, shrinking deficits on the external balance sheet as shown below may indicate that the country will be able to eradicate herlong-suffering resource gap or to lessen her degree of dependence upon foreign capital in the near future. Such indication could be translated via a macroeconomic accounting identity to the favorable picture that domestic resource gap between savings and investment is being narrowed down to a satisfactory level from most macro viewpoints. This optimistic image on local savings partly coincides with the connotation of excess liquidity status and several rounds of deposit rate cuts in the Thai financial markets in 1986. Should one compare actual annual growth rates of deposits placed at and those of lendings extended by all commercial banks in Thailand as demonstrated below, he could be further convinced that local savings are catching up with investment demand for funds at a rapid speed as, except for the year of 1983, deposit growth notably outpaced credit growth throughout the first half of 1980s.

Table 3.1

		Foreign Trade Deficits	Current Account Deficits
		(In millions of Baht)	
First three quarters of	1983	(64,019)	(46,828)
	1984	(53,345)	(39,861)
	1985	(50,756)	(35,864)
	1986	(7,641)	7,763

Table 3.2: Growth Rates of Commercial Banks' Deposits and Lendings in Thailand *
(Annual percentage change)

	1980	1981	1982	1983	1984	1985	6yr.Ave	1986Q1+2
Deposits	23.8	20.0	25.1	25.8	22.9	12.0	21.6	11.5
Lendings	12.2	16.2	17.8	34.0	18.3	10.0	18.1	5.1

*Not including interbank transactions.

Favorable conclusions or implications about domestic savings in Thailand derived from crude statistics as cited above certainly represent a distorted trend of actual aggregate savings at least in the past twelve years. Some clarifications need to be added to the aforementioned records such as the following. Although the Thai current account deficits with other countries are declining quite swiftly in 1986 principally due to falling oil prices and international interest rates together with solid growth of service receipts, this stroke of luck by no means reflects an increase in the relative size of domestic savings. On the contrary, total local savings relative to GDP has descended almost continuously from the peak of 23.4% in 1973 to only 18.6% in 1985 as displayed in Table 3.3. The recent upswing of the Thai current account position is, from a savings/investment perspective, very likely attributed to reduction of capital formation expenses and/or de-stocking of inventory especially in the presence of wildly fluctuating exchange rates and lacklustre investment atmosphere. Moreover, deposits at commercial banks represent only a portion of total domestic savings which consist of not only financial savings placed at different types of financial institutions and unorganized money markets but also real assets and valuables in anticipation of safety, future plans, and price appreciation. Rapid growth of deposits at commercial banks therefore does not necessarily imply expansion of domestic savings. Parts of additional deposits are due to remittances of Thai labor income earned abroad and others do represent results of foreign borrowings tapped by non-bank private entities as well as public agencies because of considerable decline in interest rates abroad relative to rather rigid domestic lending interest rates. The latter was the prime factor generating excess liquidity in the Thai money markets in 1986 instead of jumps in savings of any sector of the economy.

Table 3.3: Gross Domestic Savings[1], Investment[2], S/I Gap, and Imported Fuel & Lubricants[4] Relative to GDP

(Per cent)

	Total Saving[1]	Total Investment[2]	Gap I-S	p.a. of CPI	Ave. Imported Crude Oil Price[3]	Imported Fuel and Lubricants[4]
1967	22.7	23.7	1.0	4.3	0.28	1.5
1968	22.7	25.2	2.5	1.8	0.29	1.7
1969	22.9	26.4	3.4	2.4	0.26	1.4
1970	22.3	26.1	3.8	-0.1	0.27	1.7
1971	21.6	24.1	2.5	0.4	0.31	1.9
1972	19.8	20.5	0.7	4.9	0.32	1.9
1973	23.4	23.9	0.5	15.5	0.40	2.2
1974	24.2	24.8	0.6	24.3	1.30	4.6
1975	21.2	25.3	4.1	5.3	1.44	4.8
1976	20.7	23.2	2.5	4.2	1.57	4.9
1977	20.4	26.0	5.6	7.6	1.70	5.3
1978	22.1	27.0	4.9	7.9	1.70	4.9
1979	21.3	28.8	7.5	9.9	2.29	5.9
1980	20.7	27.2	6.5	19.7	3.99	8.6
1981	17.8	24.7	6.9	12.7	4.92	8.3
1982	18.4	21.0	2.6	5.2	5.24	7.2
1983	15.9	23.0	7.1	3.8	4.57	6.2
1984	19.1	23.9	4.8	0.9	4.40	5.8
1985	18.6	22.7	4.1	2.4	4.82	5.4

Periodical Averages and Ranges

	Total Savings[1]	Total Investment[2]	Gap I-S	p.a. of CPI	Ave. Imported Crude Oil Price[3]	Imported Fuel and Lubricants[4]
1967-72	22.0 (20-23)	24.3 (21-26)	2.3 (1-4)	2.3 (0-5)	0.29 (0.27-0.32)	1.7 (1.4-1.9)
1973-83	20.6 (16-24)	25.0 (21-29)	4.4 (1-8)	10.6 (4-24)	2.65 (0.40-5.24)	5.7 (2.2-8.6)
1984-85	18.8	23.3	4.5	1.7	4.61	5.6

1) Including all formats of savings of the public and private sectors as well as provision for the consumption of fixed capital or depreciation.

2) Including gross fixed capital formation as well as changes in stocks.

3) Representing average prices of imported crude oil actually paid by Thailand, measured in Baht/litre.

4) Representing values of imported fuel and lubricants (e.g. crude oil, gasoline, kerosene, diesel, lubricants) at current prices relative to GDP.

NESDB Plan	Average Per Annum (% of GDP) Total Savings	Total Investment	I-S
2nd (1967-71)	22.4	25.1	2.7
3rd (1972-76)	21.9	23.5	1.6
4th (1977-81)	20.5	26.7	6.2
5th (1982-85)	18.0	22.6	4.6

Clear-cut Trend

The previous two oil shocks gave rise to strong impact upon both price stability and aggregate savings of Thailand as presented in Table 3.3. The period between 1967 and 1985 is hereby divided into 3 intervals, pre-oil (1967-72), oil-shock (1973-83), and post-oil (1984-85), according to fluctuations of oil prices. The first shock arose towards the end of 1973 and energy dependence compelled Thailand to tolerate importing crude oil from abroad in 1974 at an average price more than quadrupling that of 1972. Additional burden was quite distinct as import expenses of Thailand on fuel and lubricants absorbed 4.6% of GDP in 1974 instead of 1.9% in 1972. Another negative outcome from the first oil shock was the jump of local price increase, up to 24% p.a. in 1974. The year of 1979 saw the second oil shock which radiated shattering effects to both industrial and

developing countries. In fact, this second shock was more severe than the first one since it lasted longer (1979-82) while the extent of price hike was equally threatening (average import price of crude oil rose from 1.7 Baht/litre in 1978 to 5.20 Baht/litre in 1982). Thailand had to give up 8.6% of her GDP to import fuel and lubricants in 1980 as opposed to only 4.9% in 1978. Inflation was rekindled again to the peak of 19.7% in 1980 before sliding down to normalcy by the end of 1983. Another reason for selecting 1983 as the end point of oil shock period is that such year marked the initial success of domestic production of crude oil in addition to natural gas and condensate already achieved along the process of indigenizing gas and oil exploration and production. Imports of all petroleum-related products decreased substantially from 98% of total ready-to-use supply in the country in 1981 to 85% in 1983 (and 67% in 1985). Conversely, domestic production of petroleum products grew by leaps and bounds from 2.3% of actual grand sales in the country in 1981 to 17.3% in 1983 and 57.4% in 1985.

Subdivision of time periods according to oil shocks as mentioned above vividly displays the cycles of domestic savings/investment in the following manner. In the pre-oil period (or during the Second NESDB Plan) local savings rested stably around 22% of GDP while investment demand corresponded very much to cycles of international interest rates, ranging from 21% to 26% of GDP. The savings/investment gap thus swung more or less according to investment pendulum. The oil-shock period, which largely overlapped with the Third and Fourth NESDB Plans, witnessed gradual but continual sagging of domestic savings in Thailand. The total savings/GDP ratio fell from 24% in 1974 to only 16% in 1983. In contrast, aggregate investment swung again in the wider range of 21-29% of GDP. Domestic resource gap (S-I) during this period was due to both investment surge (i.e. in the middle of the period or 1977-80) and savings plunge (i.e. towards the end of the period or 1980-83). In the post-oil period, which partly reflect achievements during the Fifth NESDB Plan, local savings slightly regained its momentum while investment still maintained its tardy pace. So the savings /investment gap was narrowed down to some extent. Yet, its relative magnitude is still as large as the average size during the oil-shock period (4.5% of GDP) pinpointing the significance of gross domestic savings whose clear-cut downtrend since 1973 has not diminished and thereby become a crucial cause of domestic resource gap.

Should one wish to compare the relative sizes of domestic resource gap across different periods according to the national economic and social development plans as shown in the lower part of Table 3.3, the importance of savings decline is further highlighted. While investment spree partly contributed to the widening of savings/investment gap only in the Second and Fourth NESDB Plan, continuous decline in national savings, except for

1973-4, reinforced the gap throughout every NESDB Plan. Figure 3.1 demonstrates the lack of stability of aggregate domestic savings relative to GDP. Over a long time span, however, its downward trend is quite evident, in contrast to that of local investment activities which fluctuated without any clear-cut trend. Prior to screening into details of savings structure, it is worth comparing relative sizes of domestic resource gap among neighboring countries as well as those in industrial countries so as to see how Thailand stands.

International Comparison

Tables 3.4 and 3.5 compare savings and resource gaps relative to GDPs across ASEAN members, a few newly industrialized countries (NICs), and some industrial countries during the first half of 1980s as reported in IBRD's World Department Report. Thailand's relative savings averaged out at the same level as those in Indonesia and the Philippines (21-22% of GDP). This level is below those of Malaysia, NICs, and industrial countries except for the U.S. (16%). It should be noticed that Thailand's equally ranked ASEAN neighbors encountered downward trend of domestic savings as well leading to continuation or even worsening of domestic resource gap. The contrary is lucidly evident in the cases of NICs and industrial surplus countries such as Japan and West Germany. That is, Singapore's gap was reduced by more than two-thirds while South Korea and Hong Kong have already moved into a surplus zone by 1984 owing to their industrializing efforts. These NICs exemplify the possibility that small developing deficit countries such as Thailand could very well obliterate their traditional current account deficits in not too long a time span, should concerted efforts at encouraging domestic savings and promoting exports be emphatically and continuously pursued. In other words, though a "golden or surplus age" has not been realized in Thailand, it is truly achievable given enough, proper, and continual efforts.

Similar to experiences of NICs are those of Japan and West Germany. The U.S., on the other hand, suffered a widening gap which must be due to both different speeds of economic expansion and large variations of volatile exchange rates. Different characteristics, economic backgrounds, resource endowments, and discretionary policies have to be taken into account as well in explaining different savings behaviors in different countries.

Ordinarily, domestic savings in most countries are kept in both real and financial assets within both organized and unorganized markets. The arrangements of organized financial/capital markets and implemented economic policies thus

Table 3.4: International Comparison of Gross Domestic Savings

(As Percentage of GDP)

Countries	1980	1981	1982	1983	1984	Five-Year Average
ASEAN						
Indonesia	30	23	19	20	20	22.4
Malaysia	32	26	25	29	32	28.8
Philippines	25	25	21	21	18	22.0
Singapore	30	33	41	42	43	37.8
Thailand	22	23	21	20	21	21.4
NICs						
South Korea	23	22	24	26	30	25.0
Hong Kong	24	24	25	25	29	25.4
Industrial						
Japan	31	32	31	30	31	31.0
West Germany	25	23	24	23	23	23.6
U.S.A.	17	18	15	15	16	16.2

Source: World Development Report, 1982-86

Table 3.5: International Comparison of Savings/Investment Gaps (S-I)

(As Percentage of GDP)

Countries	1980	1981	1982	1983	1984	Five-Year Average
ASEAN						
Indonesia	8	2	-4	-4	-1	0.2
Malaysia	3	-6	-9	-5	1	-3.2
Philippines	-5	-5	-8	-6	0	-4.8
Singapore	-13	-9	-5	-3	-4	-6.8
Thailand	-5	-5	0	-5	-2	-3.4
NICs						
South Korea	-8	-4	-2	-1	1	-2.8
Hong Kong	-5	-6	-4	-2	5	-2.4
Industrial						
Japan	-1	1	1	2	3	1.2
West German	0	0	2	2	2	1.2
U.S.A.	-1	-1	-1	-2	-3	-1.6

Source: World Development Report, 1982-86

play an important role in the mobilization of local savings regarding their levels as well as formats. The Appendix of this Chapter presents an overview of the Thai financial and capital markets together with brief features of implemented macroeconomic policies which also have impact upon gross domestic savings in Thailand.

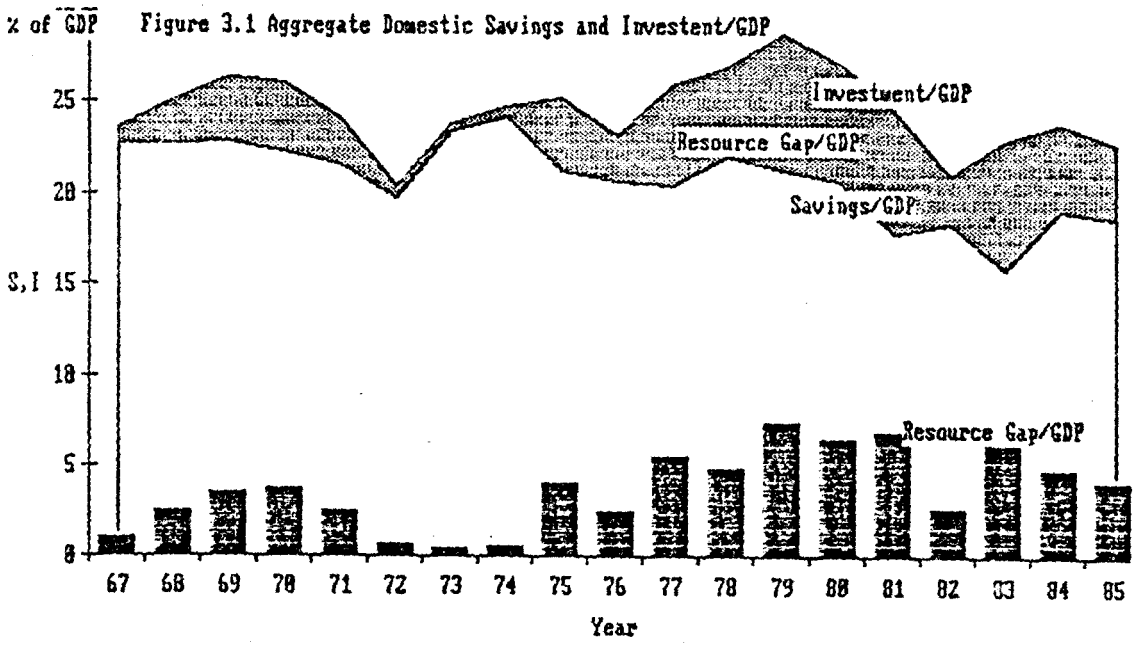
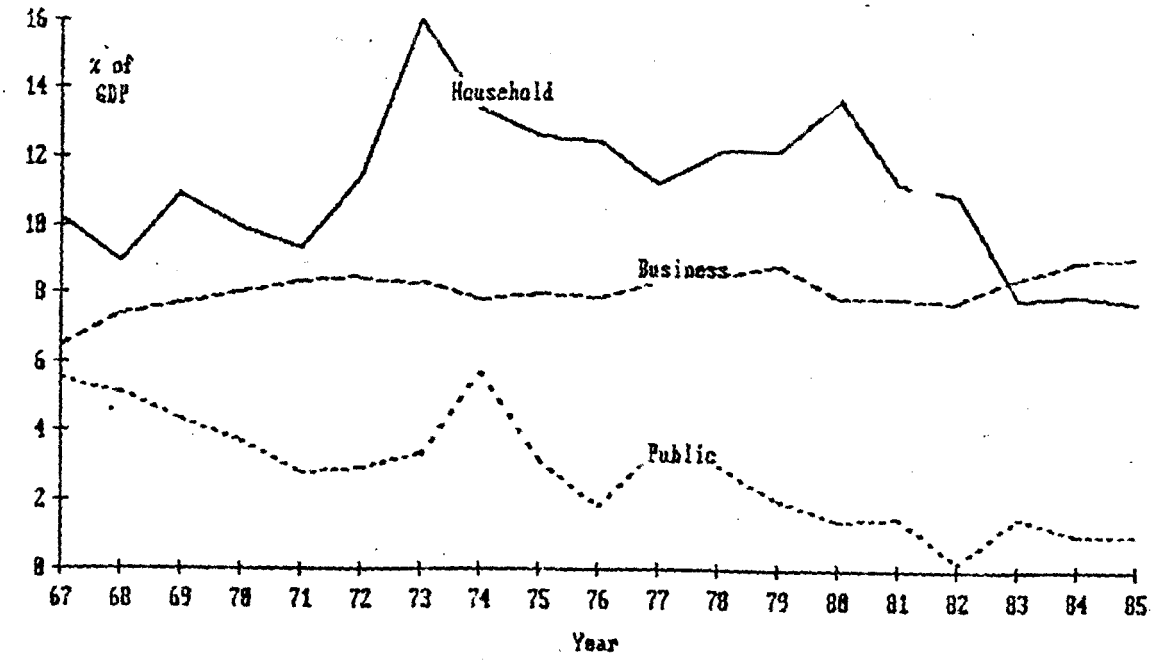


Figure 3.2 Sectoral Disaggregation of Domestic Savings



SECTION 2

CHARACTERISTICS OF HOUSEHOLD SAVINGS

In the past twenty years the household component of aggregate domestic savings deserves special attention in three respects. First, its average absolute size distinctly dominates those of the business and public sectors especially in the period before the past few years. Second, it is also more volatile than business and public savings as clearly evident in annual fluctuations. Third, household savings as a proportion to GDP has declined quite remarkably from its peak in 1973 at 16% to only 7.8% last year (1985) while those of the business sector and public agencies have not moved in a similar manner. Therefore, the pattern of household savings is quantitatively investigated in detail based on both time-series and cross-section data. Table 3.6 and Figure 3.2 demonstrate sectoral disaggregation of total domestic savings.

Household savings behavior reflects an interaction of capacity to save, available instruments together with their features, and willingness to save of income earners. In order to explain the past pattern of household savings as observed, quantifiable determinants of household savings are grouped into three categories: macro setting (aggregate income, income distribution, demographic structure), micro composition (income sources, regional differences, net financial positions), and policy variables (interest rates, tax, inflation rate, and financial intermediation). These three categories of explanatory factors will be examined hereinafter.

Macro Setting

Similar to those observed in other developing countries is the trend of household savings relative to disposable income, or the so-called average propensity to save (APS). The APS in Thailand grew together with per capita household disposable income up to a certain point during the early stage of development. Then it levelled off or started losing momentum and fell after higher levels of per capita income were reached as shown in Table 3.7 and Figure 3.3.

Table 3.6: Composition of Domestic Savings in Thailand

(Amounts in billions of Baht, otherwise in per cent of GDP)

Year	Household Sector	Business Sector	Public Sector	Statis. Discrep.	GDP Nominal	Total Savings
1967	11.0 (10.2)	7.1 (6.5)	6.0 (5.5)	0.5 (0.5)	108.3	24.6 (22.7)
1968	10.4 (8.9)	8.6 (7.4)	6.0 (5.1)	1.5 (1.3)	116.8	26.5 (22.7)
1969	14.0 (10.9)	9.9 (7.7)	5.6 (4.3)	0.3 (0.2)	128.6	29.7 (23.1)
1970	13.4 (9.9)	10.9 (8.0)	5.1 (3.7)	1.0 (0.7)	136.1	30.4 (22.3)
1971	13.5 (9.3)	12.0 (8.3)	4.0 (2.8)	1.8 (1.2)	144.6	31.3 (21.6)
1972	18.7 (11.4)	13.9 (8.4)	4.8 (2.9)	-4.8 (-2.9)	164.6	32.6 (19.8)
1973	34.7 (16.0)	17.9 (8.3)	7.1 (3.3)	-9.1 (-4.2)	216.5	50.7 (23.4)
1974	36.4 (13.4)	21.2 (7.8)	15.6 (5.7)	-7.4 (-2.7)	271.4	65.8 (24.2)
1975	37.8 (12.6)	23.8 (8.0)	9.3 (3.1)	-7.4 (-2.5)	298.8	63.5 (21.2)
1976	42.1 (12.5)	26.7 (7.9)	6.2 (1.8)	-5.2 (-1.5)	337.6	69.8 (20.7)
1977	44.1 (11.2)	32.5 (8.3)	13.4 (3.4)	-9.8 (-2.5)	393.0	80.2 (20.4)
1978	57.4 (12.2)	40.1 (8.5)	14.2 (3.0)	-7.8 (-1.6)	470.0	103.8 (22.1)
1979	67.8 (12.2)	49.1 (8.8)	11.4 (2.0)	-9.7 (-1.7)	556.2	118.6 (21.3)
1980	93.7 (13.7)	53.9 (7.9)	9.6 (1.4)	-15.5 (-2.3)	684.9	141.7 (20.7)
1981	88.3 (11.2)	61.9 (7.9)	11.9 (1.5)	-22.4 (-2.8)	786.2	139.6 (17.8)
1982	92.3 (10.9)	65.8 (7.8)	1.3 (0.2)	-3.7 (-0.4)	846.1	155.7 (18.4)
1983	73.2 (7.9)	79.0 (8.5)	14.1 (1.5)	-19.8 (-2.1)	924.3	146.5 (15.8)
1984	79.5 (8.0)	89.3 (9.0)	10.2 (1.0)	10.3 (1.0)	991.6	189.3 (19.1)
1985	81.4 (7.8)	95.7 (9.1)	10.1 (1.0)	7.3 (0.7)	1,047.6	194.4 (18.6)

Figure 3.3: Households Savings / Income Ratio (APS)

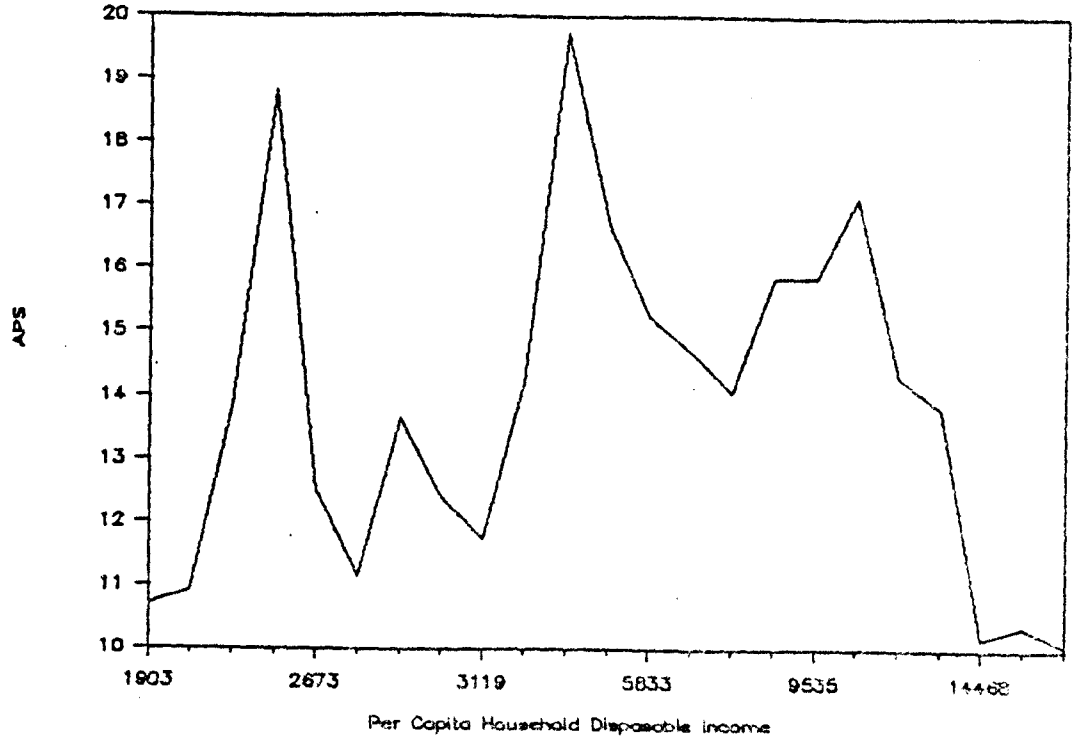


Table 3.7: Household Income and Savings
(Amounts in Baht)

Year	APS* (%)	Per Capita HH Disposable Income	Per Capita HH Savings
1963	10.70	1,903	203.65
1964	10.91	1,983	216.35
1965	13.81	2,240	309.43
1966	18.81	2,631	494.79
1967	12.51	2,673	334.46
1968	11.15	2,753	306.91
1969	13.65	2,940	401.17
1970	12.40	3,011	373.27
1971	11.73	3,119	365.81
1972	14.19	3,473	492.77
1973	19.72	4,509	889.06
1974	16.67	5,440	907.05
1975	15.22	5,833	887.72
1976	14.66	6,419	941.01
1977	14.02	7,201	1,009.66
1978	15.85	8,313	1,317.24
1979	15.85	9,535	1,511.00
1980	17.14	11,704	2,006.38
1981	14.28	12,955	1,850.11
1982	13.78	13,743	1,893.88
1983	10.17	14,468	1,471.95
1984	10.36	15,143	1,568.11
1985	10.07	15,664	1,576.69

*APS (average propensity to save) = household savings/household disposable income

One possible explanation for the rising and falling of savings ratio (APS) of households is that at the initial stage income earners place significance only on essential consumption so an increment to his real income is mostly devoted to savings. On a collective scale, the aggregate savings ratio of the community is boosted up along with rising per capita real income. Once fundamental needs are fulfilled, a typical economic agent tends to desire for the upgrading of his standard of living. He is thus expected to allocate his additional real income to replace his existing consumption or possessions with the higher-quality ones so as to match up with the level he used to admire or desire. Consequently, once that point is reached, the aggregate savings ratio tends to slide downward despite an increase in per capita real income. Another possible explanation for movements of the savings ratio is that per capita income ordinarily rises as a result of industrialization attempts along the development path. Industrialization often results in a larger degree of urbanization which provides income earners with multifarious avenues of spending. It is thus unsurprising to find that after a certain point of development, growth of per capita income is associated with a decrease in average savings ratio of the community.

However, it can also be argued to the contrary. That is, per capita income may also grow because the rich , not the poor, are the lucky ones. They tend to be the units which have already furnished themselves with not only essentials but also most available luxurious commodities. Their additional income should therefore be slated for savings purposes. If such case prevails, the savings ratio of the community could also grow without limit along with per capita income.

Because of the above doubt, it is worth searching for actual determination of aggregate household savings in Thailand by examining correlation among relevant variables in time-series data as published in the National Income Accounts from 1960 until 1985.

Aggregate Income

Several hypotheses were postulated about relationship between income and consumption. For instance, while the absolute income hypothesis simply ties current consumption with only present income after tax, the relative income hypothesis asserts that individual consumption is typically based upon the standards attained by others and those attained previously. On the other hand, the life cycle and permanent income hypotheses claim that people are so

adequately rational that they can project the intensity of their income streams throughout their life time or they can distinguish transitory income from permanent one. Decisions on consumption or savings therefore vary depending largely on present status and income projections. But whether any of these income hypotheses will satisfactorily explain macro savings behavior in Thailand has to be statistically tested.

Income Distribution

As suggested earlier, variations of income distribution pattern may affect the volume of national savings because people from different income groups may have different capacities and/or preferences and they are subject to different environments. So their savings inclinations are likely to differ from one another. However, whether savings tendency of one group is ordinarily stronger than that of its counterpart is still debatable. For instance, some argue that agricultural workers are less savings-oriented than non-agricultural workers since the former tend to be poorer than the latter. An equal incremental income to the former should thus be saved by less than that decided by the latter. However, others may argue to the contrary. That is, agricultural income is likely to be saved in a larger proportion than non-agricultural income because agricultural workers tend to reside in an environment which offers fewer varieties of spendings than the environment of non-agricultural workers. In addition, income earned from agricultural activities tends to vary to a greater frequency and extent than those from other occupations. Agricultural income-earners could be thus more inclined to save because of security reasons against possible income variations in the future.

Other categories of income distribution also raise some doubts. For example,it is widely believed that prope income tends to be saved by more than salary or wage income as owners of the former are likely to be already well-equipped. And similar argument may be quoted for the self-employed versus incorporated enterprises. The former, though lacking such firm base and reputation as the latter, are not subject to any partial ownership or obligations. In addition, the self-employed are similar to agricultural income-earners in that their income streams fluctuate more frequently and unpredictably. Therefore, the self-employed are highly induced to save principally for safety reasons against income fluctuations in the future. Nevertheless, it remains questionable whether an equal amount of household property income will be saved by more or less proportion than the one normally decided by the self-employed.

Demographic Structure

A priori one may expect that the following demographic characteristics have impact upon savings decision: male/female proportion, number of the employed to total household members, sizes of household, relative sizes of the dependent within households,and the urban share in total population. Rationales quoted for these factors are different tastes or tendencies, different savings capacities, different consumption patterns, and different environments. The impact of demographic characteristics upon savings is also contingent upon several key variables such as local traditions and availabilities .of facilities, services, and commodities.

Micro Composition

Besides the macro features influencing savings as mentioned above, one may suspect that decisions on savings or spending also hinge upon micro configurations of funds owners. Examples of these different attributes are residences and income sources of funds owners.Urban workers may save more because they tend to earn a lot and they are well-facilitated by varieties of services from financial intermediaries. But it could also be argued to the contrary. That is, urban residents are more exposed to spending items than those in rural areas. So they are enticed to save less than peasants if both groups are provided with an equal extent of incremental income. Earners of regular streams of income such as salary may be more or less savings-inclined than those counting on intermittent income such as wage. That depends on whether regular income-earners exploit their income regularity by excessive spending today (e.g. via installment or hire-purchases) or whether wage-earners have already furnished themselves with all essential items.

Another crucial determinant of household savings is the financial position of households. Again, both net financial assets and net financial liabilities can lead to more savings today. On the one hand, large net assets could yield ample property income in excess of consumption needs. On the other hand, holders of large net liabilities may be so rationally far-sighted in viewing that liabilities can only be liquidated only if adequate savings are accumulated from today onward.

Policy Variables

Interest Rates

Even though interest rate changes are typically believed to vary in the same direction as savings, it should not be overlooked that household savings in general consist of two components: financial and non-financial or real assets. While deposits at financial institutions may fluctuate in the same direction as interest rates offered by financial intermediaries, real assets or deposit substitutes tend to have their attraction or value inversely related to interest rate movements. Even among financial instruments themselves, some are attractive in an inverse direction to interest rates such as stocks or debentures in the securities exchange markets.

In this connection, two points deserve careful attention before any linkage is to be claimed between interest rate movement and household savings. First, savers normally give weights to not only interest rates to be gained on their deposits but also safety or security of their deposits. This interplay between risks and returns truly exists especially in countries or situations whereby bankruptcies or insolvencies or takeovers of financial institutions used to take place such as Thailand. Second, at some places or in some occasions direct relationship between interest rate variations and household savings prevails to a minimal extent. For instance in remote areas where ordinary financial services are rare, residents may keep on saving regardless of interest rate fluctuations because they wish to accumulate funds for particular purposes such as marriages or religious ceremonies. Therefore, actual macroeconomic relationship between interest rate movements and household savings, if any, should be empirically investigated and tested.

Inflation

Different schools of thoughts interconnect savings and price increase in different fashions. On the one hand, the so-called wealth effect is believed to create a direct link between inflation and savings. Price increase will lower real wealth and thus subsequently suppress consumption or raise savings. And, at the other end of transaction, financial gains

derived from inflationary pressure are likely to be absorbed by savings as they tend to be unexpected or unplanned for in advance.

On the other hand, an expectation effect is based on the hypothesis that consumption/savings decision is heavily influenced by the expected price level in the future. Should expected inflation exceed the present speed, one is likely to be better off consuming or stocking today rather than tomorrow. Under a rational expectation scheme, a negative relationship is therefore expected between savings and actual inflation.

In this connection, it should be well taken into consideration that inflation also affects household savings via the attractiveness of rates of return on different formats of savings. For instance, even though higher inflation hurts real returns on deposits at financial institutions given constant deposit interest rates, higher inflation can also enrich the attraction of alternatives to deposits, e.g. real estate or securities in capital markets. So inflation may affect aggregate household savings because of some spillover during the reshuffling from one format of savings to another.

Taxes

Three types of taxes are distinguished in the evaluation of the tax impact on household savings. First, direct or income tax ordinarily curtails household disposable income and hence savings capacity. Second, indirect taxes tend to generate upward pressure upon subsequent pricing, therefore, giving rise to similar effects that inflation has on savings. Third, interest income tax, levied on interest earnings from deposits at financial institutions, is expected to disturb savings in a similar fashion as interest rates, if savers have dominant concern in rates of return. Hereupon, two points should be reiterated. Typical savers also lay stress on security or safety of their principal funds. And a good part of household savings are not captured by deposits at financial institutions. Instead, they could be trapped by appreciating real assets or securities in capital markets. It is thus possible that minor variations of interest income tax may have insignificant impact upon aggregate household savings.

Financial Intermediation

The availability of financial services certainly help entice households to save as the general public derive not only safety or security of but also returns to their savings. Branches of financial institutions established in non-municipal or remote areas together with their variety of financial services disseminated must have contributed to the expansion and financialization of household savings to a great extent.

Empirical Testing

Since most decisions on savings are results of multivariate optimization attempts, the nearest approximation of these results ought not to neglect interdependence among influential factors. In other words, relevant determinants of private savings should not be estimated separately. Therefore, any empirical findings except those in (D.1) reported herein are outcomes of multivariate estimation of household savings.

Aggregate Income

After different income hypotheses (absolute, relative, and permanent) are statistically tested for the case of Thailand,* it is found that current, relative to past, disposable income best explains the positive relationship between household income and savings. Then the relative income format is tried upon different subintervals according to oil shocks.** Derived short-run marginal propensity to save (MPS) or incremental tendency to save moved in a consistent fashion with the household savings/income ratio. The MPS declined from 11.8% in 1963-72 to 10.9% in 1972-77 and only 7.9% in 1977-85.

Income Distribution

Some variables representing different patterns of income distribution were tested, concurrently with other pertinent factors, against levels of the household savings/income ratio. But only two income-distribution variables turn out to be adequately significant in explaining variations of the household savings ratio, viz. the proportion of GDP arising from

non-agricultural activities, the ratio of household property income to household income received from unincorporated or self-employed professions.*** The non-agricultural proportion of GDP is negatively related to household savings/ income variable, and so is the ratio property/self-employed income. The former, as also shown in Table 3.8, confirms that agricultural households are more savings-inclined than their counterparts despite their poorer standards of living and less access to financial institutions' services at present. The latter certifies that even though property income is typically saved by a good portion, it is yet less savings-oriented than earnings of the self-employed. These results reconfirm the strong influence that income fluctuations have on savings.

Table 3.8 Selected Indicators of Income Distribution

Year	1 Ynag / GDP	2 Property Income / Uninc. Income	3 APS (%)
1970	0.72	0.12	12.40
1971	0.72	0.13	11.73
1972	0.70	0.12	14.19
1973	0.66	0.12	19.72
1974	0.69	0.12	16.67
1975	0.69	0.12	15.22
1976	0.69	0.12	14.66
1977	0.72	0.13	14.02
1978	0.73	0.13	15.85
1979	0.74	0.13	15.85
1980	0.75	0.15	17.14
1981	0.76	0.16	14.28
1982	0.78	0.18	13.78
1983	0.78	0.21	10.17
1984	0.80	0.23	10.36
1985	0.83	0.24	10.07

1. The proportion of GDP arising from non-agricultural activities
2. Property income/unincorporated (self-employed) income of households
3. APS = household savings/household disposable income

Annual data from 1961 to 1985 show the following correlation between the household savings/income ratio and certain determinants.

$$\text{HH s/y} = \underset{(2.7)}{0.84} - \underset{(-1.9)}{0.26}\frac{\text{Ynag}}{\text{GDP}} - \underset{(-3.2)}{0.51}\frac{\text{YProp.}}{\text{YUnin}} - \underset{(-2.4)}{1.12}\frac{\text{Pop.14}}{\text{ToPop.}}$$

$$+\underset{(0.5)}{0.001}\ \text{Rsdtd} + \underset{(0.4)}{0.0004}\ \text{Int.tax} + \underset{(5.7)}{0.0022}\ \text{NHIG}$$

$$R^{-2} = 0.854\ ,\ n = 1961\text{-}85$$

HH s/y = Household savings/disposable income ratio

Ynag / GDP = The proportion of GDP arising from non-agricultural activities

YProp. / YUnin = The proportion of household income from property to that from unincorporated enterprises

Pop.14 / ToPop. = The proportion of population aged up to 14 to total population

Rsdtd = Weighted average of savings and time deposit interest rates

Int.tax = Interest income tax

NHIG = Growth rate of nominal household disposable income.

Figure 3.4 displays the actual versus predicted savings/income ratios of the household sector.

Demographic Structure

It may be somewhat surprising to discover that sex and average size of household do not generate significant impact upon household savings. Neither does the proportion of employed workers nor the urban share in total population. The only demographic feature that keenly affects household savings is the young-aged or dependency ratio (the share of children aged 1-14 within total population). The negative correlation between savings and dependency ratio is in accordance with expectation. That is so because the young-aged group hardly earn much income while adding sizable amounts (e.g. child care and schooling) to the list of ordinary expenses.

Interest Rates and Interest Income Tax

As implied above in (C.1), the result of statistical fitting confirms that neither interest rates nor interest income tax did have distinct impact upon aggregate household savings in the past. In other words, though positive relationship exists between interest rates on financial deposits and savings, its coefficient is highly insignificant.*** This leads to a conclusion that both gross and net interest rates do not signify principal determinants of household savings. Other factors are a lot more important such as stability of income growth and price level.

Income Growth and Inflation

These two primary determinants are simultaneously taken into account by including the nominal growth rate of household disposable income as an explanatory variable for household savings/income ratio.*** As expected, nominal income growth very much determines savings capacity as substantiatied by highly significant positive correlation. And gains or losses due to inflation on household income streams are hardly planned for ahead of time. So they tend to be absorbed by savings as a cushion against unexpected variations.

Residences and Income Sources

The micro perspective of household savings behavior in Thailand is scrutinized based upon the cross-section household savings survey as conducted by the Bank of Thailand in 1980. Samples are partitioned into two groups (municipal/non-municipal) so as to test the impact of urbanization. These groups are subdivided further according to income sources (wage, salary, self-employed in agriculture and non-agriculture, property).****

Within the same income group, generally municipal households turn out to have higher savings tendency (MPS) than non-municipal households. This must have been due to more access to financial institutions and more expenses to be incurred in the future that must rest upon today's savings.

Regularity of income streams also exerts strong influence upon savings. This assertion can be verified by the results from statistical fittings,**** which demonstrate that, regardless of their residences, wage earners have the lowest MPS, whereas property income earning households have the highest.

Furthermore, if financial positions of households are taken into consideration, it is discovered as expected that household savings vary in the same direction as financial assets (which partly contribute to savings) and inversely with financial liabilities when samples are tested altogether.***** However, this relationship does not prevail when samples are subdivided into different categories. For instance,positive correlation between municipal wage-earners' savings and their financial liabilities suggests the necessity of savings to fulfil financial obligations. Implied therefrom is another type of influence of financial institutions' services upon household savings behavior.

Remarks

A few comments observed from this 1980 cross-section household savings survey by the Bank of Thailand deserve special attention. First, household saving, especially those in provincial areas, were meant for particular purpose such as raising children, marriage, ordaining , or other special social occasions. In other words, savings are not induced by any rate of return. Second, the main reason why some households opted not to place their savings at financial institutions is that savings by other means such as holding cash/valuables or playing pia/share in unorganized markets are more convenient or less complicated than transactions with formal financial institutions. Moreover, within these unorganized markets, savers can convert their status to borrowers at ease. And most responses quoted that interest rate or rate of return did not constitute a crucial reason why some households did not prefer formal financial markets to unorganized ones or vice versa. The important conclusion from these findings is that should the government wish to undertake any measures to encourage household savings particularly in the rural areas, special features, not necessarily related to interest rates, need to be designed and attached to related instruments so as to fit with local preferences.

Future Outlook

The following assumptions are made to project the future course of household savings/income ratio during the Sixth NESDB Plan.

1. Industrialization will gradually lower the agricultural share in GDP from 17.4% in 1985 to 14% in 1991.

2. Population control will gather its momentum a little more as it will manifest itself in a quicker decline of dependency or young-aged portion of total population from 38% in 1985 to 34% in 1991.

3. Income distribution is to be tilted further in favor of property income and against unincorporated enterprises according to the trend. So the property/self-employed income ratio will grow from 24.2% in 1985 to 30% in 1991.

4. Real household disposable income grows at the equal pace as minimum real GDP growth (5%) while stability of price level (2% inflation) is satisfactorily maintained throughout. Or nominal receipts of households will rise 7% annually every year.

5. Other remaining pertinent factors are to stay put including interest rates on savings and time deposits as well as the prevailing 15% interest income tax.

Under the rather conservative scenario as sketched above, the Thai household sector will, very gradually and to a little extent, raise its savings/income ratio from 10.6% in 1985 to 11.2% in 1991. Should the nominal growth of household disposable income be accelerated from 7% p.a. to 10% p.a. due to stimulative measures or rapid recovery, the household savings ratio will not be increased by much, as demonstrated below, and it will stay within the range of 11-12%. Nevertheless, the conclusion of this projection upholds likelihood that Thailand will be able to curtail its financial resource gap to some extent during her Sixth Development Plan (1987-91). Household savings are not likely to resurge dramatically to their previous peak levels because their prime determinants, income and inflation, are not expected to leapfrog such as those during oil crises. Furthermore, interest rates and interest income tax will not help restore savings momentum much since household savings in the past prove to be quite insensitive to both factors.

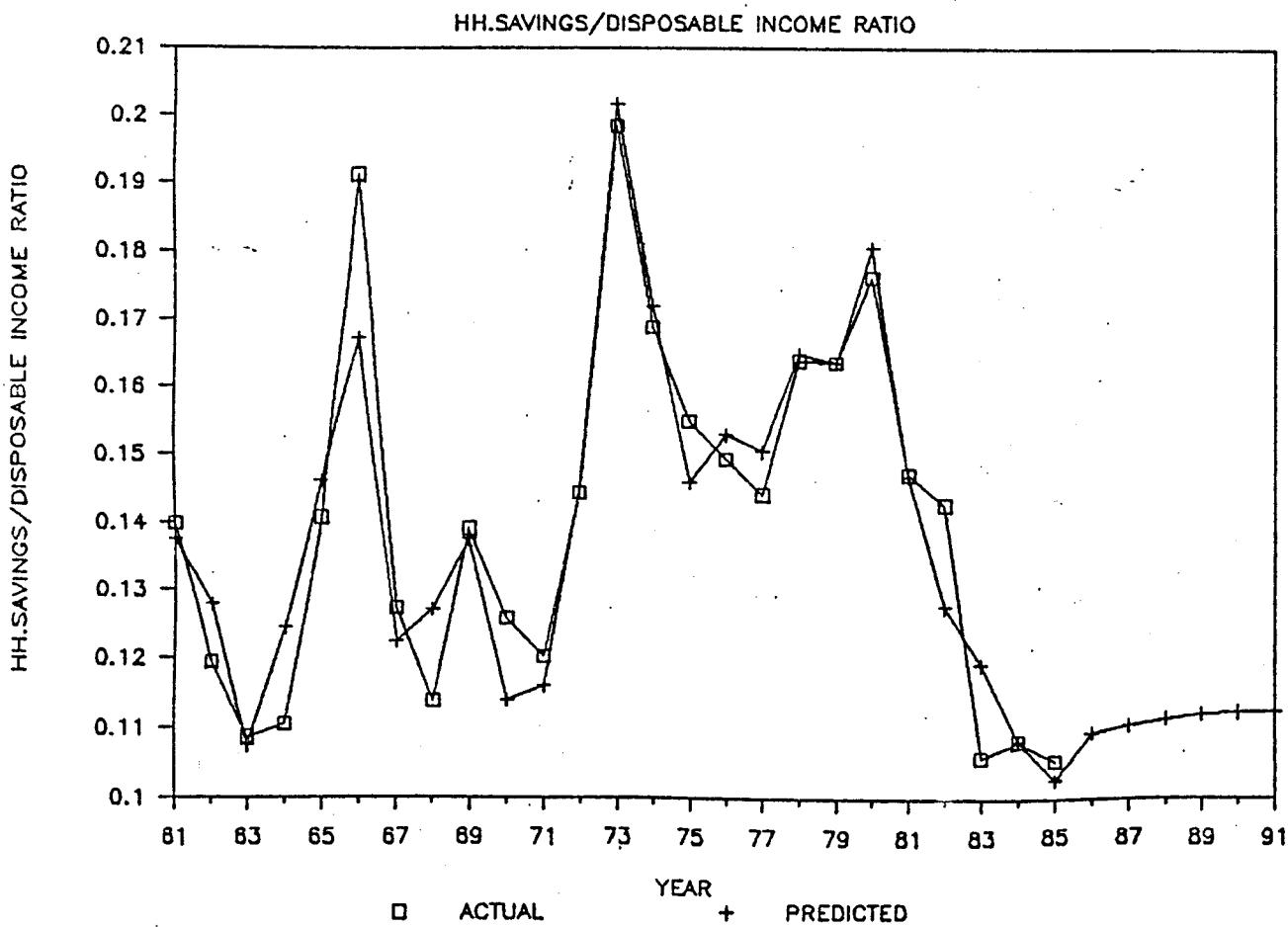
Actual and Projected Household Savings/Disposable Income Ratio

1980	17.62%
1981	14.72%
1982	14.27%
1983	10.58%
1984	10.82%
1985	10.56%

If growth of nominal household disposable income is

	7% p.a.	10% p.a.
1986	10.97%	11.63%
1987	11.09%	11.74%
1988	11.17%	11.83%
1989	11.23%	11.88%
1990	11.25%	11.90%
1991	11.24%	11.89%

FIGURE 3.4 ACTUAL AND PREDICTED



Notes of Section 2

*
Some statistical tests and their results presented herein are those obtained from joint efforts undertaken with Dr. Siri Karncharoendee and Suchart Sakkankosone towards the end of 1985.

Absolute Income

Short-run

(1) HHSAVE = 2983.73 + 0.130 YDSHH
(1.1) (15.8)

R^{-2} = 0.912 , DW = 0.635 , SE = 9072

Long-run

(2) HHSAVE = 0.136 YDSHH
(24.9)

R^{-2} = o.908 , DW = 0.606 , SE = 9108

Relative Income

Short-run

(3) HHSAVE = 1039.88 + 0.542 YDSHH - 0.455 YDSHH
(0.7) (11.4) (-8.7) t-1

R^{-2} = 0.979 , DW = 1.880 , SE = 4414

Long-run

(4) HHSAVE = 0.551 YDSHH - 0.462 YDSHH
(12.0) (-9.1) t-1

R^{-2} = 0.979 , DW = 1.869 , SE = 4368

Permanent Income (Applying Koyek Transformation Technique)

Short-run

(5) $$HHSAVE = \underset{(1.3)}{3437} + \underset{(0.2)}{0.002}\ YDSHH + \underset{(0.2)}{0.004}\ YDSHH_{t-1} + \underset{(3.7)}{0.942}\ HHSAVE_{t-1}$$

$$R^{-2} = 0.922 \quad , \quad DW = 1.797 \quad , \quad SE = 8574$$

(6) $$HHSAVE = \underset{(1.3)}{3760} - \underset{(0.2)}{0.001}\ YDSHH + \underset{(0.2)}{0.002}\ YDSHH_{t-1} - \underset{(-0.2)}{0.003}\ YDSHH_{t-2} + \underset{(4.6)}{1.018}\ HHSAVE_{t-1}$$

$$R^{-2} = 0.918 \quad , \quad DW = 1.929 \quad , \quad SE = 8764$$

Long-run

(7) $$HHSAVE = \underset{(0.3)}{0.003}\ YDSHH + \underset{(0.3)}{0.007}\ YDSHH_{t-1} + \underset{(3.7)}{0.970}\ HHSAVE_{t-1}$$

$$R^{-2} = 0.916 \quad , \quad DW = 1.721 \quad , \quad SE = 8702$$

(8) $$HHSAVE = - \underset{(-0.1)}{0.0004}\ YDSHH - \underset{(-0.1)}{0.0008}\ YDSHH_{t-1} - \underset{(-0.1)}{0.001}\ YDSHH_{t-2} + \underset{(4.7)}{1.058}\ HHSAVE_{t-1}$$

$$R^{-2} = 0.911 \quad , \quad DW = 1.849 \quad , \quad SE = 8921$$

HHSAVE = Household savings

YDSHH = Disposable income of household sector

Figures in parentheses denote t-statistics, n = 1960-84

**

(9) SPOP = - 34.545 + 0.548 IPOP - 0.430 IPOP
(-0.5) (6.6) (-4.9) t-1

R^{-2} = 0.892, DW = 1.723, SE = 32.472, n = 1963-72

(10) SPOP = 70.042 + 0.387 IPOP - 0.279 IPOP
(0.5) (3.6) (-2.5) t-1

R^{-2} = 0.861 , DW = 2.043 , SE = 68.253 , n = 1972-77

(11) SPOP = 144.576 + 0.543 IPOP - 0.463 IPOP
(0.5) (4.4) (-4.0) t-1

R^{-2} = 0.750 , DW = 2.066 , SE = 154.442 , n = 1977-85

SPOP = Per capita household savings

IPOP = Per capita household disposable income

Figures in parentheses denote t-statistics

***

(12) HHs/y = 0.8382-0.2618 $\frac{Ynag}{GDP}$-0.5108$\frac{YProp.}{YUnin}$
(2.7) (-1.9) (-3.2)

-1.1218 $\frac{Pop.14}{ToPop}$ 0.0011 Rsdtd
(-2.4) (0.5)

+0.0004 Int.Tax + 0.0022 NHTG
(0.4) (5.7)

R^{-2} = 0.854, DW = 2.229, SE = 0.010, n = 1961-85.

HHs/y = Household savings/disposable income ratio

$\frac{Ynag}{GDP}$ = The proportion of GDP arising from non-agricultural activities.

YProp./YUnin. = The proportion of household income from property to that from unincorporated enterprises

Pop.14/ToPop. = The proportion of population aged up to 14 to total population

Rsdtd = Weighted average of savings and time deposit interest rates

Int.Tax = Interest income tax

NHIG = Growth rate of nominal household disposable income

Figures in parentheses denote t-statistics.

****

	Constant	Y	N	Obser-vations	-2 R	DW	SE
Municipal households							
(13) S1	-632.6220	0.3753	-8.8480	191	0.6369	1.9376	760.2025
	(-6.4428)	(18.3109)	(-1.1586)				
(14) S2	-457.9590	0.4230	-98.9233	492	0.6036	2.0183	1,634.5229
	(-2.6172)	(29.1881)	(-3.3554)				
(15) S3	-291.6736	0.4760	-141.8175	451	0.7880	1.9138	1,640.4557
	(-1.4544)	(40.7196)	(-4.4373)				
(16) S5	-297.8689	0.9285	-586.2381	47	0.9930	1.7724	1,339.6825
	(-0.8180)	(80.6662)	(-6.9343)				
Non-municipal households							
(17) S1	23.1386	0.2407	-34.5794	183	0.4861	2.0163	380.7318
	(0.2980)	(13.1065)	(-2.8182)				
(18) S2	-604.9678	0.5409	-122.4923	164	0.7088	1.6559	1,178.3490
	(-2.2684)	(19.9341)	(-3.0101)				
(19) S3	-522.1841	0.5246	-71.3897	182	0.6671	1.9066	1,708.2189
	(-1.6379)	(18.6142)	(-1.2328)				
(20) S4	48.5323	0.4130	-55.8420	433	0.6284	1.3721	728.2805
	(0.4896)	(27.0225)	(-3.5254)				
(21) S5	-896.1223	0.7250	228.9669	28	0.6559	2.1815	839.0816
	(-2.9940)	(2.5965)	(2.7572)				

S1 = Savings of wage earning households
S2 = Savings of salary earning households
S3 = Savings of households deriving income mainly from self-employed non-agricultural activities
S4 = Savings of households deriving income mainly from self-employed agricultural activities
S5 = Savings of property income earning households
Y = Household income
N = Number of household members

Figures in parentheses denote t-statistics

*****

(22) S = - 660.7542 + 0.4927 Y - 58.2264 N + 0.0017 NFA
(-8.5119) (61.9298) (-4.9982) (12.2398)

R^{-2} = 0.7482 , DW = 1.7545 , SE = 1719.2341

Observations = 2242

(23) S = - 640.8492 + 0.4804 Y - 59.1811 N + 0.0018 FA
(-8.2106) (55.5540) (-5.0725) (11.8742)

R^{-2} = 0.7472 , DW = 1.7609 , SE = 1722.3865

Observations = 2242

(24) S = - 795.1435 + 0.5530 Y - 66.8207 N - 0.0018 FL
(-10.0423) (77.1226) (-5.5893) (-4.3248)

R^{-2} =0.7337 , DW = 1.7652 , SE = 1767.9809

Observations = 2242

S = Household savings

Y = Household income

N = Number of household members

FA = Financial assets

FL = Financial liabilities

NFA = Net financial assets (FA - FL)

Figures in parentheses denote t-statistics

3. BUSINESS SAVINGS

As mentioned earlier in Section 2, the business sector in Thailand contributed a stabler portion of domestic savings than the household sector. Should careful attention be paid to evolution over time of business savings, one may claim that in the long run it is on a gradually rising trend as shown in Table 3.9. In the late sixties aggregate business savings averaged out around 7.2% of GDP. This portion grew gradually to 8.2% in the seventies and 8.4% in the early eighties. Such trend is on the opposite direction to that of the household sector even though the extent of variations is much smaller. It thus deserves to be examined in detail why economic units subject to the same environments behaved in the contrary fashion at the same time. Ordinarily, business savings comprise two parts : depreciation and financial component. Hereafter, these portions are treated separately.

Depreciation

Depreciation represents a major share of total business savings, roughly around 87% in the past two decades (1967-85). Movements of this dominant component very much correspond with the gradually upward trend of total business savings. This is so since depreciation added up to a rising proportion of GDP : 6.4% in the late 1960s, 6.7% and 7.6% in the 1970s and early 1980s respectively. An immediate explanation of tardy expansion of depreciation is the building up or accumulation of capital stocks invested by private enterprises while undertaking economic activities. Depreciation values of these capital stocks typically depend on the grand total costs, life expectancy, and their efficiency path. This strong relationship between capital stocks and depreciation is substantiated by significant statistical correlation between values of gross capital stocks of the Thai private business sector, as evaluated by the NESDB in 1984, and those of business depreciation since 1970 (1). In this connection, it should be noted that the early 1980s saw a marked increase in the depreciation component of business savings. And such period of time immediately followed the boom of private investment in both large and small projects during the late 1970s as indicated by the surge of private investment/GDP ratio from 15% in 1971-73 to 18% in 1977-79.

Finally, some business factors induce private enterprises to reinvest their potential profits instead of realizing them.

Table 3.9: Composition of Business Savings

(Amounts in billions of Baht, otherwise in per cent of GDP)

Year	Financial Part	Depreciation Part	Total Business Savings
1967	0.8 (0.7)	6.3 (5.8)	7.1 (6.5)
1968	1.1 (0.9)	7.5 (6.4)	8.6 (7.4)
1969	1.0 (0.8)	8.9 (6.9)	9.9 (7.7)
1970	1.6 (1.2)	9.3 (6.8)	10.9 (8.0)
1971	1.4 (1.0)	10.6 (7.3)	12.0 (8.3)
1972	2.3 (1.4)	11.6 (7.0)	13.9 (8.4)
1973	4.3 (2.0)	13.6 (6.3)	17.9 (8.3)
1974	5.1 (1.9)	16.1 (5.9)	21.2 (7.8)
1975	4.0 (1.4)	19.8 (6.6)	23.8 (8.0)
1976	4.3 (1.3)	22.4 (6.6)	26.7 (7.9)
1977	5.5 (1.4)	27.0 (6.9)	32.5 (8.3)
1978	7.7 (1.6)	32.4 (6.9)	40.1 (8.5)
1979	9.4 (1.7)	39.6 (7.1)	49.1 (8.8)
1980	7.7 (1.1)	46.2 (6.8)	53.9 (7.9)
1981	7.6 (1.0)	54.3 (6.9)	61.9 (7.9)
1982	5.2 (0.6)	60.6 (7.2)	65.8 (7.8)
1983	7.6 (0.8)	71.4 (7.7)	79.0 (8.5)
1984	7.3 (0.7)	82.0 (8.3)	89.3 (9.0)
1985	7.5 (0.7)	88.2 (8.4)	95.7 (9.1)

Examples of these factors are profit tax, anticipation of exchange rate and interest rate variations, and expectation of imminent local business upswing which necessitates additional production capacity. These factors are often in effect so a large part of potential profits have been converted into incremental capital stocks via reinvestment. Such increments give rise to enormous depreciation components of business enterprises thereafter. It is therefore not surprising to find financial savings constituting a very small portion of total business savings.

Financial Component

While the depreciation component of business savings is almost singlehandedly specified by the extent of capital formation as decided by businessmen, the financial component is rather dependent upon several relevant factors. Examples of these factors are the following: the pace of economic activities or volume of business turnover, costs of funds relative to rates of return, speed of price increase or accepted inflationary expectation, corporate income/business/profit taxes and/or tax allowances/arrangements.

Among all pertinent factors, inflation and effective interest rates on credits best explain the pattern of business financial savings (2). Inflation reflects overall conditions of the economy including not only the status of demand relative to supply in the real sector but also financial purchasing power of both local and foreign consumers. In other words, inflation should indicate the prospects for businesses to attain profits which represent the core of business savings. So the higher inflation, the better the chances are for business financial savings.

Interest rates, on the other hand, are typically viewed by most businesses as a good signal for overall cost of funds. It is therefore unsurprising that a statistical correlation reveals negative relationship between financial business savings and interest rates. In this context, it should be noted that (see Table 3.10) during the upward cycle of interest rates in 1978-84 the impact of rising cost upon businesses must have been quite severe. Otherwise, their financial savings, which represent parts of their profits, would not have sunk so repetitively in the early 1980s. As for the growth of business volume, growth of nominal GDP ought to shed some light. One could assure himself of this relationship by scanning through data shown in Table 3.10.

Table 3.10: Factors Affecting Financial* Business Savings

(Per Cent)

Year	Growth of Financial* Bus. Savings	Growth of Nominal GDP	Growth of CPI	Effective Interest Rate of Commercial Banks' Lendings
1971	-12.5	6.2	0.4	10.70
1972	64.3	13.8	4.9	10.73
1973	86.9	31.5	15.5	12.30
1974	18.6	25.4	24.3	11.99
1975	-21.6	10.1	5.3	11.43
1976	7.5	13.0	4.2	11.08
1977	27.9	16.4	7.6	11.54
1978	40.0	19.6	7.9	12.34
1979	22.1	18.3	9.9	13.34
1980	-18.1	23.1	19.7	15.56
1981	-1.3	14.8	12.7	14.98
1982	-31.6	7.6	5.2	13.50
1983	46.2	9.2	3.8	13.90
1984	-3.9	7.3	0.9	14.10
1985	2.7	5.6	2.4	11.00

* Representing the non-depreciation component of business savings.

Finally, influences of interest rates and inflation upon business savings should be compared to those on household savings (3). First, interest rate is slightly positively related to savings of the household sector whereas it is significantly negatively related to that of the business sector. The former is because lower deposit rates will dilute attractiveness of financial savings in credit markets. But lower lending rates imply lower costs and consequently more profits and savings for the latter. Second, while more inflation encourages households to save more, it also raises chances that businesses will realize profits and hence have more capacity to save. This suggests a good caution that a single policy variable may interact differently with different subsets of the private sector. So extreme care is needed in the design of any discretionary economic measure for the purpose of encouraging domestic savings.

Notes to Section 3

(1)

(25) DEPRE = 0.665 + 0.046 BGCS

(0.4) (15.6)

R^{-2} = 0.961, DW = 0.785, SE = 2.458, n = 1970-80

DEPRE = Depreciation component of business savings

BGCS = Business gross capital stock

(2)

(26) FINBS = 2.839 + 0.006 NGDP - 0.128 (INTR-INFL)

(3.9) (5.2) (-2.1)

R^{-2} = 0.631, DW = 1.075, SE = 1.477, n = 1970-85

FINBS = Financial business savings

NGDP = GDP at current prices

INTR = Effective interest on banks' credits

INFL = Inflation rate as measured by annual percentage increase of consumer price index

Figures in parentheses denote t - statistics

(3)

Compare equation (26) as above with equation (12) in Section 2.

4. FORMATS OF SAVINGS

One of primary objectives of national economic and social development plans is to develop local financial institutions to the extent that they can efficiently mobilize available domestic resources to meet proper investment needs. After the extent and determination of private savings are surveyed in previous Sections, it is worth examining formats of these savings selected by private saving entities since the selected formats will help disclose the extent of local savings that can be recycled to meet investment demand. Within this Section, the following aspects of saving formats will be sequentially covered: markets, institutions, instruments, maturities, and remaining problems.

Markets

Private savings are ordinarily kept in three general categories, i.e. changes in holding of financial assets (including currencies, deposits, securities, share capital, commercial bills, life insurance, pension funds, and others), acquisition of real assets, and changes in asset holding in unorganized financial markets. Actual data from Thailand's flow-of-funds accounts in 1967-81 reveal that

Table 3.11: Allocation of Household Fund Inflows [1]

(Per cent)

	Acquisition of Real Assets / Household Savings	Changes in Financial Asset Holding / Household Savings
Second Plan (1967-71)	34.7	63.2
Third Plan (1972-76)	24.9	70.6
Fourth Plan (1977-81)	26.9	76.1

formal financial markets in Thailand were able to capture a growing average portion of household savings in the past Second, Third, and Fourth Economic and Social Development Plans (1). In other words, financialization of domestic savings has been successful to an increasing extent.

Three main factors come into play when households are to divide their holdings of funds to either real assets or financial assets or unorganized markets. First, inflation in the past few years implicitly provides a guideline as to how attractive an investment in real assets is in terms of expected price appreciation of to-be-acquired real assets. Second, interest rates or other rates of return offered with financial instruments, together with their maturities and security at offering institutions, specify the attractiveness of investment in formal financial markets or, alternatively, in capital markets. In addition, this rate-of-return feature is often treated in relative terms as compared with anticipated or prevailing inflation. Third, legal issues on borrowing/lending in unorganized markets are frequently questioned prior to decision making on investment. That is why it was definitely undeniable that the general public tended to reject unorganized markets and chains of "oil fund" activities subsided markedly after the government announced a Decree against fraudulent financial borrowing by the end of 1984. At present, the Monetary Authority is therefore equipped with more funds to handle in both money and capital markets.

Institutions

As mentioned in this Chapter's Appendix, the Securities Exchange of Thailand experienced a severe setback for at least four years after the 1979 crisis. In spite of the recent rebound in SET supported by low interest rates and strong interest from foreign organizations, the capital market still plays a minor role in tapping savings from the private sector. This can be verified by a comparison between incremental deposits at commercial banks and new securities issued at SET. The former amounted to 80-85% of total financial domestic savings in 1984-85 whereas the latter added up by only 6-8%. The major role and rapid development of financial markets, as opposed to those of capital markets, can also be illustrated by the fact that annual increases of household deposit outstanding placed at nine types of financial institutions (2) grew from 5.7% of GDP in 1972-75 to 8.2% in 1981-85.

Within all types of financial institutions, commercial banks dominate others to a remarkable extent. For instance, even for financial savings of only the household sector deposited at nine types of financial institutions2, commercial banks absorbed around 70-75%. Their market share far surpassed those of the second and third ranked, i.e. the Government Savings Bank (11.4%) and finance companies (10.2%). (See Table 3.12). The following will list some

Table 3.12: Household Savings Deposited at Financial Institutions

(Per cent)

	1972	1973-78	1979-84	1985
1. Commercial banks	75.3	72.9	71.8	74.7
2. Government Savings Bank	16.3	12.7	9.6	9.2
3. Finance companies	3.6	9.2	12.3	9.5
4. Life insurance companies	2.4	2.2	2.4	2.4
5. Others*	2.4	3.0	3.9	4.2

*Including agricultural cooperatives, savings cooperatives, credit fonciers, BAAC, and Government Housing Bank.

important reasons for commercial banks' dominance in the Thai financial markets. Among all financial institutions in Thailand, commercial banks have had the lengthiest and broadest experience in providing financial services to the public as they were first established in Thailand since 1888 or almost a century ago. Commercial banks are equipped with a number of advantages over their rivals, thus inducing more deposit clients. Examples of these advantages or privileges are permissions to extend trade-related services such as foreign exchange transactions, open letters of credits, offer credit guarantee, set up new branches, bear no such special restrictions regarding minimum deposits as those imposed on finance and securities or credit foncier companies. Moreover, private financial firms, which are commercial banks' main competitors, suffer severe loss of public confidence after a string of near-collapses or crises during 1979-83.

Although the above data may suggest that another strong competitor of commercial banks is the Government Savings Bank (GSB), detailed comparison of their balance sheets will

negate the hint. Clients of GSB tend to be those from low-income brackets as it is easily discernible from the average deposit outstanding per account. In 1984 this average of GSB was only Baht 2.5 thousand while that of commercial banks reached Baht 29.7 thousand. This should help pinpoint the difference of potential growth between that of GSB and that of commercial banks, even though GSB is very much subject to the same regulations as commercial banks and it can set up new branches as well. Furthermore, it is also notable that most clients of GSB are not only small ones but also the ones opting for savings accounts, thus raising the costs of administering these funds or imposing another obstacle to compete with commercial banks.

Since commercial banks represent a pivotal part of all local financial institutions, their deposit profile deserves a quick scan. Table 3.13 displays an average breakdown of all deposits at commercial banks (including those of the household, business, and public sectors) into those collected from the Bangkok metropolitan area and those from elsewhere. In this regard it is rather fortunate that commercial banks have been successful in tapping funds from provincial areas to a growing proportion. Provincial deposits rose from 30% in 1967-72 to roughly 40% of all banks' deposits in 1985.

Instruments and Maturities

Concentration of financial savings in the commercial banking circle leads to a limited list of financial instruments selected by household and business savers. From the flow-of-funds accounts of Thailand, it is confirmed that non-equity instruments capture a majority and even rising portion of household savings during the past pre-oil (1967-72), first oil (1973-78), and second oil (1979-83) periods. (See Table 3.14). Among non-equity categories, deposits at banks commanded a dominant and rising share as well. This vindicates the strong influence of stock crisis in 1979 and a series of private financial firms' crises during 1979-83. It should be noted that, other than bank deposits, financial instruments which also bear windfall profits from stock and finance companies' crises are public securities. These securites gained funds not only from the stock market and private financial firms but also from the breaking up of several illegal "oil-fund" borrowings. Growing practices of secondary market activities for public securities help enhance their popularity as these securities are truly secured and becoming increasingly liquid.

In spite of the widespread evacuation of stupendous funds from the three sources mentioned above, the public still feel more averse to risks than before. The impact of this negative spillover effect is the growing preference towards short maturities for most savings instruments. The first evidence is the move away from equity markets which provide not only unstable yields but also too much inherent risks. Should one disaggregate financial savings of the household sector according to maturities in the past,he will immediately detect that the ones with short-

Table 3.13: Decomposition of Commercial Banks' Total Deposits by Locations

(Per cent)

	1967-72	1973-78	1979-84	1985
Bangkok metropolitan	70.3	63.9	61.7	60.3
Non-Bangkok areas	29.7	36.1	38.3	39.7

Table 3.14: Percentage Shares of Household Savings Classified by Instruments

(Per cent)

	1967-72	1973-78	1979-84
1. Equity(a)	34.8	22.8	20.0
2. Non-equity	65.2	77.2	80.0
- Deposits	47.3	49.0	52.8
- Commercial bill(b)	0.0	5.8	4.3
- Public securities	0.6	0.2	1.8
- Life insurance and pension funds	3.0	1.8	1.5
- Others(c)	14.3	20.4	19.6

(a) Including share capital and debentures.
(b) Including negotiable bills, promissory notes, and trust receipts.
(c) Including mortgages, trade credits, hire purchases, and (premium) savings bonds.

term maturities (within one year) far outweighed those with long ones (including equity) in a continual fashion. And this bias became growingly intense in the past twenty years as shown in Table 3.15. At present approximately only a quarter of households' financial savings have maturities longer than one year.

In this connection, it should be noticed that from 1984 onward the rising portion of short - term household financial savings could not be totally attributed to willingness of savers alone. Commercial banks themselves became more engaged in interest rate adjustments than before and, in the midst of declining interest rates abroad, they tried their best at attracting short-term deposits. In anticipation of decreasing interest rates, commercial banks typically wished to extricate themselves from long-term deposit obligations so that they could adjust their average costs of funds downward at the earliest. That is why a rather flat yield curve of deposit interest rates was widely offered to the general public at that time (1984-85). It was not until the middle of 1986 that normal differences between short and long-term funds rates were witnessed again.

By and large, commercial banks in Thailand do not particularly prefer long-term deposits not only because of the interest rate factor but also because of the difficulties encountered in matching credit and debit maturities. Shorter maturities of deposit typically yield more flexibility in funds management than longer ones (as credit maturities are very much adjustable). Otherwise, maturity mismatching could easily bring about substantial losses.

Table 3.15: Maturities of Households' Financial Savings

(Per cent)

	1967-72	1973-78	1979-84
Short-term (within 1 year)	61.6	75.2	76.7
Long-term (more than 1 year)*	38.4	24.8	23.3

*Including equity

As mentioned earlier, the equity format of household savings declined continuously until the level of only one-fifth was reached by the second oil shock period (1979-83). This poses rigorous threats to business enterprises since they have to finance their undertaking heavily by debts instead of equity. This unbalanced leverage subjects business owners to excessive risks with regard to interest burden and termination of debt rollovers at times of tight liquidity. Worse yet, the study conducted by Thammasat University's Faculty of Commerce and Accounting discovered that average debt/equity ratios of most firms around the country rose from 3.03 in 1977 to 3.53 in 1980. Even for listed and authorized firms in the Securities Exchange of Thailand, the average of their D/E ratios was almost doubled up in the period of seven years from 1.66 in 1977 to 3.12 in 1983. (See Table 3.16).

Table 3.16: Average Debt/Equity Ratios

	1977	1978	1979	1980	1981	1982	1983
Throughout the country	3.03	3.36	3.44	3.53	n.a.	n.a.	n.a.
Firms listed and/or authorized in SET	1.66	1.24	1.47	1.69	2.20	2.38	3.12

Remaining Hurdles

It has been shown above that private savings in Thailand has become increasingly money-market and short-term oriented instead of being equally allotted to capital markets and long-term instruments. The next question one may wish to ask is about the structure of the present commercial banks which are commanding an unrivalled share of domestic savings. The current profile of the Thai banking system is, to a considerable extent, disheartening. The clustering of financial activities around the circuit of commercial banks is further aggravated by the very skew distribution of negotiating edges across different banks. The thirty-membered commercial banking system, comprising sixteen locally incorporated banks and fourteen banks incorporated abroad, is well dominated by only 5 banks (Bangkok, Thai

Farmers, Krung Thai, Siam Commercial, and Ayudhya Banks). These five banks occupied rough 70% portion of total deposits of the whole commercial banking system throughout the first half of the 1980s. Given such slant market shares, one would not expect to see perfect competition among Thai commercial banks. This correct expectation has been upheld by numerous incidents in the past especially the ones on price adjustments.

Worse yet, the disproportionate division of market shares also impedes development of local financial institutions regarding the introduction of new instruments and dissemination or diversification of financial services to/in remote areas. Explicit outcomes of these impediments are some drawbacks in savings mobilization efforts.

One may wonder next why the government does not attempt to enhance the degree of market competition by allowing new entrants to the financial markets. This option has diverse negative ramifications as illustrated by the outgrowth of establishing numerous private financial firms in the seventies. A large number of banks will overload the capacity of the Central Monetary Authority to monitor and supervise their functions in an efficient manner. This inadequate supervisory control, amidst the to-be-competitive financial atmosphere, will tempt each individual bank or firm to offer packages of financial instruments or services with irrationally excessive rates of return. These loosening of financial discipline will eventually lead to bankruptcies or tragic episodes of local financial scenario such as the ones experienced during the period 1979-83. Chances are thus unlikely that the government dare adopt the new-entry approach as a means to encourage further competition in local financial markets as confidence of the general public is increasingly fragile. And it is hardly recoverable, should any chaos or disarray in local financial or capital markets be encountered again.

In other words, the government is left with only one avenue through which it can implement any discretionary economic policy, i. e., the existing structure of financial and capital markets. But this does not imply any limitation upon the effectiveness of government's policies or undertaking. As long as the government adjusts relevant rules and regulations in a correct fashion, as will be suggested in Section 5, it can certainly achieve more effective mobilization of domestic savings while being able to maintain orderly financial discipline within local money and capital markets. Two points deserve further emphasis regarding the designs of proper government measures. First, government measures ought to be aimed at the origins of problems concerned, rather than at different means only to defer or mitigate or obliterate particular symptoms or outcomes of the problems. Second, specific characteristics of savings behavior or special

preferences of the Thai households and businesses should be carefully taken into account so that effectiveness of policy implementation can be attained or adverse loopholes and negative side effects be averted.

Notes to Section 4

(1) Within the flow-of-funds framework, it should be noted that sources of funds consist of not only savings but also increments of financial liabilities while uses of funds comprise acquisition of real assets, investment in financial assets, and flows transacted with unorganized markets.

(2) Including commercial banks, finance and securities companies, life insurance companies, agricultural cooperatives, savings cooperatives, credit foncier companies, Government Savings Bank, Bank for Agricultural and Agricultural Cooperatives, and Government Housing Bank.

5. POLICY RECOMMENDATIONS

Aims

One ultimate goal of most developing countries is to arrive at the state of self-sufficiency or independence of foreign capital/financial assistance along the pursuance of further economic growth. In other words, successful developing nations are the ones being able to close their savings/investment gaps without abandoning the hope to attain better standards of living or steady and sufficient pace of economic expansion. Such countries therefore cannot relinquish ambitious, yet feasible, investment undertaking. Meanwhile, they have to exert their best efforts not only at widening the extent of domestic savings but also at making these resources readily available for proper investment activities. Efficient encouragement and mobilization of local savings are truly complicated and multifarious tasks for any development planners since they need to be well-informed about profiles of all formal financial institutions as well as different preferences in regional savings behavior. And they also have to thoroughly comprehend structures of investment needs (including relative sizes, required inputs and expected outputs, prices, preliminary schedules, and prospective net rates of return). In this connection, one aspect may always be taken for granted. That is, the longer maturities of funds for investment financing, the better are the chances of success. Thus, it may be summarized that most economic development programs have a common threefold aim on savings mobilization;

1. Expand domestic savings so that they suffice for productive investment needs.

2. Selected savings formats are suitable for immediate investment use.

3. A sizeable portion of domestic savings are long-term commitments.

Targets

Given the three-pronged objective of efforts in savings mobilization, particular targets of government measures may be identified as follows. Three groups of population that deserve to be focal points of government measures are agricultural households, rural residents, and wage earners.

As stated in Section 2, agricultural households, which now make up a majority or roughly seventy per cent of the whole kingdom's employment, are more savings-inclined than those engaged in other occupations. Although their income share has recently declined to a notable extent, agricultural households still constitute the backbone of the country whose primary comparative advantages are closely tied with agricultural resources. Effective recycling of the agricultural sector's savings will reinforce the status and capacity of the main locomotive of the economy. In the same respect, rural residents should also be given careful treatment even though, as the cross-section survey indicates, they may be less savings-oriented than municipal households. The latest census reveals that at present non-urban residents add up to 72% of total population. Moreover, current statistics on deposit accounts indicate that a gigantic share (up to 90 per cent) of all commercial banks' deposit accounts are those which cover inconsiderable amounts (below Baht 100,000). And most of these small yet influential accounts belong to rural residents. This clearly substantiates the significance and potential of rural or non-municipal areas with respect to savings-tapping attempt.

In regard to the wage-earning income class, despite the fact that typical wage earners may have less savings propensity than steady-income earners, they ought to receive special attention because the country is approaching full-scale industrialization at a quick pace with particular emphasis on agro-industries. Along this endeavor, the wage-earning portion of total labor force will rise inevitably. Wage earners thus have strong potential of forming up a major component of total income-earning employment. This is already hinted by actually increasing relative sizes of agricultural labor income which signifies growing commercialization of farming activities.

Institutions and Strategies

As suggested at the end of Section 4, the government's best channel now in mobilizing savings is to exploit existing "financial infrastructure". No new institution is suggested to be established owing to the risk of jeopardizing local financial discipline and stability. Instead, <u>in the long-run</u> the structures and operating mechanisms of present financial institutions are proposed to be reshaped with regard to pertinent rules and regulations. The objectives of such reshaping are:

1. To encourage and financialize rural and low-income savings by taking into account particular local preferences.

2. To give special support to long-term savings.

3. To shorten the route of funds processing between savers and end-users.

One explicit and expeditious means to achieve the objectives mentioned above is to redistribute functions of different financial institutions. Existing branches of private financial institutions are to be utilized as outlets of several financial services other than those ordinarily provided by original owners (e.g. commercial banks). These additional services are, for example, insurance, stock brokerage services, provident funds services, bond or debenture underwriting/reselling, and secondary market trading of securities. In short, the conversion of existing private financial institutions' branches into networks of financial services centers will assist the Monetary Authority in several aspects such as the following: disseminate capital market activities and other financial services to remote areas, offer more options to attract or financialize more of domestic savings, encourage long-term savings, upgrade debt/equity leverage of private businesses or strengthen their financial absorptive capacity, and thus preserve the stability of existing financial institutions.

The foremost reason for this reshaping method, is that it can expedite effective mobilization of savings to investment, financialize more of domestic savings, and develop local financial institutions, while preserving financial stability, within the shortest possible duration. Otherwise, it would definitely be quite time-consuming and risky to be successful in encouraging private financial institutions to set up new branches in rural areas, establishing regional securities exchange units, and convincing rural peasants to have faith in newly established branches of private financial institutions by as much as they now have in the functioning of existing branches. In other words, the present linkage between current branches and rural residents should be further exploited.

It may be noted that despite its strong potential and viability, the scheme of converting current branches of private financial institutions into networks of financial services center represent a rather long-term strategy. That is so because the reshaping plan involves not only tedious procedures of revising numerous relevant Acts/rules/regulations but also painstaking efforts of lobbying different private financial institutions to merge with one another and/or start undertaking activities

outside of their realms. In the short run, other policy alternatives have to be designed to accomplish the above-mentioned threefold aim.

Ordinarily, domestic savings can be expanded by either market mechanism or compulsion. And in some places including Thailand, it has been testified that interest rates, which reflect market mechanism, have not been the prime determinant of aggregate domestic savings. Governments in some countries thus adopt compulsory savings schemes together with certain allowances such savings bonus or employers' contributions. These supplementary allowances are meant as a means to avoid public outcries and frauds.

In this regard, the government also has compromise options between market oriented and coercive policies. One good example of compromises in the short-run is a voluntary incentive savings (VIS) program. In such system some privileges such as tax exemption or savings bonus are given to regular streams of savings yielded voluntarily by subscribers. Reciprocally, some constraints must be stipulated at the very beginning such as minimum maturities, steady deposits, and particular conditions required before withdrawal. This VIS program will certainly help tap long-term savings from both the household and business sectors. And it should not be viewed as entailing too much burden upon the government. For instance, tax exemption and savings bonus will not exacerbate current budgetary difficulties of the government, should the government carefully schedule these tax losses or savings bonus in consonance with maturities of expected savings inflows.

VIS is to be jointly operated by the government and existing branches of financial institutions. Agreements have to be settled first between the former and the latter regarding administrative costs, commission or collection charges, and processing procedures. Undertaking the VIS program will truly supplement, not disrupt, ordinary commercial banking practices. It is so because such undertaking will attract only long-term savers. These savers are hardly attractive to typical commercial banks since banks rarely find long-term projects for credit extension both feasible and definitely profitable. Rigid obligations with long-term savings often bring about maturity mismatching difficulties resulting in heavy net losses.

In short, the VIS program will serve development financing purposes via existing financial infrastructure. Within the scheme, the government has options to utilize acquired long-term savings immediately so as to narrow budgetary deficits, or to relend these funds to private financial institutions for selective purposes, or to relend them directly to certain promising enterprises or economic undertaking.

In order to successfully attract subscribers to VIS or capture long-term savers, some features which reflect local preferences (as collected from surveys) ought to be attached to the VIS program. These features are as follows.

1. Savings for specific purposes This corresponds very much to the Thai traditions. For instance, savings for the purpose of marriage or religious donations are prevalent especially in the rural areas. Therefore, some allowances or instruments may be granted or designed respectively for these specific purposes.

2. Borrowing options Similar to conditions in typical unorganized money markets, VIS subscribers ought to be entitled to borrow from their long-term savings commitments. However, such privileges should be limited to particular occasions and/or a certain frequency and/or certain proportions of accumulated savings.

3. No minimum deposit size This item is meant for small-income or wage earners given that committed savings are steady, long-term, and consistent with stipulated conditions.

4. Conditional liquidity An element of conditional liquidity should be granted so as to induce long-term savings commitments. An example of conditional liquidity is the allowance that VIS subscribers can convert up to a certain proportion of their accumulated savings into tradable public securities provided that the rates of return on converted funds are lowered proportionately according to maturity reduction and such savers have participated in the VIS program for at least a certain period of time. This allowable conversion will also serve two other purposes, reinforcing secondary security-market activities and ensuring VIS subscribers a quality of deposit guarantee.

5. Adequate returns There returns could be offered in several formats depending upon maturities, conditional liquidity, borrowing options, early withdrawals, deposit sizes, and maturity profile of the public sector's expected consolidated balance sheet. Examples of different formats of returns are income tax deduction, periodical payments of and/or capitalized option for interest earnings, exemption from interest income/profit taxes, and floating rates of return with

some attractive margins above average coupons on newly issued medium-term government securities. At the very least the offered rates of return on long-term savings in the VIS program have to be higher than interest rates available on commercial banks' short-term deposits.

6. Convenience In order to induce rural residents to subscribe to the VIS program, the government has to operate it in close conjunction with commercial banks and their extensive branching networks. Transactions and all services of VIS should be executable in remote areas where there are only bank branches. Otherwise, the lack of convenience will make rural residents hesitate to subscribe to the system. This close cooperation between commercial banks and the government immediately necessitates constant and effective monitoring/examination upon how the acquired long-term savings are processed. Without such meticulous guarding, malpractices or misuses of tapped savings could easily occur and, if so, will drastically disrupt the public confidence and financial discipline in the local money markets.

Even if the suggested VIS program is not attempted for whatever reasons, the features C.1 - C.6 are worth thorough consideration and, if possible, some trials. They are the ones widely complained by both households and business enterprises as qualities being lacked in current long-term financial instruments. And that is why those savers hesitate to make long-term commitments on their savings. The features described above should constitute a solid groundwork for the refinement of present financial instruments so that better efficiency in financial resource management can be attained.

Besides the new VIS program of savings encouragement as suggested above, the government should also contemplate adopting traditional measures of promoting long-term savings via presently available instruments and institutions. These measures have the following common aims. (Some of these aims are elaborated in the Appendix of this Chapter.)

- Encourage state enterprises to tap long-term funds from the local capital markets (e.g. by offering guarantee)

- Allow and persuade private firms to issue corporate debentures.

- Popularize securities exchange activities in SET as well as those of mutual funds.

- Stimulate and permit foreign parties to participate in local securities markets (e.g. by similar means as the Bangkok and Thailand Funds).

- Provide incentives for both the public and financial intermediaries to strengthen their interests in long-term savings programs such as life insurance, pension and provident funds.

- Develop not only primary markets for long-term financial instruments but also their secondary markets so as to equip long-term savers with much-coveted liquidity.

Epilogue

As hinted in Section 1 of this Chapter, the presently declining current account deficits on the external balance sheet of Thailand do not reflect a favorable trend of domestic savings at all. Relative local savings, though growingly financialized, are, on the contrary, dwindling especially those of the household sector. The apparent narrowing of savings/investment gap is rather due to the stagnation of investment and de-stocking activities instead. As for the formats of savings, the majority of financial savings as selected by savers tend to be highly concentrated in just one portion of the local financial/capital arena, viz. the commercial banking system. Worse yet, a dominant share of savings tapped by commercial banks are of short-term maturities.

The implied preferences of local savers are disturbing investors and business enterprises to an increasing extent. Commercial undertakings have to hinge more upon debt rather than equity financing. Their unbalanced leverages thereafter incur stresses and strains on both business-owners and financial intermediaries since overloading any unit with debt obligations could easily lead to its difficulties or even insolvency at times of tight liquidity situation. Otherwise, such debt-strapped businesses could hardly expand their activities or territories as most private financial institutions are ordinarily reluctant to overextend their credit exposure to heavily debt-ridden clients.

The three-pronged target is thus recommended to policy formulations on private financial resource management, i.e. encouragement of more savings that are readily usable in the investment context especially those having long-term maturities. In order to achieve such goal, the government should undertake intervening measures to encourage mobilization of long-term funds.

One attractive measure for the government in the short run is to supplement market mechanism by offering a voluntary incentive savings (VIS) program together with a package of enticements offered in exchange for some conditions. Some local savings preferences are to be incorporated into the incentive package while certain requirements (e.g. minimum maturities and steady deposits) are demanded from subscribers. This VIS program should truly complement the existing financial system since at present commercial banks, or dominating financial intermediaries, are hardly tempted to tap long-term savings, which constitute a vital ingredient for most investment projects.

Another short-run measure that the government should undertake simultaneously with the VIS program is the relaxation of some barriers to the official stock market. Such loosening is intended to invite more of both borrowers and lenders to participate in capital market activities which represent direct contact between surplus and deficit units within the country.

Over the long run, several financial Acts together with relevant rules and regulations ought to be amended or revised in the fashion that allow for conversion of the current branching network of private financial institutions into a new system of financial services centers. This new system consists of widespread outlets, each of which offers a broad spectrum of financial services ranging from bank deposits to insurance, leasing, and securities trading, etc. Operation of these small yet well-scattered and broad-sided financial services centers is a rather delicate issue involving diverse aspects such as mergers and acquisitions, intermingling of different financial intermediaries' functions, prudential monitoring and examination so as to preserve financial stability and orderly discipline. But these financial services centers, if appropriately organized, will certainly help the government effectively tap long-term local savings in readily usable formats to an increasing extent.

CHAPTER 4

PRIVATE INVESTMENT

The key to an economic success in development of developing countries depends largely on the buildup of investments in both public and private sectors. The private investment in Thailand was 31, 40.7, 50.6 and 50.2 billions of 1972 baht in 1970, 1975, 1980 and 1985 respectively. The corresponding figures for public investment were 12.1, 9.5, 23.7 and 26.3 billions of 1972 baht.*

Private investment is the subject of this chapter while public investment is discussed in Chapter 5. The first section of this chapter gives a historical overview of private investment. It looks at, on the one hand, sources of private investment financing and, on the other hand, private investment by type and by sector. Section two of this chapter focuses on the roles of the Thai government as a stimulant of specific private investments. On the sources of financing, the government provides subsidized loans at an interest rate lower than the market rate. On the investment incentives by sector, the government imposes various types of taxes on the operations of the firms at different rates, depending on whether the firms are promoted or protected. The organization of this chapter as discussed above is redrawn again in Figure 4.1. The chapter ends with section three that gives a summary and policy recommendations.

1. AN OVERVIEW OF PRIVATE INVESTMENT

This section sketches historical fluctuations of private investment in Thailand. It serves as an introduction to the next section and as a background to an understanding of the Thai economic development. Sources of financing will be discussed first and then followed by discussions on types of investment and investments by sector. The section ends with a discussion on factors affecting private investment in the early 1980s.

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* Data are from the same sources as those in Figure 2.1.

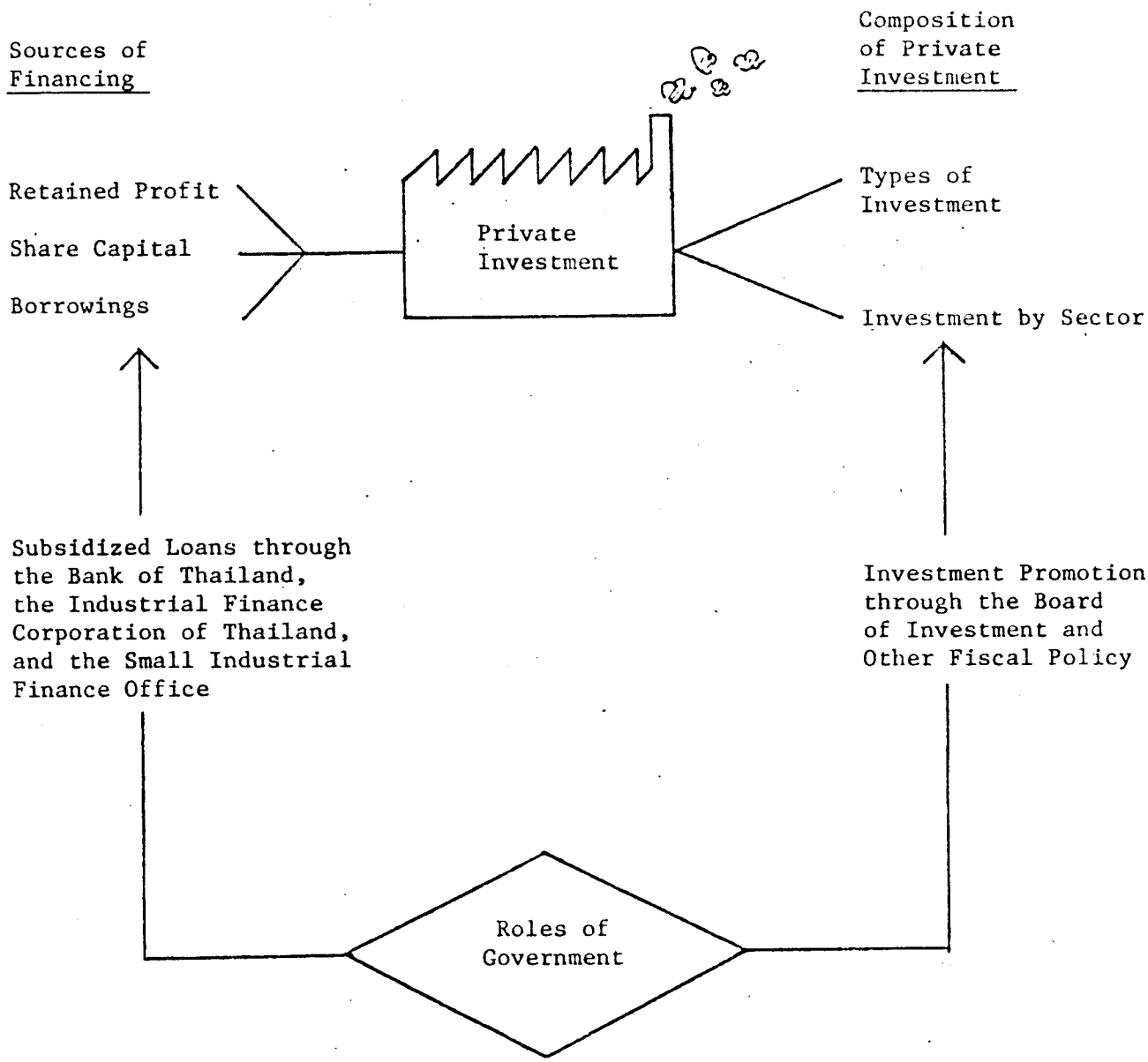


Figure 4.1

Structure of Private Investment

Private Investment Financing

The pattern that any distinct sector in Thailand tapped funds from various sources to finance their net deficit positions is best explicated by the flow-of-funds accounts, a joint effort between the NESDB and the Bank of Thailand. Ideally, one would like to look at the whole picture of sources of private investment financing. Unfortunately, available data do not allow that. What is available is data on sources of private investment financing of only non-financial incorporated businesses, the data which are utilized below.

Table 4.1 illustrates how the Thai business sector borrowed funds from different sources to cover their net spending in the past two decades. These sources are classified in two fashions: by instrument types and by lending sectors. Thorough consideration of the data demonstrated hereby will reveal the following.

The local business enterprises fortunately shifted their financial dependence upon foreign sources to upon domestic ones to a considerable proportion. In the late sixties, external debts and claims commanded a dominant 42% market share in businesses' incurrence of net liabilities. And this share declined quite markedly, though at a rather unsteady pace, to only 25% in 1983. The sector that superseded the lost share of foreign creditors of Thai businesses is, to a large extent, that of domestic financial institutions including commercial banks as well as finance and securities companies.

External financial resources tapped by Thai businesses fluctuated to a greater degree and frequency than any types of local credits, even those from share capital which experienced a severe setback since the stock crisis in 1979. The main reason why net capital inflows from abroad were so volatile is that debt commitments and transactions with foreign creditors are contingent upon several factors other than interest rate differentials. For instance, anticipation or speculation of local currency depreciation will accelerate repayment of existing debt obligations or defer further commitment. Exemption of withholding tax, ordinarily imposed upon interest income remitted to foreign creditors, is one policy instrument adopted in order to induce capital inflows at times when expected current account deficits are likely to grow. Other exchange control measures, varying political atmosphere, and investment promotional privileges also play some roles in influencing credit volume transacted with foreign organizations.

Since 1980 Thai businesses' funds that were borrowed locally under the format of commercial bills (including trade bills,

Table 4.1
Sources of Total Private(Non-Financial) Businesses' Net Fund Inflows
Classified by Selected Financial Instrument and by Selected Sector
for 1967 to 1983

YEAR	TOTAL NET FUND INFLOW (MILLIONS OF BAHT)	PERCENTAGE SHARE OF SELECTED FINANCIAL INSTRUMENT				PERCENTAGE SHARE OF SELECTED SECTOR			
		SHORT AND LONG-TERM LOAN	COMMERCIAL BILLS	SHARE CAPITAL	FOREIGN DEBT AND CLAIMS	HOUSE-HOLD	REST OF THE WORLD	COMMERCIAL BANKS	FINANCE COMPANIES
1967	5945.2	23.80	16.70	39.30	38.90	38.20	38.90	31.60	0.00
1968	6719.4	18.20	13.40	28.30	47.70	28.10	47.70	29.20	0.00
1969	7572.5	24.90	6.20	39.70	40.20	38.40	40.20	23.30	0.00
1970	9320.8	32.80	14.90	37.60	26.60	37.70	26.60	42.20	0.00
1971	5272.6	10.60	20.10	55.40	50.70	56.10	50.70	14.20	0.00
1972	11125.7	5.80	18.80	44.50	40.00	44.40	40.00	11.70	0.00
1973	18120.4	31.80	37.20	45.60	3.80	45.20	3.80	59.80	0.00
1974	29531.8	30.00	18.60	27.80	28.00	27.60	28.00	43.80	0.00
1975	18271.0	25.70	20.70	12.80	41.00	12.20	41.00	49.20	0.00
1976	14590.5	36.80	20.10	24.20	33.40	23.00	33.40	41.70	0.00
1977	20689.3	23.60	29.00	22.40	43.60	21.80	43.60	61.30	-18.70
1978	38514.6	64.40	21.30	24.10	-2.50	21.80	-2.50	51.00	27.90
1979	42818.2	36.70	18.70	31.90	26.20	31.80	26.20	47.60	2.60
1980	45259.9	37.60	14.20	5.60	50.90	7.00	50.90	22.30	9.40
1981	48295.1	31.00	26.50	5.90	33.70	-3.40	33.70	36.20	14.00
1982	50583.7	31.20	30.90	18.80	35.20	12.30	35.20	35.40	15.00
1983	106360.8	31.50	31.00	16.70	24.90	12.30	24.90	51.90	6.80

NOTES: The sum of percentage shares may exceed 100% because the values of some unselected financial instruments and sectors are negative-- that is, they are net fund outflows.

Data are from National Accounts Division, Office of the National Economic and Social Development Board and Research Department, Bank of Thailand, Flow of Funds Accounts of Thailand, 1983 Edition, various tables. Some detailed data were obtained directly from the National Economic and Social Development Board.

promissory notes, trust receipts, bankers' acceptance, etc.) gathered a firm base and stronger momentum. This coincided with an increasing role played by finance and securities companies after their first shock in 1979. It is also noticeable that their second shock in 1983 did not generate as strong a shattering effect to local businesses as the first one.

Although domestic financial resource mobilization to serve the business sector was clearly upgraded by the early 1980s regarding the goal of national self-sufficiency, direct linkages between the household sector and business enterprises waned quite considerably. In other words, household savings were channelled to business usages via credit markets by more than via capital markets. This is certified by declining shares of households and share capital as sources of businesses' pattern of deficit financing. Therefore, businesses relied very much upon debt instead of equity financing. This tilted leverage places both Thai businesses and financial institutions in rather precarious positions subject to fluctuations of interest rates and risks in economic undertaking. At times of tight liquidity, excessive debt dependence could easily jeopardize not only business borrowers but also the stability or even solvency of lending agencies. This issue of the high ratio of debt to equity has been discussed in more detail in Chapter three. It, however, will be addressed again in section three of this chapter.

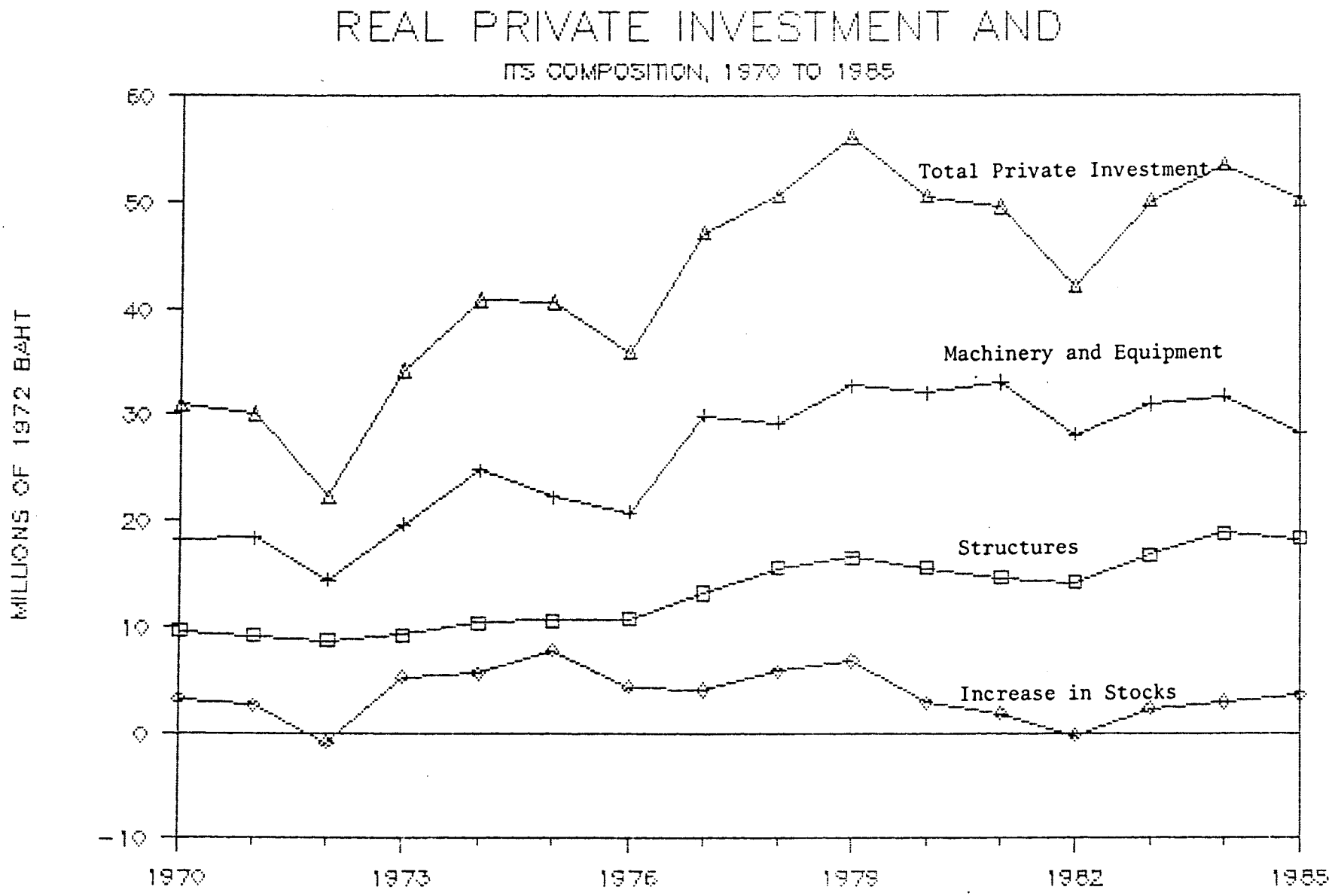
Now, let us consider the other side of the story. That is the composition of private investment by type and by sector.

Types of Private Investment

Private investment in Thailand can broadly be broken down into three types: structures, machinery and equipment, and increases in stocks. Their corresponding shares to total private investment, on average for 1970-1985, were 31%, 60.7% and 8.3%. Figure 4.2 reports their annual decomposition for 1970-1985.

The components of structures and increases in stocks declined throughout 1970-1972, which contributed to a decline in total private investment in real terms for the same period. The direction was reverse in 1973-1974 when all three components of private investment increased. Investments in structures continued increasing from 1974 to 1979 while the other two components moved up and down for the same period. In early 1980s, the components of structures, machinery and equipment increased again in 1983 and 1984, contributing to an increase in total private investment. Unfortunately, in 1985 these two components declined from their values in 1984, which also brought down the value of total private investment in 1985.

FIGURE 4.2



Note:- Data are from the same sources as those in Figure 2.1.

When one looks at the time trend of total private investment in Figure 4.2 (the most upper curve), one finds that it had an upward trend for 1970-1979. The trend, however, lost its pace in the early 1980s. Total private investment fluctuated around 48 million of 1972 baht for 1980-1985 with no trend at all. Later in this section, we shall explain some factors affecting private investment in the early 1980s.

Private Investment by Sector

The above discussions decompose private investment into various types. Alternatively, private investment can be decomposed into several sectors. Table 4.2 reports one version of such a decomposition. Sectors considered here are those of agriculture, manufacturing, wholesale and retail trade, services, and others. The manufacturing sector accounted for, on average for 1971-1980, the largest share of 52% of private investment. It was followed by the agricultural sector with, on average for the same period, the second largest share of 17.6%. Note that the latest estimates are for 1980.

Over time, the sectoral shares of private investment fluctuated because of specific shocks to each sector. For example, the shares of the agricultural sector for 1973-1975 were more than 8% higher than its average share for 1971-1980 because of a sharp increase in the prices of primary commodities in the world markets. For the same reason since crude oil is also an item of primary commodities, the share of the manufacturing sector dropped from 51.6% in 1972 to 43.3% in 1973, 26.2% in 1974, and 42.8% in 1975 because this sector suffered from high energy costs.

Changes in private investment over time by type and by sector come from various factors but one can regroup them into two major factors: (1) factors artificially created by government policies and (2) factors intrinsically created by the market forces. Both factors will be discussed next.

Factors Affecting Private Investment in the Early 1980s

The late 1970s and early 1980s were the period in which the world economy experienced a record high interest rate, strong dollar values and recessions. The Thai economy as being open to international transactions also suffered from the adverse effects of the above external factors. The Thai Government, therefore, in an effort to overcome or relieve these adverse effects has introduced various policies. Unfortunately, these policies, though with good intentions, have resulted in an additional,

Table 4.2

Percentage Shares of Private Investment by Sector

(in percent)

Year	Agri-culture	Manu-facturing	Wholesale and Retail Trade	Services	Others*
1971	9.5	62.6	7.7	7.5	12.6
1972	18.9	51.6	7.6	6.9	15.1
1973	28.7	43.3	7.5	6.1	14.4
1974	36.2	26.2	11.8	8.9	16.8
1975	25.6	42.8	10.0	6.8	14.7
1976	16.0	56.5	9.0	6.6	11.9
1977	11.1	61.2	10.4	6.3	11.1
1978	11.8	58.9	12.0	9.0	8.3
1979	8.0	55.2	14.5	7.9	14.3
1980	10.3	61.4	11.6	8.2	8.5
Average	17.6	52.0	10.2	7.4	12.8

*Others include Mining and Quarrying, Construction, Electricity and Water Supply, Transportation and Communication, Banking, Insurance and Real Estate.

Notes:- Shares may not add to 100% because of rounding. Data were computed from raw data in National Accounts Division, Office of the National Economic and Social Development Board, Capital Stock of Thailand, 1970-1980, April, 1984, pp. 87 and 95.

adverse effect to the Thai economy. The historical development is explained in detail below.

A record high interest rate pushed up the interest costs paid or the opportunity costs incurred by the firms when they borrowed funds or used their own retained profits to finance their investments. The interest rate adjusted for inflation or the so called real interest rate* increased from an average of 2.3% for 1975-1980 to an average of 15.2% for 1981-1985. That for 1985 was 14.1%. The higher interest costs in effect deterred the demand for private investment.

In addition, the high interest rate had increased interest payments on external debt shouldered by developing countries and, in turn, increased the probability that those countries would go default on their debt. These increasing risks of going default have channelled the surplus funds in the international credit market from lending to developing countries to investing in the United States. As a result, the demand for dollars increased, which pushed the value of dollar denominated in other currencies upward. The side effect of the above consequences is that the financial capital which flowed into the United States outpaced that flowed out of the United States. Thus, the surplus in the U.S. capital account and the deficit in the U.S. current account.

Since the value of baht at that time was relatively fixed with that of dollar, the prices in U.S. dollar of exports from Thailand increased in the world market and the prices in baht of imports to Thailand declined. As a result, the values of imports exceeded those of exports or the trade balance was in deficit. Although the Thai consumers benefited from the lower prices of imports, the Thai producers in both exporting and import-competing sectors suffered from the losses in market share. These losses contributed to a decline in private investment for 1980-1982.

The Thai government, instead of devaluing the baht with respect to dollar, tried to solve the deficit in the trade balance by introducing a credit restraint, the so-called 18%

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* A real interest rate was computed as the minimum prime rate less an inflation rate. Raw data used in computation are from Bank of Thailand, Monthly Bulletin, various issues.

credit limit, in 1984*. This credit restraint, though slowing down imports, also brought about a high bankruptcy rate among businesses in Thailand especially those that mainly financed their operations by credit. Perceiving that the credit restraint might temporarily relieve the deficit in the trade balance (but it carried with it a permanent, adverse effect on private investment) the Thai government inevitably announced the devaluation of the baht with respect to the US dollar from 23 baht per US dollar to 27 baht per US dollar, effective November 5, 1984**.

Since then, the credit restraint has been eased. The investment climate in Thailand, however, has not significantly improved. For one reason, many firms, which survived the credit restraint, still experienced financial troubles and, therefore, could not easily access to available credit from commercial banks. The other reason, probably more important, is the world-wide recessions since 1980. This latter factor poses two serious problems in the international markets. First it slows down the international demand for exports and, second, it triggers the likelihood of adopting the protectionist policy in the United States and the European Community. The first problem has seriously crippled private investment and deterred growth of the Thai economy since 1984. The second problem tends to cloud the recovery sign of the world economy including that of the Thai economy. Naturally, the future outlook of private investment in Thailand seems dependent upon the resolution of the second problem.

In the next section, we take a slight detour to take a closer look at various government policies which have been used as incentives for private investment in Thailand. The detour is worthwhile because these policies have distorted both the pattern of private investment and efficiency of the Thai economy.

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* Data on borrowings revealed an upward trend until mid 1984. Then, borrowings dropped from 6208 million baht in June 1984 to 5761 and 6066 million baht in September and December 1984 respectively. Data are from Bank of Thailand, Monthly Bulletin, November 1985, Table 1 Financial Survey, item 12, P. 3.

** Data are from Bank of Thailand, Annual Economic Report, 1984, P.154.

2. GOVERNMENT POLICIES AS INCENTIVES FOR PRIVATE INVESTMENT

Incentives for promoting private investment in Thailand provided by the government are mostly for nonfarm activities. The incentive system to be discussed below is classified by type of policy measure: financial incentives and fiscal incentives. Each policy measure discusses the structure of the incentives, the structure of the activities receiving the incentives, and the cost savings from the incentives. This section ends with notes on economic effects of investment incentives and policy recommendations.

Financial Incentives

The Thai Government provides subsidized loans through the rediscounting facility of the Bank of Thailand (BOT) and through two semi-official agencies, namely the Industrial Finance Corporation of Thailand (IFCT) and the Small Industrial Finance Office (SIFO). These two latter institutions provide longer term loans with subsidized interest rates to firms qualified in accordance with the government's industrial development priorities. Details of each institution are described below.

The BOT Rediscounting Facility

The BOT provides rediscounting of promissory notes from commercial banks at the rate of five percent and the banks in turn charge their customers at seven percent. In the 1960s, the notes matured in 90 days and, from the early 1970s to the recent years, they were extended to be within 180 days. Since 1985 the maturity has, however, been reduced to be payable within 120 days, but the rediscounting facilities have been extended through IFCT as well. The BOT rediscounting facility was introduced in the late 1950s with the broad purpose of facilitating the overall economic development of the economy. During the first few years, the credit was provided for financing the export of milled rice only. In the 1960s, it was extended to include other varieties of exports, the procurement of raw materials and sales of manufacturing industries. In 1969, there was another change of the loan regulations so that the criteria for allocating credit to the industrial sector were more explicitly stated. Under the new regulations, the BOT provides the rediscounting for operating expenses of an industry up to 90 percent if it uses domestic agricultural raw materials, up to 80 percent if it uses both domestic and imported agricultural raw materials, up to 70 percent if it uses domestic raw materials, and finally up to 50 percent if it uses both local and imported raw materials. In

1985, the guidelines for providing the rediscounting facilities have been broadened to cover other objectives such as export promotion and employment creation. An industry will be given priority for the credit subsidy if, in addition to having high local content of raw materials, it also exports over 20 percent of the production or if the production technique is labor-intensive.

The amount and percentage distribution of the rediscounting for various economic activities* for the three subperiods of 1964-70, 1971-80 and 1980-85 can be summarized as follows.

For 1964-70, the amount of rediscounting provided by the BOT to private economic activities was 13,238 million baht. Of all the credit, 43 percent was for the exports of both agricultural and industrial products, and another 40 percent for the sales of industrial product in the domestic markets. Loans to agricultural exports accounted for about 36 percent and those to industrial exports were only 7 percent. The share of the credit for industrial undertaking was also small at about 8 percent.

During the second subperiod of 1970-80, the amount of total credit was increased to 224,142 million baht. Of the total credit the share to exporting activities was increased to 74 percent and that for the industrial undertaking increased substantially to about 21 percent. Furthermore, for the credit to exports, that given to the export of manufacturing goods increased to 46 percent of total credit while that to the export of agricultural products declined to 24 percent. This indicates that in the 1970s a large amount of the increased credit was allocated to the export of manufacturing products and the industrial undertakings.

During the early 1980s, the structure of loans provided by the BOT rediscounting facilities had changed somewhat. Almost 90 percent of the total credit was for exporting activities while that for direct industrial taking was reduced to merely 7 percent. Of all export credit, that for the export of industrial products increased further to 52 percent of total credit and that for the export of agricultural products increased to 30 percent.

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* Data were computed from raw data in Bank of Thailand, Annual Economic Report, various issues.

The amount and percentage distribution of the rediscounting from industrial undertakings provided for various three-digit ISIC industries* during the three subperiods of 1963-70, 1970-80, and 1980-85 can be summarized as follows.

During the first subperiod of the 1960s, about 36 percent of total credit was given to the oil refinery industry, 31 percent to the nonmetallic mineral industry such as cement and concrete products, and 14 percent to the textiles and textile products industry. The rest was shared mostly by nonferrous metal (tin smelting) and chemical product industries (mostly soap, toothpaste and detergents).

In the second subperiod of the 1970s, credit for industrial undertaking more than doubled its size but no more loans were given to the oil refinery industry. On the other hand, continuing from the previous decade, more than 80 percent of the total credit was concentrated among only a few industries, namely, textiles and textile products, nonmetallic mineral products, and iron and steel industries. It is worth noting, however, that in this period the credit given to exporting industries had actually increased. For example, comparing the first and second subperiods the credit for garments and processed food industries increased substantially from 8 and 3 percent to 22 and 8 percent respectively.

In the early 1980s, although the amount of credit provided for industrial undertaking was reduced, it continued from the previous decade to provide over 60 percent of the credit to the manufacture of major exporting products such as garments, textiles and textile products, and processes food.

Thus, according to the BOT's stated policy and actual practice, it seemed that its subsidized credit was provided in relation to the government's changing industrial policies. That is, in the 1960s more loans were given to activities related to industrialization but, since the mid 1970s, more was offered to exporting activities.

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* Data were computed from raw data in the Bank of Thailand, Annual Economic Report, various issues.

IFCT

IFCT was established in 1959 under special legislation to replace the defunct Industrial Bank of Thailand. It is privately owned by both domestic and foreign shareholders, mostly Thai commercial banks. The majority of the funds provided to IFCT are from the Thai Government, Kreditanstalt fur Wiederanfhay of West Germany, the International Finance Corporation of the IBRD, the Asian Development Bank, the AID and the Special Japanese yen account at the BOT. IFCT provides both medium and long term loans to private enterprises, mostly for manufacturing, with more than one million baht in assets at 10 percent rate of interest. Loan approval is based on project feasibility evaluations in both financial and economic accounts rather than the availability of collateral like other commercial banks. It also has a close relationship with the government to ensure that loans are given to industries with promotional priorities. In the 1970s, about one half of the number of projects amounting to over 65 percent of the loans financed by IFCT also received some promotional privileges from the Board of Investment (BOI). As will be seen below that among other criteria, IFCT has also cooperated with the BOI to give priorities to import substituting firms using higher local raw material contents in the 1960s and to firms producing products to be exported in the 1970s and in the early 1980s.

The percentage distribution of loans given by IFCT to various manufacturing industries for 1960-1985 can be summarized as follows.* The structure of the loans classified by industry hardly changed. That is, 25 percent to 30 percent of the total loans was provided to the nonmetallic mineral (cement and cement products) industry; 11 percent to 16 percent to the processed food industry; about 8 percent to the textiles and clothing industries; and the rest which was about one-half of the total loans to various import substituting industries. The majority of the latter industries which persistently accounted for high proportions of total loans for over the past two decades were the industries of chemical and chemical products, glass and glass products, iron and steel, and machinery and equipment. Thus, the priorities of IFCT loans which emerged from the above observation seemed directed to the order of construction materials, exporting, and import substituting industries.

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* Data were computed from raw data in Industry Finance Corporation of Thailand, Annual Economic Report, various issues.

SIFO

SIFO was established in 1964 by the Department of Industrial Promotion in the Ministry of Industry. It is managed by a committee consisting of members appointed by the Cabinet. The objective is to provide medium-term loans to small-scale industries with less than one million baht in assets at an interest rate of 9 percent with a repayment period of up to 10 years. SIFO receives funds appropriated from the government budget, approves loan applications, but leaves the actual lending operations to the government-owned Krung Thai Bank.

Since 1967, about 85 percent of the loans have been given to the manufacturing industry, 9 percent to the services and the rest to the handicrafts and cottage industries. About one half of the loans were for purchases of machinery and equipment, 30 percent for buildings and structures, and the remaining 20 percent for financing working capital, land and others. The criteria for rationing the credit are less than specific. However, available figures show that during 1967-1972, most loans were shared by lathing and machine repairing, cottage weaving, car repairing, cement, floor and wall tiles. After 1972, the loans were extended to tapioca chips, animal feeds, canned food, wood products, clothing and shoes, furniture and rubber products. All of the latter are exporting industries.

It is notable that the low-interest-rate loans provided by SIFO still account for a small portion of total outstanding loans, only 2 percent to 3 percent of the loans available to small business firms or only 1.5 percent of total outstanding loans.

Interest Cost Savings from Subsidized Interest Rates

In this subsection, we quantify the interest cost savings received by the firms subsidized by the BOT's rediscounting policy. The basic analytic method is to compute the differential between market and subsidized interest rates. This differential basically measures the interest cost savings per unit of loans enjoyed by a subsidized firm.

Let R^m be a nominal market interest rate and R^s be a corresponding, nominal subsidized interest rate. An interest rate differential denoted by DR is defined as

$$DR = R^m - R^s$$

This interest rate differential in fact measures a real opportunity benefit per unit of loans.

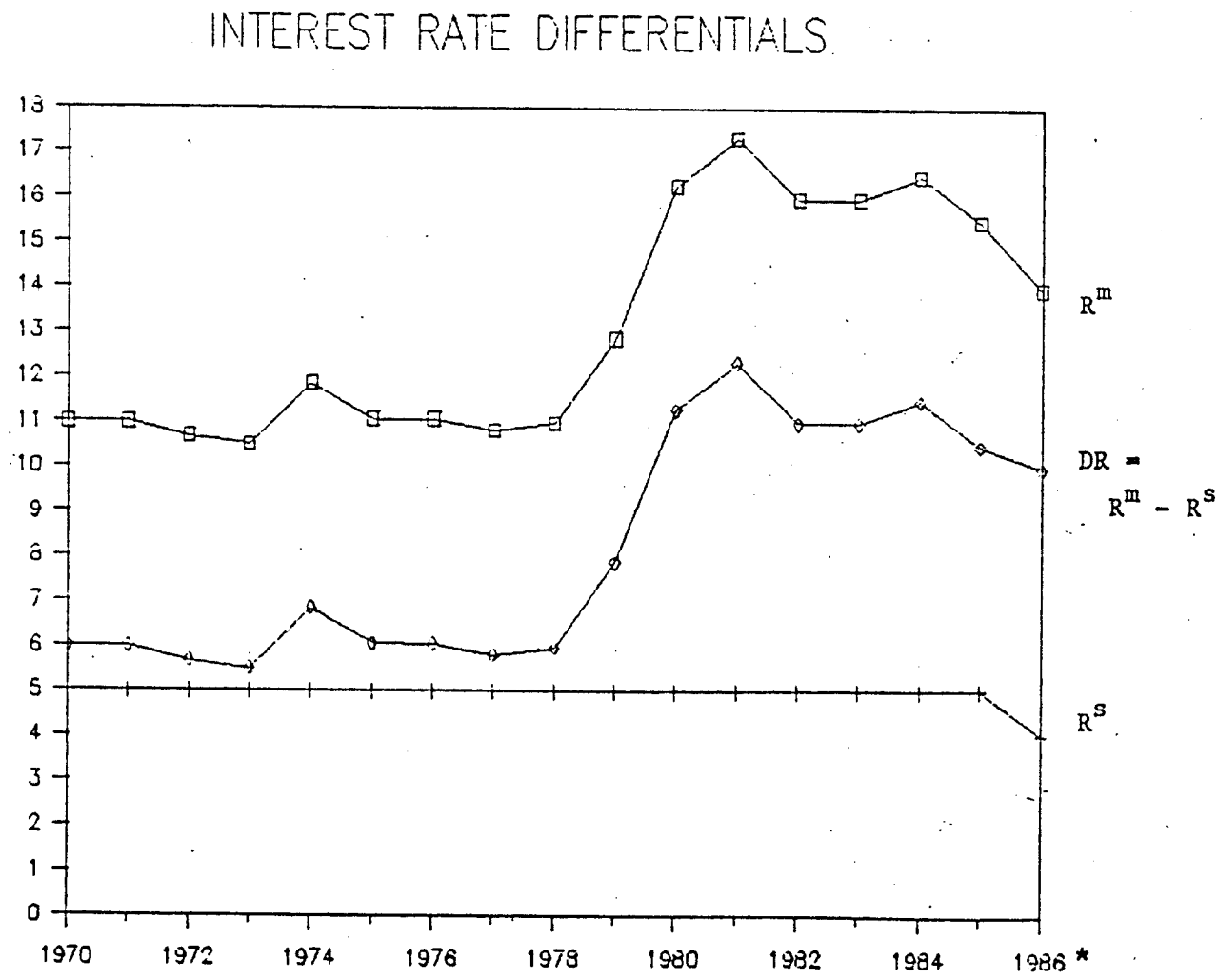
Figure 4.3 illustrates time-series plots of R^m, R^s and DR. It is obvious that the subsidized rate, R^s, which is proxied by the rediscount rate on promissory notes at the Bank of Thailand has kept constant at 5% for 1970-1985 and drops to 4% in 1986 but the market rate, R^m, which is proxied by the minimum prime rate at commercial banks has fluctuated, depending on market conditions, for the same period. Thus, the interest rate subsidy measured by the interest rate differential, DR, in Figure 4.3 reflects the fluctuations of the minimum prime rate. The interest rate subsidy, DR, moved around 5.50% and 7% for 1970-78 but increased to 7.9% in 1979 when the minimum prime rate at commercial also increased from 11% in 1978 to 12.9% in 1979. Since then, the world economy has experienced a record high interest rate. As a result, the minimum prime rate increased to 16.3% in 1980, peaked at 17.3% in 1981, and declined to 16% in 1982 and 14% in May 1986. Thus, the interest rate differential, DR, also increased to 11.3% in 1980, peaked at 12.3% in 1981, and declined to 11% in 1982 and 10% in May 1986. It is obvious in Figure 4.3 that a rediscount rate policy of the Bank of Thailand hardly depends on the market interest rate (R^m in our case). As a consequence, firms receiving a subsidized interest rate would benefit more if the market interest rate rises and benefit less if it falls.

Fiscal Incentives

The above discussions focus on financial incentives. Now, the discussions move to fiscal incentives as provided for

promoting investment in the industrial sector. The discussions below will focus on the most widely used fiscal policy instruments, namely, tariffs and other taxation, and various promotional schemes provided by the Board of Investment (BOI). They are followed by discussion on a measure of tax savings from investment promotion.

FIGURE 4.3



Notes:-

R^m is a minimum prime rate at commercial banks at the end of December.

R^s is a rediscount rate on promissory notes at Bank of Thailand at the end of December. In case there were two rediscount rates in any year, a smaller one was used.

Data on R^m and R^s are from Bank of Thailand, Monthly Bulletin, various issues.

* As of May 1986.

Tariff and Other Taxation

This subsection describes in more detail the nature of tariffs on imports in Thailand and in less detail taxes and subsidies on exports. The next subsection will be devoted to a discussion on the Board of Investment and its investment promotion policy.

Tariffs on imports are generally used to raise government revenue or correct the difficulty in balance of payments. They, however, are occasionally used to protect domestic industries. For whatever purposes, the tariff rates on various types of imports differ, which, in turn, artificially protects some industries at the expenses of others. In the theory of international trade, a true measure of the protection level is the so-called effective rate of protection (ERP). This ERP basically measures the percentage excess of the domestic value-added over the world value-added. It is superior to the nominal rate of protection because it also takes into account tariffs on intermediate inputs.* Table 4.3 reports the ERPs for selected industries for selected years of 1969, 1971, 1974, 1979 and 1982. It also categorizes the industry as import-competing, exporting and non-import-competing. See definitions of the above categories in notes to Table 4.3.

According to Table 4.3, most of the import competing and non-import-competing industries had high, positive ERPs but most of the exporting industries had negative ERPs for those selected years. The existing evidence reveals that the tariff structure tends to favor import competing and non-import-competing industries.

Besides tariffs, Thailand also imposes export duty on a small number of products such as milled rice, metal scrap, tin, raw hides, rubber, wood and, more recently, sugar, raw silk and silk yarn. The objectives are mainly to raise government revenue and to stabilize domestic prices of products whose world prices fluctuate.

Independently, the Thai Government has offered, since 1971, a relief for exporters by introducing the tax rebates and import duty refunds which are administered by the Fiscal Policy Office and the Customs Department, respectively.

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* For more discussions on the ERP, see any standard, international economic textbook such as Richard E. Caves and Ronald W. Jones, World Trade and Payments, An Introduction, Little, Brown and Co., Boston, 1985, PP. 233-235.

TABLE 4.3
EFFECTIVE RATES OF PROTECTION
FOR SELECTED INDUSTRIES

(IN PERCENT)

INDUSTRY	CATEGORY	1969	1971	1974	1979	1982
FOOD PROCESSING						
SWEET CONDENSED MILK	IMP-COMP	40.4	2.4	1766.1	33.6	62.4
WHEAT FLOUR	IMP-COMP	800	186.6	30.3	466.6	2948.5
MEAT & MEAT PRODUCTS	NON-IMP	1140	-11.6	117.3	-9.3	148.5
FOOD PREPARATIONS	NON-IMP	1991.4	-20.9	-16.1	255.9	1145.5
RICE	EXP	-61.4	-16.8	-35.7	-19.1	-28.1
TAPIOCA FLOUR	EXP	-17.7	-29.8	-29.2	-19.5	-20.4
SUGAR	EXP	n.a.	2.9	-84	-20.3	-21.6
FRUIT CANNING	EXP	-33.6	-28.4	-8	n.a.	b
BEVERAGE						
SOFT DRINKS	NON-IMP	31.1	-20.9	200.9	-2.9	20.9
BEER	NON-IMP	314.5	35.6	65.3	40	15.4
TEXTILES						
TEXTILE ARTICLES	IMP-COMP	29.9	44.1	-4.4	78.2	30.2
TEXTILE FABRICS	IMP-COMP	92.1	64	-16	912.5	979.5
THREAD AND YARN	IMP-COMP	67.4	39.3	19.9	25.1	67
CLOTHING	EXP	43.9	-7.1	7.3	338.3	105.8
LEATHER PRODUCTS	NON-IMP	13.8	48.6	-12.4	1348.1	236.4
FOOTWARE	EXP	26.3	60.1	6.8	669.4	172.8
PRINTING AND PUBLISHING	NON-IMP	-10.9	-20.3	-10.7	-7.2	3.4
PAPER AND PAPER PRODUCTS						
PAPER	IMP-COMP	n.a.	33.3	-12.1	74.9	67.5
PAPER PRODUCTS	IMP-COMP	21.9	55.4	27.1	112.7	74.7
LUMBER AND SHAVED WOOD	EXP	-19.8	-42.6	-42.3	-13.2	-21.44
CHEMICAL PRODUCTS						
PIGMENT, PAINTS AND VANISHES	IMP-COMP	30.1	13.7	57.8	115.6	37.9
SOAPS AND DETERGENTS	IMP-COMP	21.3	20.7	-10.6	114.9	66.5
DRUGS AND MEDICINE	IMP-COMP	86	48.8	-12.4	71.6	-16.3
PETROLEUM PRODUCTS	IMP-COMP	-33.9	-0.8	-9.8	-9.4	-16.2
TIRES AND TUBES	IMP-COMP	12565	25.2	-12.7	24.7	47.9
BASIC METALS						
IRON AND STEEL	IMP-COMP	16.1	18.4	37.7	17.1	58.9
IRON RODS	IMP-COMP	0.9	21.5	-10.1	-15.2	58.9
TRACTORS	IMP-COMP	49	5.3	5.9	-12	n.a.
ELECTRICAL MACHINERY						
ELECTRIC BULBS	IMP-COMP	51.1	30.1	0	n.a.	67.5
T.V. & HOUSEHOLD APPLICANCES	IMP-COMP	48.5	58.6	830.2	b	188
WIRES, CABLE AND ACCESSORIES	IMP-COMP	28.1	21	62.1	82.8	86
TRANSPORT EQUIPMENT						
MOTORCYCLES AND PARTS	IMP-COMP	178.9	56.3	36.4	102.6	15 a
MOTOR VEHICLE PARTS	IMP-COMP	122.6	68.7	84.9	55	
TRUCKS	IMP-COMP	18.2	95.4	100.7	392.4	308.2
CARS	IMP-COMP	179.8	236.4	353.9	b	

NOTES :- a : including bicycles.

b : nagative value added at world market prices.

n.a. : not available.

imp-comp stands for an import competing industry. Any industry whose competing imports are more than 10 percent of total domestic demand is catergorized as an import competing industry.

exp stands for an exporting industry. Any industry whose exports are more than 10 percent of its production is categorized as an exporting industry.

non-imp stands for a non-import-competing industry which includes that not categorized as imp-comp and exp.

Data are from the Industrial Management Company, Ltd.

Board of Investment

Tax and other promotional incentives for industrial development were officially started in 1954 when an "Act on the Promotion of Industries" was passed. The act guaranteed against nationalization or competition from the state wherever productions were initiated by private enterprises. It also offered several tax and tariff exemption benefits to industries eligible for promotion. The act became effective in 1960 when the Board of Investment was founded to implement it. Since then it has also been revised many times to improve the implementation and attract more foreign and domestic investment.

In 1962 the act was revised to provide for promoted firms, for the first five years, full exemptions from tariffs and business taxes on machinery and equipment. It also provided full to partial exemptions from tariffs and business taxes on purchases of raw material inputs according to the category of the firms. For example, firms under Group A with the highest content of domestic raw material inputs of production received full exemptions. Firms under Groups B and C which had lesser and the least contents received a half and a third reduction, respectively. However, all firms received full exemptions from corporate income taxes. They were also allowed to employ experts, technicians and skilled workers from aboard. Foreign firms under promotion were allowed to own land, remit profits and repatriate capital. All exports of these firms were subject to exemptions or reduction of export duties and business taxes. This act was mostly maintained throughout the 1960s except for two revisions in 1967 and 1969. The major revisions then were that all new promoted firms were categorized under Group C to obtain a one-third reduction of tariffs and taxes on raw materials.

In 1972 there was another major revision of the act. It set new objectives of (1) promoting firms that produced products to be exported and (2) encouraging them to locate in other regions outside the metropolitan areas. Promoted, exporting firms would receive full exemptions from tariffs and taxes on imported raw materials whereas firms locating in specified regions would receive up to a one-half tax reduction. In addition, they were eligible for obtaining refunds of all taxes assessed in the production process.

Since 1977, the major investment incentives provided by BOI are an exemption or reduction of import duties and business taxes on machinery, a reduction of import duties and that of business taxes on raw materials and components, and an exemption of income taxes. Details are discussed as follows.

Imported machinery may also be granted total exemption from the payment of import duties and business taxes, or may be granted a reduction of one-half of the rate of import duties and business taxes. In the case of machinery purchased domestically, the business taxes may be exempted. All of these exemptions and reductions are under the discretion of BOI.

The BOI may grant a promoted firm a reduction of import duties and business taxes of up to 90 percent on imported raw materials and other intermediate inputs, each time for a period not more than one year. In case the material inputs are purchased in the country, there may be a reduction of business taxes of up to 90 percent. Again, to what extent the reduction will be granted is subject to the judgement of the BOI.

The period of income tax holiday prescribed by the investment promotion law is between 3 to 8 years. In case where losses incur during the period receiving an exemption of corporate income tax, a promoted firm shall be granted permission to deduct its holiday-period losses from net profits earned for 5 years after the expiration of the period. Dividends derived from a promoted activity during the holiday period are also exempted from personal income tax. Furthermore, fees for good will, copyright or other rights paid by a promoted firm may be deducted from taxable income for a period of five years from the date the promoted firm first derives income.

For the purpose of promoting investment in certain locations, the investment promotion law provided additional incentives to promoted firms located in specified investment promotion zones and industrial estates. These special incentives include a reduction of business taxes on the sale of products, and either additional corporate income tax reduction beyond the regular income tax holiday or various allowances made to reduce the taxable income. The reduction of business taxes on the sale of product is up to 90 percent of the normal rates for a maximum period of five years, depending on which zone a recipient firm is located in. The corporate income tax reduction is at 50 percent for a period of five years after the expiration of the regular income tax holiday. The alternative allowances include double deduction of up to 25 percent of the costs of installation or construction of infrastructural facilities from taxable income within 10 years.

To end an overview of the investment promotion policy provided by BOI, it is interesting to look at some characteristics of promoted firms in the past. They are the distribution of promoted firms by industry and the ownership of promoted firms. Available data from BOI reveal that the majority of promoted firms are in the manufacturing industry - - that is, they account for around 70 percent of total number of promoted

firms and about 80 percent of total registered capital of promoted firms. With respect to the ownership, out of 54 firms promoted up to 1985, 19 were wholly owned by the Thais, 29 were joint-ventures between the Thais and foreign nationals and only 6 were wholly owned by foreign nationals. Data in 1985, however, revealed that over 25% of total registered capital of all promoted firms was owned by foreign nationals of whom the majority are from Japan, the United States, Taiwan and the United Kingdom.

Tax Savings from Investment Promotion

Various privileges especially those of tax exemption and reduction basically save the promoted firms a sizeable amount of taxes which otherwise have to be paid to the government. This subsection quantifies this amount of taxes saved. The analytic method employed conceptually is to consider a profitable firm in two environments: promoted and unpromoted. Under each environment, taxes paid in each period were computed. Then, the present values of taxes paid in each environment were calculated. The wedge between present values of taxes under the promoted environment and those under the unpromoted environment would be a measure of tax savings from investment promotion policy.

Because total amount of taxes paid by a firm varies according to the size of its tax base, tax savings measured in nominal amounts across firms or industries are not comparable. A more appropriate measure of tax savings should be adjusted for the difference in the size of the firm's tax base. Hence, a tax rate defined as the ratio of total taxes to the firm's tax base would be used here as a measure of tax savings.

Table 4.4 reports tax rates saved by promoted firms by sector. Details of the calculation are discussed in the Technical Notes at the end of this chapter. It was ordered from the lowest tax rate saved, 8.25%, in the non-ferrous metal basic industries to the highest tax rate saved, 103.24%, in the repair services not elsewhere classified with an average tax rate saved of 43.37% (close to the tax rate saved, 43.17%, in the manufacture of other chemical products). The question remains whether tax rates saved as reported in Table 4.4 reveal a policy pattern of BOI. Specifically, one would like to know, for example, whether BOI promotes small or big firms, whether BOI promotes firms or sectors whose products substitute for imports or whose products are exported, and whether BOI promotes firms or sectors whose factor intensity is labor or capital.

TABLE 4.4

Rates of Tax Savings
(Ordered from the Smallest Tax Rate)

SECTOR	Rate of Tax Savings (DT)	Import Demand	Export Output
372 Non-ferrous metal basic industries	0.0825	0.0077	0.3639
362 Manufacture of glass and glass products	0.1729	0.2501	0.0811
311-312 Food Manufacturing	0.2319	0.0168	0.3386
351 Manufacture of industrial chemicals	0.2451	0.3805	0.1016
355 Manufacture of rubber products	0.2478	0.0346	0.5118
210 Coal mining	0.2490	0.0000	0.0000
371 Iron and steel basic industries	0.2550	0.0554	0.0289
711 Water Land transport	0.2673	0.0000	0.0404
385 Manufacture of professional and scientific and measuring and controlling equipment not elsewhere classified, and of photographic and optical goods	0.2675	0.5701	0.2246
369 Manufacture of other non-metallic mineral products	0.2745	0.1176	0.0112
382 Manufacture of machinery except Electrical	0.2758	0.0876	0.0286
321 Manufacture of Textiles	0.2763	0.0426	0.1217
632 Hotels rooming houses, camps and other lodging places	0.2995	0.0000	0.0000
322 Manufacture of wearing apparel except footwear	0.3036	0.0009	0.1803
323 Manufacture of products of leather and leather substitutes and fur, except footwear and wearing apparel	0.3049	0.0320	0.2060
712 Water transport	0.3133	0.0000	0.0368
384 Manufacture of transport equipment	0.3213	0.1528	0.0020
383 Manufacture of electrical machinery machinery appliances and supplies	0.3305	0.3534	0.3500
381 Manufacture of fabricated metal products, except machinery and equipment	0.3432	0.2636	0.1221
341 Manufacture of paper and paper products	0.3487	0.0937	0.0325
933 Medical, dental, other health and veterianry services	0.3918	0.0000	0.0000
332 Manufacture of furniture fixture and flooring, except primary of metals	0.4166	0.0143	0.1624
361 Manufacture of pottery	0.4191	0.0846	0.1859
356 Manufacture of plastic product not elsewhere classified	0.4224	0.0435	0.1361
352 Manufacture of other chemical products	0.4317	0.1915	0.0197
331 Manufacture of wood and cork productions except furniture	0.4527	0.0327	0.1155
354 Manufacture of miscellaneous products of petroleum and coal	0.5098	0.6020	0.0099
719 Services allied to transport	0.5147	0.0000	0.0000
390 Other manufacturing Industries	0.5208	0.1335	0.4092
130 Fishing	0.5403	0.0001	0.0028
220 Petroleum and natural gas production	0.5656	0.0002	0.0000
290 Other mining	0.6338	0.0796	0.0867
313 Beverage Industries	0.7590	0.0251	0.0121
230 Metal ore mining	0.7707	0.0104	0.0678
111 Agriculture and livestock Production	0.8060	0.0147	0.0696
611 Mixed wholesaling	0.8873	0.0000	0.1245
121 Forestry	0.9907	0.0030	0.0164
951 Repair services not elsewhere classified	1.0324	0.0000	0.0000
AVERAGE	0.4337	0.1078	0.1105

Notes:

(1) DT is a rate of tax savings enjoyed by a promoted firm.

(2) Import/Demand is a ratio to final demand excluding intermediate transactions of total imports for final demand excluding tariff.

(3) Export/Output is a ratio to total output at producer's price of exports excluding special exports.

Data on DT were computed from the formulas in the Technical Notes. Import/Demand and Export/Output are from National Economic and Social Development Board, The Basic Input-Output Table of Thailand in 1982. The code number in front of each sector is that of the basic input-output Table. Note that the sector of petroleum refineries (code #353) was excluded because its 1982 operating surplus was negative.

Simple bivariate and multivariate regression equations were used, using data in Table 4.4, to reveal the policy pattern of BOI. The findings show strong evidence that, in the study period 1982, any sector that could successfully compete with the international market would be less likely to be promoted but weak evidence that any sector that had difficulties competing with the international market would be promoted and protected. See the Technical Notes for details. Finally, the policy pattern concerning the firm's size and factor intensity could not be tested because they lack good proxies.

Effects of Investment Incentives and Policy Recommendations

The above discussions reveal that some sectors benefit more from the financial and fiscal incentives for investment and some benefit less. These artificial favorable and unfavorable investment opportunities created by the government have widespread effects on the economy beyond that on the beneficiary firms. This subsection discusses these effects and also suggests policy recommendations regarding these incentives.

Government incentives not only lower beneficiary firms' costs but also encourage resources to move from other firms or sectors to these beneficiary firms or sectors. As long as other firms or sectors are more efficient than the promoted firms or sectors, an overall economic growth can suffer. Moreover, tax savings enjoyed by promoted firms mean losses in government revenue. One Study* reveals that the revenue loss, the so-called net fiscal cost of giving investment promotion as used in that study, is estimated at 2,617 million baht in 1980. The loss came from various sources. Import duties on machinery and raw materials accounted for the largest share of 68.35% of total revenue loss. It was followed by business taxes with a share of 25.07% and by corporate income tax with the smallest share of 6.85%. One cannot really tell whether the size of the revenue loss is significant until one compares them to total tax revenue. As it turns out, the estimated revenue loss was about 3% of total tax revenue in 1980. That in import duties was 9% of the import duty revenue. That in business tax was 3.6% and that in income tax was 1.8%.

Should the loss in tax revenue be raised from other sources, tax burdens in the form of higher tax rates will be shared by other firms or other sectors of the economy. These

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* Fiscal and Tax Policy Division, Fiscal Policy Office, Ministry of Finance, Study on Fiscal Implication of Investment Incentives and Promotion Efficiency, 1984, Chapter five, pp. 114-131.

higher tax rates will deter work, saving and investment incentives of households and firms in general.

The same argument concerning tax losses can be applied to the case of subsidized interest rates. Since the government allows small profit margins of commercial banks on rediscounts of promissory notes of some specific sectors, it has to allow commercial banks to charge substantially higher profit margins on loans lent to other sectors of the economy. Effectively, other sectors are taxed in the form of higher lending rates and the yields are, then, transferred to the beneficiary sectors. Again, this rediscounting policy of the Bank of Thailand discourages investments in other sectors in favor of the beneficiary sectors. With these higher lending rates, costs of producing and prices of output of other sectors would be higher. Thus, consumers paying higher prices on output also shoulder a part of the burdens created by the subsidized-interest-rate policy.

Consumers also pay higher prices on the products whose domestic productions are promoted by the Board of Investment (BOI). To make certain that promoted firms can survive from the competing imports, the government imposes trade and non-trade barriers on these imports. These barriers practically increase the prices consumers have to pay.

To sum up, it is likely that the government has been subsidizing inefficient firms or sectors (otherwise, why do they need subsidies) at the expense of overall economic growth, government's revenue, efficiency, higher costs paid by other producers and higher prices paid by consumers in general.

In our judgement, the existing subsidy policies should not be tolerated. The government should not protect specific firms or sectors without a time limit. Some firms or sectors having growth potential in the long run but suffering from other short-run problems should be protected in the short run but the protections or subsidies should gradually be reduced when the short-run problems subside. Other sectors with no growth potential in either the short run or in the long run should be allowed to shrink probably gradually when the protections or subsidies are gradually reduced.

3. A SUMMARY AND POLICY RECOMMENDATIONS

This chapter goes over a historical development of private investment and takes a closer look at various government policies affecting investment incentives. On the issue of private investment financing, we raise the problem that a high debt to equity ratio of private business sector can destabilize the lending agencies, private investment and the economy as a whole. On the issue of financial and fiscal incentives, we raise the question of what industry the government should promote.

The private businesses that heavily finance their day-to-day operations or long-term physical investments by borrowings instead of issuing common stocks can easily face the liquidity problem during recessions. Some may have to slow down the on going investments and/or postpone the new projects. Even worse, some may be bankrupt. This stop and go situation can destabilize the economy. Since the high debt to equity ratio is part of the causes of instability, the government, through the Securities Exchange of Thailand and venture capital companies, can help to reduce this ratio by expanding the existing stock market. By so doing, the private businesses can raise more funds in the forms of equity and, therefore, reduce the debt to equity ratio and the instability of the economy.

On the issue of financial and fiscal incentives, we discuss earlier that, in order to be competitive in the international markets, the government, through the Board of Investment, should provide promotional privileges to the industries that Thailand has a comparative advantage. They are agro-industries and exporting industries that are labor-intensive. In addition , the financial and fiscal incentives provided by the Bank of Thailand and Ministry of Finance respectively should be based on the incentives system. That is, unlike the existing system that the beneficiary firms receive the benefits regardless of their performances, the new system requires that their performances exceed pre-specified criteria before they receive any benefit. This new system is believed to increase the incentives of the beneficiary firms.

Technical Notes

A Calculation of Tax Saving from Investment Promotion and Empirical Tests of the Policy Pattern of BOI

These notes discuss in some detail two technical issues not discussed in section two of Chapter 4 on tax savings from investment promotion. They are (1) a calculation of tax savings and (2) empirical tests of the policy pattern of BOI.

A Calculation of Tax Savings

In addition to the assumption in the text, the following assumptions are adopted: (1) the unpromoted firm pays a 35 percent income tax rate on its corporate profit and pays import duties and business taxes at unpromoted rates, (2) the promoted firm pays no corporate profit tax for the assumed 5 years of a promoted period (3-8 years are usually granted), receives a 90 percent reduction of import duties and business taxes in the first year of promotion but pays in full import duties and business taxes for the rest of the promoted period, and (3) the discount rate is 15%.

The above assumptions can be used to compute DT which is defined as a rate of tax savings enjoyed by a promoted firm. It was calculated as

$$DT = PVT(U) - PVT(P) \quad ,$$

where PVT (U) is the present values of taxes paid by a firm under an unpromoted environment (U) for 5 years and PVT (P) is those paid by a firm under a promoted environment (P) for the same 5 years, i.e.

$$PVT(U) = \sum_{t=1}^{5} T_t(U)/(1+R)^{t-1} \quad ,$$

$$\text{and} \quad PVT(P) = \sum_{t=1}^{5} T_t(P)/(1+R)^{t-1} \quad ,$$

where $T_t(U)$ and $T_t(P)$ are tax rates paid at year t under unpromoted and promoted environments respectively, and R is a discount rate of 15%, R = .15.

The tax rate $T_t(U)$ was calculated as

$$T_t(U) = .35\left(\frac{OS}{OPP}\right) + \frac{IMPTAX}{OPP} + \frac{INDTAX}{OPP} \quad \text{for } t=1,2,..,5.$$

Likewise, the tax rate $T_t(P)$ was calculated as

$$T_1(P) = .10 \left(\frac{IMPTAX}{OPP} + \frac{INDTAX}{OPP} \right)$$

$$\text{and } T_t(P) = \frac{IMPTAX}{OPP} + \frac{INDTAX}{OPP} \quad \text{for } t = 2,3,..,5.$$

where OS is operating surplus, OPP is output at producer's price, IMPTAX is duties and taxes on imported raw materials and intermediate inputs used to produce output, and INDTAX is indirect taxes less subsidies. Data on OS, OPP, IMPTAX and INDTAX are from National Economic and Social Development Board, The Basic Input-Output Table of Thailand in 1982.

The estimated values of DT are reported in Table 4.4 of Chapter 4.

Empirical Tests of the Policy Pattern of BOI

We used the ratio to total output of total exports excluding special exports, (Export/Output), as a proxy for the variable of an export share and the ratio to final demand of total imports (for final demand) of products competing with the products produced from the sector of interest, (Import/Demand), as a proxy for the variable of an import substitution. The resulting, bivariate and multivariate regression equations are

$$DT_i = \underset{(0.0155)}{0.4717} - \underset{(0.2226)}{0.3520} \left(\frac{\text{Import}}{\text{Demand}}\right)_i , \qquad (A.1)$$

$$R^2 = .0590, \quad SSE = 1.80, \quad S = .224, \quad N = 38,$$

$$DT_i = \underset{(0.0469)}{0.4932} - \underset{(0.2754)}{0.5379} \left(\frac{\text{Export}}{\text{Output}}\right)_i , \qquad (A.2)$$

$$R2 = .0707, \quad SSE = 1.74, \quad S = .220, \quad N = 38,$$

and

$$DT_i = \underset{(0.0508)}{0.5256} - \underset{(0.2154)}{0.3268}\left(\frac{\text{Import}}{\text{Demand}}\right)_i - \underset{(0.2711)}{0.5125}\left(\frac{\text{Export}}{\text{Output}}\right)_i \qquad (A.3)$$

$$R^2 = .1031, \quad SSE = 1.64, \quad S = .216, \quad N = 38,$$

where DT is a tax rate saved as reported in Table 4.4, a subscript i refers to the ith sector, R^2 is the coefficient of determination adjusted for degrees of freedom, SSE is the error sum of squares, S is the standard error of the regression and N is number of observations. Standard errors are shown in parentheses below the coefficient estimates.

The estimated coefficients of the variable of (Export/Output) in equations (A.2) and (A.3) are significantly different from zero for a lower-tail test at the 5% critical level. Their t-values are 1.95 in equation (A.2) and 1.89 in equation (A.3), where the corresponding critical t-value is 1.68. However, the estimated coefficients of the variable of (Import/Demand) in equations (A.1) and (A.3) are insignificantly different from zero for a lower-tail test at the 5% critical level (t-value = 1.68) but they are significant at the 10% critical level (t-value = 1.30). Their t-values are 1.58 in equation (A.1) and 1.52 in equation (A.3).

Interestingly, the negative signs of the estimated coefficients of the variables of (Export/Output) and (Import/Demand) seem to confirm a general belief that the Board of Investment promotes the import substituting but not exporting sectors. That is, any sector that can successfully compete with the international market (an increase in exports) will be less likely to be promoted but any sector that has difficulties competing with the international market will be protected and promoted so that we observe a decline in the imports of competing products.

CHAPTER 5

PUBLIC RESOURCE MANAGEMENT

This chapter focuses on how the resources of the Thai public sector are obtained and expended. The chapter is made up of four sections. The first gives a brief background of the Thai public sector and its main components, namely the central government, local governments and state enterprises and their financial interworkings which paves the way to later sections. The second section describes the "consolidated public sector accounts" proposed by this study as a basis for further analysis. The third section highlights a few main points resulting from a closer look at the consolidated accounts and hopefully covers major points of interest and concern for readers, such as the public sector's financial structure, public debts and their servicing, public investment and legal constraints associated with public finance issues. The fourth (last) section summarizes the previous three sections.

1. BACKGROUND

Various studies concerning consolidated public sector finance have identified several common components composing the total public sector, such as: the central government, local governments, state enterprises, revolving funds, special funds, loans and grants. The classification, however, tends to differ from one study to another and confusion often arises when trying to reconcile various classification schemes. One probable explanation is from the different criteria of classification employed. This chapter differentiates three classification criteria: (i) organizational (ii) financial and (iii) accounting.

The organizational criterion differentiates various public sector components by agency, office and administrative unit each having its own authority, jurisdiction and staff. This criterion divides the public sector into (1) the central government (2) local governments and (3) state enterprises.

The financial criterion, on the other hand, classifies along different financial sources and accompanying financial procedures, budgets and disbursement procedures. Six financial entities are identified: (1) the national budget (2) loans (3) grants (4) extrabudgetary funds (5) local government budgets and (6) state enterprise budgets. The first two are national level while the remainder are subnational. These financial

entities are not independent due to coordinated planning, cross subsidies and financial interactions of various kinds. In fact, a great number of projects are jointly funded by several financial sources.

The accounting criterion merely provides operational convenience for an organization in order to manage various revenues and expenses. A much talked about "advance payment account," of ministries and departments is a good example of creating a separate accounting entity within the same organizational and financial entity. Accounting criterion is only an internal management matter and will not be a concern here except for clarification purposes.

To summarize, the Thai public sector is divided up two ways -- "organizationally" and "financially" -- in this chapter. This results in three organizational components and six financial components. Both sets of components and their interrelationships are discussed as follows.

Organizational Components

The Central Government

The central government (CG) encompasses twelve ministries, the Office of the Prime Minister, the Office of University Affairs and seven independent public agencies (e.g. the Office of the Auditor General), along with all departments, offices and agencies under them. It also directs, supervises and finances the operation and management of local governments and state enterprises to a great extent. The central government is thus the focal point in planning and directing the national policy and management.

Local Governments

Local governments (LG), in a way, are merely an administrative arm of the central government taking care of the more routine public services in the provinces. A large part of the financial support of the local governments comes as subsidy and shared taxes allocated to them by the central government. The self-collected local taxes, at the moment, only constitute about 42% of their revenues. This probably suggests a lack of autonomy vis a vis the central government. Aside from financial reliance, local governments are legally subject to supervision and endorsement by their provincial governors, who are government officials answerable to the Ministry of Interior. Currently, local governments are made up of 126 municipalities, 795 sanitary districts, 72 changwat administrative organizations (one for each

province except Bangkok), the Bangkok Metropolitan Administration, and the Pattaya City Administration. Local governments are classified according to the size and population density of the community. Most sparsely populated areas are under the CAOs. Municipalities, which represent larger communities, are further classified as "nakorn", "muang" or "tambon" municipalities. There are roughly 3.6 million people living under the jurisdiction of the 126 municipalities; 5.5 million under the 795 sanitary districts; and about 36 million under the 72 CAOs.

State Enterprises

State enterprises (SE) are mostly big businesses that are wholly or predominantly owned by the government, thus whose policies and operations are directed and supervised by the government. The bulk of state enterprises are in utilities and public services, such as electricity, waterworks, telephone, postal service and transportation. However, they span over several other industries, such as tanning, textiles, preserved food manufacturing, hotel services and state lotteries. There are currently 68 state enterprises holding some Baht 600 billion assets and employing roughly 1/4 million employees. Their combined revenues and expenditures are in the order of Baht 250 billion with operating surplus running over Baht 20 billion annually. According to their sizeable contribution to and influence on the economy -- as producers, consumers, as well as competitors -- these state enterprises can reasonably be thought of as the "third sector" of the economy. They are thus collectively referred to here as the "state enterprise (SE) sector".

In terms of reporting and control, a state enterprise reports to its parent ministry which often treats state enterprises the same way it treats departments and agencies under its control. Aside from the ministerial control, state enterprises are also answerable to the "National State Enterprise Committee" and, of course, the Cabinet. Investment projects need to be reviewed and approved by NESDB. Projects requiring foreign loans need additional review and approval by the National Debt Policy Committee and by the Bureau of the Budget when budgetary support is needed. Despite original designs to the contrary, this overwhelming control causes state enterprises to behave as if they were part of the government. Entrepreneurial inclinations and businesslike undertakings are often lacking. Most of their operating profits and contributions to the national budget are, at a closer look, mere fruits of the monopoly power blessed upon them by the government.

Many of the state enterprises started off as projects under governmental departments or agencies, but assumed separate financial entities labelled, "revolving funds." They later outgrew the technical and staff support from their parent departments and the "revolving fund status" which necessitated their own organizational setup and staff. The eventual split has resulted in the projects graduating from revolving fund status to the present "state enterprise status."

One sharp distinction, but often overlooked, between state enterprises and governmental agencies is in their business potential of providing marketable products and, eventually becoming financially self-sufficient. Several existing state enterprises, especially those of promotional function, possess neither quality. The rationale behind their state enterprise status is, at best, questionable and may need to be revised.

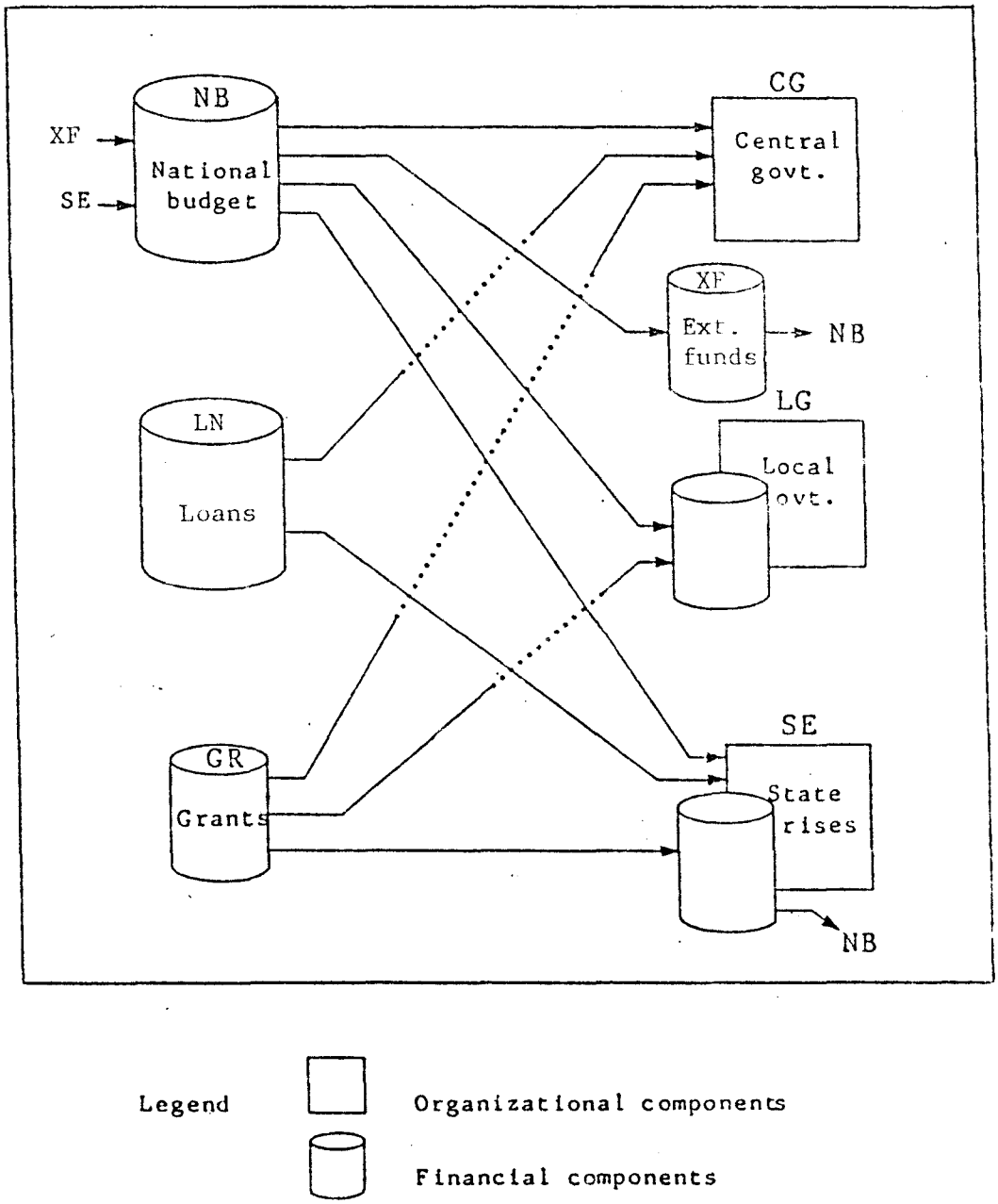
Financial Components

The three organizational components described above can be thought of as the "engine" for implementing public policy goals and objectives. Along the same analogy, the financial components perform the "fuel" function of driving the public policy engine. The six financial entities or sources of funds -- national budget, loans, grants, extrabudgetary funds, local government budgets and state enterprise budgets -- in some combinations, jointly fuel the central government, local governments and state enterprises.

Figure 5.1 diagrammatically illustrates such inter dependence. For convenience and consistency, organizational entities are represented as rectangles and financial entities as cylinders. The arrow points from the source to the destination of the flow of fund. Local governments and their budgets are stacked together since the sole purpose of these budgets is to serve the local government in question. The same applies for state enterprises.

It can be seen from Figure 5.1 that the national budget is an all-purpose source of funds. Although it concentrates on financing the central government (over 90% of the current expenditures), extrabudgetary funds, local governments and state enterprises also draw from it. The national expenditure budget for FY 1986 was targeted at Baht 218,000 million and is expected (last revision) to be about Baht 227,500 million for FY 1987.

Figure 5.1: Relationships among Components of the Public Sector



The bulk of the national budget's revenue, of course, comes from taxes of various kinds. This represents about 90% of the revenue. The taxes are mainly collected by three departments -- Revenue, Customs and Excise Departments -- of the Ministry of Finance. A small portion of the revenue is also derived from sales and services of the government and contributions from profitable state enterprises and extrabudgetary funds. The national budget is by far the largest source of funds in Thailand's public finance picture.

Foreign loans are not included in the national budget: a separate planning, disbursement and accounting procedure is set up for this purpose. While the national budget is prepared mainly by the staff of the Bureau of the Budget, the planning for foreign borrowing is done by a joint committee, called the "National Debt Policy Committee (NDPC)" which is chaired by the Finance Minister. The magnitude of foreign borrowing varies from year to year according to financial "aggressiveness" of the ruling government. The borrowing list totalled US$1,000 million for the past two fiscal years. The total borrowing, according to the Regulation on National Debt Policy (1985), may not cause the projected debt service payments to exceed 9% of the expected export earnings.

Foreign loans are the primary source of investment financing for the central government and state enterprises. Sixty percent of foreign borrowing goes to state enterprises and the remaining 40% to the central government. In addition to foreign loans, domestic borrowing by state enterprises has recently been placed under the supervision of NDPC by the Regulation on National Debt Policy (1985), as well. Though not prohibited by law, local governments (except for Bangkok Metropolitan Administration) have not even entertained the thought of borrowing from abroad.

Grants are also multipurpose. Only scanty information is available on their combined size and scope since donors tend to deal with the receiving organizations directly. Only a small fraction goes through the official route via the Department of Technical and Economic Cooperation (DTEC) or the Ministry of Foreign Affairs.

The other three funds -- extrabudgetary funds, local government budgets and state enterprise budgets -- are specific funds. They are at subnational level and only finance their own organizations or projects. Extrabudgetary funds and state enterprise budgets derive their revenues mainly from the sales of goods produced and services rendered. Local government budgets derive their main revenues from local taxes (either locally or centrally collected), such as property, motor vehicle, excise and sales taxes. They all, however, receive annual or periodical subsidies from the national budget.

As previously mentioned, profitable state enterprises and extrabudgetary funds may be required to contribute a portion of their profits to the national budget. The actual amounts are jointly determined by the Bureau of the Budget, the Ministry of Finance and representatives from the state enterprises or from the extrabudgetary funds. The current total contribution is about Baht 9,000 million. Recent major contributors have been the Government Lottery Bureau, Liquor Distillery Organization, and Thailand Tobacco Monopoly.

It should be noted that the extrabudgetary funds as covered in this report are incomplete due to data availability reasons. According to a legal provision, schools, hospitals and universities are allowed to keep their generated revenues (hospital fee and tuition, etc.) for their own use. These funds are, for all practical purposes, "extrabudgetary funds." This provision, though intended for operational flexibility, causes subsequent difficulties in sizing and tracking the finances of these organizations. The size of these funds, though difficult to estimate, is presumably quite large.

Public Sector and the Economy

On the whole, the central and governments receive revenues from businesses and households as taxes and nontaxes. Revenues are also generated from sales of goods and services through operations of state enterprises and, to a smaller extent, extrabudgetary funds. All expenditures go to purchasing of goods and services in the market for public policy objectives as well as raw materials, labor, rents, etc., for the operations and production processes of state enterprises and extrabudgetary funds.

When means and ends do not meet, the public sector borrows. Among the creditors are: businesses and households in the form of government bonds; banks and other financial institutions in bonds, treasury bills and promissory notes; and foreign lenders usually as project loans. Foreign borrowing is not included in the national budget except when the debt obligations are serviced. Aside from borrowing, the public sector also receives grants from abroad of an uncertain amount (officially recorded around Baht 4,000 million a year) mostly to finance public investment projects and as technical assistance.

Legal Constraints

When public expenditure is not adequately met by its revenue, financing is required. The recent trend of financing has been worrying politicians, bureaucrats and technocrats alike. The acts and regulations put forth were mere efforts to counter the looming financial trouble of the public sector by curbing the expanding role of deficit financing -- namely domestic borrowing, foreign borrowing and debt monetization. The following is a brief description of such acts and regulations.

The Budget Procedure Act, B.E. 2502 (Section 9), requires that the net budget deficit for any year may not exceed 20% of the net expenditure (both excluding principal repayment).

Foreign borrowing is regulated primarily by two acts and one regulation. Section 5 of the Regulation on National Debt Policy, B.E. 2528, created the "National Debt Policy Committee" which, as one of its functions, formulates annual and five-year foreign borrowing plans such that debt service may not exceed 9% of the expected export value. A time clause in the Regulation (Section 17) relaxes the ceiling to 11% up to FY 1988.

In addition, the Act Authorizing the Ministry of Finance to Raise Loans from Abroad, B.E. 2519, limits the direct foreign borrowing within 10% of the national budget. Guaranteed foreign loans for state enterprises are also curtailed within 10% of the national expenditure budget according to the Act Determining the Power of the Ministry of Finance to Guarantee Loans, B.E. 2510 (Section 5). The same act also prohibits the debt from exceeding four times its capital for "financial institution" state enterprises; and six times for "company limited" enterprises.

Concerning the ceiling on printing of money or, technically, debt monetization, Section 30 of the Currency Act, B.E. 2501 requires that at least 60% of the outstanding currency is covered by gold and foreign currencies held by the Bank of Thailand.

Sources of Information

Most of the literature on Thailand's public finance has mainly concentrated on the national budget. Very few studies covering the whole public sector have been spotted. However, vast databases have been collected and compiled (though not equally analyzed) by various agencies concerned. Most of them are in the form of worksheets and statistical tables, published and unpublished, compiled by the Bank of Thailand (BOT), the Bureau of the Budget (BOB), the Fiscal Policy Office (FPO), the

Comptroller General's Department (CGD) and the Office of the Auditor General (OAG).

This chapter benefited greatly from BOT's various monthly and quarterly bulletins, as well as from several worksheets and statistical tables prepared both for BOT's internal use and for the International Monetary Fund (IMF). A series of BOB "Budgetary Documents" (in Thai) is relied on equally heavily as an information source for budgetary transactions. Statistical tables and summaries on the government's financial position, appearing in various CGD journals, provide a useful checking point for reconciling numerical differences from different sources. The OAG-certified accounts and financial statements, when available (usually late), are used as the official judge for reconciling intersource differences.

On the conceptual and theoretical side, this report relies heavily on concepts and guidelines offered in IMF's "A Manual on Government Finance Statistics (GFS)" published in 1986. Additional references include the United Nations' manuals titled "A System of National Accounts (1968)" and "Classification of the Functions of Government (1980)." Other books and academic articles in Thai on public finance are also cited when appropriate. The conceptual framework, though liberally modified, is still kept reasonably in line with the principles espoused in the GFS.

2. CONSOLIDATED PUBLIC SECTOR ACCOUNTS

The consolidated public sector (CPS) accounts presented in this chapter are based upon the conceptual framework explained in the previous section. The accounts are constructed according to the traditional public finance accounts with only few (but hopefully significant) modifications. As generally done, the body of the account is made up of three main rows covering (1) revenue (2) expenditure and (3) financing. The three main rows are further classified into constituting items. Revenue is subdivided according to the nature of transaction into taxes, sales and services, other incomes, various kinds of grants and interagency transfers. Expenditure is, as usual, broken into current and capital. Financing is classified by lending source as domestic, external and own cash balance.

Below the three main rows, however, contain two additional rows; one for assets and the other for liabilities or debts. This is an attempt to incorporate the "stock" variables into conventional accounts which concentrate merely on "flow" variables. The linking relationships between appropriate stock

and flow variables are established. For example, when financing is done, there will be an associated increase in the stock of debts. Similarly, physical assets will be effected by additional capital expenditure and depreciation.

The CPS accounts contain eight columns. The first six columns represent six financial entities already defined, i.e. the national budget (NB), loans (LN), grants (GR), extrabudgetary funds (XF), local government budgets (LG) and state enterprise budgets (SE). Two additional columns are constructed by horizontally summing appropriate columns. One column represents the financial transactions related to the central government (CG) and the other for overall consolidated public sector (CPS).

This modification is an attempt to bring necessary information for public policy decision onto one page. Consequently, the information contained is in a highly abbreviated form. However, detail on items of interest can be retrieved upon request without altering the basic structure of the account. Another point to note is the multiplicity of information sources in constructing these CPS accounts. Where intersource inconsistencies arise, which often do especially when involving interagency transfers, some data are adjusted and altered to reconcile with those judged as more reliable. The necessity of these alterations will, however, diminish as more interagency cooperation regarding data collection and exchange will hopefully materialize in the near future.

For illustration, the CPS account for FY 1985 is presented in Table 5.1. The remaining CPS accounts (FY 1975-1984) appear in the Appendix. Reading through the first column in Table 5.1 reveals that the national budget's total revenue for FY 1985 was Baht 162.21 billion; 141.92 of which came from taxes of various kinds. The net expenditure (principal repayment excluded) amounts to Baht 195.45 billion; 158.70 and 28.00 of which were categorized as current and capital expenditure respectively. The remaining Baht 8.75 billion were subsidies to local governments, state enterprises and certain extrabudgetary funds. The budget deficit for FY 1985 was Baht 33.23 billion and 37.72 billion (net of principal repayment) was borrowed domestically to finance the deficit. The overborrowing of 4.49 was then added to the treasury cash balance.

The next five columns read in the same manner. The central government (CG) column results from summing the first four columns (NB, LN, GR and XF) horizontally. Likewise, the consolidated public sector (CPS) column is a horizontal summation of the central government (CG), local governments (LG) and state enterprises (SE) columns.

TABLE 5.1
Consolidated Public Sector Account
(FY 1985)

(Unit: billion Baht)

	NB	LN	CB	XF	LG	SE	CC	CPS
REVENUE	162.21		4.90	11.37	17.78	241.70	169.73	420.41
Taxes	141.92				9.00		141.92	150.92
Sales	4.84			11.35	1.52	239.79	16.19	257.50
Others	6.65				0.44		6.65	7.09
Transfers	8.80		4.90	0.02	6.82	1.91	4.98	4.90
EXPENDITURE	195.45	9.68	4.90	6.82	16.81	265.57	208.10	481.67
Current	158.70	1.73	3.75	6.82	9.85	215.21	171.00	396.05
-Interest	32.17					9.23	32.17	41.40
Capital	28.00	7.96	1.15		6.96	41.56	37.11	85.63
Transfers	8.75					8.80		
FINANCING	33.23	9.68		-4.55	-0.97	23.87	39.37	61.26
Domestic	37.72					2.44	37.72	40.16
Foreign		9.68				11.98	9.68	21.66
Cash balance	-4.49			-4.55	-0.97	9.45	-9.04	-0.56
Assets:								
Beginning assets					49.77	208.33	216.71	425.04
Investment					6.96	41.56	37.11	78.67
Depreciation					0.00	0.00	0.00	0.00
Ending assets					56.73	249.89	253.82	503.71
Debts:								
Beginning domestic debts						50.81	209.47	260.28
Ending domestic debts						53.25	248.66	301.92
Beginning foreign debts						107.79	59.68	167.47
Ending foreign debts						144.28	88.74	233.02
Beginning total debts						158.60	269.15	427.74
Ending total debts						197.53	337.40	534.93

To summarize, these CPS accounts are an attempt to facilitate policy decision making with an abbreviated and simplified yet comprehensive overall financial picture of the public sector. Aside from their shortcomings regarding the lack of detail and complete accuracy, they possess an array of advantageous features, such as: simplicity, brevity, comprehensiveness (within the scope of data availability), internal consistencies, and expandability upon request. These CPS accounts will form the basis for points of discussion in the next section.

3. PUBLIC FINANCE ISSUES

This section utilizes the financial data from the CPS accounts and discusses a few issues that may be of interest, namely: (1) size and structure of the consolidated public sector (2) taxes (3) public debts and their servicing and (4) public investment. This section is not intended for espousing policy recommendations but rather to be used as a catalyst for constructive discussion. The discussion provided in this section is rather brief and relies heavily on the information displayed in several statistical tables that follow. Again, detailed information appears in several CPS accounts in the Appendix.

Size and Structure of the CPS

Despite the effort to curtail the growth of the public sector, it is evident (as shown in Table 5.2) that the CPS is expanding much faster than the economy. The combined expenditure of the public sector has climbed from 27.2% of GDP in 1975 to 46.0% in 1985. Of course, this cannot mean that 46% of the Thai economy is in the hands of the government because the measurement basis for GDP and CPS expenditure are different. These numbers, however, should serve well as a benchmark indicating the expanding role of the public sector in the economy. Aside from the increasing role in the public finance aspect, the government role as the "regulator" has evidently also increased. Though outside the scope of this chapter, this fact should be kept in mind when assessing the government's impacts on the economy and the society.

TABLE 5.2

EXPENDITURE

	1975	1977	1979	1981	1983	1985
CPS (bB)	81.32	115.53	176.87	306.24	387.42	481.67
(% GDP)	27.21	29.40	31.80	38.95	41.92	45.98
CG (% GDP)	12.00	14.00	14.47	16.82	18.21	19.87
LG (% GDP)	3.59	3.06	3.05	1.62	1.58	1.60
SE (% GDP)	11.63	12.34	14.27	20.52	22.13	24.51
CG (% CPS)	44.09	47.62	45.50	43.17	43.44	43.20
LG (% CPS)	13.20	10.41	9.61	4.16	3.76	3.49
SE (% CPS)	42.71	41.97	44.89	52.67	52.80	53.31

Within this rapid expansion of the public sector, a definite shift can be discerned. The role of local governments in the CPS has declined dramatically from 13.2% of CPS in 1975 to only 3.5% in 1985. At the same time, state enterprises emerged as the trend for the future. In terms of expenditure share, state enterprises rose from 42.7% of CPS in 1975 to 53.3% in 1985. If this trend persists (and likely will), the public finance role will shift away from the central and local governments into the economy's third sector - the state enterprise sector. It is thus rather worrisome since the systems for controlling, directing, monitoring and managing state enterprises at present are quite inadequate, fragmented and sometimes downright archaic. This poses another potential serious problem regarding the nation's public policy.

Taxes

Taxes are by far the largest source of revenue (about 90%) for the government. They are mainly collected by three departments (Revenue, Excise, and Customs) under numerous categories which, for simplicity, are categorized into direct and indirect taxes in this section. Direct taxes are classified into personal and corporate income taxes; while indirect taxes are broken into business, import, export and other taxes. Table 5.3 gives the overall picture of the taxes in Thailand. For the period between 1975 to 1985, the total amount of taxes increased slightly faster than GDP (with an elasticity of approximately

1.14). It rose from Baht 34.61 billion in 1975 to 141.92 in 1985. The direct taxes (elasticity about 1.39) grew much faster than indirect taxes (elasticity of 1.07) over the same period. The share of direct taxes thus increased from 18.2% in 1975 to 24.1% of total taxes in 1985. This probably resulted from the natural shift of earnings from the informal labor market into the formal one.

Whatever the explanation may be, it is encouraging because (1) taxes increase faster than GDP and (2) taxes shift from indirect to more equitable direct taxes.

There are also ongoing efforts to expand indirect tax revenue as well. The attempts mainly concentrate on shifting the structure of indirect tax rates toward growth industries hoping to yield greater revenue for the government.

Though government revenue is a prime objective of taxation, any attempt to increase the revenue by raising tax rates is, theoretically, not a good solution because high tax rates deter incentives to work, save and invest and, therefore, depress economic growth. A preliminary study at TDRI confirms the above adverse effect of high tax rates. It finds a significant, negative relationship between the growth rates of value-added by sector and their corresponding indirect tax rates,* when

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* The regression equation using the ordinary least squares procedure is

$$g_i = \underset{(0.0336)}{0.0662} - \underset{(0.0901)}{0.2624}\, T_i + \text{.....},$$

$R^2 = 0.4188$, SSE = 0.1161, S = 0.0514, N = 55, F(10,44) = 4.89,

where g_i is the average growth rate of value-added of sector i for 1980-1984. T_i is the indirect tax rate imposed on sector i. R^2 is the coefficient of determination. SSE is the error sum of squares. S is the standard error of the regression. N is number of observations. F is the F-statistics with degrees of freedom in parenthesis. Standard errors are shown in parentheses below the coefficient estimates; and the dotted line following the above equation represents other variables not shown. These variables are (1) two average growth rates of value-added of the same sector for 1970-1975 and for 1975-1980, (2) dummy variables for all sectors except for one which is taken into account by the constant term, (3) the ratio of imported final demand to total final demand, and (4) the ratio of intermediate input to total output.

TABLE 5.3

GOVERNMENT TAXES

(Percentage share)

	Direct			Indirect					Total	Total in BB	% GDP
	PIT	CIT	Total	BT	MT	XT	OT	Total			
1975	7.79	10.36	18.15	22.91	24.35	4.10	30.49	81.85	100	34.61	11.6
1976	7.78	9.51	17.29	23.76	24.20	3.47	31.29	82.71	100	35.77	10.6
1977	7.66	9.51	17.16	23.30	25.22	3.41	30.90	82.84	100	44.69	11.4
1978	8.88	10.72	19.60	22.61	24.37	3.23	30.19	80.40	100	54.55	11.6
1979	8.52	10.64	19.16	20.63	23.47	4.10	32.64	80.84	100	66.89	12.0
1980	8.21	10.86	19.08	20.76	22.00	3.82	34.35	80.92	100	82.34	12.0
1981	8.95	13.33	22.28	21.33	21.70	2.79	31.90	77.72	100	95.93	12.2
1982	11.43	12.16	23.59	21.40	19.21	1.71	34.09	76.41	100	100.39	11.9
1983	11.37	10.23	21.59	19.91	21.71	2.03	34.76	78.41	100	120.34	13.0
1984	12.62	10.73	23.35	22.16	21.79	1.37	31.33	76.65	100	131.51	13.3
1985	12.01	12.05	24.06	20.34	20.46	1.85	33.29	75.94	100	141.92	13.5
elasticity	1.5115	1.2830	1.3941	1.0375	0.9801	0.4488	1.2133	1.0735	1.1389		
bouyancy	-7.7607	-6.1500	-6.2362	-3.8828	-3.4779	-2.1830	-4.6143	-2.8159	-3.0057		

NOTE:

PIT = Personal Income Tax
CIT = Corporate Income Tax
BT = Business Tax
MT = Import Tax
XT = Export Tax
OT = Other Taxes

controlling for other factors. Should the government revenue be raised, a better solution is to broaden the tax bases but keep the tax rates as low as possible.

Public Debts and Servicing

As in many other countries, overspending has been a long tradition of the Thai Government. Those deficits, financed either by borrowing or issuance of currency, have over the years accumulated to a point of concern. Table 5.4 shows the size of the CPS's deficit and their contributors. The party most responsible for the overall deficit is unavoidably the central government. The central government's share of CPS deficit, however, has declined over the years and, as before, has been replaced by that of state enterprises. The size of the CG's share decreased from 104.2% of CPS in 1975 to 62.6% in 1985; while the SE's share rose from 1.6% to 39.0% during the same period. Most of SE's deficit has been due to rapid increase in capital investment in this third sector, particularly in the energy area. The local governments, on the other hand, consistently register budget surpluses but the size is too small to effect the overall deficit picture.

TABLE 5.4

DEFICIT

	1975	1977	1979	1981	1983	1985
CPS (bB)	4.99	16.73	25.05	48.46	46.61	61.26
(% GDP)	1.67	4.26	4.50	6.16	5.04	5.85
CG (% GDP)	1.74	2.93	3.10	3.31	3.45	3.66
LG (% GDP)	-0.10	-0.08	-0.08	-0.04	-0.06	-0.09
SE (% GDP)	0.03	1.40	1.49	2.90	1.66	2.28
CG (% CPS)	104.17	68.94	68.76	53.67	68.34	62.63
LG (% CPS)	-5.73	-1.85	-1.75	-0.71	-1.26	-1.59
SE (% CPS)	1.64	32.92	32.99	47.04	32.92	38.96

Table 5.5 shows the CPS outstanding debts resulting from accumulation of deficits shown in Table 5.4. The size of debts has risen to an alarming proportion. In 1975, the total public

debts were about Baht 52.7 billion and accounted for 17.6% of GDP; while in 1985, they amounted to Baht 481.7 billion or 46.0% of GDP. The combined CPS debts in 1985 were 1.14 times the overall revenue of the CPS.

TABLE 5.5

DEBTS

		1975	1977	1979	1981	1983	1985
CPS	(bB)	52.72	87.63	140.54	225.71	337.60	481.68
	(% GDP)	17.54	22.06	24.93	28.43	36.15	45.48
	(% Revenue)	68.68	87.73	91.35	86.71	98.02	113.33
CG	(% GDP)	15.28	19.16	20.24	20.31	25.86	32.21
LG	(% GDP)	-0.10	-0.24	-0.33	-0.28	-0.38	-0.50
SE	(% GDP)	2.36	3.13	5.03	8.40	10.67	13.77
CG	(% Revenue)	59.83	76.22	74.16	61.93	70.13	80.25
LG	(% Revenue)	-0.38	-0.95	-1.23	-0.85	-1.04	-1.24
SE	(% Revenue)	9.24	12.47	18.42	25.63	28.93	34.32
CG	(% CPS)	87.11	86.87	81.18	71.42	71.54	70.82
LG	(% CPS)	-0.55	-1.08	-1.34	-0.98	-1.06	-1.10
SE	(% CPS)	13.45	14.21	20.16	29.56	29.51	30.28

In parallel to previous observations, the state enterprises' share in the CPS outstanding debts has also increased from 13.5% in 1975 to 30.3% in 1985. In nominal terms, the state enterprises' debts increased roughly 21 times between 1975 to 1985.

This, of course, necessitates devoting a substantial proportion of the public resources for debt servicing. Table 5.6 depicts how the debt burden kept mounting over the past decade. The interest payment which accounted for 8.0% of the national budget's expenditure in 1975 moved up to 16.5% in 1985 and is expected to be 19.2% in 1987. This consequently leads to less public resources available for other uses, particularly for capital investment. The same table also reveals an unmistakable down trend of the public investment portion in the national budget from 1977 on. As the decline in the capital expenditure continues, the government will eventually lose its influence as

TABLE 5.6

NATIONAL BUDGET

	1975	1977	1979	1981	1983	1985
Expenditure (bB)*	43.56	63.12	84.93	130.07	165.08	195.45
(1) Interest (%)	8.03	7.41	9.30	10.65	13.47	16.46
(2) Capital (%)	14.42	21.53	17.27	18.57	16.04	14.33

* Actual and net of principal repayment.

the leader and initiator of the country's investment programs. Whether this role should be replaced by state enterprises or the private sector will be another question worth deliberating by the nation's policy makers.

Though smaller than its domestic counterpart, foreign debts deserve particularly careful attention since they can potentially perturb the external balance of the country's economy. The past trend of foreign debts outstanding grew from Baht 11.9 billion or 4.0% of GDP in 1975 to 233.0 billion or 22.2% in 1985 (see Table 5.7). This drastic increase was mainly due to the investment of state enterprises, as can be seen from the increasing proportion of foreign debts liable to them (61.9% in 1985). This unavoidably affects the current account balance in a major way.

In an attempt to counter this dangerous trend, the government set up the National Debt Policy Committee (NDPC) to overlook the debt situation with particular emphasis on the nation's foreign debts. Each year, the combined ceiling is announced by NDPC for foreign borrowing by the government and state enterprises. For better or worse, these ceilings have had a major impact on the allocation of public resources in several ways.

TABLE 5.7

FOREIGN DEBTS

	1975	1977	1979	1981	1983	1985
CPS (bB)	11.88	20.14	48.90	103.44	154.19	233.02
(% GDP)	3.97	5.13	8.79	13.16	16.68	22.24
CG (% GDP)	1.62	1.99	3.76	4.75	6.01	8.47
SE (% GDP)	2.36	3.13	5.03	8.40	10.67	13.77
CG (% CPS)	40.64	38.84	42.81	36.13	36.06	38.08
SE (% CPS)	59.36	61.16	57.19	63.87	63.94	61.92

First, the public investment by the government which, for the past few years, depended heavily on foreign sources will be seriously affected. Second, state enterprises investment will also be curtailed for most of their investment projects have been externally financed. Third, there is a gradual shift to domestic sources for investment by state enterprises as can be seen by several flotations of state enterprise bonds. Lastly, government's investment opportunity is being taken up by state enterprise investment within the prescribed ceiling since they tend to compete better than the government's projects on financial grounds. It may be worth considering whether it would be better to have two separate ceilings -- one for government projects and another for state enterprises -- instead of one combined ceiling at present.

Public Investment

As already discussed under the "Public Debts and Servicing" topic, the capital investment by the government will soon be tightly curtailed since the debt servicing burden is becoming insurmountable. The total investment for the CPS, on the contrary, shows a slow but increasing trend. (See Table 5.8). At a closer look, though, the increase mainly concentrates in the state enterprise sector. The central government's share in total public investment fluctuated but on the whole declined. That of the local governments sharply declined initially and later stabilized at a little over 8% of CPS. The state enterprises investment surged from 30.5% of CPS in 1975 to 48.5% in 1985. In nominal terms, it has risen by 8.3 times in one decade.

TABLE 5.8

CAPITAL INVESTMENT

	1975	1977	1979	1981	1983	1985
CPS (bB)	14.68	27.35	37.29	63.42	68.15	85.63
(% GDP)	4.91	6.96	6.70	8.07	7.37	8.17
CG (% GDP)	2.23	3.69	3.16	3.58	3.48	3.54
LG (% GDP)	1.18	0.88	0.76	0.56	0.62	0.66
SE (% GDP)	1.50	2.39	2.78	3.92	3.27	3.97
CG (% CPS)	45.47	53.04	47.11	44.42	47.16	43.33
LG (% CPS)	24.09	12.60	11.38	6.99	8.43	8.13
SE (% CPS)	30.45	34.36	41.51	48.59	44.41	48.54

A point worth clarifying regarding public investment is the utility of NDPC ceiling on foreign borrowing just described. One viewpoint argues that the ceiling is overrestraining and becoming a major road block to public investment; while the other sees it as an extremely necessary instrument for the country's economic stability. The following is a small experiment trying to describe only roughly how the public finance picture will look if we move the ceiling up from US$ 1 billion to, say, 1.5 and 2.0, respectively, assuming that investment from other sources are still growing at their usual rate of 5% per year.

Table 5.9 portrays the total investment by the overall public sector from 1986 to 1991 under different ceilings (US$ 1.0, 1.5 and 2.0 billion). Figure 5.2 shows alternative investment paths that the government may choose. Numbers attached on each path represent the growth in public investment associated with the chosen path for that year. Each growth strategy will render a different profile of investment and, of course, debt. Four strategies were chosen to illustrate the point. The first strategy (Path I) is to maintain the US$ 1.0 billion ceiling throughout. Path II maintains the ceiling at US$ 1.0 billion for 1986-1987; and 1.5 billion for the remaining years. Path III maintains US$ 1.0 billion ceiling for 1986-1987; 1.5 billion for 1988-1989; and 2.0 billion for 1990-1991. Path IV, which is most expansionary, moves the investment ceiling to US$ 2.0 billion immediately in 1988 and maintains the ceiling at that level throughout 1991.

TABLE 5.9

ALTERNATIVE PATTERNS OF PUBLIC INVESTMENT

Ceiling	1986	1987	1988	1989	1990	1991
$ 1.0 billion	93.98	97.43	101.05	104.85	108.84	113.03
$ 1.5 billion	106.48	109.93	113.55	117.35	121.34	125.53
$ 2.0 billion	118.98	122.43	126.05	129.85	133.84	138.03

Figure 5.2 Alternative Public Investment Strategies

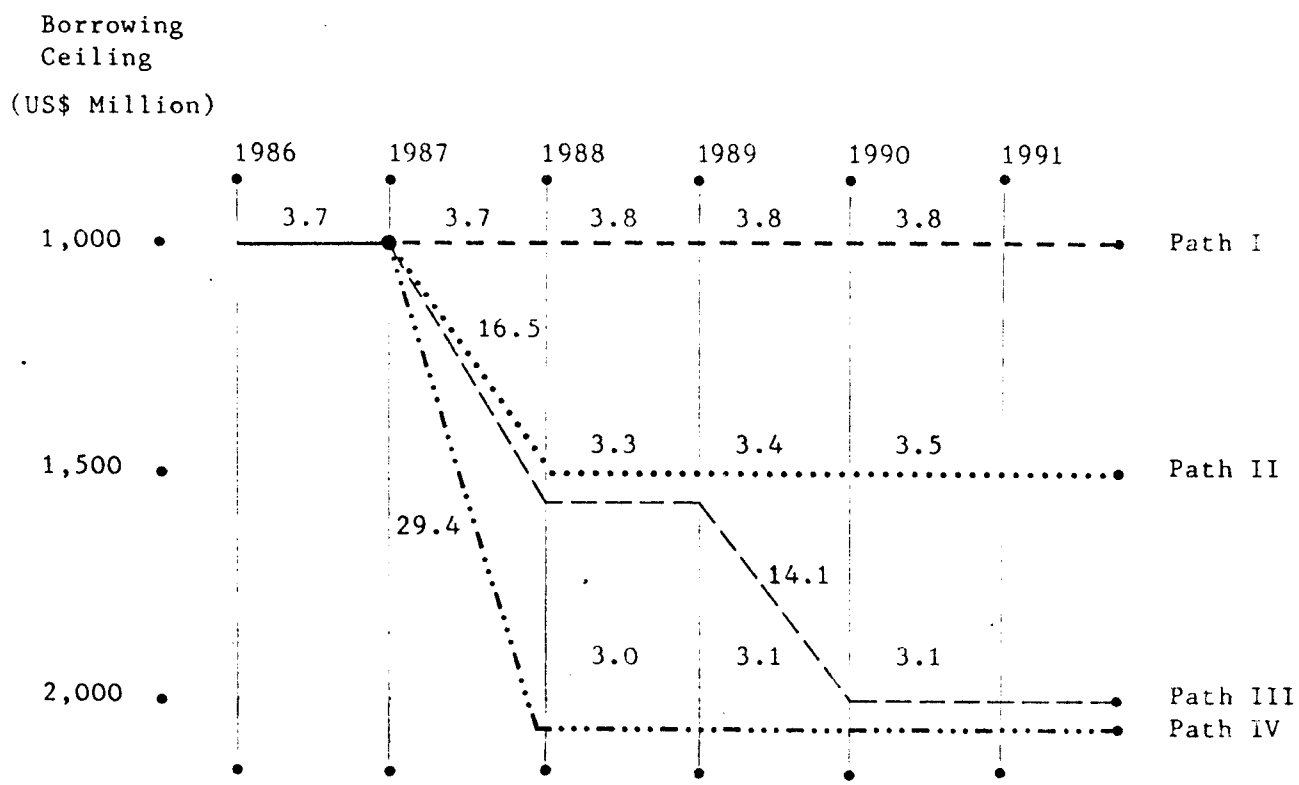


TABLE 5.10

FOREIGN DEBTS AND ALTERNATIVE INVESTMENT PATHS*

	1986	1987	1988	1989	1990	1991
Path I	24.4	23.2	22.0	20.8	19.7	18.6
Path II	24.4	23.2	22.9	22.5	22.0	21.4
Path III	24.4	23.2	22.9	22.5	22.8	22.9
Path IV	24.4	23.2	23.9	24.3	24.3	24.2

* As % of GDP, using the base run result in Chapter 6.

Table 5.10 shows the associated foreign debt to GDP ratio expected under the four strategies. Nominal GDP is assumed to be growing at 7% per year. Path I shows the decline of foreign debt/GDP ratio over the period of the Sixth National Plan (1987-1991) from 24.5% at the beginning to 19.1% at the end of the Plan. Path IV shows an increase during the same period from 24.5% to 24.8%. Paths II and III are the compromises. (See Table 5.10).

Table 5.11 shows the picture from a slightly different angle. Debt service ratio which is defined by the sum of principal repayment and interest payment over the export value is approximated for each investment strategy. The export value is assumed to be growing at 8.5% per annum over the Sixth Plan period. It is shown that even the most conservative investment scheme cannot bring the ratio down below 9.0% by the end of 1991. However, the ratio will decline from the present 12.7% high regardless of whichever strategy is employed.

It is probably surprising that the numbers in Tables 5.10 and 5.11 are higher than generally estimated. This is due to two reasons. One is the Baht devaluation in November 1984 resulting in an approximately 17% jump in stock of foreign debt for 1985 in terms of Baht. The other is the rapid yen appreciation 1986 of about 50%. When debt portfolio taken into account, the stock of debt and servicing for 1986 should rise by some 14% over the original estimate.

Aside from the debt service ratio consideration, relaxing the NDPC borrowing ceiling will at the same time worsen the national budget deficit. Elevating the borrowing ceiling to US$

TABLE 5.11

DEBT SERVICE RATIO* AND ALTERNATIVE INVESTMENT PATHS

	1986	1987	1988	1989	1990	1991
Path I	12.4	12.5	11.9	11.2	10.6	9.9
Path II	12.4	12.5	11.9	11.7	11.4	11.1
Path III	12.4	12.5	11.9	11.7	11.4	11.5
Path IV	12.4	12.5	11.9	12.2	12.3	12.2

* (principal repayment + interest payment)/export value.
Assuming export growth according to base case in Chapter 6 (11.5 in 1986 and 8% for 1987-91).

2.0 billion (as in Path IV) is estimated to add some Baht 5 billion as interest payment to the national budget as compared to the present US$ 1 billion ceiling.

4. CONCLUSION

This chapter bases its discussion on consolidated public sector (CPS) accounts constructed at TDRI. Referring to various points of discussion covered in this chapter, four main conclusions can be drawn.

(1) The public sector, as a whole, is growing faster than the economy in general. Within the public sector, state enterprise sector is growing the fastest. There is a definite shift of the role away from the government to state enterprises by whichever measurement* -- expenditure, revenue, investment, etc.. However, the present system for directing and supervising state enterprises is, at best, inadequate. Serious effort is thus needed to strengthen the state enterprise "control system."

(2) Interest payment of the national budget has reached an alarming proportion (estimated at 19.2% of budget in 1986). This severely restricts the investment opportunity out of the national budget due to the deficit ceiling set by Budget Procedure Act, B.E. 2502. Substantial portion of public investment migrates to foreign funding. This, again, is legally constrained by the borrowing ceiling set according to the Regulation on National Debt Policy, B.E. 2528.

(3) According to the estimate, debt service ratio cannot be brought down below 9% even with the NDPC's ceiling on foreign borrowing of US$ 1,000. The ratio, however, is expected to improve from the present 12.4% high to about 9.9% by the end of 1991.

(4) Concerning taxes, a gradual shift from direct to indirect taxes is observed. Direct taxes (personal and corporate income taxes) accounted for only 18.2% of total taxes in 1975. In 1985, they constituted 24.1% of tax revenue. Taxes, in general, are also found to grow faster than the economy. The tax elasticity to GDP is estimated to be around 1.14. Both are signs for optimism.

CHAPTER 6

OUTLOOK FOR FINANCIAL RESOURCE MANAGEMENT

INTRODUCTION

Thus far, this report has looked at the past trends in the financial situation of the country, together with detailed examinations of three important areas in financial resource management, viz; Private Savings, Private Investments and the Public Sector. These have given us an understanding of the role of public policy in these three areas. In some cases, such as with household savings, public policy does not seem to be the direct crucial determinant, and as we saw in Chapter 3, the rate of household savings cannot be expected to rise back to the high rates of the middle to late 1970's. In other areas, particularly related to financial management of the public sector itself, policy choice is crucial. For the public sector as a whole, an important question is how much of a role should it play in the investment picture of the country. Since 1980, the share of public investment in total domestic investment has jumped by about 4 percentage point compared to the late 70's. Should this continue, or even increase, and if so how fast. This has to viewed in terms of the financial management of the country as a whole. From the last chapter, it can be seen that substantial expansion in public sector investments, which is becoming more and more the province of the State Enterprises, will most likely have to be accompanied by an expansion in public external borrowings (given that this has been the main investment financing for State Enterprises in the past). If this occurs, what will happen to the financial picture for the economy as a whole, and if it is deemed desirable, how much more investments should the public sector carry out? These issues will be examined in this Chapter. What will be presented are alternative future profiles of growths based upon various assumptions about public policy and the external environments. From these, a judgement can be made about how much room there is for public policy to maneuver while maintaining growth with financial stability.

A development which is crucial to an understanding of the problem is what has been happening in this eventful year of 1986. From the trade figures, it is likely that in terms of the nation financial deficit, 1986 will be the best for a very long time. The current account should be almost balanced. This is a far cry from the situation of last year, when the current account deficit was over 40,000 million baht, or 1983 when it was over 65,000

million baht. Two major shocks have occurred:- the sudden decline in the world price of oil by around 40%, and the appreciation of the yen by almost 50% compared to the dollar. Another, particularly relevant for the Thai economy is the passage of the US farm act. Interest rates have also declined. On the domestic front, the government has introduced a number of policies designed to stimulate the economy, such as decreasing the domestic price of oil, electricity, interest rates.

This chapter starts by trying to understand what has been happening in 1986. How can one explain the excellent current account in 1986? Is it caused by just the oil price decline, or how much by oil prices and how much by other factors. This is quite crucial for judging the financial resource management strategy in the future.

After examining the 1986 situation, we look to the future. Will the almost balanced current account be maintained over the next few years, and what is the outlook for growth and the national external debt picture? What happens if the public sector starts to boost investment spending? How much room is there for expansion of the public sector foreign borrowing ceiling while maintaining financial stability?

SITUATION IN EARLY PART OF 1986

In December 1985, TDRI presented a forecast of the economic situation then expected for 1986 and over the period of the 6th Five Year Plan. At that time the outlook was very pessimistic, with 1986 GDP growth estimated to be only around 3.2%, and the current account deficit around 40,000 million baht, or around the same level as last year. Since that time however, there have been major changes in both external economic situations and internal policies. The major changes are:

1. The sharp decline in international oil prices, and reductions in domestic oil prices.
2. The decline in the exchange rate of the dollar vis a vis other major currencies, particularly the Yen, and only slight appreciation of the baht to the dollar.
3. The US Farm Act.
4. Decreases in electricity charges.
5. Declines in interest rates.

Most of the changes should serve to stimulate the economy, except for the US farm act. By far the most important of these changes, are the sharp decline in oil prices and the appreciation of the yen. If the world price of crude stays around the $15 a barrel level for the rest of the year, which is not too unreasonable, then the average price for the year will be around $16 a barrel. This represents a decrease of 40% compared to the average price for 1985, and presents a substantial saving for the economy. In 1985, oil imports amounted to around 56.7 billion baht. If oil imports stayed at the same volume as in 1985, Thailand can expect a saving of around 22.5 billion baht in the oil import bill. The actual figure may be slightly less than this amount because the lower domestic price for oil, as announced three times by the Government, should lead to a higher demand.

Apart from the direct effect of lower oil prices on oil products, the fall in the world price of oil will also have a number of implications for the world economic outlook, which will indirectly affect Thailand through international trade. First, the decline in oil prices should help to stimulate the world economy, and second, it should dampen the rate of inflation. In addition, the fall in world oil prices will likely lead to less demand for Thai workers in the Middle East, and should lead to a decline in the remittances from Thai workers abroad.

The appreciation in the yen relative to the dollar, and also relative to the baht, has helped boost Thai exports to Japan and decrease Thai imports from Japan.

In terms of the development in the first part of 1986 is concerned, by far the most visible economic indicator related to the external constraint issue is the tremendous improvement in the current account. In the first six months of 1985, the balance of trade was in deficit by around 36.9 billion baht. In the first half of 1986, the figures show that the balance of trade was in deficit by only 8.5 billion baht, a change of 28.4 billion baht. The current account was actually in surplus by about 3.6 billion baht. This represents a turn around of 28.3 billion baht.

Unfortunately, in Thailand, the external trade figures are available very quickly, while other important measures of economic activity are much slower. Therefore, there is much uncertainty regarding how to interpret the current economic situation, and more importantly the implications for the future trend. This is nevertheless crucial given that the direction of policy for the new Government needs to be developed, and as 1987 is the first year of the Sixth Five Year Plan.

It is however possible to make some judgements based on various indicators that can be put together. Roughly, the interpretation is as follows:

1. Between around the middle of 1985 and the first six months of 1986, the economy has been very depressed. In fact, if there had been no major changes in the external environment, then the 3.2% real GDP growth forecasted by TDRI in December 1985 for this year should be very close to the mark or even too optimistic.

2. While currently the general economic situation has picked up substantially, partly as a result of a number of policy measures designed to boost the economy, the prospects for agriculture this year is very bleak, both because of the bad weather, and also because of low crop prices. The production of rice, cassava and maize are expected to decline compared to 1985. In 1986, agriculture will show very little real growth, and growth may even be negative.

3. At the same time the first nine months of 1986, particularly the first two quarters, saw a boom in manufactured exports, which is partly a delayed effect of the Devaluation in 1984, and also a result of a continue depreciation of the baht against the average basket of currencies of major trading partners, especially Japan.

4. The changes in exchange rates made imported goods from Japan, and other non-US trading partners, much more expensive.

5. While on average, agricultural export prices declined from 1985, particularly the price of rice which declined by around 20%, this has been offset by a large increase in volume, mostly drawn from the previous year's productions. In fact, the volume of rice export this year will be close to the target of 4.5 million tons.

6. Together with the boom in exports, the decline in oil prices has brought substantial savings to the economy.

7. There has been substantial de-stocking, and hence very low or even negative growth in gross investment (including stock changes) during the first part of 1986.

From the analysis of the external deficit problem in the earlier parts of the report, the above interpretation is consistent with the tremendous improvement in the current account over the first part of 1986. As we saw earlier, the national financial deficit can be looked at from either the trade side or the saving investment side. Looking at the situation from the trade side, it can be seen that oil imports have declined substantially and will probably save the economy at least 20,000 million baht this year. Non-oil imports have been slow to pick up due to the depressed economic situation in the first half of the year, and the substantially higher costs of ordering new stocks of imported merchandise due to exchange rate changes, particularly the appreciation of the yen. Exports have boomed. Similarly, looking at the situation from the saving investment gap side, the sluggishness of the general economy in the first part of the year, together with the bad agricultural situation, have meant low investment levels, and there has been large de-stocking activities. This has meant that the gap between savings and investment has shifted from a deficit to a surplus.

The interpretation of the improvement in saving-investment balance as being due mostly to lower gross investment (including changes in stocks) is consistent with the analyses in the previous chapters. As indicated in the chapter 2, the ratio of savings to GDP of the non-household sectors have been very stable over a long period of time. Thus, if one were to attribute a substantial portion of the improvement in the current account to an increase in savings rate, then this has to be mostly from the household sector. However, in Chapter 3, it was clearly shown that while household saving rates may increase slightly, it is unlike to change much.

DE-STOCKING

De-stocking has probably contributed a great deal to the improvement in the current account this year. In general, the figures for stock changes are very incomplete. National Accounts estimates for stock changes should be regarded as very incomplete. Some data are however available for certain

commodities, such as oil, rice, cassava, and other crops. This year, available evidence seems to suggest that at least for the commodities for which data are more reliable, there has been large de-stocking.

First oil. In the first part of the year, there was a change in the regulations which imply that the oil business is now only required to hold a stock of oil equivalent of 19 days consumption, compared to the previous 26 days consumption. Assuming an average consumption of fuel similar to 1985 of around 38 million liters per day, one can estimate that the reduction of oil stock by 7 days is equivalent to about 1,500-2,000 million baht.

Next rice. With the boom in rice export in the first half of this year, it is estimated that the beginning of the year stock of about 1.6 million tons will decline by at least 1 million ton this year. This comes as a result of very high volume of rice export this year. This works out to a decline of about 2,500-3,000 million baht.

Lastly cassava. Again, with the large volume of exports, the estimate is that the stock of cassava will decline from the beginning of the year stock of 4.8 million tons, to only around 1.9 million tons by year end. This represents around 2,500 million baht stock decumulation.

In total, with these three commodities alone, the decrease in stocks is expected to be around 7,000 million baht for this year. This represents about 3% of total gross domestic investments.

With most other commodities, there is simply no data. However, given that the baht has in practice depreciated against our major non-oil suppliers of imports (except for the US), and by over 40% relative to the yen, it is hard to believe that with the economic situation as depressed as it was in the first part of this year, there is likely to be large stock build-ups over the year. The costs of replacing imported stocks from Japan has very likely meant that orders were delayed. First, there is always the hope that the yen may fall a little, and second, one has to be fairly sure that demand growth is picking up satisfactorily. The situation may of course change towards the end of the year as the economy picks up, and there are signs that this is indeed the case.

What de-stocking means is that gross investments is lower than what it otherwise would be, because investments include changes in stocks. From the above calculations, it is quite likely that destocking has contributed at least 10,000 million baht to the improvement in the current account.

TABLE 6.1
FUEL CONSUMPTION BY MONTH
(MILLIONS OF LITERS)

				(GROWTH FROM SAME MONTH LAST YEAR)	
		TOTAL	PREMIUM REGULAR &DIESEL	TOTAL	PREMIUM REGULAR &DIESEL
1985	JANUARY	1,097.9	689.7	.21	12.02
1985	FEBRUARY	957.2	624.6	-7.41	5.66
1985	MARCH	1,020.3	692.8	-11.51	1.92
1985	APRIL	1,020.2	685.7	-4.05	9.59
1985	MAY	1,006.6	674.0	-6.21	6.74
1985	JUNE	932.9	583.5	-9.99	-2.43
1985	JULY	979.5	616.8	-3.09	3.89
1985	AUGUST	960.2	600.2	-7.37	-.06
1985	SEPTEMBER	921.1	553.4	-3.75	2.53
1985	OCTOBER	947.6	577.9	-7.23	1.28
1985	NOVEMBER	963.3	598.7	-7.46	-3.16
1985	DECEMBER	990.0	628.1	-6.61	2.17
1986	JANUARY	1,076.6	698.4	-1.95	1.25
1986	FEBRUARY	949.0	628.6	-.86	.64
1986	MARCH	1,078.3	700.0	5.69	1.05
1986	APRIL	1,054.1	680.9	3.32	-.71
1986	MAY	1,038.5	677.6	3.16	.52
1986	JUNE	965.3	613.9	3.47	5.20
1986	JULY	1085.40	684.3	10.81	10.94
1986	AUGUST	1014.10	644.70	5.61	7.11
1986	SEPTEMBER	1039.50	640	12.86	14.61
1986	OCTOBER	1057.30	649	11.58	12.31

THE IMPROVING ECONOMIC CONDITIONS

The pessimistic forecast that TDRI presented at the 1985 year-end conference was reflected in the dismal growth in the first half of 1986. Going by many indicators, it is quite possible that there was almost zero real growth in the first few months of 1986. However, with large shocks coming from the

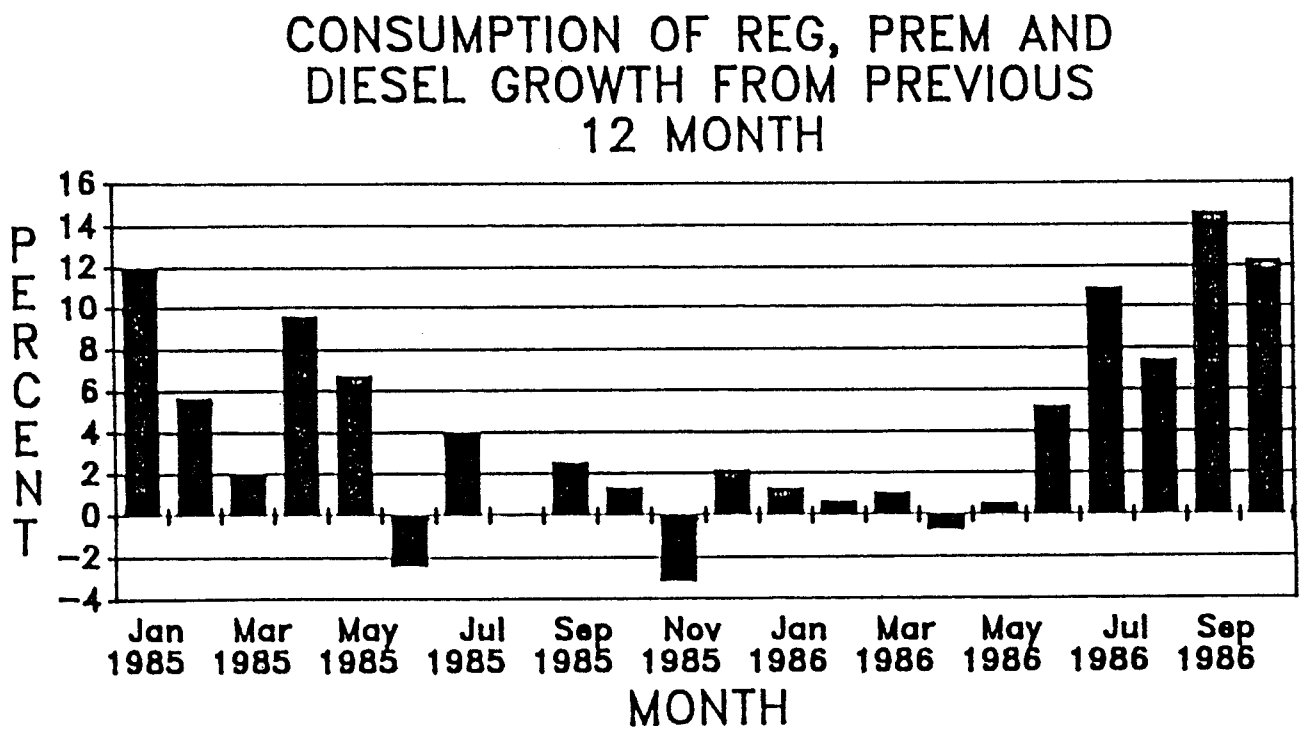

CONSUMPTION OF REG, PREM AND DIESEL GROWTH FROM PREVIOUS 12 MONTH
PERCENT
16
14
12
10
8
6
4
2
0
−2
−4
Jan 1985
Mar 1985
May 1985
Jul 1985
Sep 1985
Nov 1985
Jan 1986
Mar 1986
May 1986
Jul 1986
Sep 1986
MONTH

Figure 6.1

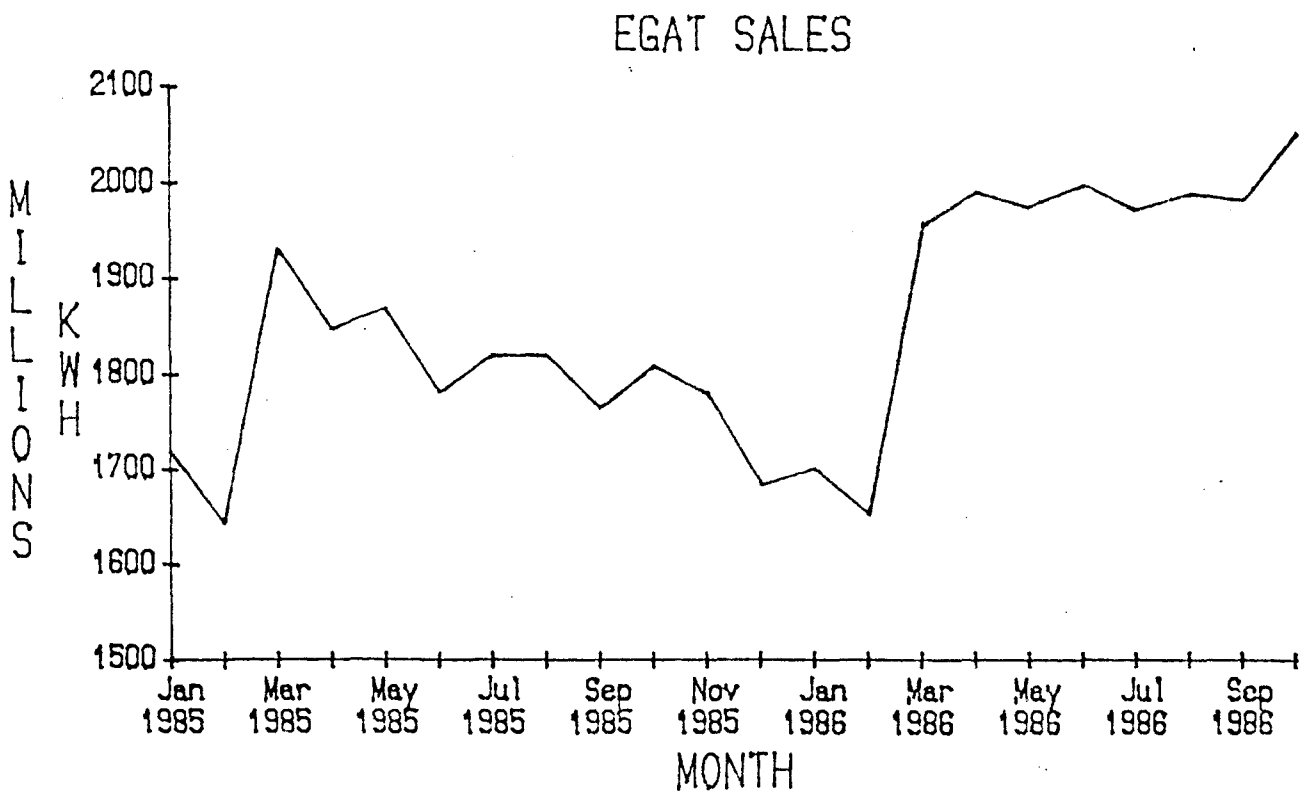

EGAT SALES
MILLIONS KWH
2100
2000
1900
1800
1700
1600
1500
Jan 1985
Mar 1985
May 1985
Jul 1985
Sep 1985
Nov 1985
Jan 1986
Mar 1986
May 1986
Jul 1986
Sep 1986
MONTH

FIGURE 6.2

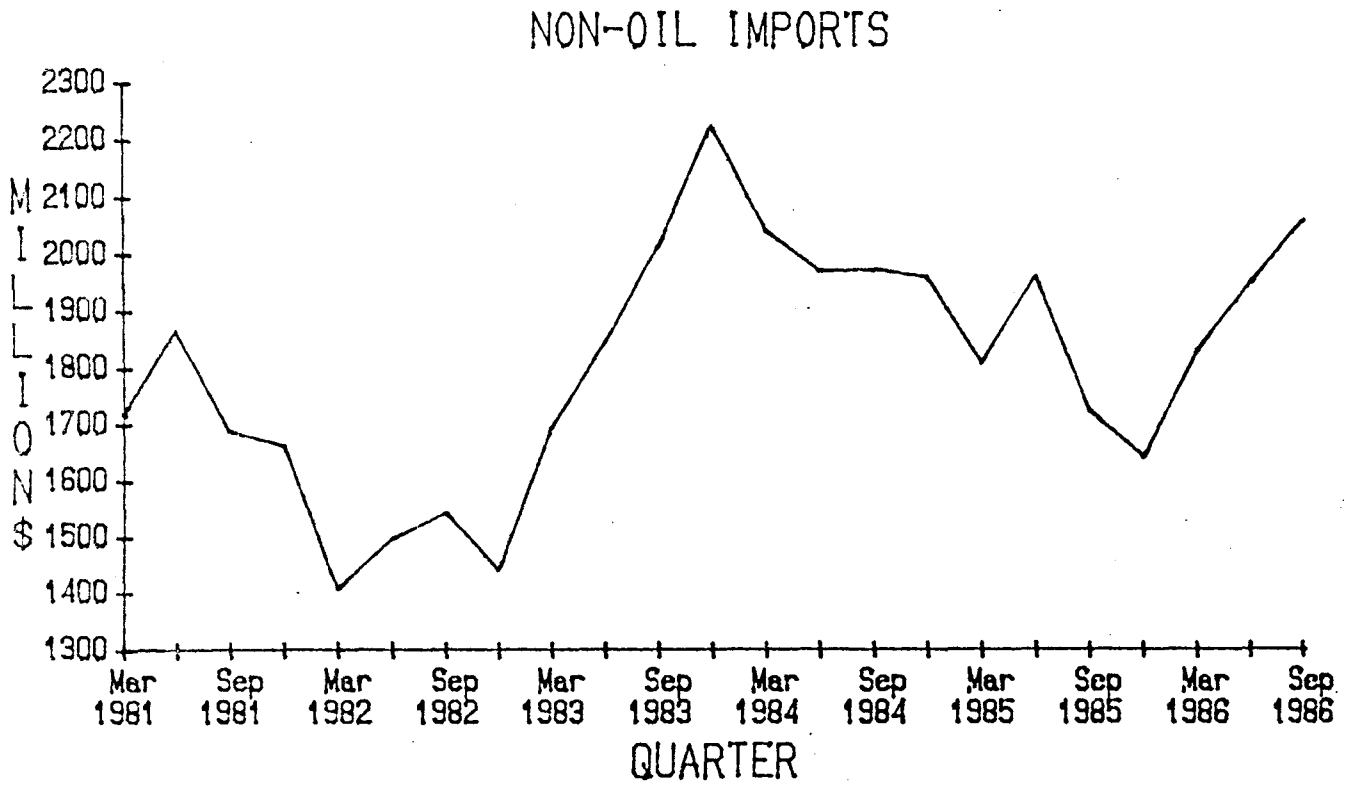

NON-OIL IMPORTS
MILLION $
2300
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
Mar 1981
Sep 1981
Mar 1982
Sep 1982
Mar 1983
Sep 1983
Mar 1984
Sep 1984
Mar 1985
Sep 1985
Mar 1986
Sep 1986
QUARTER

FIGURE 6.3

decline in oil prices, fast export growth, and various policies designed to stimulate the economy, it would be surprising if they did not eventually lead to a pick up in economic activity.

While agriculture is badly hurt this year, there are signs that elsewhere the economic situation is picking up fast. This section looks at three indicators that are consistent in indicating this trend. These are the trend in fuel consumption, in EGAT's electricity sales, and in non-oil imports.

Table 6.1 gives the total fuel consumption in millions of liters by month from January 1985 to October 1986. The total for just regular gasoline plus premium gasoline plus diesel is also given. The table also shows the growth rates from the same month of the previous year. For total consumption, it seems that the consumption for the whole of 1985 was much lower than that for 1984, with consumption finally picking up in March 1986. This total may be slightly misleading as part of the total consumption includes Fuel Oil, where EGAT is the major consumer. To leave out the impact of EGAT, which will be looked at later, one can look at the consumption of regular gasoline, premium gasoline and diesel. These correlate well to transport activities in general. Figure 6.1 plots the growth rate compared to the same month the previous year. This shows clearly that there was still growth in the first part of 1985 compared to a year earlier. Then since about August of last year up until May of 1986 there was just about zero growth compared to a year earlier. Then in June, consumption picked up, and since then till October, the last month for which data is available, there has been substantial and persistent growth for five solid months. This suggests that at least for transportation the situation has picked up a lot since the middle of the year.

The second indicator which should also be related to economic activity is the use of electricity. Figure 6.2 shows the total sales of EGAT. This includes sales to MEA, PEA and direct sales to large industries, which are mainly composed of the cement industry.

It can be seen that for electricity usage, there is a clear seasonal pattern. Sales tend to be lowest in February, with sharp pick ups in March. From the figure it appears that 1985 was very sluggish. Sales were on a downward trend throughout. In March 1986, there was a big jump, which is to be expected from the seasonal pattern. However, the encouraging sign is that sales have remained higher than the corresponding month in 1985 for all months since March. This corresponds to the total fuel consumption reported earlier, and suggests that at least for electricity consumption, there has been a pick up since the start of the second quarter of this year.

Overall, with both fuel consumption and electricity consumption, the situation must be regarded as very encouraging, at least for economic activity. One can conclude that the economy has finally picked up after a slump lasting about a year. This is presumable due to the various stimulations, such as lower oil prices, interest rates, and the boom in exports.

Finally, to look at a last indicator, if the economy is in the process of picking up, then from what one has learned about the stability of non-oil imports to GDP in chapter 2, one should be expecting an increase in non-oil imports. Figure 6.3 shows non-oil imports (merchandise) by quarter since 1981 in dollar values. It can be seen that since the big boom in imports in 1983, following a depressed 1982, there was a big drop in the first quarter of 1984. Dollar value of imports were very stable during 1984, and there was a sharp decline in early 1985 following the devaluation of the baht. After a pick up in the second quarter of 1985, with the recession starting around the middle of 1985, non-oil imports declined sharply in the third and fourth quarter of 1985.

In 1986, non-oil imports have been consistently picking up. Of course, if the pattern follows 1985 then it may fall sharply again. But this is very unlikely, given that the economy seems to be picking up, from other indicators. If anything the situation in 1983 appears to be more relevant. After a depressed 1982, which saw a decline in gross investment, and also de-stocking of goods, imports boomed for the whole of 1983, causing a huge current account deficit. Clearly, with now lower oil prices, and excellent export performance, even if non-oil imports accelerate in the last few months of 1986, it is not going to cause too much harm for the current account which should be close to being balanced this year.

OUTLOOK OVER THE SIXTH PLAN

TDRI had revised its forecasts three times in 1986. It is not unusual for economic forecasts to change. Indeed, with huge shocks to the economy this year, both positive and negative, the model used would clearly lacked credibility if a forecast made in December 1985 assuming a price for oil of around $26 a

barrel shows no response to a drop in oil prices by 40%, an appreciation of the yen by 50%, or the profound influence of the US farm act on the Thai economy.

The various revisions reflect changes in assumptions on the environments that influence economic activity. In February, with a judgement on oil price at that time to average 22$ per barrel for the year, and taking into account an expected effect of the Farm Act, which was not yet passed by Congress at that time, it turned out that the positive effect of the oil price declining to $22 a barrel would just about be offset by the negative effect of the Farm Act, so that growth in 1986 would only improve a little from the 3.2% forecasted in December.

In May, with oil prices falling further and further, even to around the $10 a barrel level, with rapid changes in exchange rates, and with the government having passed a number of measures designed to stimulate the economy, the outlook appeared to improve tremendously. The growth rate jumped from 3.2% to 4.6%. In fact, the model proved to be too sensitive to the stimulating effects coming from the shocks to the economy. That economic growth must pick up is clear, and borne out by the various indicators that we looked at earlier. However, given the very depressed business climate in early 1986, the model misjudged the speed at which the business sector and the consumers can respond to the stimulations. And if growth starts to pick up later rather than earlier, the average growth for the whole year will obviously be lower. This was corrected, and the September revision showed real GDP for 1986 increasing by 4.3%.

In fact, this is almost certain to be too optimistic, and the main reason is agriculture. If agriculture grew at around 2% as previously forecasted then we expect that the 4.3% real GDP growth forecasted in September would just about be on the mark. However, recent indications suggest that the growth of agriculture this year is around zero or even negative. There are two main factors involved. First is the bad weather which had particularly seriously affected the Maize harvest, but also that of other crops. However, the second is the impact of low crop prices on the cultivated area. Paddy, cassava, as well as maize are all expected to show negative output growth this year.

The weather is not easily amenable to modeling, except ex post. The cropping pattern response to price changes are also not well modeled in the kind of Computable General Equilibrium model used for macroeconomic forecasts at TDRI. One really needs a detailed model of the agricultural sector, which can capture the numerous types of land that are available for different crops in different parts of the country, and a great amount of details on the cost structures for different crops. It can be expected

that as crop prices fall, there will be substitutability among crops, and the more marginal land will be withdrawn from cultivation as it hardly becomes worthwhile.

The need for such a model has long been recognized at TDRI, and this year a great deal of effort has been put into constructing just such a model. Currently, TDRI has available a preliminary Non-linear Programming model of the agricultural sector covering about 15 major crops, which is particularly well suited to assessing the impact of price changes on cropping patterns and cultivated areas (this will be reported on elsewhere). The model takes into account different land suitability and productivity for different crops. Preliminary experience with this model suggests that it yields sensible cropping and land use patterns as relative price changes. With the current outlook on the price of major crops, the model suggests that the outlook for the agricultural sector over the Sixth Plan (at least the major crops) is bleak, and this is reflected in the revised forecast for the Sixth Plan period below.

The major assumptions on the world environment does not change much from the September forecast. We assume that oil prices will stabilize next year at the same average level as this year, i.e. around $15.9 per barrel. There after, beginning in 1988, the price will increase by $2 a barrel per year. Of course, as clear from what happened this year, if oil prices change substantially from what is assumed, then the forecasts will have to be revised. (See below for other scenarios).

TABLE 6.2
ASSUMPTIONS ON OIL PRICE

	17794	GROWTH
1986	15.90	-40.0
1987	15.90	.0
1988	18.00	13.2
1989	20.00	11.1
1990	22.00	10.0
1991	24.00	9.1

TABLE 6.3
ASSUMPTIONS ON WORLD ECONOMY

	GDP	INFLATION	REMITTANCES
1986	3.20	2.00	-10.00
1987	3.70	2.00	-5.00
1988	3.50	2.25	.00
1989	3.20	2.25	.00
1990	3.20	2.25	.00
1991	3.20	2.25	.00

For the world economy, world GDP in 1986 is assumed to grow by 3.2%, as in September, the figure for 1987 is now assumed to be 3.7% and for 1988 3.5%, down slightly from the 4.0% and 3.7% assumed earlier. Inflation is assumed to be initially 2% per annum, rising to 2.25% as the oil price start to increase again in 1988. Remittances are assumed to decline by 10% this year, and by 5% next year, before levelling out.

Exchange rates are assumed to remain about where they are now, with the dollar baht rate taken as 26.25 unchanged over the next five years. More importantly, the yen dollar rate is assumed not the change appreciably.

It is assumed that there will be no major trade restrictions from our trading partners, particularly from the US and EEC. If this is wrong, then manufactured exports may be affected badly.

TABLE 6.4

PRICE ASSUMPTIONS FOR MAJOR CROPS
1987-1991

CROP	REAL PRICE INCREASE PER ANNUM
RICE	.0%
MAIZE	-2.0%
CASSAVA	-.5%
SUGARCANE	4.0%
SORGHUM	-2.0%
MUNGBEAN	.0%
SOYBEAN	1.0%
GROUNDNUT	-2.0%
KENAF	-4.0%
COTTON	.5%

Table 6.4 gives the price assumptions for the major crops. This is a rather bleak picture. They are based to some extent on the World Bank commodity price projections, with some roundings. The major adjustment is the sugar price, with the assumption here substantially below that of the World Bank. Indeed, sugar is the only commodity with any real price prospects.

It is also assumed that the government will continue on with fairly restrictive policies on hiring and investments. Hiring is assumed to increase at 2% a year, and public sector investments at around 3% a year in real terms. What happens if the government changes its investment targets will be looked at below.

According to the latest estimates, GDP will grow this year at around 3.9%, down from the September estimate of 4.3%. The basic difference from the last forecast is due entirely to the performance of agriculture. Previously, agriculture was expected to grow at 1.8%, now we expect agricultural growth for 1986 of 0.2%, the reasons are as explain earlier.

TABLE 6.5
REAL GDP GROWTH BY INDUSTRIES
(PERCENT)

	TOTAL	PRIMARY	SECONDARY	TERTIARY
1986	3.9	.2	6.0	4.4
1987	5.4	2.4	6.2	6.1
1988	4.5	1.7	5.5	5.1
1989	4.3	1.3	4.3	5.4
1990	4.2	1.7	4.6	5.0
1991	4.8	2.2	5.4	5.4

Next year, real GDP is expected to be 5.4% picking up sharply from this year. That the economy is already picking up is clear, and it seems clear that we have not yet seen the full benefits of the oil price decrease, the export boom, and various other policy measures that have been introduced. Also because agriculture is so bad this year, even a slight movement back towards the normal trend should be able yield the 2.4% growth forecasted for next year (barring another bad harvest due to the weather).

Growth is expected to slow down in 1988 and into 1990, as agriculture moves along a rather low growth path of 1.7% in 1988, 1.3% in 1989 and 1.7% in 1990, and the world economy is also assumed to grow slower in these periods, and oil prices start to rise again. The rate of growth should pick up slightly towards the end of the Sixth Plan, as the larger and larger share of manufactured exports in total exports continually push up the growth of total exports. The average growth for the Sixth Plan period is expected to be just above 4.6% per annum, and below the Sixth Plan target of 5% per annum.

The really worrying feature of the above forecast is the poor performance of agriculture. However, this stems directly from the price forecasts. In fact, the forecast on rice prices, zero growth in real terms, may be regarded as optimistic by some who feel that the US Farm Act may lead to further price falls, so that in real terms the price of rice may fall (possibly even fall in absolute terms). Whether this is valid not, it is clear that the situation will still be bad. One can expect that there be movements into sugar (assuming the price rise is correct), where this is possible. Maize will be badly hit, so will sorghum, kenaf and groundnut, and some shifts out off cassava is also expected. However, in a situation where most prices are bad, cultivated area will increase slowly if at all, and one can instead expect an accelerated shift out off the major crops,

either into minor crops, other types of agricultural diversifications (eg. aquaculture), or out off agriculture altogether.

On trade and the current account, this year we now expect only a slight deficit on the current account of around 1,400 million baht. This comes about from a number of factors already discussed:- oil price decline (saving the country around 20,000 million baht), good exports (with merchandise exports expected to grow by around 15% this year, and total exports by over 11%), poor growth , de-stocking.

TABLE 6.6
CURRENT ACCOUNT
(MILLIONS OF BAHT)

	TOTAL EXPORTS	TOTAL IMPORTS	DEFICIT
1985	280021	318430	-38409
1986	311664	313102	-1438
1987	331541	344194	-12653
1988	355826	374695	-18869
1989	382844	406443	-23599
1990	414203	439750	-25547
1991	448804	477730	-28926

However, as economic activity accelerates in the latter part of 1986 and 1987, and as re-stocking takes place, it is expected that non-oil imports will continue its upward trend in 1987. In 1987, it is also expected that agricultural exports will decline slightly from the very high volume achieved this year, due to poor production in 1986, and low stocks. However, the low oil price will still cushion the impact. Over all, we expect the current account deficit to increase to around 12,650 million baht. In 1988, as the oil price increases by 13.2%, the current account deteriorates by another 6,216 million baht, and the deficit comes to around 18,869 million baht. This is of course still much better than the trend in the recent past. As oil prices continue to increase, the current account increases slightly on into 1991, with the deficit in the last year of the Sixth Plan at about 28,900 million baht. Even though the price of oil is assumed to rise up to $24 a barrel by 1991, a continual acceleration in exports due to manufactured exports being a larger and larger proportion of total merchandise exports help to keep the current account in check. Manufactured exports show an average growth of over 15% per annum through out the Sixth Plan.

From the above outlook, it can be seen that the current account deficit is expected to be much lower than in the last few years. Thus, this should improve the debt burden of the country. However, we have to be rather careful. The major variable is the appreciation of the yen relative to the dollar by around 50%, and relative to the baht by around 47%. In chapter 2, debt calculations were carried out in dollars, and so to see for example the ratio of debt to GDP, we should really revalue the debt to reflect the change in exchange rates. Whether we do so or not (and we should) yields a dramatically different picture. (We ignore other currencies)

TABLE 6.7
STOCK OF DEBT

	IGNORING YEN APPRECIATION		REVALUE DEBT WITH YEN APPRECIATION	
YEAR	END YEAR STOCK OF DEBT (MILLION DOLLARS)	RATIO TO GDP (PERCENT)	END YEAR STOCK OF DEBT (MILLION DOLLARS)	RATIO TO GDP (PERCENT)
1985	15,109	39.0	15,109	39.0
1986	14,853	33.3	17,120	38.4
1987	15,025	31.0	17,292	35.7
1988	15,434	29.9	17,701	34.3
1989	16,023	29.3	18,290	33.4
1990	16,687	28.7	18,953	32.6
1991	17,478	28.3	19,745	32.0

NOTE 1: Debt excludes Direct Investments

NOTE 2: In revaluating debt due to yen appreciation, assume that 30% of 1985 year-end stock is in yen.

NOTE 3: Assuming direct investment flows at $3[illegible]0 million per year

Table 6.7 gives the year end stock of debt based on the above projections. One set of calculation ignores the increase in value of the debt due to the appreciation of the yen. The other takes this into account by assuming that around 30% of the outstanding debt are denominated in yen, and these 30% are then revalued by about 50% to yield the dollar value of the stock of debt. (Assuming that 30% of debt is in yen is not too extreme because there had been massive movements into yen debt over the

last few years as borrowers were attracted by the low interest rates. In fact, the government even did some refinancing into yen loans just prior to the sharp rise of the yen). The calculations assume that direct investment inflows will be around $310 million per year or around 8,100 million baht per year. This is part of the inflow that makes up for the current account deficit, so should be subtracted from the current account deficit to get the net addition to the stock of debt (excluding direct investments).

In the case without revaluation, the stock of debt as a proportion of GDP declines by over 5.5% point in 1986 compared to 1985. This is because, taking account of the direct investment inflow, the stock of debt actually declines. Another factor is the appreciation of the baht against the dollar by about 3%. After 1986, the stock of debt continues to fall and reach 28.3% of GDP by 1991. The fall is faster at the beginning of the Sixth Plan, falling by 1.7% between 1987 and 1988, and the decline slows down over time as the current account worsens, with the decrease between 1990 and 1991 at only 0.4 of a percent.

Taking account of the yen appreciation yields a different picture. The stock of debt increases by about $2,000 million in 1986, due to an increase in the stock of debt by around $2,270 million on account of the 50% appreciation of the yen relative to the dollar. The ratio of debt to GDP does however decline by about one half of one percent. Then in 1987, the ratio of debt to GDP begins to fall rapidly (2.7%), and reach 32% of GDP by 1991. The appreciation alone account for about a 5-6 point increase in the ratio of debt to GDP.

However, in either case, because future current account deficits are expected to be relatively low compared to the past, the ratio of debt to GDP can be seen to be on a downward trend. Thus, in the present scenario, the country's debt problem will be getting better. Taking the case with revaluation as being the more appropriate one, it looks as though the ratio of debt to GDP should stabilize at around 30.5% of GDP. The picture is certainly a far cry from what had been happening in the five to ten years before 1986. It represents a substantial improvement compared to the previous trend and is a sign for optimism.

POLICY CHOICES

The decline in oil prices and the fairly good export performance has changed the national financial balance for the Thai economy substantially. The base case simulation shows a dramatic improvement in the current account when compared to the situation over the previous 5 years. This will ease the financial constraint on Thailand's economic development. The question that is to be addressed in this section are the possible policy choices for the government.

The base case assumed no major change in government development policy. Tax policies are not expected to change much, nor are government investment policies. Current account deficits will be small, and the ratio of debt to GDP declines over time. In this case, the implication is that the windfall stemming from the improvement in the external situations are basically used to ease the burden from the old debt, which had played such an important role in financing development in the 1970's. This is the conservative scenario, and brings clear benefit in terms of financial stability.

However, given that agriculture is due for a period of dismal growth, and the average growth for the Sixth Plan period is likely to be well below the 5% per annum growth target set in the Plan, an important question is whether some of the windfall should be used to boost growth, or for help to the rural population who are likely to be badly hurt.

There are many alternatives on how the government might act, including the followings, or combinations of the followings.

1. Ease the current debt burden as assumed in the base case.

2. Substantially increase the rural development efforts. This may involve increasing the allocations to rural development projects, or by schemes designed to temporarily lift agricultural prices above the world market levels, or by intensive projects for agricultural diversifications.

3. Regional urban infrastructure developments designed to meet an expected increase in migration rates into the urban areas, given the depressed agricultural situation.

4. Promotion of labour intensive industries, small to medium scale industries etc..

5. Export promotion on a much wider scale than at the current time, for example an exemption in business tax for exporters.

6. A conscious effort to restructure protection policies. This would be a kind of "structural adjustment" policy. It is clear that this would in the short run involve increasing the budget deficit and also the current account deficit as tax revenues may decline, and imports pick up.

Each of these, and other possible schemes, will require resources, and basically they are ways in which the government might make use of the improvement in the current account for development purposes. If certain policies may in fact eventually lead to even better exports or lower imports, all well and good. Or if the desire is to help the rural population weather the period of expected low agricultural prices, this if fine too. These are political choices that have to be made. The question to be addressed here is just how much room does the government have to play with, given that one should also have to be concerned on the financial stability question.

A way to judge the interaction of the debt issue and these policy choices is to see what might happen to the economic situation if the government increases its use of resources for development purposes. A simple way that we shall use to examine this is to look at two alternative scenarios on the government external borrowing policy. In fact, in terms of the external balance situation, whether the government uses the money from foreign borrowing or from domestic borrowings will not make too much difference. (There are of course differences in terms of the administrative structure of the public sector, as there are different laws and regulations that affect different ways of expanding the public sector deficit:- see the details in Chapter 5).

We look at two of the scenarios which were already discussed in chapter 5 in relation to the public sector debt. These are:-

1. An increase in the public external borrowing ceiling from the current $1,000 million, to $1,500 million in 1988, with the ceiling remaining $1,500 million up to 1991.

TABLE 6.8
IMPACT OF INCREASING GOVERNMENT EXTERNAL BORROWING CEILING ON GDP, CURRENT ACCOUNT, AND DEBT TO GDP

REAL GDP GROWTH
(PERCENT)

	BASE CASE	$1,500m IN 1988	$2,000m IN 1988
1986	3.9	3.9	3.9
1987	5.4	5.4	5.4
1988	4.5	5.0	5.3
1989	4.3	4.8	5.3
1990	4.2	4.4	4.8
1991	4.8	4.8	4.8
AVERAGE 87-91	4.6	4.9	5.1

CURRENT ACCOUNT DEFICIT
(MILLIONS OF BAHT)

	BASE CASE	$1,500m IN 1988	$2,000m IN 1988
1986	-1438	-1438	-1438
1987	-12653	-12653	-12653
1988	-18869	-29750	-37343
1989	-23599	-37774	-51500
1990	-25547	-40340	-57248
1991	-28926	-44844	-62994

RATIO OF STOCK OF DEBT TO GDP
(PERCENT)

	BASE CASE	$1,500m IN 1988	$2,000m IN 1988
1986	38.4	38.4	38.4
1987	35.7	35.7	35.7
1988	34.3	34.1	34.0
1989	33.4	34.0	34.5
1990	32.6	34.1	35.4
1991	32.0	34.2	36.4

NOTE: Debt takes into account Yen appreciation and excludes direct investments

2. An increase in the public external borrowing ceiling to $2,000 million in 1988, and maintaining the $2,000 through out the Sixth Plan.

It is assumed that the government will increase the public enterprise investment budgets, and also to help boost growth in the agriculture sector.

The implications of these on GDP growth, the current account, and the ratio of debt to GDP are given in Table 6.8 where the base case is also given.

With larger external borrowings, the current account deficit deteriorates starting in 1988, the year the borrowing ceiling is lifted. Growth improves, and the debt to GDP ratio is worse than the base case. These are all expected. The main question is how much change can we expect.

The case where the borrowing ceiling is lifted to $1,500 million leads to an average growth of about 4.9% over the Sixth Plan period, just under the target set for the Sixth Plan. The thing to notice is that the ratio of debt to GDP seems to stabilize after 1988 at around 34.1%. In 1987, the situation is the same as the base case, with a debt to GDP ratio of 35.7%. In this scenario, the ratio dropped slightly to 34.1% in 1988, a smaller ratio than in the base case event though the current account deficit is worse by about 9,000 million baht, on account of higher imports. This is essentially due to better GDP growth, and also higher inflation due to the government injection into the economy. From 1988 on, however, while the ratio of debt to GDP in the base case declined by about 1%, in this case, the ratio declines just slightly, by 0.1%. From 1989, the ratio increases very slightly.

In the high borrowing case, where the borrowing ceiling goes to $2,000 million in 1988 and beyond, GDP growth is higher, averaging 5.1% for the Sixth Plan, although in 1988 and 1989 GDP growth is about 1% higher than in the base case. However, the debt to GDP ratio rises by about half a percentage point between 1988 and 1989, and by about one percentage point each year till the end of the Sixth Plan.

For the $1,500 million ceiling case, the ratio of debt to GDP in 1991 is about 2.2% higher than in the base case, and the $2,000 million case again increases the debt to GDP ratio in 1991 by 2.2%.

A judgement on which of the three alternatives is the best one obviously depends on may factors, both political and economic. It depends on whether one thinks that the current debt to GDP ratio is too high, or manageable, or easily manageable. It depends on what level of growth target should be aimed at, how much help is needed for the rural population. It depends on a judgement concerning uncertainty in the world environment. Plus many other factors. Of the three cases, the one involving raising the ceiling to $1,500 million appears to lead to a only a slight rising trend in the debt to GDP ratio as the Sixth Plan ends. The high borrowing case may be too risky, as there is a tendency for the debt to GDP ratio to rise by about 1% or more each year at the end of the Sixth Plan, and is likely to get back to the level in 1986 one or two years into the Seventh Plan.

The risks arising from uncertainty in the external situation should not be minimized. Oil price may rise much more rapidly than assumed in these scenarios. Or protectionism might set in hurting our exports substantially. On this last point, we also ran another experiment just to see what might happen if manufactured exports was hit at about the same time that the borrowing ceiling is raised.

In the base run and all the simulations discussed above, manufactured exports are assumed to continue booming through out the Sixth Plan. We put in a 15% growth trend on manufactured exports, as from recent years, this seems to be the potential, barring unfortunate events on the international front. In this last experiment we take the case of high borrowing, together with an assumption that the trend on manufactured exports would decline to 5% in 1988 and on into 1991. Thus, there might be severe protectionist measures passed by our major trading partners as Thailand's share of manufactured exports into their countries increases rapidly.

TABLE 6.9
CURRENT ACCOUNT, STOCK OF DEBT
AND DEBT TO GDP RATIO
(HIGH BORROWING AND BAD EXPORTS)

	CURRENT ACCOUNT DEFICIT	STOCK OF DEBT	RATIO DEBT TO GDP (PERCENT)
1986	-1438	17,120	38.4
1987	-12653	17,292	35.7
1988	-38880	18,467	34.6
1989	-53299	20,224	35.7
1990	-62878	22,326	37.6
1991	-74992	24,889	39.9

NOTE: $2,000 million ceiling from 1988
and slow down in exports

Table 6.9 shows the current account, stock of debt and the ratio of debt to GDP for this case of high borrowing and slow down in export growth. As to be expected, the current account worsens significantly, and the ratio of debt to GDP climbed at an accelerating rate from 34.6% in 1988 to about 40% in 1991, a ratio higher than in 1985.

The point of this exercise is simply that one should bear in mind that conditions which have caused the windfall to accrue to the country in 1986 are not totally, or even mostly, under our own control. Thus, some margin for error in expectations should be allowed for.

CONCLUSIONS

The study presented above clearly suggests the following facts and policy options.

1. The overall picture of the Thai economy in both real and financial terms shows much potential improvement to be achieved in the next five years. However, some uncertainties still remain. The forecasts are fairly sensitive to assumptions on the external environments, e.g. oil prices, world economic growth, interest rates in international credit and capital markets, fluctuations of commodity prices, etc. Aiming at prudential growth targets is therefore an appropriate macroeconomic policy.

2. The economy will grow at a moderate pace of about 4.6% per annum during the Sixth Plan period. Manufacture will be the leading sector. Agricultural outputs as well as agricultural exports will demonstrate a rather poor performance which can be mainly attributed to continuous worsening of terms of trade against agriculture. More attention as well as resources are needed to facilitate some restructuring of this economic sector.

3. Although predictions exhibit considerable reduction of external imbalance in 1986, there is no clear-cut evidence that this is due to an increase in household savings/income ratio. On the contrary, this ratio declined quite appreciably in the past few years. Therefore, attempts at savings mobilization via the restructuring of current financial system are truly worthwhile so as to attain long-term financial stability.

4. The public sector tends to grow faster than the economy as a whole. Within the public sector, it is clear that substantial resources have been shifted from the central government towards state enterprises. Hence, influence of the central government on directions of public investment or resource utilization will be less. Privatization may still represent an appropriate method of resolving some troubling difficulties.

5. The forecasts indicate that there is perhaps some room for flexibility in financial and fiscal policies. It may be appropriate for the government to rationalize the overall tax structure in order to stimulate growth and restructure the economy towards labor-intensive and export-oriented activities. But adequate caution should be continually exercised in any alteration of the tax structure regarding the revenue base of the government. At present, as public debt service is already absorbing more than a quarter of fiscal appropriations, any narrowing of revenue base will not leave the public sector with much room to utilize resources in investment undertakings.

6. The simulation exercises presented above support the government decision to maintain the ceiling on public external borrowing at US$ 1 billion per annum at least for the next few years. Should such ceiling be steadily adhered to, the external debt outstanding to GDP ratio will decline and the public debt service ratio will be brought down to 9% by the end of the Sixth Economic and Social Development Plan.

APPENDICES

Appendix to Chapter 3

Financial Environment and Economic Policies

During the course of scrutinizing private savings behavior, financial and capital markets ought to be examined in detail regarding available instruments, rates of return and security, related taxes, and other privileges because these features represent important incentives inducing people and businesses to save. Furthermore, structural changes and prevailing problems in these financial/capital markets should be investigated as well since they will help very much in designing additional discretionary policies in order to stimulate domestic savings.

Financial Markets

The financial markets in Thailand consist of two major portions as organized and unorganized markets. The organized market includes legally registered financial institutions whereas the unorganized one does not do so. Ever since the end of 1984 when prohibition against illegal or chain-ring borrowing was enacted, activities in the unorganized market have slackened to a large extent. Therefore, in this report focus will only be placed on financial institutions in the organized market.

At present financial institutions in the organized market in Thailand can be categorized into six types as follows.

1. Bank-oriented: Commercial Banks (CB)
   Government Savings Banks (GSB)
   Government Housing Bank (GHB)
   Bank for Agriculture and Agricultural Cooperatives (BAAC)
2. Finance, securities, and credit foncier companies
3. Cooperatives: Agricultural Cooperatives
   Savings Cooperatives
4. Life insurance companies
5. Pawnshops

6. Specialized institutions: Industrial Finance Corporation of Thailand (IFCT)
Small Industries Finance Office (SIFO)

Table 3.17 presents a brief profile of the different types of financial institutions as of 1984 including years of establishment, typical activities, number of firms, number of branches, and supervising institutions.

In short, the first two types of financial institutions mobilize savings funds from the general public by taking deposits under different formats and, thereafter, extending credits in different formats to both the general public and public agencies. Other institutions serve specific needs. For example, life insurance companies offer life insurance in exchange for insurance premium, pawnshops lend money against a variety of articles, IFCT acts as a development bank tapping long-term funds from abroad and extending credits to industrial undertakings, SIFO provides concessional financing to small-scale industries.

Bank-oriented institutions markedly dominated other institutions in all respects in the past ten years. For instance, approximately 88 per cent of appregate domestic savings tapped by all financial institutions belonged to the bank-oriented group as its deposits whereas around 76 per cent of total credits extended by all financial institutions were originated by the same group. The second group, finance, securities and credit foncier companies, absorbed approximately 10 per cent and 18 per cent of total deposits and credits channelled through domestic financial institutions, respectively. (See Tables 3.18-3.21)

Basic Structure of Deposit and Credit Instruments of Financial Institutions

In general, bank-oriented institutions obtain funds from the public by offering demand, time, and savings deposits. Particular banks, established for particular purposes, also provide special services such as the following, special savings deposits as collaterals for loans on housing from the GHB, premium and savings bonds from the GSB, and special savings as for compensatory financing from the BAAC. Finance, securities, and credit foncier companies, on the other hand, accept deposits under the formats of promissory notes and notes payable.

Table 3.17
Brief Profile of Six Types of Financial Institutions in Thailand
As of 1984

Institutions	Year of Establishment	Activity	No. of Firms	No. of Branches (1984)	Supervising Institution
1. 1.1 Commercial Banks	Foreign Bank established in 1888. Thai Bank established in 1905	1. Mobilize funds by taking deposits from the public 2. Lending in the forms of loan, overdraft, and bill discounting 3. Investing in securities	14 foreign Banks 15 Thai Banks	1,739	Bank of Thailand
1.2 Government Savings Bank	1946	1. Mobilize funds by taking deposits from the public 2. Investing in government securities 3. Lending to the public	1	436	Bank of Thailand
1.3 Government Housing Bank	1953	1. Mobilize funds by taking deposits from the public 2. Lending to the public for housing purposes	1	-	Ministry of Finance
1.4 Bank for Agriculture and Agricultural Cooperatives (BAAC)	1966	1. Taking deposits from the public 2. Lending to farmers and agricultural cooperatives	1	67	Ministry of Finance
2. 2.1 Finance and Securities Companies	Finance companies have been operated since 1953 but full-fledged finance companies began operations in 1989	1. Issuing promissory notes 2. Purchasing promissory notes 3. Investing in securities	104	31	Bank of Thailand
2.2 Credit Foncier Companies	1958	1. Mobilize medium-term funds (not less than 3 years) from the public by issuing promissory notes at minimum amount of Baht 1,000 per note 2. Lending for housing purposes	26	-	Ministry of Finance
3. 3.1 Agricultural Cooperatives	1916	1. Main sources of funds are borrowings from BAAC and members' subscriptions to capital account 2. Lending directly to their members	1,031	-	Ministry of Agriculture and Agricultural Cooperatives
3.2 Savings Cooperatives	1946	1. Main sources of funds are paid-up share capital and members' savings 2. Lending short-term and long-term funds to members	574	-	Ministry of Agriculture and Agricultural Cooperatives

Table 3.17 (continue)

Brief Profile of Six Types of Financial Institutions in Thailand
As of 1984

	Institutions	Year of Establishment	Activity	No. of Firms	No. of Branches (1984)	Supervising Institution
4.	Life Insurance Companies	1929	1. Selling life insurance policies to the public 2. Lending and investing in securities	12	639	Ministry of Commerce
5.	Pawnshops	1866	1. Main sources of funds are their own savings and borrowings from financial institutions 2. Lending money against a variety of articles, jewelry, gold, machine, electrical appliances, etc.	330	-	Ministry of Interior
6.	6.1 Industrial Finance Corporation of Thailand (IFCT)	Established in 1959 to supersede the Industrial Bank of Thailand which had been operating since 1952	1. Borrowing long-term funds from both domestic and foreign sources 2. Extending medium-and long-term credits to industries	1	3	Ministry of Finance
	6.2 Small Industries Finance Office	1964	Receiving funds appropriated from the government budget and then depositing them with the Krung Thai Bank. Krung Thai Bank also provides matching amounts to SIFO's account-at the ratio of 3 to 1 -for the purpose of lending to small industries	1	-	Ministry of Finance and Ministry of Industry

Source: Bank of Thailand

Table 3.18

Total Deposit Outstanding at Financial Institutions in Thailand
(Unit in Million Baht)

Institutions	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
1. Commercial Banks	86,558.5	106,418.2	131,079.8	158,523.6	175,624.9	217,115.4	260,184.9	324,303.3	408,305.9	500,893.5
2. Finance & Securities Companies	7,306.3	9,865.4	14,030.9	22,332.0	23,031.9	29,309.0	38,824.8	49,814.2	54,050.7	48,551.9
3. Government Savings Bank	12,021.5	13,267.5	15,805.5	17,202.6	21,158.3	24,412.7	27,162.7	32,172.1	39,339.8	47,083.9
4. Bank for Agriculture and Agricultural Cooperatives	2,845.4	4,523.1	6,286.1	7,506.9	8,349.3	9,073.1	10,646.1	11,538.1	13,091.0	13,900.1
5. Life Insurance Companies	1,896.4	2,347.7	2,847.1	3,506.7	4,282.4	5,403.9	6,924.8	8,793.3	11,109.1	13,553.7
6. Government Housing Bank	552.1	1,654.0	2,366.0	3,368.4	4,847.7	6,534.0	5,890.2	4,522.0	2,266.8	5,451.5
7. Credit Foncier Companies	504.0	468.2	591.9	1,014.0	1,348.3	1,981.6	2,808.0	3,621.3	3,096.3	2,316.3
8. Savings Cooperatives	53.5	73.1	99.8	138.3	215.3	299.7	425.0	553.3	718.6	1,062.7
9. Agricultural Cooperatives	56.9	76.8	101.7	154.0	182.0	209.5	227.7	282.2	329.9	384.0
10. Industrial Finance Corporation of Thailand	-	-	-	-	-	-	-	-	-	-
11. Pawnshops	-	-	-	-	-	-	-	-	-	-
12. Small Industries Finance Office	-	-	-	-	-	-	-	-	-	-
Total	111,794.6	138,688.0	173,208.8	213,746.5	239,040.1	294,338.9	353,094.2	435,599.8	532,308.1	633,210.6

Source: Bank of Thailand

Table 3.19

Percentage Shares of Deposit Outstanding at Financial Institutions in Thailand

(Unit in Per Cent)

Institutions	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
1. Commercial Banks	77.4	76.7	75.7	74.2	73.4	73.7	73.7	74.5	76.7	79.1
2. Finance & Securities Companies	6.6	7.1	8.1	10.4	9.6	10.0	11.0	11.4	10.1	7.6
3. Government Savings Bank	10.7	9.5	9.1	8.0	8.9	8.3	7.7	7.4	7.4	7.4
4. Bank for Agriculture and Agricultural Cooperatives	2.5	3.3	3.6	3.5	3.5	3.1	3.0	2.7	2.5	2.2
5. Life Insurance Companies	1.7	1.7	1.6	1.6	1.8	1.8	2.0	2.0	2.1	2.1
6. Government Housing Bank	0.6	1.2	1.4	1.6	2.0	2.2	1.6	1.0	0.4	0.9
7. Credit Foncier Companies	0.5	0.3	0.3	0.5	0.6	0.7	0.8	0.8	0.6	0.4
8. Savings Cooperatives	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
9. Agricultural Cooperatives	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
10. Industrial Finance Corporation of Thailand	-	-	-	-	-	-	-	-	-	-
11. Pawnshops	-	-	-	-	-	-	-	-	-	-
12. Small Industries Finance Office	-	-	-	-	-	-	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 3.20

Total Credit Outstanding Extended by Financial Institutions in Thailand
(Unit in Million Baht)

Institutions	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
1. Commercial Banks	81,410.2	95,145.4	121,768.7	158,599.9	195,072.4	218,931.2	254,449.2	299,760.0	401,648.2	474,993.2
2. Finance & Securities Companies	20,493.7	25,227.5	33,652.8	48,149.7	47,573.3	54,978.4	65,390.1	79,515.4	90,711.6	95,029.9
3. Bank for Agriculture and Agricultural Cooperatives	4,714.8	6,778.4	8,521.8	9,703.3	10,943.5	12,464.4	14,142.0	15,741.4	17,117.9	19,608.3
4. Savings Cooperatives	1,327.3	1,623.1	1,955.6	2,469.8	3,165.2	4,038.5	5,196.7	6,678.7	8,615.5	10,978.9
5. Government Housing Bank	311.1	890.3	1,679.9	2,669.3	4,900.1	8,122.9	9,410.9	9,469.9	9,285.7	10,084.5
6. Life Insurance Companies	933.1	1,163.0	1,323.0	1,445.6	2,062.4	2,697.8	3,361.9	4,062.9	5,090.6	6,258.4
7. Industrial Finance Corporation of Thailand	1,333.1	1,663.2	1,646.0	1,903.8	2,460.6	3,309.6	4,300.9	4,700.5	4,919.5	6,192.8
8. Agricultural Cooperatives	1,899.6	2,276.5	2,913.5	3,522.4	3,839.2	3,877.0	4,169.7	4,536.3	4,797.9	5,136.3
9. Pawnshops	1,222.9	1,324.1	1,431.6	1,758.9	2,436.5	2,798.0	3,138.0	3,162.3	3,283.0	3,508.5
10. Credit Foncier Companies	597.2	631.2	835.6	1,221.5	1,628.2	2,068.2	2,582.0	3,436.5	3,702.3	3,046.4
11. Government Savings Bank	329.1	458.5	666.8	657.7	1,140.7	1,121.8	2,094.2	2,049.9	3,241.1	1,228.2
12. Small Industries Finance Office	76.1	85.3	111.5	127.7	128.6	103.4	74.6	56.2	44.0	40.8
Total	114,648.2	137,266.5	176,506.8	232,229.6	275,350.7	314,511.2	368,310.2	433,172.0	552,457.3	636,106.2

Source: Bank of Thailand

Table 3.21

Percentage Shares of Credit Outstanding Extended by Financial Institutions in Thailand
(Unit in Per Cent)

Institutions	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
1. Commercial Banks	71.0	69.3	69.0	68.3	70.8	69.6	69.1	69.2	72.7	74.6
2. Finance & Securities Companies	17.9	18.4	19.1	20.7	17.3	17.5	17.7	18.4	16.4	14.9
3. Bank for Agriculture and Agricultural Cooperatives	4.1	4.9	4.8	4.2	4.0	4.0	3.8	3.6	3.1	3.1
4. Savings Cooperatives	1.2	1.2	1.1	1.1	1.1	1.3	1.4	1.5	1.5	1.7
5. Government Housing Bank	0.3	0.6	1.0	1.1	1.8	2.5	2.6	2.2	1.7	1.6
6. Life Insurance Companies	0.8	0.8	0.7	0.6	0.7	0.8	0.9	0.9	0.9	1.0
7. Industrial Finance Corporation of Thailand	1.2	1.2	0.9	0.8	0.9	1.1	1.2	1.1	0.9	1.0
8. Agricultural Cooperatives	1.6	1.7	1.7	1.5	1.4	1.2	1.1	1.1	0.9	0.8
9. Pawnshops	1.0	1.0	0.8	0.8	0.9	0.9	0.9	0.7	0.6	0.6
10. Credit Foncier Companies	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.8	0.7	0.5
11. Government Savings Bank	0.3	0.3	0.3	0.3	0.4	0.4	0.6	0.5	0.6	0.2
12. Small Industries Finance Office	0.1	0.1	0.1	0.1	0.1	*	*	*	*	*
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Agriculturaland saving cooperatives serve their members in a similar fashion as CB, i.e. accepting funds as time and savings deposits and extending credits on certain conditions. Deposits at life insurance companies, viz. insurance premium, may be viewed in a different perspective. Returns from deposits at this institution are contingent upon special incidents or circumstances. Institutions in groups 5 and 6 as listed above do not accept any deposits from the general public or other juristic entities.

As mentioned earlier that commercial banks (CB) represent the most influential group of all financial institutions since they absorbed more than three quarters of deposits placed at all financial institutions, attention will therefore be focused upon their balance sheets. Time deposit has continually been the most popular instrument on CB's balance sheets, having commanded an average share of 73 per cent within total deposits accommodated by CB.(See Table 3.22). As for finance, securities and credit foncier companies, promissory notes issued by finance companies were preferred to notes payable issued by credit foncier companies. (See Table 3.23). And most promissory notes had short maturities, less than one year, especially after widespread crises/bankruptcies of numerous private financial firms in 1979 and 1983.

Formats of lending vary according to types of financial institutions such as the following: commercial banks' in terms of loan, overdraft, and bill discounting, finance companies' in terms of advance notes receivable, loan, and P/N installment, credit foncier companies' in terms of P/N pledging loan, mortgage loan, installment and hire purchase receivable, and short-term loan, etc. Like their domination regarding deposits, bank-oriented institutions gained approximately 76% of all credits extended by all financial institutions in Thailand during 1975-1984. Finance, securities and credit foncier companies commanded around 18% during the same period. Since commercial banks far outweighed their banking rivals, further attention will be directed to their lending profile. Within all commercial banks' lending, overdrafts turned out to be the most favorite instrument or averaging out around a half of all CBs' lending. The rest was shared by loans (20%) and bill discounting (30%). (See Table 3.24). This demonstrates the fact that preference of bank customers (in favor of O/D) overrode most other factors. In other words, CB's were not successful in persuading their customers to select the loan option, so they had to prepare their liquidity buffer stock to an adequate extent before hand in order to accommodate O/D demand. As for finance, securities, and credit foncier companies, promissory notes and mortgage loans were dominating instruments among all their deposit services and credits extended. (See Tables 3.25-3.26).

Table 3.22

Deposit Outstanding at Commercial Banks Classified by Type
(in Million Baht)

Type of Deposits	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Demand deposit	14,019.6	16,780.2	19,696.6	23,520.3	25,428.3	28,323.5	29,652.1	28,237.8	26,445.3	32,589.8
Savings deposit	7,677.3	9,517.8	11,120.7	14,961.6	18,156.8	28,127.1	38,633.8	61,695.4	95,473.8	104,035.5
Time deposit	63,693.3	78,943.9	99,272.1	117,769.7	129,363.9	157,671.6	186,671.9	231,406.3	282,878.7	358,433.1
Other deposits	968.3	1,176.3	1,590.4	2,272.0	2,673.9	2,993.0	3,227.1	2,963.8	3,508.4	3,915.1
Total	86,358.5	106,418.2	131,079.8	158,523.6	175,624.9	217,115.4	258,184.9	324,303.3	408,305.9	500,643.5

Source: Bank of Thailand

Table 3.23

Deposit Outstanding at Finance, Securities, and Credit Foncier Companies Classified by Type
(in Million Baht)

Type of Deposits	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Promissory Notes	17,319.7	18,320.7	24,111.0	36,624.8	37,646.6	46,431.3	59,561.0	75,496.6	77,173.5	74,404.5
Notes Payable	504.0	466.2	591.9	1,014.1	1,348.3	1,981.6	2,698.0	3,621.3	3,096.3	2,219.3

Source: Bank of Thailand

Table 3.24

Credit Outstanding Extended by Commercial Banks Classified by Type

(In Million Baht)

Type of Credits	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Bills										
Domestic bills	15,662.3	16,117.7	20,266.1	26,413.2	32,632.4	37,994.4	47,453.6	62,288.3	90,474.9	102,398.9
Export bills	1,711.5	1,927.1	2,373.8	5,696.9	6,363.1	6,477.8	7,645.6	6,768.9	7,233.1	9,539.8
Import bills	5,407.9	6,050.4	7,315.2	2,756.7	4,394.9	7,209.0	6,182.5	5,232.6	5,819.3	7,055.3
T/R	3,262.4	4,653.7	4,898.1	8,179.4	11,299.8	10,736.5	12,531.6	11,333.2	14,291.0	17,957.4
Loans and overdrafts										
Loans	15,514.7	20,584.6	26,931.4	33,855.4	41,106.0	48,210.6	54,743.6	69,301.6	91,930.0	125,319.3
O/D	40,860.4	45,311.9	60,396.1	81,698.3	99,285.2	108,302.9	125,892.7	144,835.5	191,899.9	212,722.4
Total	87,410.2	95,145.4	121,768.7	158,599.9	195,072.4	218,931.2	254,449.6	299,760.1	401,648.2	474,993.1

Source: Bank of Thailand

Table 3.25

Credit Outstanding Extended by Finance Companies Classified by Type
(In Million Baht)

Type of Credits	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Loans & promissory notes from other institutions	n.a	3,142.2	3,375.7	4,820.0	3,994.7	5,341.0	6,284.0	8,235.7	7,976.1	8,083.7
Loans	n.a	4,259.2	5,379.0	8,090.1	9,535.9	11,248.8	12,442.3	15,981.7	20,028.9	20,697.7
Promissory notes	n.a	15,372.9	18,226.5	23,908.7	25,156.3	31,811.4	40,218.8	48,474.0	54,392.6	57,429.1
P/N installments	n.a	2,411.1	3,357.2	3,679.2	3,657.6	3,877.5	4,315.9	4,714.5	6,204.2	7,008.4
Securities loans	n.a	42.1	3,314.4	7,651.7	5,228.8	2,699.7	2,129.1	2,109.5	2,109.8	1,811.0
Total	20,493.7	25,227.5	33,652.8	48,149.7	47,573.3	54,978.4	65,390.1	79,515.4	90,711.6	95,029.9

n.a. not available

Source: Bank of Thailand

Table 3.26

Credit Outstanding Extended by Credit Foncier Companies Classified by Type
(In Million Baht)

Type of Credits	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
P/N pledging loans	-	-	-	-	-	-	-	45.8	-	-
Mortgage loans	328.1	326.7	606.9	888.0	1,094.2	1,463.9	2,096.6	2,362.7	2,691.5	2,548.7
Installments & hire purchase receivable	62.0	18.3	142.6	333.5	534.0	604.3	485.4	299.6	297.3	205.7
Short-term loans	207.1	286.2	86.1	-	-	-	-	730.4	713.5	292.0
Total	597.2	631.2	835.6	1,221.5	1,628.2	2,068.2	2,582.0	3,438.5	3,702.3	3,046.4

Source: Bank of Thailand

Major Structural Changes

1. During 1975-1984 there was a distinct shift of deposit pattern at commercial banks from demand to savings deposits. In 1975 demand deposits' percentage share in all deposits was 16% and decreased to 5% in 1984 while that of savings deposits grew from 9% in 1975 to 20% in 1984. Difference in the rates of return must have contributed to this shift. Or depositors must have felt obligated to adjust their deposit balances so that their demand deposits, which yielded no interest, were reduced to the extent that they only covered essential transaction balances. Even though the interest rate on savings deposit is usually lower than that on time deposit, the tax exemption together with its immediate accessibility to withdrawal, especially after recent introduction of electronic banking services, enhanced the popularity of savings deposit over the past ten years.

2. In terms of credit extension by commercial banks, term loans have gained more uses as opposed to those of overdrafts. The percentage share of term loans in all credit types increased from 19% in 1975 to 29% in 1984 and overdrafts' share declined gradually and slightly from 49% in 1975 to 45% in 1984. This may have been due to several factors. Ordinarily, most borrowers prefer overdrafts to term loans because of O/D's flexibility on drawdown and repayment while commercial banks prefer the opposite because of orderly scheduling on funds flow. Commercial banks thus introduced two types of interest rates: MOR (Minimum Overdraft Rate) and MLR (Minimum Lending Rate), with the former higher than the latter so as to discourage the usage of O/D. The Central Bank also assisted commercial banks by issuing a ceiling on O/D at Baht 50 million per client in February 1985. All the above factors geared lendings of commercial banks towards term loans.

3. Ever since the first establishment of a finance company in 1961, businesses of private financial firms expanded rapidly in terms of not only the number of companies but also amounts of assets, loans, and deposits. It was not until 1979 that a finance company, Raja finance, encountered severe difficulties. The first shock in the local stock market, where Raja placed a large portion of its investment, triggered off the first crisis in the local money market. It is therefore not surprising to find that the growth rate of deposits at all finance companies dropped from 59.2%

in 1978 to 3.1% in 1979 and that of credits from 4.3% in 1978 to -1.2% in 1979. The second crisis occurred in 1983 owing to several reasons such as excessive lending to affiliated companies, mismatching of borrowing and lending maturities, and concentration of lending to few large borrowers and/or few large projects. In short, difficulties encountered by private financial firms arose from misuses of funds obtained from the public. Or inadequate attention was paid to the asset side of these firms, in sharp contrast to their liabilities.

4. Bankruptcies and collapses of numerous finance, securities and credit foncier companies since 1983 led to further adverse effects upon the public confidence in local financial institutions. A large number of other financial firms faced growing difficulties as their deposits and lendings receded dramatically. The Ministry of Finance and the Bank of Thailand found it inevitable to undertake the rescue operations on April 4, 1984 to provide assistance to ailing private financial firms. The number of troubled finance companies joining the rescue project reached twenty-five.

5. Other than failures of some finance and securities firms as mentioned above, some commercial banks also encountered difficulties ever since 1982 in their funds management due to similar reasons. Examples of their problems were bad debts, doubtful debts with inadequate or even without valuable collaterals, losses in foreign exchange operations, excessive lending to affiliated companies, and maturity mismatching.

6. In conjunction with the April 4th rescue operations, the Thai Central Monetary Authority established several Funds such as Liquidity Fund and Capital Market Development Fund as a means to inject necessary financial aids to problematic financial institutions. These Funds received contributions from other healthy commercial banks and financial firms. Towards the end of 1985, when the new Decree on commercial banking was approved by the Cabinet, the formats of concessional assistance (to be) provided to ailing financial institutions have evolved into a common funds called Funds for Rehabilitation and Development of Financial Institutions, which receives interest-free contributions from all financial institutions.

7. It is easily noticeable that one outcome of the crises among numerous finance companies and a few commercial

banks in 1983-84 was a shift from deposits at finance, securities and credit foncier companies to bank-oriented financial institutions. This shift was clearly evident despite the fact that deposit interest rates at the latter were lower than those at the former. The shift indicates that depositors are more concerned on security of their deposits than on their rates of return.

Relevant Problems

1. Unreliable and/or Insufficient Information about Borrowers

At present, most financial institutions complain about prospective borrowers' failure to furnish lenders with comprehensive and reliable financial statements when applying for credits. This causes not only delay in credit extension but also possible future losses. It is therefore unsurprising that financial institutions have now become increasingly selective about credit extension despite their excess liquidity. And quite a few financial institutions are now tempted to switch decision making authority on credit extension from a decentralized to centralized network. Some banks already join each other in an attempt to set up a "Customer Information Club" so as to exchange information and attain accurate profile of customers.

2. Availability of and Competition in Financial Services

It is found that even though some large banks have endeavored to offer their customers a wider range of financial services, this broader spectrum is mostly available only in metropolitan areas. In spite of the presence of some banks' rural branches, types of financial services or packages disseminated out there are rather limited. Worse yet, unorganized market activities tend to be accessible to all clients. This represents an extreme contrast to formal financial markets, i.e., highly profitable, regulation-free, requirement-free, and readily available financial services to all.

It should be noted that up until recently private financial firms as well as commercial banks had been

very much engaged in a competition of asset-based activities. Competition in financial services with respect to innovation, diversification, and quality had been rather neglected until the early eighties.

3. Rigidity of Interest Rate Movements

Interest rate is one of the most important factors influencing flows of funds through formal financial intermediaries and unorganized markets. In the past few years the Thai Central Monetary Authority has altered its stance regarding specification of local interest rates. It tends to prefer voluntary movements of interest rates specified by commercial banks and finance companies themselves. Such preference prevails on both sides, an increase and a decrease, depending on the liquidity status in the market and each financial institution's individual treasury policies. The Central Bank thus stipulates only ceilings on deposit and lending rates in order to protect the public against usury and possible frauds. However, some rigidities still remain in interest rate movements voluntarily conducted by private financial institutions especially in the downward direction. One of the main reasons why some private financial institutions are reluctant to reduce their deposit interest rates is possible loss of some customers given their narrow deposit base and limited credit lines that can be tapped abroad. These private financial corporations are consequentially reluctant to curtail lending interest rates since doing so will suppress their profitability. It should be noted that local interest rate rigidity gives rise to several repercussions upon domestic liquidity. And such effects are amplified by flexibility of local exchange rate as initiated since the end of 1984 and the absence of strict exchange controls on foreign capital inflows/outflows. Domestic liquidity glut in most parts of 1986 clearly demonstrates the expected result of downward rigidity of local interest rates, continuously declining foreign interest rates, and rather stable exchange rates of local currency.

4. Unbalanced Leverage

The status of numerous customers in Thailand has often caught both commercial banks and private financial firms in a quandary in the following respects. Most small- and medium-sized Thai companies tend to count

heavily upon debt, instead of equity, financing as a means to uphold their operations because of intricate difficulties in raising equity. These companies are therefore quite fragile or extremely vulnerable to fluctuations of interest rates and/or credit lines. Commercial banks and financial firms are troubled as well for several reasons, for example, if they are too cautious and restrictive on debt/equity positions of borrowers, they may not be able to find sufficient clients; and once they commit themselves to certain clients, it is difficult to terminate such commitment or stop debt rollovers as doing so will hurt their clients and thereby bring about more losses. In other words, long-term funding is prevalently lacking in Thailand. And private financial institutions are thus compelled to share the burden of sustaining operations of the weak financially-structured companies or corporations.

5. Loss of Confidence

One discouraging outcome of a string of bankruptcies of financial firms in 1983 is the widespread loss of public confidence within the security of their deposits at these firms. Such confidence is also very hard to be restored without any eposit guarantee scheme or firm commitment from the government. Therefore, one should not be surprised to find that maturity profiles of typical private financial firms are now tilted towards the short end due to risk aversion of the public. Consequently, these firms are not well-equipped to extend long-term financing.

Capital Markets

Present Status

Since 1975 the Securities Exchange of Thailand (SET) started offering investors or savers with alternative means of capturing their surplus funds other than deposits at commercial banks and finance companies. Such means include common and preferred stocks, straight bonds, debentures, and unit trusts. Daily trading in SET adds crucial elements of liquidity and opportunity to realize capital gains. However, due to numerous factors and prevalent negative image after the crash in 1979, SET has not arrived at its full-fledged stage as can be testified by an international comparison of stock exchanges in other Asian

countries as demonstrated in Table 3.27. Thailand's SET is far smaller than and behind most stock exchanges of its Asian neighbors in several respects such as numbers of listed companies and securities, types of securities, trading volume, and market value. Legal restrictions represent one important factor restraining the growth of SET. For instance, legal complexities in Thailand lead to the absence of offering of convertible bonds, corporate bonds, and bonds with warrant which are mostly available in stock exchanges of newly industrialized countries such as Singapore and South Korea.

If one looks further into how SET has performed in the past few years relative to other financial institutions in mobilizing domestic savings in Thailand as shown in Table 3.28, he will easily notice a big slump posterior to the climatic episode in 1979 which entailed substantial loss of public confidence in the local stock market. In 1985-6, however, downtrends of local and foreign interest rates, together with imposition of additional interest income tax, reinvigorate the SET to some extent. Incremental momentum to activities in SET is also contributed by interests of foreign parties by ways of recently established Bangkok Fund and Thailand Fund whose prime objective is to effectively channel foreign investment into the local stock market. Notwithstanding, SET has not attained sufficient stamina to function as an efficient financial institution matching funds from surplus to deficit units in the country. The two foremost reasons for inactive demand and supply in SET are the lack of widespread knowledge in stock trading (and this lack was aggravated by the 1979 crisis) and the legal plus tax difficulties. Other hindering factors will be elaborated afterwards.

Distinct securities markets that have, on the other hand, prospered quite well are secondary markets for government and state enterprise securities. These markets began in 1982 hosted by a growing number of active commercial banks and finance and securities companies. This number reached almost thirty by the middle of 1986. These hosting banks and financial firms offer post-issued government and state enterprise securities with various remaining maturities and yields for sale to the general public. They adjust prices daily so as to reflect current market condition as well as their portfolio positions. Investors and savers warmly welcome this package of investment opportunities as the degree of risk involved is minimal and maturities are flexible or immediate liquidity is available. It is therefore not surprising to find turnover volume at these secondary markets rising very rapidly. Some hosting units even go further, in order to accommodate large and reliable institutional customers, by offering repurchase-like services to their clients with the objective of assisting their clients in immediate and short-term portfolio adjustment.

Table 3.27 Comparative Statistics of Various Stock Exchanges (As of December,1984)

	Thailand	Singapore	Malaysia	Hong Kong	Korea	Taiwan	Japan
1. No. of listed co.	96	301	282	218	336	123	1,456
2. No. of listed sec.							
-Stock	99		296	252	455	127	1,461
-Bond	130		1	9	3,084	24	736
3. Total market value							
-Stock (mil.$us)	1,747	12,247	19,401	22,666	6,222	9,935	644,417
-Bond (mil.$us)	5,626*	5,325	7.4	301	11,458*	907	371,070
4. Trading value							
-Stock (mil.$us)	396	3,770	2,311	2,355	3,769	8,261	49,572
-Bond (mil.$us)	10		0.01	9.6	2,722	24	8,013
5. No. of members	30		47	349	25	39	83
6. Kinds of listed sec.	CS,PS SB,UT	CS,PS SB,CB,BW	CS,PS SB,CB	CS,PS SB,BW	CS,PS SB,CB,BW	CS,PS SB,CB	CS,PS SB,CB,BW

*Par value

CS: COMMON STOCK
PS: PREFERRED STOCK
SB: STRAIGHT BOND
CB: CONVERTIBLE BOND
BW: BOND WITH WARRANT
UT: UNIT TRUST

Table 3.28 Domestic Savings Tapped By Major Financial Institutions On A Yearly Basis

	1979		1980		1981		1982		1983		1984	
Financial institutions	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Commercial Banks	17,101.0	67	41,491.0	88	42,787.0	60	64,401.0	71	83,294.0	87	93,296.0	88
Finance Companies	422.0	2	(240.0)	-0.5	22,754.0	32	15,936.0	18	1,677.0	2	(2,769.0)	-2.6
Life Insurance Co.	776.0	3	1,122.0	2	1,231.0	2	2,053.0	2	2,451.0	2	2,243.0	2
Credit Foncier Co.	334.0	1	633.0	1	826.0	1	813.0	1	(525.0)	-0.6	(777.0)	-0.7
Govt. Savings Bank	3,956.0	16	3,255.0	7	2,750.0	4	5,076.0	6	7,101.0	7	7,744.0	7
SET (new issues)	2,890.0	11	697.0	2	1,084.0	2	2,164.0	2	1,456.0	2	6,495.0	6
Total	25,479.0	100	46,958.0	100	71,432.0	100	90,443.0	100	95,454.0	100	106,232.0	100

REMARKS

1. Interbank Deposit Not Included
2. Total Amount of FNs
3. Total of Insurance Preaiums
4. Total Value of New Shares Issued by Listed and Authorized Companies at Issuing Prices

Recent Restructuring

One main legal constraint that hampered the growth of SET was the enactment of the Public Company Act in 1978. This Act prohibits public offering of both common stocks and debentures of companies other than those registered as public companies. Such restriction effectively halted underwriting activities in the primary market of SET in 1980-82. Nonetheless, commercial banks, being forced to make public offering so as to satisfy share divestiture, and certain finance and securities firms, adopting new techniques in private placement, helped revive the underwriting business in Thailand somewhat. In September 1984 the SET Act was amended and thereby particular types of non-public companies are now allowed to issue debentures and adopt public offering. Those non-public companies must be either already listed or authorized SET companies or applying for SET membership. Despite such aforementioned amendment, there remain certain conflicts between the SET Act and the Public Company Act. For instance, the Public Company Act stipulates that a company which registers itself from 1978 onward have to apply for a public company status if the number of its shareholders exceeds 100. In the meantime, SET demands that its listed company or authorized company possess at least 300 or 200 small shareholders, respectively. Thus, general companies hesitate to apply for SET listing because doing so will require them to both diversify their shareholders and apply for the public company status which entails very much difficulties.

By 1986 the government was caught in an intricate dilemma. On the one hand, it was searching for some methods of relieving itself from revenue shortfall without incurring further public debt since debt obligations are already absorbing a sizable portion of total fiscal appropriations. On the other hand, it should try its best at revitalizing its economy out of the lethargic state and tax increase seems to be the least appropriate option. Nevertheless, a package of compromised measures were undertaken and some of these, as follows, have direct impact upon the working and future development of local capital markets.

1. Ordinary tax exemption on capital gains received from SET stock trading is not to be applicable to those received from trading of debentures. Such rule will definitely impede the development or further usage of debentures which are already encountering strong difficulties regarding the prerequisites to be satisfied before issuance and the lack of efficient secondary markets.

2. The corporate income tax of non-listed and authorized companies is curtailed from 40% to 35% so as to provide stimulus

to the economy. But this cut will certainly undermine the incentive of entering SET as listed companies as the 30% tax rate for listed companies is to stay put.

3. Tax credits that are normally granted as allowable deduction after dividends are declared are scaled down from 35% to 30%. This, though yielding additional revenue to the government, lessens the attraction of investment in SET.

4. Normally, listed companies are entitled to tax exemption on dividends up to 15% of their before-tax income while authorized and non-listed are allowed up to 7.5%. Now, two conditions are attached to such tax allowances : securities be purchased at least 3 months before dividend payments, securities be held for at least 3 months after dividend payments. These conditions are meant to help delete tax loopholes but they somewhat discourage investment in securities since they deflate the degree of liquidity of such investment.

5. The uplifting of interest income tax from 12.5% to 15% is applicable not only to deposits at commercial banks and finance companies but also to a portion of interest from government securities that is above ceiling on commercial banks' savings account interest rate. This measure impairs the attractiveness of government securities and thus some activities in capital markets. Meanwhile, interest from debentures, ordinarily liable to progressive income tax rates, is to be subject to the 15% flat rate such as typical bank deposits. This should help entice more investors into the debenture market.

Overhanging Problems

Despite some changes recently introduced by the Thai government, SET is still suffering from some remaining fundamental weaknesses and/or problems as illustrated in the following.

1. Inadequate Demand The inadequacy of demand for equity investment in Thailand can be well substantiated by the average volume of trading turnover in SET. Except for the hectic period between 1977 and 1979, the average trading turnover per day was as low as Baht 30-50 million. (See Tables 3.29-3.30). And when the numbers of shares are compared with the numbers of shareholders in SET, slower growth of the latter (with the exception in 1983 in which a rapid increase of the number of shareholders was mainly attributed to the share divestiture requirement imposed upon commercial banks) distinctly indicates low popularity of investment in equity in Thailand.

The rapid swelling of trading volume in 1985-86 seems encouraging but it coincided with the drop of interest rates, rise of related taxes, and inception of Bangkok Fund and Thailand Fund. Therefore, nobody can guarantee whether the recent picking-up in SET will be ephemeral or long-lasting.

The general dearth of demand can be traced back to the well entrenched financial culture of the Thai people. The financial markets in Thailand have long been dominated by commercial banks and finance companies whose financial services are mostly fixed-rate oriented. The majority of the general public therefore hesitate to allocate even parts of their savings in share or stock ownership whose trading mechanisms plus strategies are not well-known or well-understood and whose yields are rather uncertain.

2. Inadequate Supply The limited number and variety of instruments offered in SET do not appeal much to investors. For instance, as of November 1985 there were only 92 common stocks, 3 preferred stocks, and 4 unit trusts as available corporate securities, 129 government bonds and only 1 state enterprise bond as available public securities. This unfavorable market condition was exacerbated by uneven distribution of securities among different economic categories. Besides legal difficulties and restrictions as mentioned earlier, there are other factors restraining private companies from tapping funds from the equity market such as the following. First, private businesses tend to be able to borrow funds at cheaper costs from money markets than from capital markets and the latter often require complicated procedures which entail numerous administrative costs. Second, borrowing from the stock market could dilute controlling power in debtor enterprises. Third, entering SET could only be achieved at the expense of disclosing information profiles of borrowing entities which are typically kept confidential. Finally, tax allowances and other privileges granted to those tapping funds from SET are often viewed as inadequately worth an effort plus associated expenses. In other words, a large number of potential borrowers do not perceive any benefits in kind or those to their reputation when they are officially allowed to issue securities in SET. Or official credibility/recognition in the stock market does not mean much to them so they, similar to investors, tend to stay away from SET. Should such negligence of potential borrowers and lenders prevail to the present extent much longer, further development of SET will be very difficult to be accomplished.

3. Tax and Other Legal Constraints In addition to alterations of tax allowances and legal revisions mentioned above, there are several other tax and legal issues remaining as stumbling blocks on future development of SET such as the following. First, the present corporate tax deduction procedure

Table 3.29: Trading Turnover of Corporate Securities at SET

Item	1977	1978	1979	1980	1981	1982	1983	1984	1985
Volume (Mil. Shares)	97.1	178.9	97.3	58.2	30.0	60.8	71.2	83.3	97.3
Value (Mil. Baht)	26,282.0	57,066.0	22,451.0	6,549.0	2,521.0	5,878.0	9,121.0	10,535.0	15,334.0
-Monthly	2,190.0	4,755.0	1,871.0	546.0	210.0	490.0	760.0	885.0	1,278.0
-Daily	107.0	232.0	91.0	26.0	10.0	24.0	37.0	43.0	63.0

Table 3.30 Distribution of Share Ownership

Items	1978	1979	1980	1981	1982	1923	1984
No. of holders							
-Individual	66,574.00	66,130.00	77,263.00	81,313.00	94,624.00	179,970.00	176,415.00
-Institution	3,752.00	4,220.00	4,346.00	4,471.00	4,560.00	5,136.00	5,285.00
-Total	70,326.00	70,350.00	81,609.00	85,784.00	99,184.00	185,106.00	181,700.00
No. of shares (Million)							
-Individual	42.30	39.92	44.24	47.04	53.94	75.32	88.15
-Institution	73.72	85.88	98.24	104.83	124.56	130.59	211.00
-Total	116.02	125.80	142.48	151.87	178.50	205.91	299.15
Growth (%)							
-No. of holders		0.03	16.00	5.00	16.00	87.00	(1.80)
-No. of shares		8.00	13.00	7.00	18.00	15.00	42.00

favors debt financing instead of equity financing. Interest expenses on debts of private corporations can be treated as a deductible item before corporate income tax is to be calculated. On the other hand, dividend payments are not to be treated in a similar fashion and they can only be remitted after corporate income taxes are fully cleared. This arrangement immediately tempts business leaders to count on debt commitment first as a superior means of financing their deficit positions to equity participation. Second, while foreign institutional investors from some countries, with which Thailand presently holds double taxation treaties such as the U.K. and Singapore, are enjoying tax exemption on capital gains derived from trading in SET, those in other influential countries but without double taxation agreements are subject to the 25% capital gain tax. This bias discriminates against a large group of potential investors who, though holding some interest in stock trading in SET, are hardly aware of available services from Bangkok Fund and Thailand Fund which are established chiefly for the purpose of attracting foreign investment or stimulating demand in SET. Third, in secondary markets for government and state enterprise securities, existing tax arrangements do not persuade investors to commit transactions as frequently as they may wish. Capital gains derived by investors are subject to ordinary progressive income taxes. On the contrary, if investors hold securities until maturities, their accrued interest may or may not be partly subject to interest income tax depending upon dates of note issuance and conditions initially stated.

Finally, some current rules and regulations imposed on particular institutions are not quite in accordance with general policies encouraging capital market activities. Insurance companies and provident funds, for example, are prohibited to invest more than 40% of their assets and 20% of their capital funds, respectively, in common stocks. These institutional investors tend to be the ones with long-term funds which are very much needed in the stock market as a stabilizing valve. They should thus be encouraged to participate in SET. In spite of such generous regulations and increasing popularity of provident funds in town, it is notable that both insurance companies and provident funds, in the past few years, invested very little in the SET. This certifies a rampant negative attitude towards risks in local stock trading as a result of intimidating shocks in 1979.

4. Risk-Return Trade-off According to the study conducted by Dr. Somjai Phagaphasvivat and Dr. Pipat Pithyachariyakul, it was found that even though an average rate of return of the market portfolio based on 67 selected stocks over 10 years of SET operation was around 16% p.a. or twice as much as average returns on bank deposits over the same period of time, the risk inherent

in such advantage was also very high, as measured by the standard deviation of 20.294% for the whole market. A trade-off to this extent was detected in most groups of stocks, even the most popular group of construction materials, thus strengthening the notion that SET is closer to a gambling game than an arena of alternative investment opportunities.

5. Market Distortions The collapse of Raja Finance and the subsequent stock crisis in 1979 were partly due to manipulation and inside trading. This flaw still remained in the first half of 1980s as can be indicated by the fact that stock prices often moved in favor of certain groups of investors. In other words, market prices rarely reflected all available relevant information. Technically, accumulation or distribution of stocks prior to bullish or bearish trends was mostly executed by manipulators or insiders. Domination of these insiders immediately suggested a hypothesis, which was validated in the aforementioned study, that SET was heavily speculative in the sense that it was speculators, rather than long-term investors, who commanded the stock market at most of the time in the past.

6. Other Weaknesses Other than problems and defects stated earlier, capital markets in Thailand are also sufferring from the lack of some accommodating institutions ordinarily found working in conjunction with securities exchange centers around the world. Examples of these institutions are securities financing corporation, securities depositing services, securities or corporation rating services. Without these collaborating efforts, transactions or exchanges of securities/stocks are not facilitated. Therefore, existing participants in the Thai capital markets, either buyers or sellers or intermediaries, have limitation upon their roles, contributions, and willingness. These facilitating institutions deserve considerable attention from the Central Authority if efforts to develop efficient local capital markets are to be fruitful.

Implemented Monetary and Related Policies

On top of the basic structures of financial and capital markets which are discussed above, discretionary economic policies as implemented by the government exert strong influence upon savings decisions of private entities. The first and foremost policies which give rise to direct impact upon domestic savings are monetary ones as they determine not only the volume of financial assets in the system but also the levels of nominal as well as real interest rates which represent returns to financial savings. The following will trace monetary and related policies as conducted in Thailand since 1980 in two categories:

ordinary and special measures.

Ordinary Measures

Typically, the Monetary Authority adjusts local interest rates for three general purposes as follows.

1. Counteracting excess or shortage of domestic liquidity so as to preserve financial stability.

2. Conforming to trends of international interest rates or avoiding possible excessive disturbances to the country's balance-of-payments position.

3. Stimulating or defusing the local economy when it commands too stagnant or overheated a status, respectively.

Normally, other than because of intervening measures, local liquidity can vary rapidly depending on four major factors. First, peaks or troughs of economic activities necessitate relatively high and low demand for money, respectively. Second, fluctuations of relative interest rates abroad may induce inflows/outflows of foreign capital which will affect domestic liquidity afterwards. Third, stable or unstable exchange rates of local currency will play an important role in decision making on commitment and repayment of external debt. Finally, deficit or surplus in the balance-of-payments account will, if not absorbed by adjustments of commercial banks' portfolio, also result in changes of domestic liquidity. Once local liquidity varies due to any of the aforementioned factors and the Monetary Authority wishes to respond for any of three above purposes, it can do so by utilizing several monetary policy instruments such as interest rate ceilings, discount (or bank) rate, rediscounts, repurchase intervention, and capital/risk assets ratio.

Should one compare the degree of domestic liquidity (as represented by loan/deposit ratio) in local money markets with Bangkok interbank rate and measures undertaken by the Monetary Authority in the first half of 1980s, he will be able to easily detect the expected correspondences. For instance, the Monetary Authority handled the two peaks of tightness in money markets in 1981 and 1984 by uplifting ceilings on interest rates. And it did the opposite twice in 1986 in the presence of excess liquidity so as to stimulate domestic investment. It varied central bank rates not only to offset liquidity imbalances but also to bend general interest rates in accordance with international movements.

Special Measures

The Thai Monetary Authority has maintained its stance throughout in preserving the interplay of free market forces. This is demonstrated by the stipulation of only ceilings on deposit and lending interest rates instead of particular rates for those of particular maturities. The Monetary Authority intensified this preference by uniting limits on deposit interest rates for different maturities together in 1984. In the same year it started prohibiting interest payments on deposits with maturities less than three months as a means of encouraging long-term savings. At times of balance-of-payments or exchange rate difficulties, exemption of interest income withholding tax on foreign borrowings, swap arrangement for foreign borrowings, ceilings on import L/C and credit growth were adopted. Five special measures that have strong effects upon financial resource management are the following.

1. Interest Income Tax At the beginning of 1982 interest income tax imposed on interest payments from financial intermediaries was increased from 10% to 12.5%. And by the beginning of 1986 it was raised again to 15%.

2. Compulsory Credit Extension In response to agricultural promotion policy, commercial banks have been requested since 1975 to extend credits to farmers by at least a certain proportion of their total deposits at the end of preceding years. This proportion was raised several times but at the latest increase some allowances were given to cover credits for agro-businesses.

3. Priority Sector Lending From 1984 onward, 4-5 crucial economic sectors are identified and given special privileges on credits to be attained from commercial banks regarding both volume and prices. That is, interest rates on credits allocated to priority sectors are subject to a lower ceiling than the one on general credits. Commercial banks' extension of credits to priority sectors is normally reciprocated by certain benefits from the Central Bank (e.g. higher volume of rediscounts).

4. Decree Against Illegal Borrowing In 1984 the government issued a Decree against illegal borrowing such as oil shares or pyramid money game. The issuance led to collapses of illegal or chain borrowing and refuelled activities in organized money markets.

5. Rescue Operations After crises in 1979, the government intervened to rescue both faltering commercial banks and finance/securities/credit foncier companies in 1983-5. These banks and financial firms severely suffered from mismanagement but the government extended assistance in several formats so as to avoid collapses or bankruptcies which, if occur, could create widespread and hardly curable negative externalities upon public confidence such as the dismal incident in 1979.

6. Quality Control At present the Monetary Authority stresses the significance of quality of assets and management strategies as explicitly evident in recent changes of regulations and revision of relevant Acts. For instance, while some types of reliable assets such as interbank loans and receivables from public agencies are waived from the capital/risk assets requirement, lendings overseas are to be declared as risk assets because they are vulnerable to a great extent. Moreover, a ceiling on overdraft credit line per client is specified so as to limit usage of OD or ameliorate strains upon commercial banks. And all banks are requested to terminate interest payments on deposits before maturities in order to subdue excessive competition. On the electronic banking front, the Monetary Authority was so far-sighted that it issued a requirement on pooling electronic equipment together among banks. This pooling requirement yields mutual benefits for banks as well as their customers. It also helps the money market avoid excessive and/or unfair competition.

Responses

Private financial institutions have responded to guidelines and requests of the Monetary Authority quite well. Almost all Thai commercial banks, for example, join each other in formulating extensive networks of electronic banking services. Such services constitute one important reason why commercial banks have been so successful in enlarging their deposit base. Commercial banks are also equally concerned about management quality. That is why several banks reach an agreement to set up a customer information club in order to exchange crucial information about borrowers and thus avoid being deluded by inaccurate messages received directly from clients. Furthermore, ever since the second half of 1982 commercial banks voluntarily adjusted their interest rates to a growing frequency. Such moves were mostly necessitated by variations of foreign interest rates and/or liquidity status of local money markets. At times when consensus could not be reached among commercial banks with regard to rate adjustments, some official interventions, under any formats such as a cut of government

bonds' coupon rate or discount rate or ceiling rate, were called for as a guideline for commercial banks. Nevertheless, commercial banks have become distinctively more dynamic in this regard, in consonance with what the Monetary Authority is aiming at. This can be certified by the fact that during 1982-86 while the ceilings of interest rates were adjusted three times according to prevailing economic conditions, private commercial banks altered their interest rates on a voluntary basis up to fifteen times.

Together with commercial banks, private finance and securities companies cooperated well with the Monetary Authority in helping rescue ailing financial firms and banks so that bankrupcies and their adverse snowball effects can be averted.

In general, even though the early years of 1980s saw occurrences of a few crises in both financial and capital markets, which must have disturbed the pattern of local savings somewhat and interrupted the mobilization of available resources to meet productive end-users, remedial actions as well as removal of some fundamental stumbling blocks were successfully undertaken. Therefore, one can confidently say that the organized financial/capital markets in Thailand have undergone a fairly comprehensive set of experiences, and lessons plus adjustments therefrom. And if the government continues to place development of local money and capital markets as a highly prioritized task, the Thai financial environment, relative to those in other developing countries, should prove ready to capture local financial resources and effectively mobilize them to meet investment needs to a growing extent in the near future.

Appendix to Chapter 5

Consolidated Public Sector Accounts

1975 - 1985

Consolidatei Public Sector Account
(FY 1975)

(Unit: billion Baht)

	NB	LN	GR	XF	LG	SE	CG	CPS
REVENUE	36.49		0.90	0.37	11.02	36.50	30.65	76.33
Taxes	34.61				2.53		34.61	37.14
Sales	0.67			0.37	0.29	35.48	1.03	36.80
Others	1.38				0.11		1.33	1.49
Transfers	1.84		0.90	0.00	8.08	1.02	-6.36	0.90
EXPENDITURE	43.56	0.16	0.90	0.33	10.73	36.57	35.85	81.32
Current	28.18	0.00	0.67	0.33	7.20	30.27	29.18	66.64
-Interest	3.50					0.43	3.50	3.93
Capital	6.28	0.16	0.23		3.54	4.47	6.68	14.68
Transfers	9.10					1.84		
FINANCING	5.07	0.16		-0.03	-0.29	0.08	5.20	4.99
Domestic	4.53					0.46	4.53	5.00
Foreign		0.16				1.99	0.16	2.15
Cash balance	0.54			-0.03	-0.29	-2.38	0.51	-2.15
Assets:								
Beginning assets					0.00	0.00	0.00	0.00
Investment					3.54	4.47	6.68	11.15
Depreciation					0.00	0.00	0.00	0.00
Ending assets					3.54	4.47	6.68	11.15
Debts:								
Beginning domestic debts						0.00	39.13	39.13
Ending domestic debts						0.46	40.84	41.30
Beginning foreign debts						4.94	4.96	9.90
Ending foreign debts						7.05	4.83	11.88
Beginning total debts						4.94	44.08	49.03
Ending total debts						7.51	45.67	53.18
Transfers:								
SE contrib.	1.84							
XF subsidies								
LG subsidies	8.08							
SE subsidies	1.02							

Consolidated Public Sector Account
(FY 1976)

(Unit: billion Baht)

	NB	LN	GR	XF	LG	SE	CG	CPS
REVENUE	42.92		0.81	0.35	14.46	39.99	32.20	82.82
Taxes	35.77				2.65		35.77	38.42
Sales	1.93			0.35	0.37	39.40	2.27	42.04
Others	1.40				0.15		1.40	1.55
Transfers	3.82		0.81	0.00	11.29	0.59	-7.24	0.81
EXPENDITURE	53.77	0.40	0.81	0.33	14.12	42.13	43.44	95.87
Current	32.40	0.00	0.58	0.33	9.16	32.25	33.31	74.71
-Interest	3.83					0.53	3.83	4.36
Capital	9.50	0.40	0.23		4.96	6.06	10.13	21.15
Transfers	11.87					3.82		
FINANCING	10.86	0.40		-0.02	-0.34	2.14	11.24	13.04
Domestic	10.44					1.17	10.44	11.61
Foreign		0.40				1.82	0.40	2.22
Cash balance	0.42			-0.02	-0.34	-0.85	0.40	-0.78
Assets:								
Beginning assets					3.54	4.47	6.63	11.15
Investment					4.96	6.06	10.13	16.19
Depreciation					0.00	0.00	0.00	0.00
Ending assets					8.50	10.53	16.81	27.34
Debts:								
Beginning domestic debts						0.46	40.84	41.30
Ending domestic debts						1.63	45.94	47.57
Beginning foreign debts						4.05	4.83	8.88
Ending foreign debts						9.09	7.11	16.19
Beginning total debts						4.51	45.67	50.18
Ending total debts						10.72	53.05	63.76
Transfers:								
SE contrib.	3.82							
XF subsidies								
LG subsidies	11.29							
SE subsidies	0.59							

Consolidated Public Sector Account
(FY 1977)

(Unit: billion Baht)

	NB	LN	GR	XF	LG	SE	CG	CPS
REVENUE	52.16		0.65	0.65	12.34	46.75	43.48	98.81
Taxes	44.69				3.14		44.69	47.83
Sales	1.79			0.65	0.45	45.31	2.43	48.19
Others	1.92				0.21		1.92	2.13
Transfers	3.76		0.65	0.00	8.54	1.44	-5.56	0.65
EXPENDITURE	63.12	0.70	0.65	0.51	12.03	52.25	55.01	115.53
Current	39.56	0.00	0.44	0.51	8.59	39.09	40.50	98.18
-Interest	4.68					0.67	4.68	5.35
Capital	13.59	0.70	0.21		3.45	9.40	14.51	27.35
Transfers	9.98					3.76		
FINANCING	10.96	0.70		-0.14	-0.31	5.51	11.53	16.73
Domestic	11.41					1.53	11.41	12.94
Foreign		0.70				2.87	0.70	3.58
Cash balance	-0.44			-0.14	-0.31	1.10	-0.58	0.21
Assets:								
Beginning assets					8.50	10.53	16.81	27.34
Investment					3.45	9.40	14.51	23.91
Depreciation					0.00	0.00	0.00	0.00
Ending assets					11.94	19.93	31.31	51.24
Debts:								
Beginning domestic debts						1.63	45.94	47.57
Ending domestic debts						3.16	67.49	70.65
Beginning foreign debts						9.09	7.11	16.19
Ending foreign debts						12.32	7.83	20.15
Beginning total debts						10.72	53.05	63.76
Ending total debts						15.48	75.31	90.79
Transfers:								
SE contrib.	3.76							
XF subsidies								
LG subsidies	8.54							
SE subsidies	1.44							

Consolidated Public Sector Account
(FY 1978)

(Unit: billion Baht)

	NB	LN	GR	XF	LG	SE	CG	CPS
REVENUE	62.14		1.11	0.53	15.35	59.34	51.06	122.32
Taxes	54.55				3.59		54.55	58.14
Sales	2.06			0.53	0.60	57.42	2.59	60.60
Others	2.11				0.36		2.11	2.46
Transfers	3.43		1.11	0.00	10.80	1.93	-8.18	1.11
EXPENDITURE	74.74	4.08	1.11	0.45	14.86	69.04	67.65	148.12
Current	47.44	2.71	0.76	0.45	10.16	50.46	51.36	111.98
-Interest	5.98					1.03	5.98	7.01
Capital	14.57	1.37	0.35		4.71	15.15	16.29	36.15
Transfers	12.72					3.43		
FINANCING	12.59	4.08		-0.08	-0.48	9.70	16.59	25.80
Domestic	12.12					3.10	12.12	15.22
Foreign		4.08				6.85	4.08	10.92
Cash balance	0.47			-0.08	-0.48	-0.25	0.39	-0.34
Assets:								
Beginning assets					11.94	19.93	31.31	51.24
Investment					4.71	15.15	16.29	31.44
Depreciation					0.00	0.00	0.00	0.00
Ending assets					16.65	35.08	47.61	82.68
Debts:								
Beginning domestic debts						3.16	67.49	70.65
Ending domestic debts						6.26	80.40	86.66
Beginning foreign debts						12.32	7.83	20.15
Ending foreign debts						20.53	14.24	34.77
Beginning total debts						15.48	75.31	90.79
Ending total debts						26.80	94.64	121.43
Transfers:								
SE contrib.	3.43							
XF subsidies								
LG subsidies	10.80							
SE subsidies	1.93							

Consolidated Public Sector Account
(FY 1979)

(Unit: billion Baht)

	NB	LN	GR	XF	LG	SE	CG	CPS
REVENUE	75.09		1.44	0.62	17.43	75.02	63.25	151.81
Taxes	66.89				3.90		66.89	70.79
Sales	2.11			0.62	0.70	73.52	2.72	76.94
Others	2.21				0.44		2.21	2.65
Transfers	3.89		1.44	0.00	12.39	1.50	-8.57	1.44
EXPENDITURE	86.15	6.27	1.44	0.52	16.99	83.29	80.48	176.87
Current	57.58	3.74	1.07	0.52	12.75	63.92	62.91	139.58
-Interest	7.90					1.65	7.90	9.55
Capital	14.67	2.53	0.37		4.24	15.48	17.57	37.29
Transfers	13.90					3.89		
FINANCING	11.06	6.27		-0.10	-0.44	8.27	17.23	25.05
Domestic	12.95					0.29	12.95	13.23
Foreign		6.27				8.18	6.27	14.45
Cash balance	-1.89			-0.10	-0.44	-0.20	-1.99	-2.62
Assets:								
Beginning assets					16.65	35.08	47.61	82.68
Investment					4.24	15.48	17.57	33.05
Depreciation					0.00	0.00	0.00	0.00
Ending assets					20.89	50.56	65.17	115.73
Debts:								
Beginning domestic debts						6.26	80.40	86.66
Ending domestic debts						6.55	91.64	98.19
Beginning foreign debts						20.53	14.24	34.77
Ending foreign debts						27.96	20.93	48.90
Beginning total debts						26.80	94.64	121.43
Ending total debts						34.51	112.58	147.09
Transfers:								
SE contrib.	3.89							
XF subsidies								
LG subsidies	12.39							
SE subsidies	1.50							

Consolidated Public Sector Account
(FY 1980)

(Unit: billion Baht)

	NB	LN	GE	XF	LG	SE	CG	CPS
REVENUE	92.69		1.95	2.69	23.97	112.56	76.29	208.03
Taxes	82.34				4.30		82.34	86.64
Sales	2.51			2.48	0.76	110.22	5.00	115.98
Others	3.04				0.42		3.04	3.46
Transfers	4.80		1.95	0.20	18.49	2.34	-14.08	1.95
EXPENDITURE	112.78	9.29	1.95	1.56	23.29	135.68	104.55	258.72
Current	71.67	4.99	1.61	1.56	15.89	101.84	79.83	197.56
-Interest	10.62					2.66	10.62	13.27
Capital	20.07	4.30	0.35		7.40	29.04	24.71	61.16
Transfers	21.04					4.80		
FINANCING	20.09	9.29		-1.12	-0.68	23.12	28.25	50.70
Domestic	23.03					0.33	23.03	23.36
Foreign		9.29				17.68	9.29	26.96
Cash balance	-2.94			-1.12	-0.68	5.11	-4.06	0.39
Assets:								
Beginning assets					20.89	50.56	65.17	115.73
Investment					7.40	29.04	24.71	53.76
Depreciation					0.00	0.00	0.00	0.00
Ending assets					28.29	79.60	89.89	169.49
Debts:								
Beginning domestic debts						6.55	91.64	98.19
Ending domestic debts						6.88	107.77	114.65
Beginning foreign debts						27.96	20.91	48.90
Ending foreign debts						45.44	28.87	74.31
Beginning total debts						34.51	112.58	147.09
Ending total debts						52.32	136.65	188.96
Transfers:								
SE contrib.	4.80							
XF subsidies	0.20							
LG subsidies	18.49							
SE subsidies	2.34							

Consolidated Public Sector Account
(FY 1981)

(Unit: billion Baht)

	NB	LN	GR	XF	LG	SE	CG	CPS
REVENUE	110.49		3.72	1.97	13.08	144.72	106.19	257.78
Taxes	95.93				5.54		95.93	101.47
Sales	2.94			1.84	0.81	141.25	4.78	146.85
Others	5.40				0.35		5.40	5.75
Transfers	6.21		3.72	0.13	6.39	3.47	0.07	3.72
EXPENDITURE	130.07	7.22	3.72	1.17	12.74	167.52	132.20	306.24
Current	95.94	3.91	3.01	1.17	8.31	130.49	104.02	242.82
-Interest	13.85					4.54	13.85	18.39
Capital	24.15	3.32	0.71		4.43	30.82	28.17	63.42
Transfers	9.98					6.21		
FINANCING	19.58	7.22		-0.80	-0.35	22.79	26.01	48.46
Domestic	19.46					1.09	19.46	20.55
Foreign		7.22				17.33	7.22	24.55
Cash balance	0.12			-0.80	-0.35	4.37	-0.67	3.35
Assets:								
Beginning assets					28.29	79.60	99.89	109.49
Investment					4.43	30.82	28.17	58.99
Depreciation					0.00	0.00	0.00	0.00
Ending assets					32.73	110.42	118.06	228.48
Debts:								
Beginning domestic debts						45.44	28.87	74.31
Ending domestic debts						46.53	122.27	168.80
Beginning foreign debts						45.44	28.87	74.31
Ending foreign debts						66.07	37.37	103.44
Beginning total debts						90.87	57.75	148.62
Ending total debts						112.60	159.64	272.24
Transfers:								
SE contrib.	6.21							
XF subsidies	0.13							
LG subsidies	6.39							
SE subsidies	3.47							

Consolidated Public Sector Account
(FY 1982)

(Unit: billion Baht)

	NB	LN	GB	XF	LG	SE	CG	CPS
REVENUE	113.65		2.63	1.38	14.39	175.17	107.04	291.70
Taxes	100.39				6.33		100.39	106.73
Sales	3.27			1.22	0.93	171.57	4.49	177.00
Others	5.09				0.26		5.09	5.35
Transfers	4.90		2.63	0.16	6.86	3.60	-2.93	2.63
EXPENDITURE	152.33	8.25	2.63	1.13	13.63	193.95	153.72	356.49
Current	113.92	3.48	2.12	1.13	8.45	158.17	120.64	287.26
-Interest	16.61					6.97	16.61	23.58
Capital	27.79	4.77	0.51		5.19	30.88	33.03	69.14
Transfers	10.62					4.90		
FINANCING	38.68	8.25		-0.25	-0.75	18.78	46.68	64.70
Domestic	40.89					0.50	40.89	41.38
Foreign		8.25				17.65	8.25	25.90
Cash balance	-2.21			-0.25	-0.75	0.63	-2.46	-2.59
Assets:								
Beginning assets					32.73	110.42	118.06	228.48
Investment					5.19	30.88	33.08	63.96
Depreciation					0.00	0.00	0.00	0.00
Ending assets					37.91	141.29	151.14	292.43
Debts:								
Beginning domestic debts						46.53	122.27	168.80
Ending domestic debts						47.03	147.26	194.28
Beginning foreign debts						66.07	37.37	103.44
Ending foreign debts						81.99	46.13	128.11
Beginning total debts						112.60	159.64	272.24
Ending total debts						129.02	193.38	322.40
Transfers:								
SE contrib.	4.90							
XF subsidies	0.16							
LG subsidies	6.86							
SE subsidies	3.60							

Consolidated Public Sector Account
(FY 1983)

(Unit: billion Baht)

	NB	LN	CR	XF	LG	SE	CG	CPS
REVENUE	137.45		2.64	6.00	15.15	195.28	136.44	340.81
Taxes	120.34				6.88		120.34	127.22
Sales	4.24			5.99	1.07	192.54	10.23	203.84
Others	6.80				0.30		6.80	7.10
Transfers	6.07		2.64	0.01	6.90	2.74	-0.93	2.64
EXPENDITURE	165.08	7.85	2.64	2.38	14.57	210.63	168.29	387.42
Current	128.96	2.70	2.12	2.38	8.82	174.29	136.16	319.27
-Interest	22.23					7.29	22.23	29.52
Capital	26.47	5.15	0.52		5.74	30.27	32.14	68.15
Transfers	9.65					6.07		
FINANCING	27.63	7.85		-3.62	-0.59	15.35	31.85	46.61
Domestic	27.02					1.61	27.02	28.64
Foreign		7.85				13.96	7.85	21.81
Cash balance	0.60			-3.62	-0.59	-0.23	-3.02	-3.83
Assets:								
Beginning assets					37.91	141.29	151.14	292.43
Investment					5.74	30.27	32.14	62.40
Depreciation					0.00	0.00	0.00	0.00
Ending assets					43.65	171.56	183.28	354.83
Debts:								
Beginning domestic debts						47.03	147.26	194.28
Ending domestic debts						48.64	183.42	232.06
Beginning foreign debts						81.99	46.13	128.11
Ending foreign debts						98.59	55.59	154.19
Beginning total debts						129.02	193.38	322.40
Ending total debts						147.23	239.01	386.24
Transfers:								
SE contrib.	6.07							
XF subsidies	0.01							
LG subsidies	6.90							
SE subsidies	2.74							

Consolidated Public Sector Account
(FY 1984)

(Unit: billion Baht)

	NB	LN	GR	XF	LG	SE	CG	CPS
REVENUE	148.82		4.00	9.99	16.39	241.72	153.66	405.47
Taxes	131.51				7.91		131.51	139.41
Sales	3.94			9.97	1.23	239.54	13.91	254.68
Others	7.07				0.31		7.07	7.38
Transfers	6.31		4.00	0.02	6.95	2.18	1.18	4.00
EXPENDITURE	178.05	6.63	4.00	3.83	15.67	256.57	183.36	449.23
Current	141.68	1.36	3.05	3.83	9.55	213.49	148.92	372.97
-Interest	25.25					8.21	25.25	33.46
Capital	27.22	5.27	0.95		6.11	36.77	33.44	76.32
Transfers	9.15					6.31		
FINANCING	29.23	6.63		-6.16	-0.73	14.85	29.69	43.82
Domestic	38.25					2.17	38.25	40.42
Foreign		6.63				12.66	6.63	19.28
Cash balance	-9.02			-6.16	-0.73	0.02	-15.18	-15.88
Assets:								
Beginning assets					43.65	171.56	183.28	354.83
Investment					6.11	36.77	33.44	70.21
Depreciation					0.00	0.00	0.00	0.00
Ending assets					49.77	208.33	216.71	425.04
Debts:								
Beginning domestic debts						48.64	183.42	232.06
Ending domestic debts						50.81	209.47	260.28
Beginning foreign debts						98.59	55.59	154.19
Ending foreign debts						107.79	59.68	167.47
Beginning total debts						147.23	239.01	386.24
Ending total debts						158.60	269.15	427.74

Transfers:

SE contrib.	6.31
XF subsidies	0.02
LG subsidies	6.95
SE subsidies	2.18

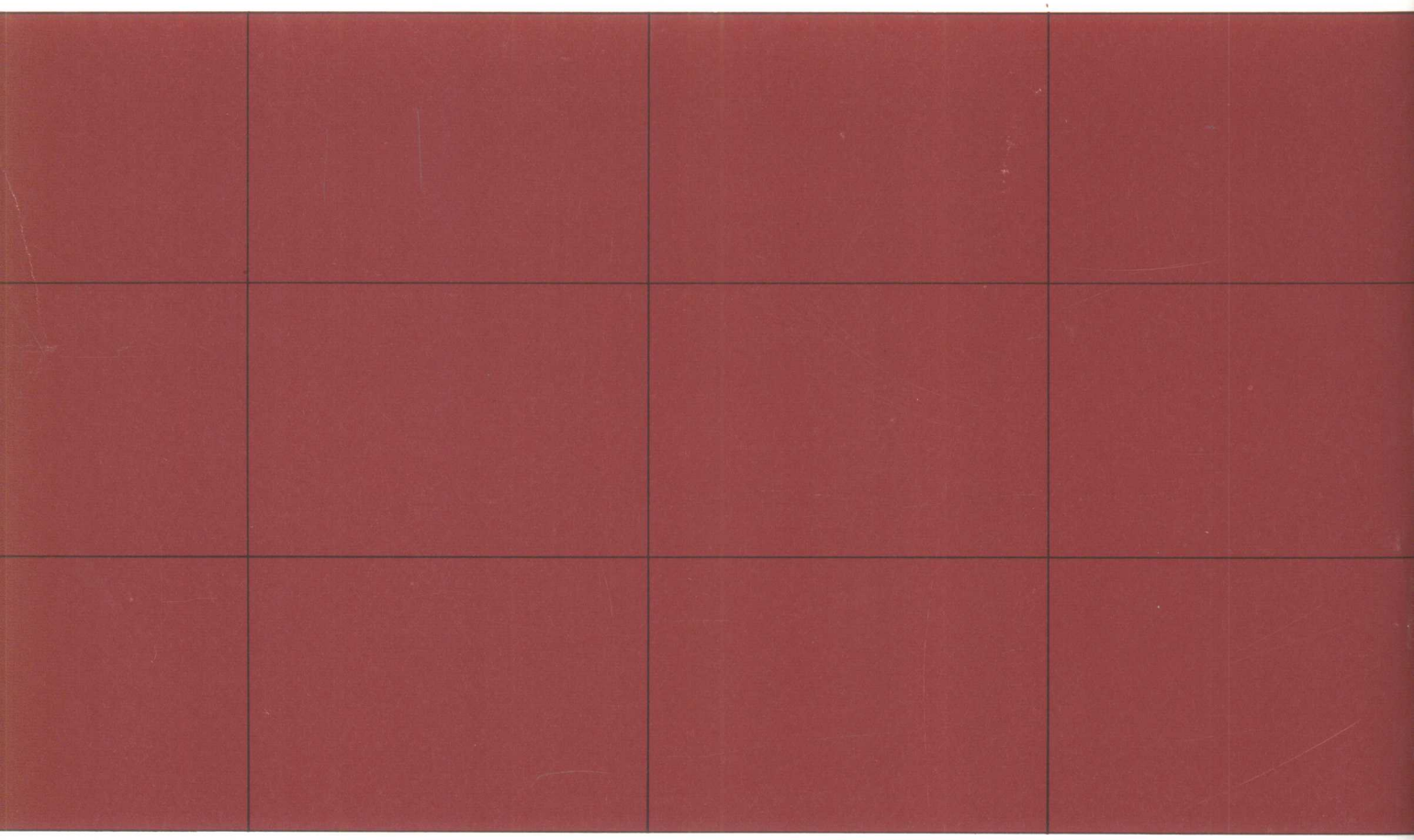
Consolidated Public Sector Account
(FY 1985)

(Unit: billion Baht)

	NB	LN	GR	XF	LG	SE	CG	CPS
REVENUE	162.21		4.90	11.37	17.78	241.70	169.73	420.41
Taxes	141.92				9.00		141.92	150.92
Sales	4.84			11.35	1.52	239.79	16.19	257.50
Others	6.65				0.44		6.65	7.09
Transfers	8.80		4.90	0.02	6.82	1.91	4.98	4.90
EXPENDITURE	195.45	9.68	4.90	6.82	16.81	265.57	208.10	481.67
Current	158.70	1.73	3.75	6.82	9.85	215.21	171.00	396.05
-Interest	32.17					9.23	32.17	41.40
Capital	28.00	7.96	1.15		6.96	41.56	37.11	85.63
Transfers	8.75					8.80		
FINANCING	33.23	9.68		-4.55	-0.97	23.87	38.37	61.26
Domestic	37.72					2.44	37.72	40.16
Foreign		9.68				11.98	9.68	21.66
Cash balance	-4.49			-4.55	-0.97	9.45	-9.04	-0.56
Assets:								
Beginning assets					49.77	208.33	216.71	425.04
Investment					6.96	41.56	37.11	78.67
Depreciation					0.00	0.00	0.00	0.00
Ending assets					56.73	249.89	253.82	503.71
Debts:								
Beginning domestic debts						50.81	209.47	260.28
Ending domestic debts						53.25	248.66	301.92
Beginning foreign debts						107.79	59.68	167.47
Ending foreign debts						144.28	88.74	233.02
Beginning total debts						158.60	269.15	427.74
Ending total debts						197.53	337.40	534.93

Transfers:

SE contrib.	8.80
XF subsidies	0.02
LG subsidies	6.82
SE subsidies	1.91



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