The World Bank



# Thailand ECONOMIC MONITOR

## Positioning for a Sustainable Recovery

## การฟื้นตัวทางเศรษฐกิจอย่างยั่งยืน

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**KINGDOM OF THAILAND – FISCAL YEAR**
**October 1 – September 30**

## ABBREVIATIONS

| | |
|---|---|
| AMC | Asset Management Companies |
| BOI | Board of Investments |
| CDRAC | Corporate Debt Restructuring Advisory Committee |
| DCA | Debtor – Creditor Agreement |
| EBITDA | Earnings before Interest, Taxes, Depreciation and Amortization |
| EDI | Electronic Data Interchange |
| FDI | Foreign Direct Investments |
| FIDF | Financial Institutions Development Fund |
| GOT | Government of Thailand |
| ICA | Inter – Creditor Agreement |
| ICAAT | Institute of Certified Accountants and Auditors of Thailand |
| MBIs | Market – Based Instrument |
| MNC | Multinational Corporation |
| MOC | Ministry of Commerce |
| MOF | Ministry of Finance |
| NESDB | National Economic and Social Development Board |
| NPLs | Non-Performing Loans |
| NSTDA | National Science and Technology Development Agency |
| PAO | Provincial Administrative Organizations |
| R&D | Research and Development |
| SME | Small and Medium scale Enterprise |
| SDF | Skill Development Fund |
| TBDC | Thai Bond Dealing Center |
| VAT | Value Added Tax |
| WTO | World Trade Organization |

# Contents

## *Figures*

## *Tables*



## *Boxes*

# Executive Summary

**Is the worst of the economic downturn behind Thailand?** In the July 2001 Economic Monitor we argued that Thailand should be able to weather the global downturn. Despite the decline in the global output growth rate, the rapid deterioration in the external terms of trade and the terrorist events of September 11, Thailand managed to keep its growth rate positive at around 1.8 percent in 2001. Thanks to supportive macroeconomic policies and a diversified economic base Thailand managed the downturn well.

**The Thai economy has rebounded in 2002 and the economic and social outlook has improved.** The rate at which key economic indicators deteriorated during 2001 now appears to be moderating. Fourth quarter GDP in 2001 picked up significantly to an annualized quarter-on-quarter growth rate of 6.5 percent, helped by strong private consumer demand. This compares with more sluggish fourth quarter growth in Indonesia and Philippines.

**Poverty began to fall in 2000, although it remains above pre-crisis levels.** The incidence of poverty dropped from 15.9 percent of the population in 1999 to 14.2 percent in 2000. The number of individuals who live in households with an income below the poverty line has declined by almost one million, from about 9.8 million to 8.9 million. In rural areas the number living in poverty fell by about 2.5 percent, compared with a fall of only 0.4 in sanitary districts, although poverty actually increased by 0.2 percent in urban areas. Overall poverty remains above the pre-crisis levels and it continues to be a predominantly rural phenomenon. Urban poverty remains less significant although the quality of life of the urban poor (e.g., migrant construction workers) is probably worse than that of the rural poor.

**External macroeconomic vulnerability has been reduced**. Thailand maintained a surplus on its external current account balance in 2001. A flexible exchange rate policy along with a diversified export base helped cushion Thailand from external shocks (e.g., IT downturn, oil price increase). Total external debt has been reduced. Financial market indicators (e.g., the stock market index, foreign currency debt ratings, the spread between deposit and lending rates, long term interest rates, bank lending, debt to equity and interest coverage ratios of firms) appear to be stabilizing, although the picture is mixed, reflecting some underlying weakness in the balance sheets of banks and firms.

**The key issue is how strong the recovery will be**. The strength of the emerging recovery is likely to be determined by a tug-of-war between positive, powerful forces boosting activity versus negative, somewhat weaker but more persistent structural forces that will restrain the momentum of recovery.

**There are several factors on the side of recovery.** The positive factors supporting recovery include the strong stimulus given by fiscal and monetary policies, a low inflation and interest rate environment, global recovery, expected improvements in the external terms of trade, a strong national balance sheet reflecting the reduced level of external debt and improvements in the labor market.

**But there are also negative forces that could restrain the momentum of recovery.** Firstly, the excess capacity in the economy and the weak balance sheets of firms are likely to moderate the growth of business investment. Secondly, fiscal management will require more attention given that the level of public debt has increased. Although the level of public debt is manageable, debt dynamics could be complicated by a low growth environment, a weak fiscal stance or increases in interest rates. Perceptions of fiscal risk may in turn weaken the consumer confidence that is driving this recovery. Thirdly, Thailand has fallen behind other countries in the global competitiveness rankings, particularly with regard to the knowledge economy (e.g., it offers low levels of skills and technological capability). These negative forces may not derail the short-term recovery but they could compromise the momentum of that recovery.

This Monitor focuses on the progress that Thailand has made in implementing its structural reform program in three key areas that are shaping the nature of the recovery - fiscal management, financial and corporate reform, and the knowledge economy.

**Fiscal management remains a high priority.** The cumulative build-up of the fiscal stimulus since the 1997 crisis and the fiscal cost of financial sector restructuring have contributed to the rapid rise in public debt, from 14.5 percent of GDP in 1996 to nearly 57 percent in 2001. Concerns about the rising level of public debt have now begun to outweigh the benefits of pump-priming the economy.

In response to the improved economic outlook and the low inflation environment Thailand is changing the mix of macroeconomic policies. Fiscal stimulus is being replaced by monetary stimulus. The Bank of Thailand has adopted an accommodative monetary policy and changed the balance of its focus away from supporting the external balance and towards supporting recovery. The Ministry of Finance has announced that the budget deficit is likely to be reduced in FY03. The privatization and corporatization of state owned enterprises, tax reform, public expenditure reform, decentralization, elimination of quasi-fiscal stimulus and the reform of the Public Debt Law will all contribute to fiscal consolidation, improved transparency and accountability and help lower public debt. Fiscal outcomes will depend on the pace of implementation of these reforms.

**Thailand has made significant progress since the 1997 crisis in rebuilding its banking sector and modernizing its regulatory institutions, but there are challenges ahead**. The banks meet prevailing capital adequacy standards, although significant unrealized losses remain and the sector is fragile. The ability of listed firms to pay interest is slowly recovering. Since the crisis there has been a downward trend in debt to equity ratios, but they remain high. Initial steps to strengthen the legal framework, and work by the Corporate Debt Restructuring Advisory Committee (CDRAC) have contributed to corporate debt restructuring. To speed up the resolution of problem debts held by state banks the government set up the centralized Thailand Asset Management Corporation (TAMC), which has special powers and is responsible for resolving about one-half of the banking system's distressed assets.

**Despite this progress banks and firms face risks from the continued existence of distressed loans and this will slow down the recovery in private investment**. The restructuring of firms and their loans, both with and without the TAMC, remains critical for a broad-based and sustainable recovery. In the interests of keeping the public debt at a manageable level and to support debt restructuring any additional losses incurred by the TAMC and state owned financial institutions should be minimized. Regulatory forbearance should not compromise the objective of strengthening the competitiveness of the Thai banks.

**Measures are needed to develop a sound financial system and promote new lending.** Thailand must sustain reforms that promote the effective functioning and governance of the

TAMC, improve the legal framework for debt restructuring outside the TAMC, phase out forbearance on prudential regulation, strengthen risk-focused prudential regulation, develop bond markets and ensure that policies towards the state owned banks do not conflict with the medium term objective of developing a sound financial system.

**Thailand's competitiveness has been hampered by a weak knowledge economy.** Once the balance sheet of the firms has been strengthened their ability to compete will depend on productivity growth, which has been hampered by a relatively weak knowledge base. The country faces challenges in four areas: (a) secondary school enrollment rates that lag behind other countries in the region, (b) the technological capability of Thai firms lags behind other countries in the region, (c) a skills mix that does not support the emergence of a knowledge economy (in which new industrial and services companies seek to increase productivity through technological and organizational change), and (d) institutions and public programs that have been less effective than those of other countries in helping firms to upgrade their skills development, training, technology and 'knowledge networks'.

To take one example, at least 17 public organizations or funds exist to support technology and innovation in Thailand. The lack of public infrastructure for a knowledge economy is therefore not an issue. The challenge is that the public institutions and incentives are rooted in an old policy model, one that focuses on single entities (whether firms or institutions) rather than on knowledge networks, interactions and supply chains.

**Knowledge sharing and networking will be important drivers of the competitiveness of Thai firms**. The fact that knowledge is a public good, one that has significant externalities associated with it, means that strengthened partnerships between the private and public sectors will be required. But in the search for a framework for this partnership a strategy of "picking winners" rather than providing solutions may only raise more questions. Instead, policy makers may want to place more emphasis on reforming existing public institutions and increasing inter-agency coordination to improve the delivery of services, improving the governance of these agencies by giving a greater voice to SMEs on the Boards of Management, targeting public support more effectively (e.g., by reaching out not only to firms but also to networks) and integrating technological and skill development programs.

CHAPTER 1

# POSITIONING FOR A SUSTAINABLE RECOVERY

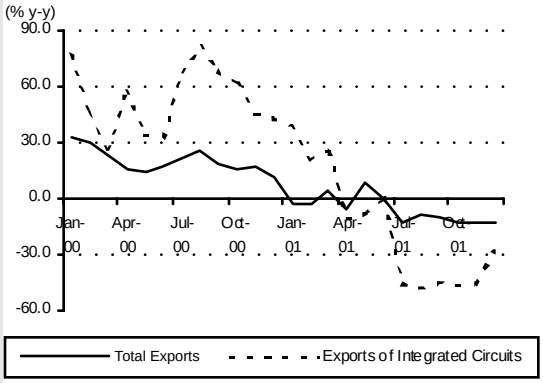
## Outlook for growth has improved

In the July 2001 Economic Monitor we argued that Thailand should be able to weather the global downturn. Despite the decline in the global output growth rate from 4.7 percent in 2000 to 2.2 percent in 2001, the deterioration in the external terms of trade and the September 11 terrorist events, Thailand managed to keep its growth rate positive, at around 1.8 percent. Thanks to its diversified economic base and supportive macroeconomic policies Thailand managed the downturn well. It is now on the path to recovery.

**There are early signs that the worst of the downturn is past.** The rate at which key economic indicators fell during 2001 appears to be moderating. The economy bottomed out in the third quarter of last year, although a firm recovery has not yet materialized. The rate at which high-tech exports (e.g., integrated circuits, telecoms equipment and electrical appliances) fell during 2001 also appears to be moderating, in line with the global recovery. Growth in manufacturing production remains positive, although modest. Domestic cement sales have increased sharply. The property sector appears to be turning around; throughout the country approved construction areas in municipalities enjoyed positive growth of 8.4 percent in 2001, compared to negative growth of 4.1 percent the previous year. In Bangkok the number of applications for ownership during 2001 increased by 8.3 percent for condominium units and by 4.3 percent for housing units.

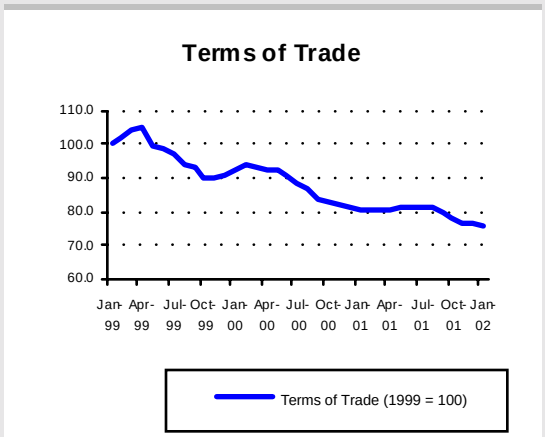
## Box 1-1
## Thai economy seems to have turned around

### 1. Rate of decline in export growth has slowed.



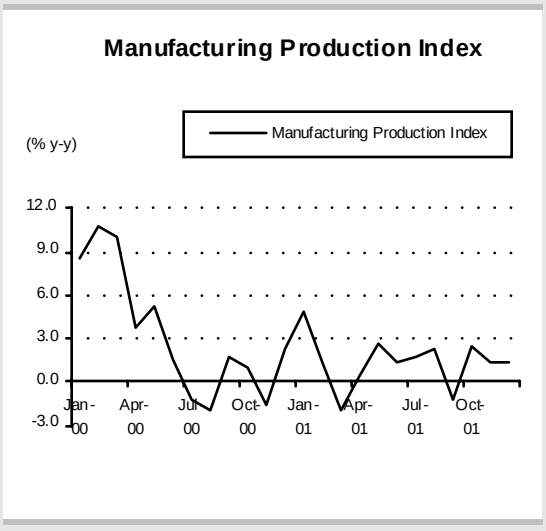

*Source: Bank of Thailand*

### 2. External terms of trade are bottoming out.



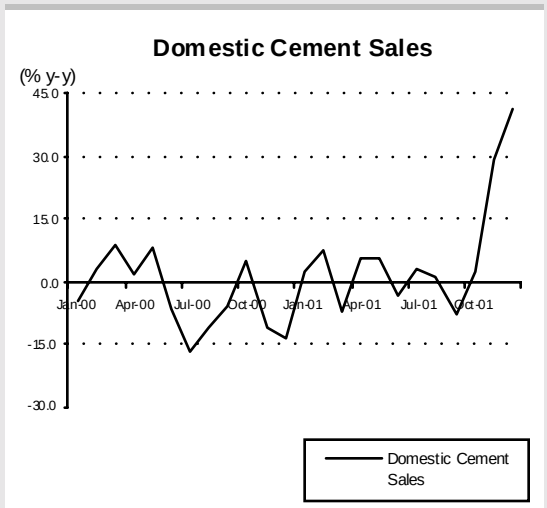

*Source: Bank of Thailand*

### 3. Manufacturing production growth is positive…




*Source: Bank of Thailand*

### 4. …and some of the sectors worst hit by the crisis have turned around



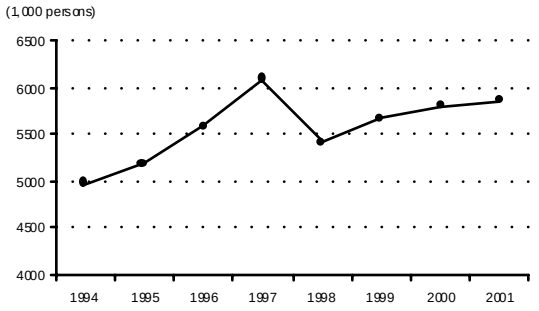

*Source: Bank of Thailand*

## Labor markets have improved

**Private sector employment conditions are no longer deteriorating.** The number of people insured with the Social Security Office, which fell sharply in the aftermath of the 1997 crisis, is rising again. The NSO Labor Force Survey data also show an improvement in labor market conditions, with the unemployment rate coming down sharply from a high of 4.4 percent in November 1998 to 2.4 percent in November 2001.

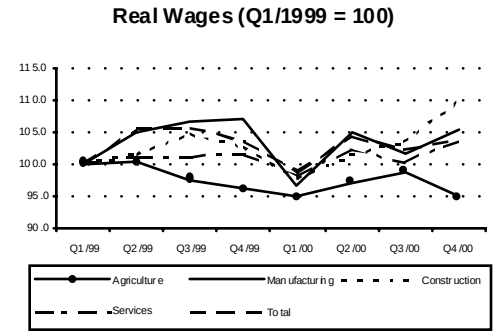
Thailand managed to create around 1.4 million new jobs between November 2000 and November 2001 according to the Labor Force Survey data. The bulk of the new jobs (0.41 million) were in the services sector, followed by the manufacturing sector (0.39 million). After agriculture the services sector now accounts for the largest share of employment (21 percent) and it has clearly overtaken the manufacturing sector in terms of its contribution to job creation and national output. Real wages have stabilized, with the possible exception of the agriculture sector.

**Figure 1-1**
**Number of people insured with the Social Security Office**




*Source: Social Security Office*

**Figure 1-2**
**Real wages have stabilized**




*Source: National Statistical Office and World Bank estimates*

**Table 1-1**
**Employment by sectors (in thousands)**

| | *Nov-98* | *Nov-00* | *Nov-01* | *Nov-01* | *Nov-01 / Nov-00* | |
|---|---|---|---|---|---|---|
| | | | | Share of Total % | Change % | Jobs Created |
| Total Employment | 30,794 | 31,749 | 33,194 | 100.0 | 4.6 | 1,445 |
| Agriculture | 14,857 | 14,771 | 14,937 | 45.0 | 1.1 | 166 |
| Manufacturing | 4,150 | 4,574 | 4,968 | 15.0 | 8.6 | 394 |
| Construction | 1,283 | 1,317 | 1,413 | 4.3 | 7.3 | 97 |
| Commerce | 3,843 | 4,341 | 4,722 | 14.2 | 8.8 | 381 |
| Services | 6,576 | 6,697 | 7,108 | 21.4 | 6.1 | 410 |
| Other | 85 | 49 | 47 | 0.1 | (5.6) | (3) |

*Source: Labor Force Surveys (LFS)*

## Post-crisis rise in poverty has stalled

**Thailand's growth rate of about 4 to 4.5 percent per annum during 1999-2000 was sufficient to break the trend of higher poverty rates** triggered by the Asian crisis of 1997-98. Based on an analysis of the Socio-Economic Survey 2000, the National Economic and Social Development Board (NESDB) reports that poverty levels have dropped from 15.9 percent of the population in 1999 to 14.2 percent in 2000. This implies that the number of individuals living in households with an income below the poverty line has declined by almost one million, from about 9.8 million to 8.9 million.

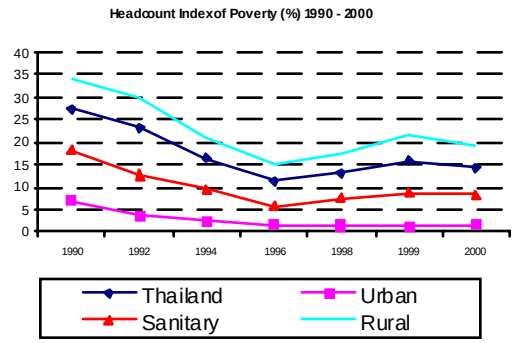
In rural areas the number of people living in poverty declined by about 2.5 percent, compared with only 0.4 in sanitary districts, while poverty actually increased by 0.2 percent in urban areas. Nevertheless poverty continues to be a predominantly rural phenomenon, and urban poverty remains insignificant although the quality of life of the urban poor (e.g., migrant construction workers) is probably worse than that of the rural poor.

**Southern region overtakes the Northern region in cutting poverty.** The progress in poverty reduction was uneven across different regions. The South experienced a significant improvement; the poverty headcount dropped by 30 percent, from 15.7 percent in 1999 to 11 percent in 2000. This means that the Southern region has now been replaced by the North - where poverty actually increased - as the second poorest in the country. The Northeast, the poorest of the regions, and the Central areas, saw more modest progress in poverty reduction.

## External vulnerability has been reduced

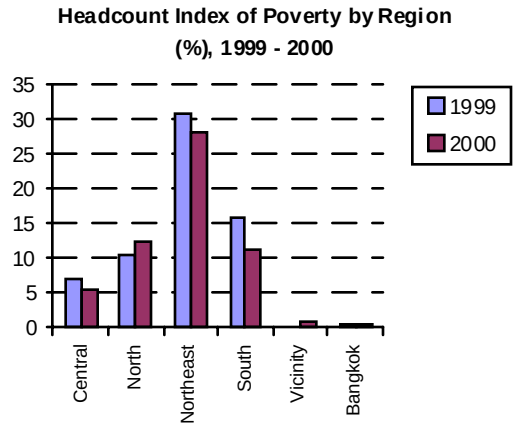
**The global downturn and the September 11 terrorist events tested Thailand's ability to withstand external shocks.** Thailand maintained a surplus on its external current account balance in 2001 equivalent to nearly 5 percent of GDP. A flexible and competitive exchange rate along with a diversified export base helped cushion Thailand from the external shocks. Thailand was less severely affected by the downturn in the terms of trade for electronics, for while the proportion of electronics among total exports is significant at 36 percent it is low compared to other countries in the region. Agriculture and forestry exports account for over 20 percent of Thailand's total exports. The country is also a strong exporter of services, with tourism accounting for 5-7 percent of GDP and 11 percent of total export earnings.

Figure 1-3
**Increase in poverty has stalled**




*Source: NESDB*

Figure 1-4
**Poverty by region**




*Source: NESDB*

## Financial conditions have improved

**Total external debt fell** from a high of $109 billion (72 percent of GDP) in 1997 to $71 billion (61 percent of GDP) in 2001. External private debt more than halved from $85 billion in 1997 to $40 billion in 2001. The maturity structure of external debt has also improved.

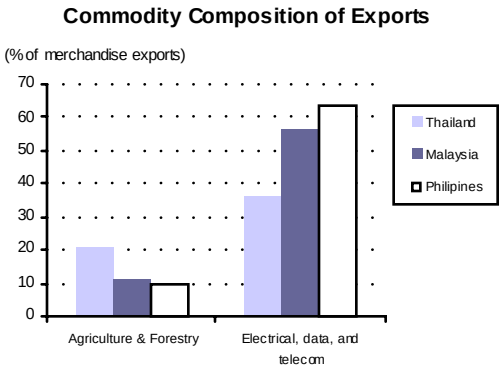
**Sentiment in the equity market has improved.** Like other markets in the region the Thai stock market index has surged 26 percent since its low at the beginning of the year. From the start of the year to date daily turnover on the Stock Exchange of Thailand (SET) has averaged Baht 11 billion, almost double last year's figure. This increase has been driven by foreign investor demand, which can be ascribed to at least three factors: (1) international asset managers have increased their investment weighting in this region following re-emerging problems in Latin America, (2) lower global interest rates have reduced their required rates of return, making equity investment in Thailand more attractive, and (3) optimism about the expected earnings of blue chip firms.

**Financial conditions appear to have stabilized although they continue to remain tight**. Financial market indicators (e.g., foreign currency debt ratings, the spread between deposit and lending rates, long term interest rates and bank lending) appear to be stabilizing although the picture is mixed, reflecting underlying weaknesses in the balance sheets of banks and firms.

## Private investment remains sluggish

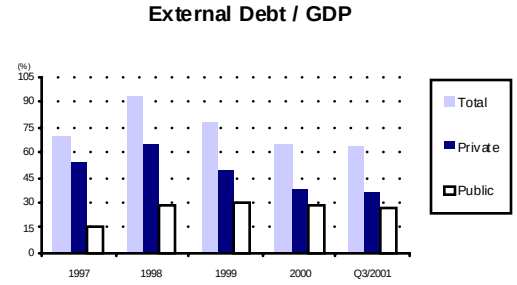
**The household sector performance has been strong relative to the business sector.** Since households were not as financially leveraged as firms private consumption has recovered. Lending for personal consumption has begun to improve although total bank lending remains sluggish.

Figure 1-5
**Thai export structure is diversified**



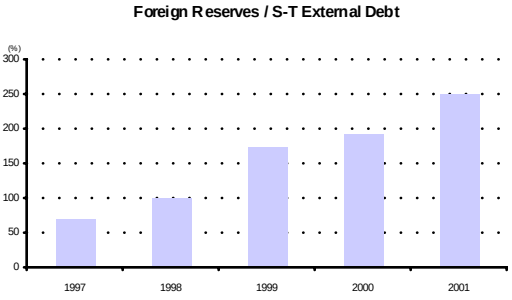

*Source: Wolrd Bank, East Asia Regional Brief*

Figure 1-6
**External debt has been reduced**




*Source: Bank of Thailand*

Figure 1-7
**Foreign reserves to external debt ratio has improved**




*Source: Bank of Thailand*

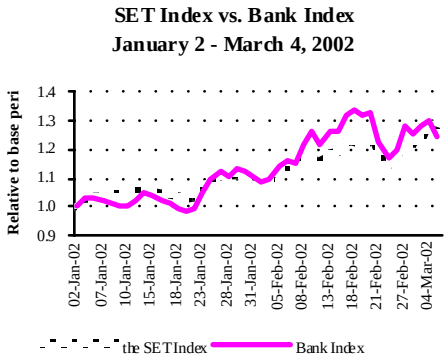
**But private investment has remained sluggish,** particularly in machinery and equipment. Overall, the contraction in private investment since the 1997 crisis has been by far the largest when compared to other crisis countries such as Malaysia and Korea.

Several reasons have been suggested for this sluggishness in private investment. The principle one is that the opportunity to buy assets cheaply during restructuring is preferred to creating new assets. Therefore, as long as real restructuring remains unfinished — i.e., as long as there is still the potential to buy fixed assets cheaply through distressed sales — there will be constraints on new private investment. Four years after the crisis excess capacity in the manufacturing sector and the high level of unutilized investments remain a major drag on growth. If the 1997 crisis has permanently changed the level of asset prices, these prices have not yet adjusted fully to the new levels. This has created uncertainty about asset prices which in tum has held back new investment. However, there are signs in some sectors that the cash flow and return on capital of firms is improving and this is positive for new business investment. While improved cash flow will help to increase business expenditure the extent of the investment recovery is likely to be retarded by the weakness of balance sheets and the high level of indebtedness.

## Will Thailand benefit from the global recovery?

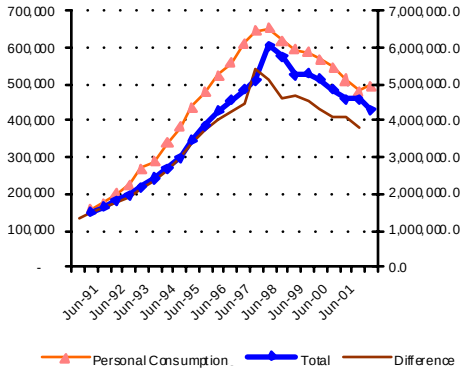
The global recovery is being led by the turnaround in the US economy. The US recovery is being powered by strong consumer demand, the change from inventory liquidation to accumulation, lower energy prices and the stimulus — substantial by historical standards — created by the easing of monetary and fiscal policy. Capital investments are restrained. The strength of recovery will depend on how the economy overcomes imbalances in the corporate sector (weak balance sheet and a large financing gap) and whether weakness in the household sector (low savings levels) will put a brake on private consumption growth. The

**Figure 1-8**
**Thai stock market is bullish**



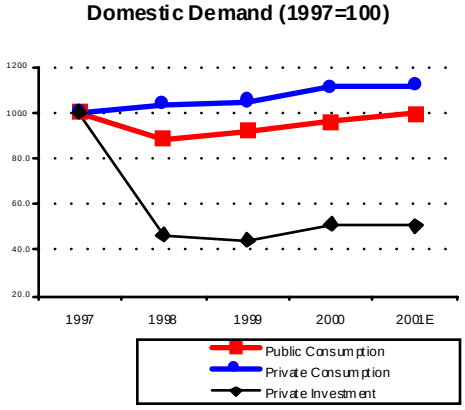

*Source: the SET, Merrill Lynch Phatra*

**Figure 1-9**
**Bank lending for personal consumption is improving**




*Unit: millions of Baht*
*Source: Bank of Thailand*

**Figure 1-10**
**Private investment remains sluggish**




*Source: NESDB and staff estimates*

revival of the US economy is expected to act as a catalyst for a rebound in Europe. The outlook for Japan is weak, although the structural reforms being implemented will provide a strong foundation for recovery. Global growth is expected to increase from around 2 percent in 2002 to close to its trend level of 3-4 percent in 2003.

**Thailand is well positioned to take advantage of the expected global recovery**. The policy reforms that Thailand has implemented since the crisis have positioned it well to take advantage of the expected global growth. Firstly, there is sufficient fiscal and monetary stimulus in the system, given the large budget deficit and low interest rates. Secondly, Thailand has become more open since the crisis. While openness was a handicap last year it will boost growth in 2002. Thirdly, the reduction in external debt has cleared the national balance sheet and positioned the country well for recovery.

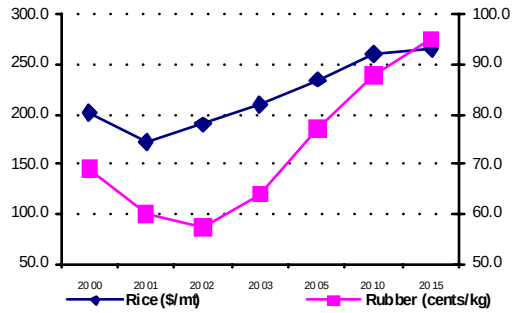
**Thailand is not expected to suffer further large income losses as a result of changes in the external terms of trade**. In recent years large declines in export prices and terms of trade have inflicted significant income losses on Thailand. Dollar prices for developing countries' non-oil commodity exports fell 9 percent in 2001 and a cumulative 32 percent in the four years 1998-2001. Agricultural prices fell, cumulatively, by a third in this period, partly as a result of large currency depreciations among exporters in East Asia and Latin America and partly because technological progress and policy reforms allowed substantial increases in agricultural production and exports. For example, palm oil, rice and rubber prices fell by 40-50 percent during 1998-2001. From late 2000 semiconductor prices also slumped, as a result of the global high-tech recession. The terms of trade were also reduced by the upward trend in oil prices in the last few years. World oil prices averaged $23-24 a barrel in 1999-2001, nearly 30 percent more than the average earlier in the 1990's.

Losses due to weaker terms of trade in Thailand averaged 3.3 percent of national income per year

**Figure 1-11**
**Thailand is a more open economy post-crisis**

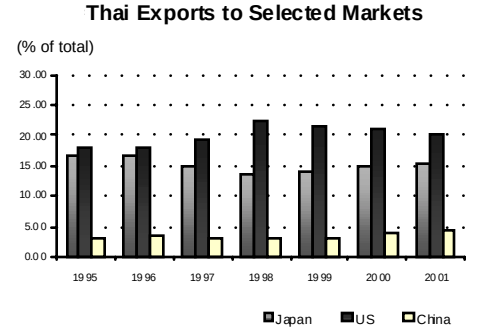

*Source: World Bank*

**Figure 1-12**
**Commodity prices are expected to improve**




*Source: World Bank, Economic Policy and Prospects Group, 2002*

**Figure 1-13**
**Thai exports are less dependent on Japan while exports to China have increased**




*Source: Bank of Thailand*

in 1998-2000 – a cumulative 13 percent in these four years. By comparison this is higher than, say, Korea where annual terms of trade-based losses averaged 2.7 percent of national income in the same period.[1]

An important factor in the current recovery in Thailand is that primary commodity prices stabilized and started rising from late 2001, as did semiconductor prices. As world growth and demand gains ground the World Bank's Economic Policy and Prospects Group expects further mild improvements in non-oil primary commodity prices in the next two years. Even if the terms of trade do not improve markedly, the simple fact that Thailand will not suffer further large income losses because of changes in the terms of trade will be an important factor in fostering recovery.

**Impact of Japan's uncertain economic outlook**. Will Thailand's recovery be compromised by Japan's fragile economic outlook? Japan has been an important trading partner for Thailand and economic sluggishness in Japan may constrain Thai exports. However this risk is now lower because Thailand has diversified its export markets. The proportion of Thai exports going to Japan has come down while that to the US has increased. In terms of financial linkages, Thailand's private external debt with Japan has been reduced. On balance, the expected recovery in the US and Europe should compensate for any losses caused by sluggishness in Japan.

**What about China's entry into the WTO?** Another concern is that China's entry into the WTO will create competitive pressures on Thailand. There will be increased competition from China because of the similarity in the two countries' export structures - the simple correlation between the structures of manufactured exports from Thailand and China is high at 60 percent. But the similarity between Thai and Chinese exports is not substantially higher than that between China and other ASEAN countries. Thailand will come under increased competitive pressure as a result of the diversion of trade and capital to China. But at the same time Thailand will benefit from the increased amount of trade created by China's entry into the WTO. On balance, any loss of exports from Thailand as a result of "trade diversion" to China is likely to be compensated for by the "trade creation" arising from China's WTO membership. This gain will be reinforced by both the improved competitiveness of Thai firms and the global recovery.

**Table 1-2**
**Thai and Chinese manufacturing exports are similar in nature (1995)**

| | CH | HK | IN | KO | MA | PH | SI | TH | TA |
|---|---|---|---|---|---|---|---|---|---|
| CH | 1 | | | | | | | | |
| HK | 0.59 | 1 | | | | | | | |
| IN | 0.35 | 0.17 | 1 | | | | | | |
| KI | 0.21 | 0.4 | 0.1 | 1 | | | | | |
| MA | 0.17 | 0.43 | 0.18 | 0.73 | 1 | | | | |
| PH | 0.31 | 0.51 | 0.21 | 0.66 | 0.82 | 1 | | | |
| SI | 0.2 | 0.36 | 0.07 | 0.66 | 0.74 | 0.62 | 1 | | |
| TH | **0.57** | **0.54** | **0.21** | **0.52** | **0.59** | **0.58** | **0.7** | 1 | |
| TA | 0.35 | 0.44 | 0.09 | 0.64 | 0.67 | 0.56 | 0.81 | **0.76** | 1 |

*Source: Lall* et al *(1999)*

## How strong will the recovery be?

The strength of the economic and social recovery will be determined by a tug-of-war between powerful forces boosting economic activity and somewhat weaker but more persistent structural forces acting to restrain the momentum of recovery and poverty reduction in the medium term.

**There are several factors on the side of recovery.** The positive factors on the side of recovery include the strong stimulus provided by fiscal and monetary policies, a low inflation and interest rate environment, the high share of

[1] Terms of trade-based income losses are measured using national income account deflators for exports and imports.

foreign trade in GDP, expected improvements in the external terms of trade (or at least no further deterioration), expected global recovery, a strong national balance sheet and the establishment of the TAMC which will help accelerate debt restructuring.

**But there are also negative forces that will restrain the momentum of recovery.** Firstly, fiscal risk has increased as a result of rising public debt. Although it is manageable, debt dynamics could be complicated by low growth or a weak fiscal stance. Perception of fiscal risk may, in turn, weaken investor and consumer confidence and constrain private investment growth. Secondly, the weak balance sheets of firms will prevent them from increasing business investment, without which recovery cannot be sustained. Thirdly, Thailand has fallen behind other countries in the global competitiveness rankings in criteria related to the knowledge economy (education, technological capability and skills). These negative forces will not derail the short term recovery but will constrain growth over the medium term.

## High growth is important for poverty reduction

**The fragile recovery in Thailand has raised concerns that Thailand may not be able to achieve its target of reducing poverty** to 12 percent of the population by 2006, as envisaged in the Ninth Plan. Projections based on household survey data indicate that meeting this target depends on two crucial factors - high growth and limited inequality.

In the first scenario we assume that GDP growth recovers from 1.5 percent in 2001 to 5 percent in 2006, averaging close to 4 percent between 2002 and 2006. At the same time the benefits of growth are widely spread and inequality drops below the levels observed during the 1990's. This leads to a reduction in poverty to single digit figures by 2006, about 3.5 percentage points below the target of the Ninth Plan and more than 2.5 percentage points below the pre-crisis level. Correspondingly, the number of poor declines by about 3.5 million from 8.9 million in 2000 to 5.4 million in 2006.

**The poverty-reducing impact of high growth can be undermined by a rise in inequality.** In Scenario 2 we assume the same growth path as for Scenario 1, but incorporate a widening in income distribution, so that the Gini coefficient for 2002 to 2006 is on average just above the level observed in the early 1990's, when inequality was at its peak. In this scenario poverty levels will remain close to 14 percent of the population, similar to the level in 2000 and

**Table 1-3**
**Poverty projections under alternative scenarios**

**Poverty Projections Under Alternative Scenarios**

| | *Actual* | *Scenarios* | | | | | |
|---|---|---|---|---|---|---|---|
| | | *1) High Growth and Declining Inequality* | | *2) High Growth and Rising Inequality* | | *3) Low Growth and Stable Inequality* | |
| | 2000 | 2002-06 | 2006 | 2002-06 | 2006 | 2002-06 | 2006 |
| ***Assumptions*** | | | | | | | |
| GDP Growth | 4.4 | 3.9 | 5.0 | 3.9 | 5.0 | 2.0 | 2.3 |
| Gini Index | 52.5 | 50.6 | 50.3 | 54.0 | 55.1 | 52.5 | 52.5 |
| ***Poverty Projections*** | | | | | | | |
| Headcount Index | 14.2 | 10.4 | 8.4 | 13.9 | 13.8 | 13.3 | 12.6 |
| Poverty Gap Index | 4.1 | 2.8 | 2.1 | 4.6 | 5.1 | 4.0 | 3.9 |
| Severity of Poverty Index | 1.6 | 1.1 | 0.8 | 2.3 | 2.8 | 1.7 | 1.7 |
| Number of Poor (Million) | 8.9 | 6.6 | 5.4 | 8.8 | 8.9 | 8.4 | 8.1 |

*Source: Staff estimates.*

substantially exceeding the target of the Ninth Plan. Furthermore, the number of poor people would remain unchanged between 2000 and 2006.

**Sluggish growth can endanger progress towards meeting the poverty reduction target**. Growth rates that were once the highest in the world may now remain moderate over the medium term. In the third scenario we stipulate a slower recovery in GDP, with GDP growth rising to only 2.3 percent by 2006. Assuming inequality remains constant over the period of the Ninth Plan, progress in poverty alleviation would be insufficient to reduce the poverty headcount to below 12 percent.

Thailand is implementing its national competitiveness program which aims to achieve full employment growth potential of around 5-6 percent, as targeted in the Ninth Plan. Some of the key measures being implemented include:

- Improving fiscal management
- Improving the balance sheets of banks and firms
- Strengthening the knowledge economy

This Monitor reports progress that Thailand has made in implementing its competitiveness program and the challenges that lie ahead.

CHAPTER 2

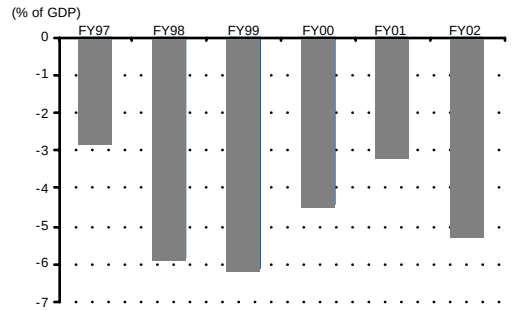
# FISCAL MANAGEMENT

## Introduction

In 2001 the Thaksin Government embarked on an aggressive fiscal stimulus program in order to fulfill its election campaign promises and manage the economic downturn. Its plans are to fully disburse the budgeted Baht 58 billion emergency reserve fund (1 percent of GDP) in FY02. The reserve fund will finance training, programs to strengthen local communities and labor intensive projects in agriculture, tourism, and the SME sector. In addition to these budgetary measures other stimuli, outside the budgetary framework, are also being applied (e.g., the Village Fund, debt suspension for farmers). If all quasi-fiscal activities are included (central government, non-financial public enterprises) the size of the comprehensive public sector deficit will increase from around 3 percent of GDP in FY01 to an estimated 6 percent in FY02. Increased fiscal stimulus was an appropriate response to the expected downtum last year.

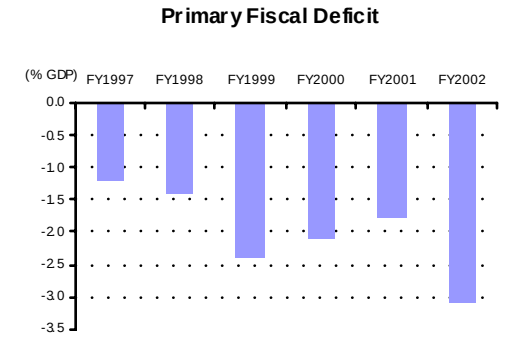
The govemment sees these "bottom up" fiscal programs as different from previous stimulus programs because they are not limited to providing a stimulus in the conventional Keynesian sense. Rather, the programs are also seen as way of promoting social and structural change based on balanced and equitable development, and unlocking the entrepreneurial spirit and talents of the Thai people.

**Figure 2-1**
**Comprehensive fiscal balance**




*Source: Source: IMF*

**Figure 2-2**
**Primary fiscal deficit has increased**




*Source: Bureau of the Budget, MOF*

Box 2-1

## What is the Village Fund?

This program aims to provide each of Thailand's approximately 75,000 villages and urban communities with a revolving fund facility of Baht 1 million ($23,000) to finance micro-credit programs for small scale enterprises and working capital needs. Funding is initially provided by a specialized financial institution (the Government Savings Bank or GSB). However, principal and interest costs will be reimbursed by the budget over an eight year period. The funds allocated to the villages are administered independently by village-level committees, with broad oversight being exercised by a national committee that has the ability to impose financial penalties on individual villages that misuse the funds.

By the end of February 2002, Baht 70.4 billion of funds had been disbursed to the villages out of a total of Baht 74.9 billion (1.5 percent of GDP) allocated to the initiative. Of this amount about Baht 48.6 billion (1 percent of GDP) had been lent on a short term basis (less than 1 year) to individuals. The individual credit limit is set at Baht 20,000 ($460) and the average loan size is about half of that. According to a BoT survey most of the loans (60 percent) are funding the purchase of intermediate inputs (such as fertilizer) and the rest are equally split between investment in small scale projects and refinancing of high-cost debt. Given the early stage the program is at no reliable information on default rates is yet available.

**The objectives of credit granted**

| Activity | Percent |
|---|---|
| 1. Agricultural sector | 70.9 |
| - rice | 23.5 |
| - crops | 16.0 |
| - fruit and vegetables | 17.0 |
| - hogs | 8.3 |
| - poultry | 4.7 |
| - cattle | 23.2 |
| - prawns | 2.5 |
| - other | 4.8 |
| 2. Household industry | 4.0 |
| 3. Trading | 15.3 |
| 4. Services (repair shop, beauty salon, etc.) | 3.7 |
| 5. Emergency alleviation | 1.6 |
| 6. Group activities | 4.5 |

*Source: Bank of Thailand*

**Overall operating results**

Unit: Fund

| | Villages | Urban Communities | Total | Percent |
|---|---|---|---|---|
| 1. Target | 71,364 | 3,517 | 74,881 | *** |
| 2. Already established and received the transfer of funds 1/ | 69,026 | 1,415 | 70,441 | 94.1 |
| 3. Remaining balance | 2,338 | 2,102 | 4,440 | 5.9 |

*Source: Bank of Thailand*
*Remark 1/ includes 4,251 village and urban community funds that received the 6th tranche of funds transferred on Feb 20, 2002*

**Primary fiscal deficit** (expenditure net of interest payments) increased to 3 percent of GDP in FY02, up from around 1.5 percent in FY01.

**Public debt has increased**. The cumulative build up of fiscal stimuli since the 1997 crisis and the fiscal cost of financial sector restructuring have contributed to the rapid rise in public debt (central government debt, FIDF debt associated with financial restructuring and non-financial public enterprises) from 14.5 percent of GDP in 1996 to nearly 57 percent in 2001. The concerns about the rising level of public debt have now begun to outweigh the benefits from pump-priming of the economy.

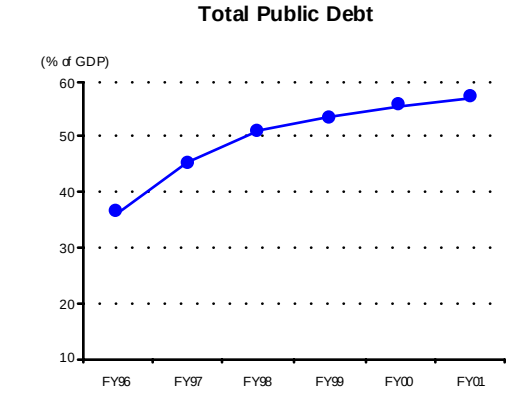
**The macroeconomic policy mix is changing** Given the high level of public debt, improved economic outlook and low inflation, monetary policy stimulus through low policy rates has been increased while fiscal policy is being tightened. The Government has announced that it will tighten fiscal policy starting in FY03. The planned budget deficit for FY03 is Baht 175 billion compared to Baht 200 billion in FY02. The Bank of Thailand has shifted the balance of focus of its monetary policy from supporting BOP stability to supporting growth. In addition to changing the mix of macroeconomic policy, other reforms are being implemented to lower fiscal risk.

**Thailand is implementing institutional and policy reforms to improve its fiscal position and to lower public debt**. These initiatives are wide-ranging in scope and include improving tax revenue collection, better expenditure management, privatization of state owned enterprises and increased transparency and accountability, as required under the new Constitution.

## Debt dynamics

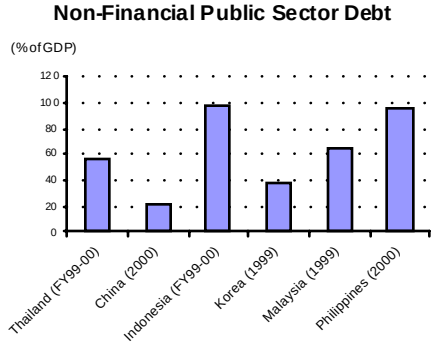
**Thailand's public debt is comparable to other countries in the region.** Thailand's public debt has risen sharply according to its own historical standards, but it still compares favorably with other countries such as Malaysia and Korea.

Figure 2-3
**Public debt has increased**




*Source: MOF*

Figure 2-4
**Thailand's public debt compares favorably with other Asian countries**




*Source: IMF (Staff Report, July 2001)*

Over two-thirds of the increase in public debt is directly attributable to financial sector restructuring costs, while the rest comes from the social safety nets and the expansionary fiscal policy that supports growth. The currency devaluation brought on by the 1997 crisis also resulted in balance sheet losses and a rising interest burden (in local currency) on the foreign exchange liabilities of the government.

**Public debt dynamics are sustainable but are vulnerable to growth and fiscal stance**. Public debt can come down to 50/55 percent of GDP by 2010 if GDP growth can be increased

to 5 percent, fiscal stance is tightened and interest rates remain low. A protracted period of low growth or insufficient fiscal reform could produce an unsustainable debt path (see IMF Selected Issues Paper, 2001, for details on debt dynamics).

**Contingent liabilities could complicate debt management.** In the aftermath of the crisis the Government has faced increasing off-budget obligations, particularly in the form of contingent liabilities. These off-budget obligations have accumulated primarily in the banking and enterprise sectors. Some of these obligations are of a legal nature (for example, state-guaranteed debt) while others reflect policy commitments (for example, non-guaranteed obligations of state owned enterprises and revolving funds to sustain price controls). If enterprises and funds continue to incur losses this practice of allowing their further borrowings (often with explicit government guarantees) only postpones the need for direct government financing and increases the size of the government's off-budget obligations. The Government is planning to limit guarantees to state enterprises through the reform of the Public Debt Law, and corporatization and privatization of enterprises.

## Fiscal reform

Thailand's low tolerance for public debt is largely due to its relatively low tax base of around 15-17 percent of GDP and declining flexibility in spending. The government has been implementing reforms to enhance the tax base and to increase the revenue collected. Tax reforms are promising and will be important given that an increasing proportion of the budget will go towards mandated spending in the future (e.g., payments on public debt, revenue allocated to the local governments as required under the constitution and wages and salaries). Having said that, discretionary spending in Thailand is still relatively high compared, for example, to Indonesia or Brazil. A high level of discretionary spending should provide the flexibility to cope with fiscal vulnerabilities, at least in the short run.

**Box 2-2**

**Categories of contingent liabilities in Thailand**

*Explicit contingent liabilities* of the Thai Government are commitments that are based on law and contracts and primarily include guaranteed debt and other liabilities of state owned enterprises as well as financing needs resulting from price support programs. Government *implicit contingent liabilities* are commitments that are based on political announcements, public expectations and possible interest-group pressures. In Thailand these mainly include:

- Deposit guarantees
- Obligations of FIDF (the result of the past and possibly future recapitalization actions, liquidity support and deposit insurance claims) and, indirectly, the future recapitalization needs of the entire financial system
- Liabilities of extra-budgetary funds
- Net worth of the Bank of Thailand
- Losses, non-guaranteed obligations, arrears and deferred maintenance of state-owned enterprises (including concession agreements of state owned utilities, arrears of the State Railways to the PTT and deferred railway track rehabilitation)
- Future possible commitments and obligations of sub national governments (for example, losses of provincial enterprises)
- PAYG Pension system

*Source: Bank staff*

The other key drivers of fiscal outcomes include decentralization, privatization, transparency and accountabilities. Will the proceeds of privatization help to improve fiscal balance and lower public debt? What are the implications of financial sector restructuring on public debt (discussed in Chapter 3)?

## Tax reforms

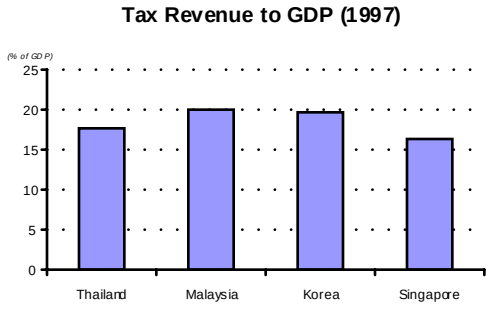
The total revenue of the central government in Thailand for 1999-2000 amounted to Baht 817.6 billion[2], of which Baht 717.3 billion was tax revenue[3]. Of that total tax revenue Baht 91.8 billion was personal income tax, Baht 145.6 billion corporate income tax and Baht 10.6 billion petroleum income tax. Taxes on property amounted to Baht 3.6 billion. The Thai VAT represented Baht 192 billion, specific business tax Baht 17 billion and excise taxes Baht 168.8 billion. Import duties amounted to Baht 85.3 billion, reflecting a downward trend that has been evident since 1994.[4]

**Given that an increasing proportion of the budget will go towards mandated spending, in future Thailand will have to rely on revenue measures to reduce the budget deficit, which mainly means tax revenue.** Some obvious candidates are the increase of the VAT rate to 10 percent and the increase of excise taxes on beer and spirits, tobacco, petroleum products, motor cars and the like. Reform of personal income tax, corporate income tax, VAT and the tax administration as a whole will also be important in increasing revenue.

**Thailand is implementing reforms to improve the tax system**. Although much progress has been made in recent years, particularly in tax administration, certain tax law and administrative reforms have the potential to improve revenue. Firstly, a simplification and rationalization of existing (mostly income) tax laws, regulations and compliance. Secondly, a reconsideration by the government of tax incentive policies, curbing "leakage" and restricting such incentives to situations where they are really effective in attracting additional investment. Thirdly, while the current organization of the Thai tax administration is modern and efficient there is clearly room for

[2] At one US $ equals around 43.5 Baht.
[3] The remainder is mostly income from state enterprises and the state lottery.
[4] Thailand is a member of the WTO and of the ASEAN Free Trade Agreement, which entails significant restrictions on import duties.

**Figure 2-5**
**Thailand has a low tax revenue base**




*Source: IMF data*

**Figure 2-6**
**Divergence between import tariffs and import revenues**

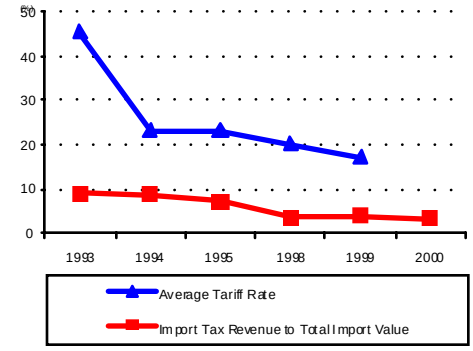
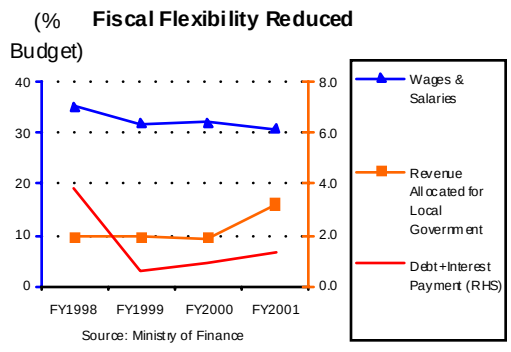



**Figure 2-7**
**How flexible is public spending?**




*Source: Ministry of Finance*

improvement. Adopting a "service approach" to taxpayers, improving the training of tax officials and rationalizing some of the administrative functions are realistic and modest goals. They would reduce overall administrative costs, increase voluntary compliance and the efficiency of tax assessments and collections.

**Tax Incentive Policy.** The government has already reviewed its corporate tax incentive policy and this had lead to certain restrictions on the tax savings available under the Investment Promotion Act[5]. The international consensus now leans to the view that the impact of certain tax incentives on attracting sustained FDI is much overrated and that many tax holiday regimes may actually cause more harm than good[6].

**Tax Administration.** There are some well-known issues with respect to the organization of the Thai tax administration, including optimal structuring along functional and district lines and the sustained computerization of tax administration functions. Some of these issues have already been addressed to a certain extent, for example through the creation of a "Large Taxpayers Office" and the computerization of tax-paying by the public, enabling the payment of taxes through bank transfers and intra-administrative communication and data management. Others issues however may still deserve further attention, such as increasing third-party obligations for providing information and collection of taxes and effective cooperation between different departments of the Ministry of Finance (such as between the Revenue Department and Customs). One somewhat pressing matter is the VAT refund and related abuses legislation. This is considering making compulsory the carrying forward of a VAT credit, rather than allowing cash refund (except in cases involving exports), and introducing minimum amounts for tax refunds.

The theme of simplification and rationalization of tax law and regulations can also be pursued at the administrative level of Thailand's tax system. There seems to be some room for scaling down the compliance and administrative burden on certain taxpayers and officials[7].

## Public expenditure reform

**Mandated spending** — the rising debt servicing commitment, fixed expenses on wages and salaries and a rapidly increasing proportion of revenue allocated to local government under the decentralization program — is likely to reduce expenditure flexibility in future. In turn this is likely to limit the scope to use future expenditure cuts to cope with fiscal shocks.

**Capital expenditures, which are more discretionary in nature, have already been reduced**. The reduction in capital expenditure has been applied across the board, including in education, health and housing. The money saved was largely allocated to local government. However, current expenditures on education and health have been maintained or increased. This would suggest that the cuts have focused on investment while operations and maintenance have been protected.

**Public expenditure management should be improved**. The key areas of weakness in expenditure management in Thailand are: (a) lack of timely audited accounts, (b) effective monitoring and evaluation of spending, (c)

[5] See above.

[6] Van der Bruggen, E., "A review of the OECD Report on corporate tax incentives for FDI", Asia Pacific Journal of Taxation, March 2002; Yelpaala, K., The efficacity of tax incentives within the framework of the neoclassical theory of foreign direct investment, 19 Texas International Law Journal, 1984, 400-403; SIMMONS, R.S., "Corporate taxation and the investment location decisions of multinational corporations", Asia-Pacific Journal of Taxation, Vol. 4, No. 1 (Spring) 2000, p. 88-107; Abed, G.T., Norregaard, J., van der Heeden, K., Gropp, R., and Walsh, J., "Thailand: Improving the Structure and Performance of the Revenue System", IMF, Fiscal Affairs Department, May 1998, p. 40-52.

[7] Silvani, C., and Baer, K., "Designing a Tax Administration Reform Strategy: Experiences and Guidelines", IMF Working Paper, WP/97/30, p. 10-13; Bird, R.M., "Tax policy and tax administration in transitional countries", ibid, p. 72.

management of contingent liabilities, and (d) lack of line agency flexibility and accountability.

## Decentralization

There are 7,951 local administrations in Thailand today, in 5 classifications: (1) 75 Provincial Administrative Organizations (PAO), (2) 1,129 municipalities, (3) 6,745 Tambon Administrative Organizations (TAO), (4) Bangkok Metropolitan Administration, and (5) Pattaya City.

**These local administrations are being given increased resources and greater responsibilities for the delivery of public services.** The 1999 Decentralization Act mandates that local administrations' revenues should be at least 20 per cent and 35 per cent of the national government's revenues in years 2001 and 2006 respectively.[8] In FY 2000 it is estimated that 43 percent of local administration revenues and transfers were from shared taxes, 44 percent from both unconditional and specific grants from the national government to the local administrations and only 13 per cent from locally collected revenues. The 20 percent target was achieved in FY2001 mainly by more than doubling the national-to-local grants, with three-quarters of the grants being specific grants allocated through national government departments. Beginning FY2003, all specific grants are slated to be terminated, allowing local administrations greater discretion over the use of the funds. In February 2002 the Parliament approved the Decentralization Action Plan which nominates six areas, including 245 functions, which will be devolved to local administrations. These functions, which are categorized as either mandatory or voluntary, will be devolved by FY2004.

**Table 2-1**
**Public investment in social sectors has fallen**

| Public capital expenditures in social sectors ( percent GDP) | 1996/1997 | 1997/1998 | 1998/1999 | 1999/00 | 2000/01 |
|---|---|---|---|---|---|
| Total expenditure | 7.6 | 7.5 | 7.9 | 7.6 | 7.8 |
| Education | 4.1 | 4.2 | 4.4 | 4.1 | 4.5 |
| Health | 1.6 | 1.7 | 1.6 | 1.4 | 1.3 |
| Social security and welfare | 0.7 | 0.7 | 0.8 | 1.2 | 2.0 |
| Current expenditure | 5.1 | 5.4 | 6.1 | 6.3 | 6.8 |
| Education | 3.1 | 3.3 | 3.7 | 3.6 | 4.1 |
| Health | 1.1 | 1.2 | 1.4 | 1.3 | 1.2 |
| Social security and welfare | 0.7 | 0.7 | 0.8 | 1.1 | 1.5 |
| Capital expenditure | 2.5 | 2.1 | 1.8 | 1.3 | 1.0 |
| Education | 1.0 | 0.9 | 0.6 | 0.5 | 0.4 |
| Health | 0.5 | 0.5 | 0.3 | 0.2 | 0.1 |
| Social security and welfare | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 |

*Source: IMF, Bank staff estimates*

**Table 2-2**
**Areas for improving expenditure management**

| Good Practice Criteria | Indonesia | Malaysia | Philippines | Singapore | Thailand |
|---|---|---|---|---|---|
| Budget formulation through interministerial and legislative deliberation | 2 | 3 | 2 | 3 | 2 |
| Budget covers all or most fiscal operations | 2 | 1 | 2 | 3 | 2 |
| Actual spending deviates only slightly from planned levels | 2 | 2 | 2 | 2 | 2 |
| Timely, audited public accounts | 1 | 3 | 2 | 3 | 1 |
| Results specified, performance reported | 1 | 2 | 1 | 1 | 1 |
| Adequate compensation for public service | 2 | 3 | 2 | 3 | 2 |
| Competence-based hiring and promotion of public service | 2 | 3 | 2 | 3 | 2 |
| Line agency flexibility and accountability | 1 | 3 | 2 | 3 | 1 |
| Contingent liabilities identified and managed | 1 | 2 | 1 | 1 | 1 |
| Effective monitoring and evaluation of spending | 1 | 2 | 1 | 1 | 1 |
| Transparent budget process with timely and accurate reporting | 2 | 3 | 2 | 3 | 2 |
| Overall | 1 | 3 | 2 | 3 | 2 |

*Note: Rating are High = 3, Medium = 2, Low = 1*

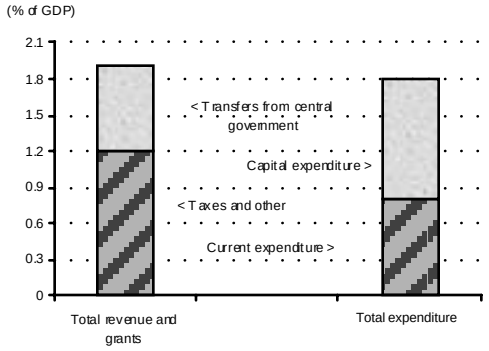
*Source: World Bank, "East Asia Recovery and Beyond", and World Bank staff*

[8] From 1990-1999, local governments' revenues were on average 8 per cent of that of the national government.

**Decentralization provides Thailand with a significant opportunity to improve the delivery of public services by allowing it to respond better to local needs and enhance participation and accountability at local level.** To see all the benefits that decentralization has to offer requires further strengthening of the local administrative capacity. This would include improving their financial management (revenue, expenditure and asset and liability management) to ensure efficient use of resources, strengthening accounting and financial reporting and building up technical skills related to the decentralized functions, including an understanding of the laws and procedures relating to local governments. Given the very small size of some local governments, joint provision of public services by several local governments may also be important to ensure that services are provided efficiently and on a sufficient scale.

**Duplication should be minimized.** Moreover, the decentralization of functions specified in the Decentralization Action Plan should be accompanied by a clear plan for the decentralization of personnel so that the duplication of functions and staff at the national and local administration levels is minimized, along with any undue risks to the budget.

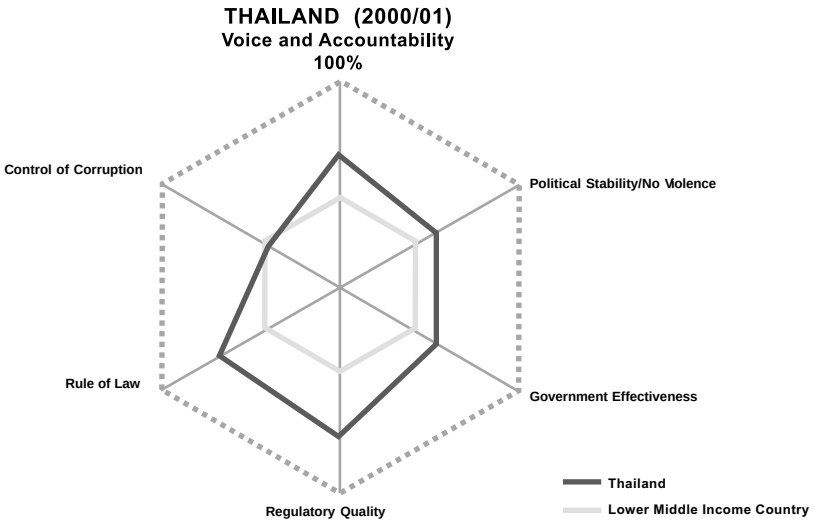
Figure 2-8
**Structure of local government public finance (1999-2000)**




## Accountability & transparency

**Thailand has taken significant steps towards improving accountability and transparency.** The Office of the Ombudsman has been estab-

Figure 2-9
**Thailand's governance compares favorably with other lower middle income countries, with the exception of corruption**




*Source: Kaufmann, Kraay and Zoido (KKZ), 2002: Governance Matters II: Updated Governance Indicators for 2000-01*

lished, the Ombudsman appointed, the National Counter Corruption Commission was officially established and seventeen Supreme Administrative Judges have been officially appointed. A code of ethics for civil servants has been revised and an Ethics Promotion Center established.

**Despite these achievements independent organizations need more resources to improve their staffing**. The challenge now is to continue developing government policies and procedures for budgeting and human resource management, as well as the reporting roles of independent organizations concerned with monitoring accountability, (so enhancing the integration of these organizations with other reform agencies) and promoting public awareness of the roles and responsibilities of these organizations. Emerging issues, emphasized in the government's new program, include developing and implementing an effective government-wide, anti-corruption strategy.

## Privatization

The Government estimates that it will receive about Baht 10-20 billion per year from the proceeds of privatization. The amount is modest because the bulk of the money raised will go to the enterprises themselves to pay down debt or finance future investments. However a more significant result will be the reduction in the SOE debt which is counted as public debt. Currently, government-guaranteed debt from state owned enterprises is close to Baht 1 trillion. This could be cut in half if the privatization program planned for the next 2-3 years is successful. In turn this could lower the ratio of public debt to GDP by 7-8 percentage points.

**Eighteen state owned enterprises will be privatized**. In 2001 the government successfully privatized Internet Thailand through an equity offering of more than 50 percent of the government's holding. The Government corporatized the Petroleum Authority of Thailand (the PTT Co. Ltd was created on 1 October 2001) and a month later launched a successful initial public offering of 30 percent of its holding.

**In addition to the corporatization of SOEs,** the government is considering restricting the provision of financial guarantees for state enterprises to a limited recourse basis, with the criteria and conditions for underwriting financial guarantees meeting generally accepted business practices.

**Regulatory reforms will help accelerate privatization**. Telecom utilities, the Airports Authority of Thailand, the Ports Authority of Thailand and some financial institutions are to be privatized in 2002. Privatization of the power and water utilities is scheduled for 2003. Resolving outstanding issues of market and regulatory structure will help to accelerate the privatization program.

**Conflicts of interest will need to be managed well**. Currently the corporate govemance role and the regulatory govemance role in many state enterprises often overlap, resulting in conflicts of interest. Independent economic regulatory agencies with credible procedures and processes need to be established. A degree of separation between the political and the decision making systems should be introduced. The economic regulatory agencies that have so far been established are the National Telecommunications Commission and the National Broadcasting Commission. Establishment of additional regulatory agencies such as a National Energy Regulatory Commission, a National Waterworks Commission and a National Transportation Commission are being considered.

CHAPTER 3

# FINANCIAL AND CORPORATE REFORM

## Introduction

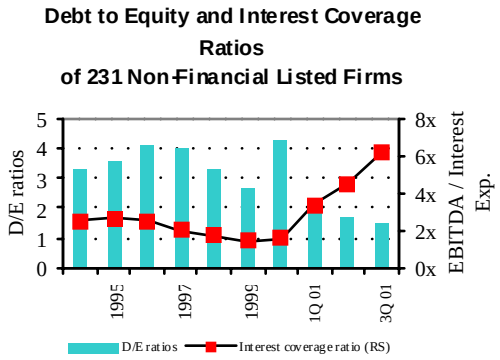
**Much has been done to stabilize the financial and corporate sectors since the crisis and market sentiment has improved, as is demonstrated by the 26 percent surge in the SET since its low at the beginning of the year.** Policies affecting financial institutions and firms during 2001 were aimed at preventing economic contraction, managing an orderly re-pricing of assets, supporting the banks with regulatory forbearance, stimulating the economy to keep businesses alive and increasing bank lending.

## Recent trends in firms and banks

**Are companies still highly indebted[9]?** Analysis of the debt to equity ratios of 231 listed, non-financial firms shows they have been volatile since the Baht flotation in 1997. The ratios peaked in 1997 at over 4x, came down to below 3x in 1998, went up again in 2000 to 4x and has gradually declined since 2001 to slightly more than 3x in 3Q 01. The main contributor to these lower D/E ratios has been a decline in the level of corporate debts rather than an increase in corporate equity.

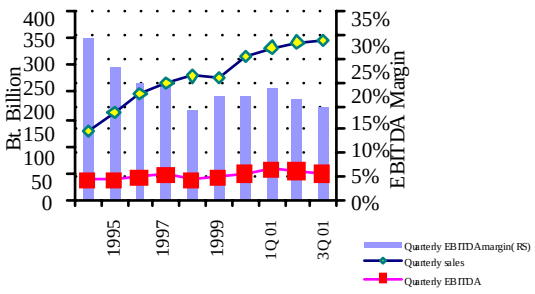
[9] This analysis looks system-wide and there is a significant difference of indebtedness and performance across sectors and firms.

Figure 3-1
**Debt to equity and interest coverage ratios**




*Source: SET, Merrill Lynch Phatra, World Bank estimate*

Figure 3-2
**Quarterly Sales, EBITDA, and EBITDA margin of 231 non-financial listed firms**




*Source: the SET, Merrill Lynch Phatra, World Bank estimate*
*EBITDA margin equals EBITDA divided by sales*

The ability of Thai listed firms to service debt as measured by interest coverage ratios (EBITDA[10] to interest expense) has improved from the 1998 low. However interest coverage ratios of listed firms in 3Q 01 were still less than half of the pre-crisis level. The lower interest rate environment has been crucial to the survival of the Thai corporate sector.

While quarterly sales of listed, non-financial firms have increased steadily since 1994, their EBITDA have not seen a concurrent increase because of a declining EBITDA margin. Loss of pricing power by Thai firms is probably a better explanation for this than increases in their operating expenses.

**Domestic financing for non-financial corporate activity is sluggish.** There are several factors which further depressed corporate bond issuance in 2001, including uncertainty over the BoT's interest rate policy, the steepness of the yield curve and the future volume of FIDF bonds required to refinance the costs of intervention in failed financial institutions.

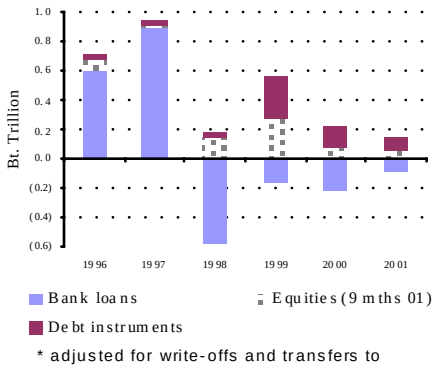
## Restructuring of firms and their debts

While headline NPL[11] figures have dropped from a peak of 47 percent to about 11 percent, distressed loan levels remain high.

**The flow of re-entry NPLs[12] has exceeded new NPLs due to the poor quality of debt restructuring.** There has been a downward trend in new NPLs, from 0.3 percent of total loans in the financial system per month in 2001 to 0.15 percent of total loans in January 2002. Re-entry NPLs came down to 0.30-0.33 percent of loans during November-December 2001, from more than 0.4 percent of total financial system loans per month during January-October 2001. The figure rose again to 0.53 percent of total loans as of January 2002. However as transfers to AMCs are not captured in these reported NPLs, the level of re-entry NPLs reported by the BoT could be understated.

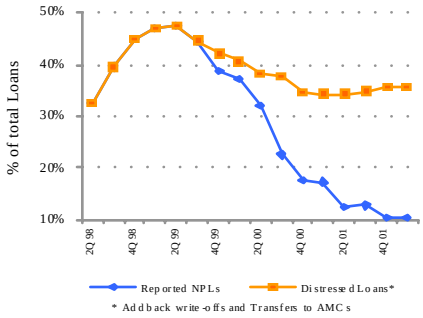
**Debt restructuring has been the largest contributor to the reduction of NPLs in the financial system, but the rate of restructuring has been declining.** This declining trend of completed debt restructuring could be

**Figure 3-3**
**Domestic funding sources for Thai corporates**




*Source: SEC and World Bank estimates. Equities include new issues by listed firms or IPOs.*

**Figure 3-4**
**Distressed loans remain high**




*Source: BoT, World Bank estimates.*

[10] Earnings before interest, taxes, depreciation and amortization.

[11] Headline reports of NPLs have become increasingly unreliable as a source of information for tracking the level of distressed loans and the flow of NPLs in the financial system. Transfers to AMCs (both private and public) and restructuring by AMCs are not captured by the BoT's aggregated NPL figures. As of January 2002, the outstanding book value of transfers to AMCs totalled Bt885 billion, which represents 65% percent of total distressed loans in the financial system. While total transfers to AMCs to date can be added back into the BoT -reported NPLs to derive the system-wide figure for distressed loans, there is no information on NPL re-entrying and restructuring by those AMCs. As a result, system-wide measurement of the NPL inflow and outflow is difficult.

[12] Re-entry NPLs are defined as previously restructured loans that have since reverted to non-performing status.

explained by the fact that banks are now restructuring more difficult cases. In addition the overall completion rate of corporate debt restructuring (including proactive debt restructuring of performing loans) has slowed system-wide. This has been due in part to debtors delaying negotiations until the TAMC was established, with the hope that their loans would receive more favorable restructuring terms and conditions from the TAMC. Going forward, completed restructurings by AMCs will need to be consolidated into the figures so that the trend of completed debt restructuring in the overall financial system can be properly measured.

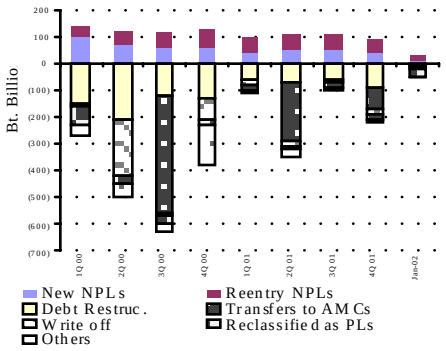
### *Out of court workouts by CDRAC*

**The debt restructuring of large corporate cases under the voluntary CDRAC process is seen as having played a significant role in the reduction of NPLs** so far, although the impact on SME cases has been relatively small. The total number of cases and the credit exposure of SME loans under the CDRAC process are minute compared to the total SME credit exposure in the system, simply because CDRAC initially targeted larger cases. Debt restructuring under the CDRAC process has slowed down with the establishment of TAMC. However a scaled-down CDRAC operation continues, to facilitate cases that are not transferred to TAMC and NPL re-entry.

### *Court-led NPL resolution*

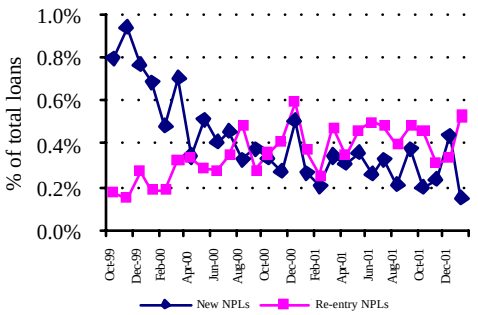
**The pace of restructuring has been undermined by the backlog of cases in the Civil Courts,** where mortgages are enforced. Filings to foreclose on collateral and sue guarantors are increasing. There are two predominant categories of filings: cases that failed the CDRAC process and loans in default for more than a year where direct negotiations with debtors and guarantors outside the CDRAC process have failed. The Civil Courts estimate that there are more than 65,000 NPL cases awaiting judgments. It is estimated that this backlog will take at least seven years to clear given the cumbersome civil procedures and evidentiary process, the limited administrative

**Figure 3-5**
**Contributors to increases and decreases in NPLs by quarter**



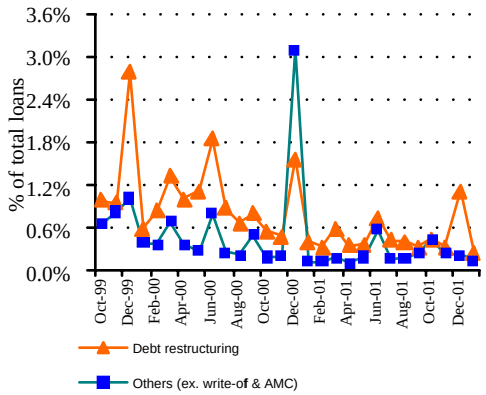

*Source: BoT, World Bank estimates.*

**Figure 3-6**
**NPL inflow**




*Source: BoT, World Bank estimates*

**Figure 3-7**
**NPL outflow**




*Source: BoT, World Bank estimates*

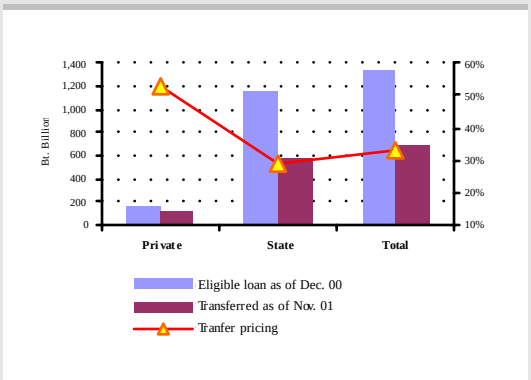
## Box 3-1
## Thai Asset Management Corporation (TAMC)

As of December 2001, the majority of eligible distressed assets had been transferred to TAMC. Bt 698.4 billion (outstanding book value) of total eligible assets of Bt 1.3 trillion (specified as of December 2000) were transferred at an average of 33% of book value. Approximately 160,000 small, single creditor loans (approximately Bt 250 billion) remain with state banks and FIDF-owned AMCs. Before a decision is taken to transfer this high volume of small accounts to TAMC, careful consideration should be given to TAMC's capacity and comparative advantage.

Fewer loans were transferred to TAMC than were eligible because some were restructured by banks and some were adjudicated or by the courts in the meantime. As of November 2001 distressed loans managed by TAMC will account for 52% of the distressed assets in the Thai financial system. As a result TAMC could be the main catalyst for the next wave of distressed loan resolution.

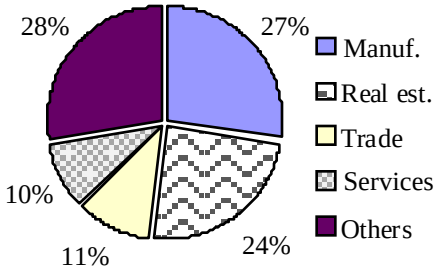
TAMC has set aggressive goals and plans to restructure Bt 500 billion (75% of total transferred loans) by the end of 2002. It may be challenging to meet these goals given the limited in-house resources (management has received approval to hire 100 additional employees, making a total of 200). The Board's strategy appears to be to offer favorable discounts to current debtors, with an initial focus on accounts that were blocked by state banks who were reluctant to accept liability on behalf of the state for losses. TAMC intends to complete resolution plans for all distressed loans in its portfolio within 2 years and to complete its operations within 5 years, quicker than its earlier estimate of 8 years. Since loans to the manufacturing (27%) and real estate (24%) sectors are the two largest in its portfolio TAMC will give a high priority to restructuring these loans. As of Q1 02, TAMC had restructured Bt 100.2 billion of loans. The 177 restructured loans include 47 in the property sector, 51 in manufacturing, 23 in wholesale/retail, 11 in finance and 29 in services. Around 50% of the resolutions were resolved through debt restructuring (primarily term extensions, write downs, interest rate reductions and debt/equity swaps), around 10% by bankruptcy rehabilitation and 40% via foreclosure of collateral. TAMC defines "resolved" as either the

### Figure 3-8
### Transfers of banks' distressed assets to TAMC




*Source: TAMC*

### Figure 3-9
### Industry breakdown of transfers to TAMC




*Source: TAMC*

conclusion of negotiations, the rehabilitation agreement has been confirmed by vote or a decision has been reached to liquidate the debtor. Once transactions are finalized TAMC will track the resolution process to completion. It will be important for TAMC to track and disclose the transactions which have an accounting effect, including debt restructuring, cash collections and the final disposition of the assets back to the markets. For the relatively few single creditor cases transferred from state banks, TAMC has given asset managers special guidelines. Of the single creditor cases transferred, 840 are in the courts,

250 are not. Debtors were given 30 days to propose a repayment plan and their responses were due in March. Cases are supposed to be resolved in April and May. If a debtor does not perform then TAMC will remove the case from the courts and exercise its special powers of liquidation.

Two problems have arisen with starting the restructuring process. The first is the selection of asset managers and the payment of asset management fees. This has yet to be finalized among the TAMC, FIDF, state banks, state bank AMCs, and private banks, which may cause a lapse in the servicing of some loans. The second problem has been a difference of approach between the private banks, as asset managers, and the TAMC on what constitutes an acceptable restructuring. The private banks push for maximum recoveries, while the TAMC seeks to balance the positions of creditors, debtors and taxpayers. The best solution is to develop a transparent and competitive process in which the TAMC seeks from the market alternative plans to restructure a particular debt or firm, so that the highest value option can be selected by the Board.

Close monitoring of key challenges will be required. These include: (1) TAMC's willingness to exercise its special powers when needed, including the prompt liquidation of non-viable cases, (2) building the capacity (including human resources), systems and procedures to manage the parties and assets in the restructuring process in a fair and transparent manner, (3) the importance given to maximizing the number of recoveries, which would require a change of operational approach away from conducting negotiations with only the current debtor towards soliciting from the market competitive plans to resolve an NPL or rehabilitate a debtor, (4) developing the capacity and strategy to manage and sell assets which result from debt restructuring, including performing loans, collateral and equity in firms, and (5) the quality of debt restructuring, which could be compromised by unrealistic goals based on volume.

The last two issues are particularly important for Thailand because the secondary markets are moribund. The government's primary responsibility in post-crisis asset resolution is to re-establish asset markets and pricing. This is accomplished by selling or joint-venturing the assets it has acquired by intervening in failed banks. The assets should be transferred back into the private markets either before or after the loans have been restructured, depending on which route maximizes the number of recoveries. It's important that this is a measured, transparent and competitive process. As the first investors or partners make money and competition builds, prices rise, and the private financial institutions can then re-enter the markets with their own portfolios over time.

Assets such as real estate collateral remain unproductive, locked up on bank and AMC balance sheets instead of being reallocated to the best management and new sources of capital through the secondary markets. One approach for real estate-related loans and collateral is for the TAMC to enter into equity partnerships with private asset managers and their capital partners over a specified pool of assets. This strategy of accepting deep haircuts with the current debtor has the benefit of reducing the debt of those firms, which should then be able to grow. However, without competitive bidding the process will not be transparent. One danger is uneven treatment of debtors by banks, based on favored relationships, and by the TAMC, based on political interference. Another danger is that without a competitive process, the TAMC exposes itself to charges of improper behavior. Finally, this strategy may not minimize the cost to the taxpayer.

capacity of the judiciary and a lack of judges with the necessary experience to handle relatively complex disputes over secured loans.

**Given this backlog, the government could consider taking steps to expedite the civil procedures or the evidentiary process**. The existing legal regime lacks a quick mechanism for debt collection and enforcement of security rights outside the bankruptcy law. Since debtors are already able to use the legal framework to delay restructuring negotiations it may not be appropriate to amend the Bankruptcy Act again to favor the debtors further.

**The Mediation Center for Financial Disputes (MCFD)** within the Office of the Courts of Justice was opened in August 2000 to relieve the backlog in the courts by providing out-of-court mediation as an alternative to trial. The demand for out-of-court mediation has increased from an average of five cases per month between August-December 2000 to twenty cases in June 2001. All cases were mediated and settled within three weeks and all have withdrawn their court petitions. MCFD is now looking to recruit more experienced legal and financial professionals to serve as mediators.

## Cost of financial sector reform

**The recovery rate achieved by TAMC has a direct effect on the public debt and it is helpful to understand where the losses will be booked.** During the crisis the FIDF, in its role as the rescue fund and lender of last resort, acquired assets from failed banks and finance companies. After paying off the depositors of those institutions and selling or restructuring the assets (mostly NPLs), the government estimates that FIDF's net loss will be Baht 1,386 billion. Baht 500 billion of those losses were attributable to the failed finance companies and have already been fiscalized through the issuance of government bonds. The other Baht 886 billion of those losses are currently financed by the FIDF in the short term repurchase markets. When it intervened the FIDF acquired the assets from the failed banks at approximately 90 percent of book value. The bulk of those assets have subsequently been transferred to TAMC at approximately 30 percent of book value (which accounts for Baht 460 billion of the total estimated loss of Baht 886 billion).

Importantly, the Baht 886 billion loss estimate assumes a recovery rate on assets transferred to TAMC of 40-45 percent of book value. The actual recovery rate is unknown, but will depend on the quality of the assets, which is believed to be relatively poor, and on TAMC's future performance. The only benchmarks for recovery rates are FRA auctions and the third party sale of NPLs by DBS Thai Danu Bank at about 23 percent of outstanding book value. Given these facts, FIDF's remaining losses could far exceed Baht 886 billion unless TAMC maximizes the recoveries on FIDF's (e.g., the taxpayer's) assets. The FIDF can make claims on its gain/loss sharing agreement with TAMC on a net basis for the assets managed by TAMC in year ten (2012).

**The recovery rates achieved by four other FIDF-owned AMCs are also important and should be disclosed.** Baht 300 billion remains in these AMCs, which are mostly single creditor accounts, and the asset management of these accounts needs to be rationalized (possibly including mergers) with profit incentives provided to the asset manager. There remains a reluctance to sell resolved assets into the secondary market, given the resistance to the rapid liquidation of assets from the failed finance companies that was achieved by the FRA using a transparent auction process. For example, Sukhumvit Asset Management (SAM), which took over NPLs from KTB, has retained about Baht 120 billion (6,000 borrowers) of assets (from single creditor accounts and multi-creditor accounts less then Baht 50 million in size), after transferring their larger multi-creditor accounts to TAMC. SAM has outsourced the restructuring of these loans over the next three years, and plans to liquidate the restructured assets thereafter.

**Financing FIDF's losses from financial sector restructuring is a fiscal matter, and a plan to fiscalize those losses would reduce both the financial and policy risk to the BoT.** FIDF is currently funded in the short term repurchase market at low rates. In order to reduce interest rate risk and to move the obligation off the BoT's balance sheet, in October 2000 the cabinet approved the government guarantee of FIDF bonds to the amount of 207 billion. Thus far the FIDF has issued Baht 112 billion in guaranteed bonds. It is expected that the remaining Baht 95 billion of guaranteed bonds will be issued this year. Any new issuance that has an impact on the budget faces legislative hurdles. First, the enactment of the draft Public Debt Management Act continues

to be delayed. Second, Parliament must enact an additional law to fiscalize remaining financial restructuring costs borne by the FIDF.

To date, the fiscalization of remaining losses on FIDF's balance sheet has not been finalized and the interest costs of further fiscalization were not included in the most recent government budget. The BoT does not have the ability to service the interest obligation on longer term FIDF bonds. Currently financial institutions contribute about Baht 20 billion annually to the FIDF. Assuming the FIDF will issue 6 percent coupon bonds to lengthen the term of its total liabilities of Baht 776 billion, annual interest expenses will be Baht 47 billion, exceeding FIDF's annual income. Exposing the BoT to this shortfall and failing to fiscalize these costs could compromise the independence of monetary policy. In the short run the FIDF may continue to rely on short term financing to keep its interest expenses low. Moreover, excess capacity in the Thai economy may help to keep inflation down. Nevertheless, too much reliance on short term funding exposes both the FIDF and the BoT to refinancing and interest rate risk.

**Public debt management capacity has been improved with the establishment of the PDMO, but the capacity to track public debt and contingent liabilities needs to be enhanced.** Significant contingent liabilities are embedded in the state owned specialized financial institutions, some of which take deposits and compete directly with private banks. The Ministry of Finance is implementing an action plan to rationalize the roles, business strategies and fiscal treatment of these institutions. However, the government mandate to provide off-budget stimulus through these institutions should be carefully monitored, especially given the weak risk management capacity in some institutions and the rising public debt.

## Policy towards state banks

**Policy toward state banks should be consistent with the medium term objectives of developing a sound financial system.** Private banks are experiencing low loan demand from credit-worthy borrowers. As the loan stock continues to decline the government has directed the four state owned commercial banks to accelerate their new lending (although the year-end figures show that the state banks have not yet gained market share at the expense of private banks). These four state banks have had their balance sheets cleaned up by transferring NPLs to TAMC. The government's strategy poses two challenges. Firstly, state banks are offering the customers of private banks more open credit lines and lower interest rates, which could cannibalize the spreads of already weak private banks. If this contributes to a bank failure it might increase the contingent liability of the government. Secondly, state banks have relatively poor risk management systems, especially when it comes to pushing new lending. This may create a new stock of NPLs and losses for the taxpayer. Thirdly, the debt-driven strategy of stimulating the economy through state banks does not provide incentives for firms and SOEs to reduce their indebtedness.

**Earlier plans to privatize the state banks could be revived.** KTB's strategy is reverting to a focus on its government client. While there is an effort in the MoF to consolidate procurement of expensive systems by the state banks there is no question that keeping four state banks competing amidst excess capacity is not just costly for the taxpayer, but distorts both competitive incentives and pricing in the market. The recent merger of BMB and SCIB, two failed banks which were nationalized and in which there had been intervention, is a positive step that could reduce the amount paid by taxpayers. Potential benefits include increased economies of scale and reduced operating costs. Ultimately, privatization should include a shift to commercially-based corporate govemance. Without this change in governance, the sale of a minority stake to retail investors presents the risk of no improvement in the risk management and performance of the institutions.

## Competitiveness of Thai financial institutions

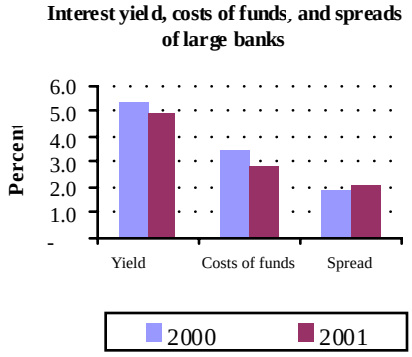
**Regulatory forbearance increased to support**

**the weaker banks.** This is intended to stimulate new lending and lower the cost of valuing collateral. The relaxed guidelines for general reserves include: (1) a change in the reserves for loans classified as 'Normal' and 'Special Mention' from 1-2 percent to either 1-2 percent or a rate based on the loan aging into lower-quality classifications over the previous four quarters - whichever is the lower - subject to the BoT's discretion, and (2) extension of the renewal requirement for re-appraisal of collateral from 12 months to 36 months. Guidelines for specific reserves were also relaxed in two ways: (1) 95 percent of the value of a letter of credit or letter of guarantee may now be used as a new type of collateral (whose value is deducted from the required reserve), and (2) collateral may now be appraised by the bank's in-house (instead of third party) appraisers up to a value of Baht 50 million, instead of the previous level of Baht 5 million.

**There are four risks to extending this regulatory forbearance.** Firstly, while it alleviates regulatory stress on weaker banks it undermines competitive incentives in the market by allowing less competitive institutions and excess capacity to survive, and this reduces the earnings opportunities for the better managed institutions. Secondly it allows banks to continue operating with less capital than necessary to compensate for the risks of their portfolios. This could increase the probability of future systemic problems and contingent liabilities for the taxpayer. Thirdly, increasing forbearance does not mean more lending. The constraint is the level of effective demand not regulatory capital. Fourthly, unless forbearance practices are transparent bank balance sheets will become obscure. This may discourage sound analysis and investor interest when and if the bank does need to raise new capital, especially to refinance the SLIPS and CAPS.

**Because of increasing interest rate spreads large banks have been generating positive net interest income since 1999 and all banks show positive net interest income in 2001.** The wider spreads were driven primarily by lower funding costs. While all banks showed positive, if small, pre-provision profit, levels fell in 2001 for some banks because of non-interest income and expense dynamics. Provisions for loan losses dropped in 2001 because banks met the provisioning requirements as they were phased in at the end of 2000, and now have significant discretion on provisioning levels because of regulatory forbearance.

Figure 3-10
**Interest yield, costs of funds and spreads of large banks**




*Source: Merrill Lynch Phatra, World Bank estimate*

## Legal reform

**Improvements to the legal regime and judicial capacity for debt collection could be accelerated.** A number of draft laws have been held up in the legislative queue for years, including the financial institutions law, further amendments to the bankruptcy act and foreclosure procedures, the secured lending law, the credit bureau act, and the securities and exchange act to name a few. Recently enacted accounting standards should be maintained.

**The reform of the bankruptcy law**, now under consideration by the Legal Reform Committee for the Development of Thailand (LRC), needs to be both expedited and expanded to consider other related business laws. The process should be placed within the framework of an easily monitored schedule. There are several problems to be fixed, foremost of which are: (a) the criteria for commencement of bankruptcy proceedings, which currently don't rely on the

ability of the debtor to meet his obligations as they come due, and (b) the issue of failed reorganizations that do not automatically convert into liquidations.

## Capital market development

**Progress has been made in developing the capital market master plan, following a government workshop in early January.** The master plan emphasizes six key areas: (1) strengthening corporate governance of participants in the capital market, (2) enhancing the quantity and quality of supply, (3) expanding and strengthening the investor base, (4) strengthening financial intermediaries, (5) reforming the supervisory and regulatory regime, and (6) enhancing the efficiency of the infrastructure. The steering committee for the master plan is chaired by the Chairman of the SET. There will be three working groups focusing on action plans for the equity, bond and derivatives markets.

**The development of an organized trading platform for the bond market will require a consensus among different stakeholders.** The BoT is in the process of formalizing the primary dealer system for its open market operations. Primary dealers may be required to engage in market making in addition to the existing requirement to quote indicative prices for benchmark issues. Incentives for primary dealers are under consideration, including giving them preferential access to information and exclusive access to the secondary market. At the same time the Thai Bond Dealing Center (TBDC) is planning to develop a more transparent market which will be more open and easily accessible to all market participants, not only primary dealers. Alternatively, broad access and a transparent trading platform could be developed for only a few liquid benchmark issues. Access could be restricted to primary dealers for non-benchmark issues. The development of an organized secondary market for bonds requires a consistent policy and co-ordination among various stakeholders, including BoT, the SEC and the TBDC.

**A unified and integrated clearing and settlement system for all securities should enhance efficiency and reduce transaction costs in the capital market.** Currently the BoT performs clearing and settlement functions for government securities, while the Thai Securities Depository (TSD) clears and settles corporate bonds and equities. Settlement of government securities is based on a real time

**Box 3-2**
**Medium term strategy for the financial sector**

A recent conference served as a catalyst for Thai policy makers to set a medium term strategy for the Thai financial system. The Governor of the Bank of Thailand is now heading the strategy creation process which will involve key stakeholders from the public and private sectors. A framework is now being set up by a high level steering committee. The goal is to design and manage the transition of the Thai financial sector into a deeper, more efficient, balanced and sound system which serves all sectors, including rural areas and smaller enterprises.

As a first step a conference was co-organized by the BoT and the World Bank on "Modernizing the Thai Financial System". The conference produced a number of key messages. These included

- Rather than concentrating on institutions the focus of regulation and supervision is shifting towards functions such as consumers' demand for saving and investment alternatives.
- More open access, entry and exit for the payments system is required to encourage local institutions to improve their efficiency and competitiveness and to promote innovation.
- As well as traditional prudential regulation of intermediaries there is now a growing worldwide emphasis on regulations covering disclosure and the conduct of those participating in the markets.
- Access is more important than price for people and businesses in rural areas, and prices should be risk-adjusted and should provide profit opportunities that can attract the innovation of the private sector.

gross settlement (RTGS) system. On the other hand settlement of corporate debentures and equities is based on a netting system. The Thai capital market would benefit from economies of scale in infrastructure and from cross collateralization between different markets (debt, equity and derivatives) which is particularly important for the derivatives market. If Thailand is migrating towards an integrated C&S platform, the sole agent should have a strong risk management capability and good governance that can respond to the needs of all market participants.

## Strengthening corporate governance

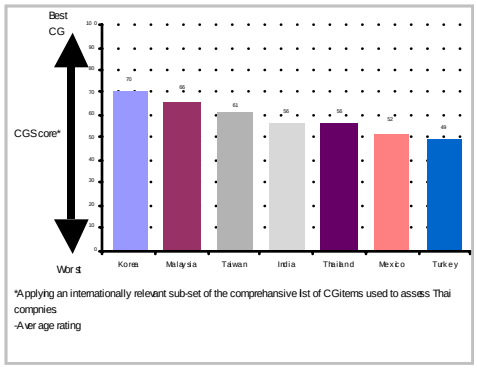
Significant improvements have been made in corporate governance in Thailand in the last 4 years. Accounting and auditing standards have been improved, securities regulations have been enhanced, an Institute of Directors has been established and corporate governance has become a high priority. The recent report of the Thai In stitute of Directors and McKinsey & Company Thailand (2002) underscores the need to carry on with corporate govemance reform in Thailand.

When benchmarked against other countries, Thailand performs below Korea, Malaysia and Taiwan, but was on par with India and ahead of Mexico and Turkey. It is important to note that Korea, Malaysia, and Taiwan both have higher per capita incomes and larger capital markets.

However, when benchmarked against individual components of corporate governance, Thailand performed relatively better in terms of board responsibilities and structure. This is due to the emphasis in Thailand on improving boards' performance, rather than, for example, improving shareholders' rights. The recent proposed amendments to the Public Company Limited Act by the SEC, which would elevate the roles and responsibilities of directors and improve the protection of minority shareholders rights, are encouraging.

In the area of transparency Thailand ranks

**Figure 3-11**
**International comparison of corporate governance practices**




*Source: Baselining evaluation, Mckinsey Investor Opinion Survey 2000.*

below Korea and Malaysia. While Thailand has improved its accounting and auditing standards in the last few years, the challenge now is to improve accounting and auditing practices. The recent SEC initiative to introduce incentives for companies to improve their corporate governance practices, including introduction of a "governance rating system" among listed companies and the establishment of an independent association of minority shareholders, are commendable.

Some measures that Thailand can implement to strengthen corporate governance are as follows.

- Enhance the role of regulators in enforcement of securities regulations by streamlining criminal procedures relating to securities laws.
- Improve law enforcement, including the introduction of severe sanctions on insiders for false and misleading disclosure.
- Increase the accountability of directors and management and further clarify the fiduciary duties of directors.
- Further increase minority shareholder rights and the ease with which they can exercise those rights, including the right to access a company's financial information and the right to approve major and connected transactions.

- Provide cost-effective legal channels for shareholders seeking redress or the dismissal of a director for misconduct or violation of the law or an article of incorporation.
- Further improve accounting and auditing practices.
- Make the audit committees of boards of directors more effective.
- Amend the Accounting Professional Law to allow establishment of the Thailand Financial Accounting Standards Board and strengthen the ICAAT.
- Improve the process for imposing disciplinary action or sanctions on accountants who violate their professional code and commit fraud.
- Continue to provide training for accountants on new standards and for directors of public companies on best directorship practices.

Box 3-3

**Next steps to enhance financial and corporate debt restructuring**

**Legal and Judicial Regime**: In order to lower legal risk and promote new lending the legal framework for corporate debt restructuring outside TAMC needs to be speeded up. This includes further revisions to the bankruptcy code. Expediting the processes for both judgments and legal execution in the civil courts, where foreclosure is decided, is crucial to clear the outstanding backlog. Enactment of new legislation on secured lending and credit bureaus is also crucial to promote new lending. These reforms will distribute losses more equitably among debtors, guarantors, bank shareholders and the taxpayer.

**Out of Court Restructuring**: Build capacity and awareness of mediation for viable cases.

**TAMC**: See box on TAMC above.

**FIDF**: For the single creditor NPLs which remain under FIDF control, FIDF could implement previous plans to use private sector asset managers, working under incentive arrangements, to resolve the debts and establish pricing of assets in the secondary markets. FIDF borrowings (from financial sector restructuring) can be fiscalised by issuing government securities that are bankable and build the investor base.

**Forbearance on Prudential Regulations**: Phase out implicit forbearance and require full loss recognition by financial institutions to satisfy the transparency requirements of new investors and reward those banks which are aggressively restructuring and raising capital. Banks may be given reasonable time to raise the necessary capital under MOUs with the regulator.

**Supervision and Regulation**: Further strengthen risk-focused prudential supervision, including consolidated supervision of financial conglomerates and supervision of specialized financial institutions according to BIS standards. Enactment of the Financial Institutions Act (with prompt corrective action) and the Central Bank Act (with sufficient independence for the Bank of Thailand to supervise banks) are key next steps.

**Disclosure**: Establish competitive incentives by implementing accounting standards which reflect international norms.

**Government-owned Financial Institutions**: Implement commercially-based governance of state-owned commercial banks so that they compete with private banks on a level playing field, until the time when they are privatized or consolidated. For specialized financial institutions, subsidies from the government necessary to fulfill government mandates should be budgeted prospectively. This would be allow the Ministry of Finance to monitor the impact of subsidies and would prevent the depletion of capital and the weakening of the SFIs over time.

**Government Bond Market**: Implement an enhanced clearing and settlement system and a trading architecture for government bond trades.

CHAPTER 4

# STRENGTHENING THE KNOWLEDGE ECONOMY

## Framework for a knowledge economy

**What is a knowledge economy?** The knowledge economy could be defined as one where "comparative advantage [is] much less a function of natural resource endowments and capital-labor ratios and much more a function of technology and skills".[13] Its development is the product of two forces: a rise in the knowledge intensity of economic activities and an increasing globalization of economic affairs. It is driven by the revolution in information and communications technology, the increasing pace of technological change and by national and international deregulation.[14]

From a policy perspective the knowledge economy can be seen as consisting of four main inter-related spheres.[15] These are:

- **Innovation Systems**: R&D, diffusion of technology, links between science and industry, firms focusing on new technology, industry clusters.
- **Human Resource Development**: basic education, scientific and engineering talent, lifelong learning, job training, organizational learning and innovation.
- **Business Environment**: regulatory environment, intellectual property rights, competition policy, tax rates, physical infrastructure.
- **Information and Communications Technology (ICT) Infrastructure**: investment in ICT, digital networks, access to and use of ICT, growth of electronic commerce and enterprises.

This Monitor focuses on the skill and technological components of the knowledge economy, an area where Thailand is low in global competitiveness rankings.

**The most industrialized economies have addressed many of the fundamental infrastructure needs of a knowledge-based economy** and are focusing on improving their innovation systems and promoting the development and use of ICT systems and services. However the situation is less positive in Asian economies such as Thailand that are at a relatively early stage in building innovation and knowledge infrastructures. A recent APEC report comments, "Along with their marketplace laws, [they] face the need to build their economy's skills base, further modernize their physical infrastructure and invest in strengthening their science and technological capabilities".[16]

**The 'knowledge system' is composed of three parts;** locally-owned Thai firms (especially

[13] L. Thurow. 'New Tool, New Rules: Playing to win in the new economic game', *Prism*.
[14] J. Houghton and P. Sheehan. *A Primer on the Knowledge Economy*, Centre for Strategic Economic Studies, Victoria University, Melbourne, 2000; Dahlman, C.J and Aubert, J.-E. *China and the Knowledge Economy: Overview*, WBI Development Studies, The World Bank, Washington D.C. (n.d.)
[15] APEC, *Policies for Promoting the Development of Knowledge-Based Economies.*
[16] APEC, op cit, p. 127.

SMEs), multinational or global corporations (who possess product and process technologies that are more advanced than the local versions) and other knowledge institutions such as schools/universities and government research institutes.[17] Since firms and their workers are the key components of a knowledge economy the question is "what actions can governments take to help firms and workers more effectively acquire, develop and utilize knowledge".[18]

**A central problem** is that many government institutions and incentive schemes for industrial technology and skills upgrading are following old policy models which focus more on single entities (whether firms or institutions) than on knowledge networks, interactions and supply chains.

## Importance of a knowledge economy for Thailand

**The importance of the knowledge economy for Thailand** has been highlighted in the Ninth Plan. The Thai government's policies broadly recognize the importance of improving skills and technological capability in all economic and social sectors.[19] One specific goal for domestic markets and rural communities is to "increase production efficiency by promoting research and utilizing local knowledge as well as modern technological know-how". For industry, the policy supports cooperation in research, technology and product development between small and medium-sized enterprises (SMEs) and other public and private sector organizations (including those in higher education). The aim is to assist Thai firms to obtain technology and intellectual property from all sources and ensure a supply of qualified personnel.

**But if the will is there, what is the way**? What progress has been made and what challenges lie ahead in expanding the knowledge base of the country? How can the government's goals best be achieved, given the current range of government initiatives and the relevant experience of other industrializing countries?

**Recent studies in Thailand have argued for new ways of 'thinking about' industrial technology policy** as it affects knowledge networks that involve clusters of innovative firms and collaboration between the business, public and education sectors. The studies identify current barriers preventing knowledge linkages. They highlight new ways of formulating and implementing policies that spread technological capabilities, raise standards and overcome barriers within firms to technology upgrading.

**Table 4-1**
**Rankings of growth competitiveness component indices**

| Country | Global comp. Ranking | Technology Index Rank | Public Institutions Index Rank | Macroeconomic Environment Index Rank |
|---|---|---|---|---|
| Singapore | 4 | 18 | 6 | 1 |
| Korea | 23 | 9 | 44 | 8 |
| Malaysia | 30 | 22 | 39 | 20 |
| **Thailand** | **33** | **39** | **42** | **16** |
| Philippines | 48 | 40 | 64 | 28 |

*Source: World Economic Forum, Global Competitiveness Report 2001*

**Thailand is placed low in global competitiveness rankings**. Thailand faces constraints in four areas:

- Secondary school enrollment rates that lag behind other countries in the region.
- Skills mix that is not suited to the emergence of a knowledge economy, where new industrial and services companies seek to increase productivity through technological and organizational change.
- Technological capability of Thai firms lags behind other countries in the region.
- Institutions and public programs that have been less effective than those of other countries in helping firms to upgrade their skills development, training, technology upgrading and 'knowledge networks'.

[17] Paul L. Robertson. *Firm-level incentives for research and training in developing economies*, m/s, University of Wollongong, Feb. 2002.
[18] Robertson, 2002, op cit.
[19] *Policy of the Government of H.E. Prime Minister Thaksin Shinawatra delivered to the National Assembly on Monday, 26 February 2001* (Unofficial Translation), Section 7.

## Education

**The need for skills in the labor force is now even greater as Thailand's industrial and service companies seek to increase productivity through technological and organizational change**. Finding ways to improve the skills of young people and adults in Thailand is a high priority for improving competitiveness, boosting growth, reducing poverty and raising the quality of life.

Although it is not a focus of this Monitor, secondary education is the key to skills development. The limited provision of quality secondary education is a major bottleneck in skills development in Thailand. Enrollment rates in Thailand lag behind Malaysia, Korea and Philippines.
A recent Bank study on secondary education identified a number of challenges facing Thailand.

- Improving quality, efficiency and equity (priority issues are science, math, IT, teacher training and creating a learner-centered approach).
- Financing 12 years of basic education.
- Private and public provision of vocational education.

## Skill development strategies

**Thai companies face critical shortages of high quality engineers and of specific skills like tool and die making**. Thailand is in the process of formulating a new Skills Development Act and an associated fund. A December 2001 workshop on skill development, which was part of the Country Development Partnership on Competitiveness, highlighted the lessons learned in Korea, Malaysia and Singapore in the management of skill funds, cooperation between the public and private sectors and cost sharing arrangements.

**Thailand is formulating a new Skill Development Act which makes provision for pre-employment skill training, re-training for job changes, setting national standards for skills and accreditation and tax relief for training organizations and firms**. The law also sets up a restructured Skill Development Fund (SDF) to pool government and employers' contributions, donor funds and income in order to provide loans to trainees and training organizers. Employers will contribute to the SDF only if they are unable to arrange the necessary training for themselves. The objective is to improve both the skills of workers and trainers, particularly for in-house training. However details of the SDF are still being worked out and will depend on the way it is implemented and administered.

**Experience in Malaysia, Singapore and elsewhere suggests that successful SDFs share a range of characteristics**.[20] Firstly, they are joint projects bringing together government, industry and training providers, sustained by industry and government funding with very strong industry involvement in, or control of, their management. They use a wide range of training providers: public sector organizations, in-house trainers, private trainers and expert consultants. They tend to provide *grants* to the firms seeking training and *loans* to the training providers. The overriding philosophy is one of 'firms accessing their own contributions' to the fund.

The scope of training schemes supported by funds is also wide, ranging from basic literacy to technical, craft and managerial skills. Recognizing that the training 'industry' itself may be weak, a crucial element is support for the development of training providers: through accreditation, promulgation and application of standards, and financial assistance for training infrastructure.

A further essential element is the support that successful SDFs provide; for skills planning, the development of training strategies within firms, for cooperation on training between firms and

[20] Hong Tan, *Do Training Levies Work: Malaysia's HRDF and Its Effects on Training and Firm-Level Productivity*, Working Paper, World Bank Institute, July 2001; A. Dar, S.; Canagarajah and P. Murphy, *Training Levies: Rationale and Evidence from Evaluations*, draft m/s, Nov. 2001; S. Garrett-Jones, *Government Incentives for Technological Skills Development*, paper presented to 'Skills Development Fund Seminar', Dept. of Skill Development, Bangkok, 19 Dec. 200

within industries, employer groups and geographical regions.

The Skills Development Act is a welcome step but care is required in its implementation. Comments at the December 2001 workshop focused on the scope and administration of the new SDF. Imposing a levy only on firms that have no training activities would overlook firms that had the budget but not the expertise to implement a training strategy. Would it adequately encourage 'learning from other firms'? For example, would large companies and MNCs feel themselves 'outside' the scheme and thus be unwilling to assist? Strong employer representation, including the establishment of working committee(s) from particular industrial sectors, was strongly advocated as a counter to having the fund overly dominated by the public sector. While integration of public sector training was seen as highly desirable (e.g. vocational and university education), substantial involvement of the private sector in training was also seen as essential. It

**Box 4-1**
**Skills development incentives in Singapore**

***Environment:***

- Singapore has a sound education system, with a bias towards early vocational training.
- A range of public and private training providers operate in a competitive environment.
- A range of human resource development programs, including through the SDF, are in place.

***Skills Development Fund: Financing and Administration***

- The SDF is long-standing: established in 1979 under the National Productivity Board, Ministry of Trade and Industry.
- The SDF has evolved: originally established with employer subsidies, moved to planning training priorities in 1987 and adopted an SME focus in 1992.
- Funded by a 1% employer levy on low-paid, unskilled workers; at times the levy has been higher, 2% (initially) and 4%.
- Its budget in 1996-7 was S$86 million.
- Most of its budget comes from industry funding and interest on invested funds: only 2% is from government funds (1991 figures). However, expenditure is currently exceeding the amount raised from levies; and govemment 'tops up' the Fund.
- Assistance is provided on a cost sharing principle: SDF pays 50-80% of costs, employers pay 20-50%.
- It has provided grants for more than 500,000 training places.
- In 1990 30,000 approvals were made; a 90% success rate.
- It requires prior approval for programs, there is a 2-year wait for reimbursement in some cases.
- Monitoring and evaluation are carried out at three levels:
  - Macro level (skills shortages, redundancies)
  - Program level (various performance indicators)
  - Firms/trainees (client quality control/tracer studies)
- The SDF manages a broad portfolio of schemes and programs.

***SDF Schemes & Programs***

- Training Grants
  - Training Leave (for unskilled mature workers).
  - Training Vouchers (all firms are eligible).
  - Worker Training Plan (to support training in firms).
  - Training Needs Analysis Consultancy Scheme (assistance with training strategies for locally-owned firms).
  - Approved-In-Principle Scheme (pre-accreditation of public courses, making it easier for firms to use them).
  - Emerging/Critical Skills Development Grants (e.g., in nominated priority areas like robotics, wafer fabrication, health care).
- Basic Education for Skills Training - BEST (providing fundamental functional literacy/numeracy to 'Year 6' level).
- Worker Improvement Through Secondary Education - WISE (English, Math).
- Training Infrastructure Development.
- Partnerships with MNCs to set up industry-specific training centers.
- Financial assistance to trades union groups for training.

was suggested that the SDF should therefore provide encouragement for the 'training service industry' to expand its activities and to improve its quality, rather than simply acting as an industry watchdog. A cautionary note is provided by Korea, where an intrusive 'regulatory' approach to the eligibility of firm level training and the application of skills standards failed to produce any increase in training activity by firms.[21]

## Technological capability and innovation within firms is weak

**Technological capabilities in firms can be thought of as three interlocking sets of competencies**: production capability (management and engineering), project execution (feasibility, training, execution) and innovation capability.[22] Put more succinctly these are 'the skills, technical knowledge and organizational coherence required to make industrial technologies function in an enterprise'.[23]

Technological capability is perhaps shown best when firms face the need to innovate, to *change* their products, processes or technological organization. However when it comes to technological innovation relatively little is known about the activities or capabilities of Thai firms. Consequently it is hard for firms and industries to benchmark themselves against their competitors in Thailand or elsewhere, or for the government to formulate policies and measures to improve the technological capacity of local firms. So an important first step has been to gather such information through surveys and case studies.

**Three out of four Thai firms do *not* engage in any activities to improve their technological capability**. In 2000, the National Science and Technology Development Agency (NSTDA) and the Brooker Group PLC carried out the first R&D/Innovation Survey of Thailand's manufacturing industry. The survey covered both R&D

[21] Tan and Middleton, op. cit., p. 4.
[22] Alice H. Amsden, *The Rise of 'The Rest': Challenges to the West from Late-Industrializing Economies* (New York: Oxford University Press, 2001), Table 1.2, p. 4.
[23] S. Lall, *Learning from the Asian Tigers*, London, Macmillan, 1996, p. 29.

**Box 4-2**
**Innovation clusters**

Industrial innovation clusters exist where there is a loose *geographic* concentration or association of *firms* and *other organizations* involved in a value chain, producing goods and services and *innovating*. Innovation clusters, particularly in the knowledge services sector, can be 'virtual' rather than geographically based.

The *innovation cluster* concept goes beyond traditional ideas on industry clusters, which involve horizontal networks of firms focusing on the same product lines in the same industry sector. It stresses the advantages of producers, suppliers and support services from a variety of industries being close to each other. Thus, innovation clusters are cross-sectoral, involving dissimilar firms that collaborate with each other and with public 'knowledge institutions' such as universities and research laboratories.

Michael Porter uses the term 'cluster' in a similar although more restricted sense to describe formal cooperative linkages among firms - and between firms and technology organizations - that result in business 'clusters' that are globally competitive. The concept of 'supply chains' is closer to the traditional 'industry cluster' model (i.e. focused on a particular product and sector), but incorporates vertical relationships and, increasingly, an acknowledgment of the importance of sharing knowledge and learning.

Where innovation clusters have developed their financial, learning and productivity 'cultures' to a level that supports systemic innovation they can be regarded as constituting a 'regional innovation system'. An analysis of innovation clusters will usually reveal the extent to which such collaborative action has developed in funding, learning and the production of innovative goods and services, and the level of support for these goals in the commercial and public sectors.

and other innovation activities, including training and market research, for the three years 1997-1999. A total of 1,019 firms responded to the survey (including the 200 largest firms in Thailand). Of these 154 (or 15.1 percent) reported carrying out R&D, while 223 (21.9 percent) reported carrying out other innovation activities. In other words, more than three out of four firms responding had *not* engaged in any activities to improve their technological capability in the preceding three years[24] (not even employee training or the acquisition of machinery to improve production processes). Most of the firms carried out only simple testing and quality control, fewer than half had a design capability and only one-third a capacity for reverse engineering.[25]

**R & D is concentrated in a few sectors**. Research is perhaps the most skill-intensive driver of innovation and the survey showed it was clearly a minority activity. Fewer than one in six firms said they had carried out R&D in the last three years. Firms spent Baht 1,350 million on R&D in 1999, with companies in the food, beverages and tobacco industry carrying out around 48 percent of the total, and firms in the fabricated metals, machinery and equipment sector performing a further 35 percent. Nearly 1,100 research personnel were employed. The survey shows that R&D activities are concentrated in a few sectors but, at least in the case of the food industry, ones not regarded internationally as sectors of 'high R&D intensity'.

**Strong linkages between local and foreign firms support innovation**. Expenditure by firms on innovation activities other than R&D totalled Baht 2,084 million in 1999, or about 1.5 times the expenditure on R&D, again concentrated in the same two industry sectors. Acquisition of machinery and equipment was the most common activity and buying external technology the least common. The main reasons for innovation were reported as a) to improve product quality; b) to reduce production costs/ improve yield and c) to expand product ranges and markets. Factors limiting innovation were also canvassed. The survey also found that innovating firms saw it as important to use their parent and associated overseas companies and their foreign-owned suppliers as collaborators and sources of information on innovation.

**Technology and innovative capabilities in Thailand lag behind comparable Asian countries**. The government policies and institutional framework supporting technological development in Thai firms have recently been

**Box 4-3**
**Scope of innovation activities**

- Research and development (R&D).
- Acquisition of machinery, equipment and software for product and process innovation (i.e. new or significantly improved products or processes).
- Acquisition of external technology (e.g., patents and licenses) linked to product and process innovation.
- Industrial design and engineering, market research and marketing linked to product and process innovation.
- Training linked directly to product and process innovation.

*Source: Thailand R&D/Innovation Survey 2000*

**Box 4-4**
**Factors limiting innovation**

| Factors limiting innovation (1 – not important, 5 – very important) | |
|---|---|
| Lack of government support | 3.6 |
| Perceived cost too high | 3.6 |
| Lack of qualified personnel | 3.5 |
| Inadequate support services | 3.4 |

*Source: Thailand R&D/Innovation Survey 2000*

[24] Technical Information Access Center, National S&T Development Agency (2000). Thailand R&D/Innovation Survey – 2000, (Questionnaire); The Brooker Group plc (2001). Technological Innovation of Industrial Enterprises in Thailand: Project Synthesis prepared for the Workshop on 'Innovation and R&D in Thailand's Private Sector: *Information and New Findings, June 21, 2001'.*

[25] Patarapong Intarakumnerd, Pun-arj Chairatana and Tipiwan Tanchipiboon, 'National Innovation System in Less Successful Developing Countries: The Case of Thailand', m/s submitted to *Research Policy*, Sept. 2001.

reviewed with the support of the World Bank.[26] The study found that technology and innovative capabilities in Thailand lagged far behind comparable Asian countries. For example, the current level of R&D among business enterprises in Thailand is around 10-15 years behind the level in Korea in the early 1980s when that country had a level of industrial and manufacturing development similar to that in Thailand today. The intensity of R&D in business in Thailand would need to increase to around 20 times its present level in order to 'catch up' with the level in Korea at its corresponding earlier stage of industrial development.

**The most important thresholds of technological capability** that firms need to cross are *not* concerned with formally organized R&D but with other technological development and learning activities:

- For larger firms, they are about building design and engineering capabilities as a starting point for significant technology development activities.

- For the majority of SMEs, especially in traditional industries, they are about increasing the efficiency with which existing technologies are acquired, used and operated.

## Public policy and institutional framework for innovation must change

**The common finding of recent studies is that most Thai firms do not have the resources they need to upgrade their process and product technologies.** In particular SMEs (the backbone of most economies, whether developing or developed) lack both the knowledge required to make informed decisions and the financial resources to acquire that knowledge and to invest in new technologies once they have decided on a reasonable strategy. In countries with relatively low per capita incomes, governments offer the best (and perhaps the most equitable) prospects for providing the funds needed to surmount these barriers.

**Public institutions are viewed as weak and ineffective by firms**. In the 2001 innovation survey companies were also asked about their knowledge and use of government support and funding and which services and incentives they had used. Firms rated the availability of government incentives for innovation as weak and requested the provision of better information on innovation, better human resource development and financial incentives for R&D and innovation. Firms that used public services valued the information, technical and training services provided by the government more highly than the monetary incentives, which were not used extensively by the firms sampled. University laboratory services were also well used.

**Supply side driven technology development will need to be changed**. The Technopolis study was strongly critical of a 'supply side' approach to technology development in Thailand and argued for giving end-users more influence over government sponsored technology development. It saw current policy and institutional arrangements as 'mono-structural', favoring public and semi-public institutions at the expense of building up technology development capabilities within industrial firms. This finding has clear implications for future policy.

**The nexus between universities and the private sector.** In 2002 Thai public universities are expected to achieve greater management autonomy while being required to generate more income from the business sector. This should prompt growth in university-industry collaborative R&D, training and service activities.

**Policy reforms, funding arrangements and the organization of technical support institutes would build technological capability**. There is a need for more specializa-

[26] E. Arnold, M. Bell, J. Bessant and P. Brimble. *Enhancing Policy and Institutional Support for Industrial Technology Development in Thailand: The Overall Policy Framework and the Development of an Industrial Innovation System*, Technopolis, SPRU, CENTRIM and Brooker Group plc, December 2000.

Table 4-2
**Financial Incentives for R&D and innovation activities in Thailand**

| *Scheme* | |
|---|---|
| **BOI promotion for R&D activities** | Promotion of R&D as:<br>(a) R&D activities already included in a promoted investment project<br>(b) R&D as an addition to an already promoted investment project.<br>(c) activities separate from firm's other business activities |
| **Depreciation allowances for machinery and equipment for R&D** | Depreciation rate raised to 40% from 20% |
| **200 percent tax concession** | 200% deduction for R&D expenditure |
| **Deduction or exemption from R&D machinery import duties** | |
| **Research and Technology Development Fund (MOSTE)** | R&D soft loans Baht 10-20 million per project |
| **Company Directed Technology Development Program** | |
| **Innovation Development Fund** | Grants and soft loans for business innovation and start-ups |
| **Thai Research Fund R&D Grants** | Science and technology for production, marketing and services<br><br>Industrial R&D for production processes and product development |
| **MOI Productivity Improvement Plan** | Soft loans for improving productivity and upgrading machinery |
| **NSTDA Industrial Consultancy Service** | Provides up to 75% of consultancy costs |
| **Support for Technology Acquisition and Mastery Program (STAMP)** | Financial support and arrangement of factory visits |
| **BOI Unit for Industrial Linkages Development** | |
| **Skills development: 150 percent tax concession for training expenditure** | |

*Source: Garrett-Jones, Robertson, Turpin, and Charoenpanji (2002)*

| *Objective* | *Mechanism* | *Target* |
|---|---|---|
| Promote firm-based R&D | Taxation concessions | Firm located in any zone involved with R&D activities |
| Encourage firm-based R&D | Taxation concessions | Firms engaged with R&D |
| Encourage firm-based R&D | Taxation concessions | Firms conducting R&D or hired to do R&D.<br>They must be approved by MOF. NSTDA is the certifying body. |
| Encourage technology acquisition | Taxation concessions | Firms importing specific types of machinery: esp. scientific tools, R&D testing equipment, electronics parts and computer parts |
| Soft loans to improve and develop production processes and invest in R&D results | Loans | General |
| Assist SMEs to invest in technology development | Loans and grants | SMEs |
| Grants and soft loans for strategic projects | Grants and loans | General |
| Raising levels of R&D to develop processes and products | Grant | SMEs |
| Improving firms' machinery and productivity | Loans | SMEs |
| Enhancing production capability in SMEs through the use of consultants | Subsidies | SMEs |
| Support for technology acquisition | Subsidies | SMEs |
| Improving linkages between manufacturers and local suppliers | | |
| Encourage private sector to invest in training | Levies | Firms that don't conduct training themselves |

Table 4-3

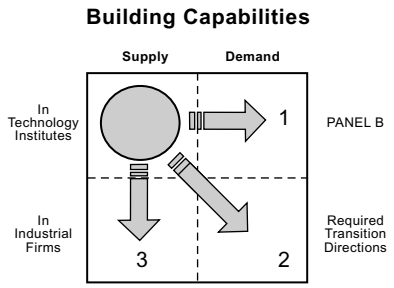
**Administrative benefits and constraints on different forms of financial incentive for research and technology development**

| *Assistance Measure* | *Benefits* | *Possible Constraints* | *Budgetary/Administrative/Legal Issues* |
|---|---|---|---|
| **Tax concessions** | Non-discriminatory: open to all firms that meet stated criteria.<br><br>Businesses more likely to be aware of taxation benefits.<br><br>'Arm's length' instrument: activities chosen by industry.<br><br>Maintenance of firm confidentiality.<br><br>Speedy processing (when approval 'automatic'). | No benefit to unprofitable/start-up firms.<br><br>Subsidizes 'existing' activities that would have occurred anyway (unless based on incremental performance, which is hard to police).<br><br>Abuse (e.g., 'double dipping' when firms are also eligible for loans or grants).<br><br>Selection criteria may encourage risk-averse activities to achieve short term repayment. | Cost is open-ended (difficult to control the level of revenue foregone).<br><br>Relatively simple administration.<br><br>Does not require annual approval of budget.<br><br>Usually requires changes to taxation legislation.<br><br>Requires careful accounting of eligible costs within the firm.<br><br>Problems of definition and legal interpretation. |
| **Repayable loans** | Can be targeted widely or focused on specific activities.<br><br>Priorities or scope (type, timing, size) set by govt., specific proposals made by firms. | Less likely to subsidize activities that would occur anyway.<br><br>Formal application may be required.<br><br>Cumbersome and lengthy selection procedure. | Maximum cost can be set but actual cost hard to determine.<br><br>Requires annual budget.<br><br>Requires formal procedure for application and selection.<br><br>Difficult to decide what constitutes a successful outcome for the purpose of repayment – clear criteria required. |
| **Grants** | Generally for specific activities. Priorities or scope set by govt., specific proposals made by firms. | Less likely to subsidize activities that would occur anyway.<br><br>Formal application required. Cumbersome and lengthy selection procedure. | Annual cost is set.<br><br>Requires clear criteria for selection and the evaluation of outcomes.<br><br>Requires formal procedure for application and selection. |

*Source: Garrett-Jones, Robertson, Turpin, and Charoenpanji (2002)*

tion by institutions (including both integrating and separating current functions), more competition between institutions to encourage rationalization (e.g. between NSTDA's national institutes and the universities), greater stakeholder involvement (govemment and industry) in decision making and priority setting, and performance-linked financing. For example a key part of NSTDA's mandate is to foster industrial development. However industry plays a surprisingly small part in the govemance of NSTDA. NSTDA has a range of support instruments to help develop technological capabilities but these are not widely deployed and do not interact much with NSTDA's main research activities.

**Figure 4-1**
**Industrial technology development policy in Thailand: alternative strategy – policy emphasis**




*Source: Arnold et al (2000)*

**Agencies like NSTDA could consider shifting the focus of their activities from developing public research capabilities to fostering technological capabilities in industry**. This would require changes in governance, management and strategy development in NSTDA. Changes in focus would also be necessary. These include separating policy-making and policy/program implementation, adopting formal goal setting, performance measurement and reporting of achievements and increased mobility of personnel between NSTDA, the universities and industry.

**There is a strong consensus among analysts that it is time for a change of direction on the part of NSTDA and other technology agencies**. The important 10-year phase of building up the public research and technology infrastructure must now lead on to the crucial 'second step' – that of working directly with industrial 'customers' and with groups of players in the knowledge economy. This represents a significant change of emphasis in government programs.

## Knowledge networking

**There is a growing recognition of the important role of 'knowledge networks'** in driving innovation (rather than the catalyst being technology alone). Other important factors are the importance of clustering in industries to support smaller firms in skill development and the collective acquisition and distribution of technology; a reliance on knowledge intensity rather than capital or labor intensity; the need to link local, national and international knowledge and innovation systems rather than focusing on developing an isolated national system. The implication is that future government policies should support knowledge networking as a means of improving the capability of firms in an equitable manner.

**Linkages between the 'knowledge actors' (local and multi-national firms, technology institutes, universities) within Thailand's innovation system appear generally weak and fragmentary**. The result of this is weak links between users and producers, limited intra-sectoral cooperation, limited technology spillover from MNCs and poorly developed, short-term relationships between firms, universities and technology institutes.[27] For example, in the 2000 innovation survey fewer than one in five firms reported having used the services of the government research and technology organizations.

Past studies have supported incentives that promote collaboration between universities and industry, with the dual aims of stimulating world

[27] Patarapong Intarakumnerd et al. op cit.

**Box 4-5**
**Malaysia – the search for spillovers**

Since Malaysia achieved independence in the 1960's the role of technology in development policy has evolved greatly. In particular in the mid-1980s the government embarked on a large-scale program to promote industrialization through technological development in targeted industries. As a result of dissatisfaction with the failure of investments by MNCs to provide substantial spillovers at that time, public R&D expenditures were centralized in the Fifth Malaysia Plan of 1986-90 and the Intensification of Research in Priority Areas program of 1986. Increased private sector input was provided as a result of the Action Plan for Industrial Technology Development (1990).

Although government spending on R&D more than doubled between 1986 and 1995 and public sector technology institutes expanded greatly, a feeling arose that activities had become excessively centralized and bureaucratized and that, as a result, they were not sufficiently efficient in meeting industrial needs. To counteract these tendencies and to hamess technological dynamism in the private sector government policy followed a new direction after 1993. In order to encourage the creation of industrial clusters the Malaysian government increasingly sought spillovers from MNCs operating locally. In a policy similar to Singapore's, the government has tried to promote technological advances in indigenous firms that belong to subcontracting networks centered on foreign firms (largely from Japan or East Asian NICs) with manufacturing operations in Malaysia. Through *keitretsu*-like structures small local firms are meant to get the resources to upgrade their technological skills and reduce Malaysia's high level of dependence on labor-intensive operations. A cluster in Penang, built around disk-drive firms that had migrated from Singapore, has been viewed as especially successful. A more recent phenomenon, the Multimedia Super Corridor, is currently receiving a large amount of funding from the Malaysian government to create another private-public cluster. However despite this partial shift in emphasis to technology transfer within the private sector, two prominent observers (Felker with Jomo, 1999, 24) have argued that;

> *"In sum, though industrial and technology policies have gradually shifted from expansive aspirations to strategically direct structural change to a model more focused on private-sector dynamics and institutions, the Malaysian state retains its activist stance in fostering technological upgrading. It continues to emphasize strategic intervention, if increasingly in a supportive and facilitating role".*

Although it is too early to evaluate these initiatives fully, there are concerns that, in reality, the spillovers from MNCs to indigenous firms are less than had been hoped. Moreover, the lack of local skilled and educated labor may inhibit further rapid development if MNCs capture the bulk of the skilled workforce, so leaving locally-based firms that wish to participate in technological upgrading at a disadvantage. This situation had led to calls for immediate and substantial growth in the infrastructure devoted to training and education.

class research and doctoral level training and encouraging 'people-focused' (rather than equipment focused) technology link-ups between technology institutes and industrial enterprises.

**Potential locations for such collaboration already exist**. In the Chiang Mai area a number of service providers (government agencies, universities and technology institutes) cater to SMEs in the local ceramics industry. However their relationship appears to be short term and ad hoc rather than systematically supporting a strategy for building the technological capability required for higher quality and higher priced products. An effective example of collaboration is that between King Mongkut's Institute of Technology in Bangkok and the Hi-Tech Industrial Estate, which has led to the setting up of the Ayutthaya Technical Training Centre.

**Potential collaborative dusters may also be found in the supply chains of manufacturing MNCs**. In the automotive industry MNCs like Toyota have significant in-country R&D and technological skills which can be used to support their Tier 1 and Tier 2 (primarily local) suppliers. The activities of semi-public agencies like the Thailand Automotive Institute (in information, training, quality certification and testing) can also play an important role. However, a recent analysis of the Thai automotive industry identified a lack of collaborative mechanisms within the supply chain, in addition to the common problems of a shallow skills base and inadequate support services.[28] Communication within the supply chain was largely informal, making little use of ICT-based systems. The challenges facing the automotive sector at the Tier 2 level concern the interaction of technology/skills development, trade policy, investment policy and SME development. As is the case in other sectors these problems cut across several government. agencies, including NSTDA and the Ministries of Industry and Labor.

**There is no single focal point within government with responsibility for producing a coherent sectoral strategy or coordinating the government's response to the technical and policy needs of the sector**. In such industries the technological needs will be almost wholly determined by the MNCs. But public-private sector cooperation is also required to assist the local companies in building their capability to serve MNCs with technology-based products of the required quality and price.

## Conclusion

Thailand ranks low in global rankings of technological and skills capability despite the large number of public institutes that have been established to support science, technology and labor skills. It is estimated that at least 17 public organizations or funds exist to support technology and innovations. Most of these programs suffer from a lack of targeting. There is a lack of coordination amongst agencies, and many of the programs are supply driven. The programs on technological development are not well coordinated with those for skills development. Along with institutional deficiencies the instruments used to deliver the services (e.g., taxes and subsidies) are also ineffective.

Thailand will need to consider the following to improve its technological and skills development.

- Improve targeting (e.g., by reaching out not only to firms but also to networks, targeting SMEs).
- Improve coordination across agencies.
- Improve governance of these agencies by giving a greater voice to SMEs on the boards of management.
- Increase awareness.
- Integrate technological and skills development.

[28] World Bank Group, SME Global Product Group/East Asia and Pacific Private Sector Development, *Supply Chain Deepening in the Thai Automotive Sector: Analysis of Key Issues-Pilot Program Design*, December 2001.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