

## Thai Petrochemical Industry: Negotiating Debt after the East Asian Crisis (A)

*I'm unperturbed about the huge foreign debt following the depreciation of the baht. The new exchange rate will benefit the operation because exports will become more competitive.*

—Prachai Leophairatana, CEO, Thai Petrochemical Industry<sup>1</sup>

*There was no need to hedge the loans because the government promised to keep the baht pegged. Then, suddenly, they didn't keep their promise.*

—Prachai Leophairatana, CEO, Thai Petrochemical Industry<sup>2</sup>

### INTRODUCTION

After the East Asian crisis in Thailand, Thai Petrochemical Industry (TPI), the largest petrochemical conglomerate in Southeast Asia, became the biggest delinquent debtor in the country with US\$3.4 billion in loans (approximately 10 percent of the financial system's total nonperforming loans) to over 140 creditors.

In March 2000, in response to a petition led by Bangkok Bank along with TPI's other major creditors (International Finance Corporation, US Export and Import Bank, Citibank and Bank of America), Thailand's Central Bankruptcy Court (CBC) found TPI to be insolvent. The court had yet to rule on a restructuring plan. The steering committee appointed by the creditors had nominated Effective Planner, a unit of the Australian firm Ferrier Hodgson, to oversee the rehabilitation of TPI. TPI CEO Prachai Leophairatana had first declared a moratorium on debt repayments, then tried to negotiate a restructuring deal with the creditors, and after the creditors went to court, lobbied aggressively to lead the company restructuring. Prachai's actions, whether

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<sup>1</sup> Chatrudee Theparat, "BANKING - Lift ceiling on bank lending, says Prachai," *Bangkok Post*, July 12, 1997.

<sup>2</sup> Julian Gearing, "A Thai Tycoon's Tragedy: How Prachai lost his beloved empire through hubris and misplaced trust," *Asiaweek.com*, April 27, 2001, Vol. 27, No. 16.

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Professor Witold J. Henisz and Aneesa Capur prepared this case as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

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or not they were successful, were indicative of the immense influence the former senator had on his own company's operations as well as within the economic and regulatory framework in Thailand.

TPI's creditors now had to make a decision on how best to maximize the value of their outstanding loans. In order to do so, the creditors needed to take into account the economy in Thailand, most importantly, the factors leading to the crisis, the actions of the Thai government with the aid of the International Monetary Fund (IMF) to counter the crisis, and the outcomes of these actions. As importantly, the creditors would have to analyze the events leading to TPI's current situation and the factors that impacted the success of the company in order to assess the viable options available to them moving forward.

## **THAILAND ECONOMY**

### **Background**

Typical of many South East Asian economies, Thailand's corporate sector comprised of mainly large and diverse family-owned conglomerates which were financed by banks that had close relationships with the borrowing firms. Until the mid-1980s, the economy was dominated by five financial business groups: the Bangkok Bank Group owned by the Sophonpanich family, the Siam Commercial Bank Group owned by the Crown Property Bureau, the Thai Farmers Bank Group owned by the Lamsam family, the Bangkok Metropolitan Bank Group owned by the Taechaphaibun family and the Bank of Ayudya Group owned by the Ratanarak family. Financial deregulation under the guidance of the IMF and the development of the Stock Exchange of Thailand (SET) in the late 1980s in addition to the creation of the Bangkok International Banking Facilities (BIBF) in 1993 provided alternative sources of funding allowing business groups that did not own banks to grow rapidly by borrowing heavily from foreign creditors including intergovernmental organizations such as the International Finance Corporation (IFC).

### **Bubble Economy or Sustainable Boom?**

During this period, a fixed exchange rate regime in Thailand created an illusion of zero-exchange rate risk while the premature relaxation of capital controls encouraged excessive borrowing in foreign currencies. The export shortfall in 1996 and the widening current account deficit raised concerns about the sustainability of the currency peg.<sup>3</sup> Thailand experienced a classic example of a crisis of confidence brought about by several critical features of the Thai economy during the period of 1996 to 1997. These factors included an overheating bubble economy with inadequate corporate governance and prudential regulations in the private sector, a rapid build-up of private short-term foreign debt liabilities, a weak financial system without the establishment of a comprehensive regulatory and supervisory framework and futile defense of the baht's (the Thai currency) fixed exchange rate regime. With the baht succumbing to speculative attacks, Thailand shifted from a fixed exchange rate system and floated the baht on July 2, 1997. This event triggered the East Asian crisis.

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<sup>3</sup> Bhanupong Nidhiprabha, "Economic crises and the debt-deflation episode in Thailand," *Asean Economic Bulletin*, Volume 15, Issue 3, 1 December 1998.

## Overheating bubble economy

Prudent macroeconomic management, including cautious fiscal policies, a non-inflationary monetary policy and a closely monitored fixed exchange rate system, was key to Thailand's economic success in the 1980s and early 1990s. In 1996, the declining export and import growth, growing excess capacity in real estate markets, especially in Bangkok, and a rapid decline of the SET index was evident (see Exhibit 1 on basic macroeconomic data for Thailand from 1990 to 1999).<sup>4</sup>

Thai exports increased at the rate of 22.2 percent in dollar terms in 1994, followed by an even higher growth rate of 24.7 percent in 1995. In the following year, exports declined by 1.9 percent. This sharp decline in 1996 stemmed mainly from slowdowns in the three largest export destinations: the United States, Japan and Singapore. The loss in competitiveness of Thai exports to the United States was partly due to an appreciation of the real exchange rate, which had begun in 1988 when the inflation rate in Thailand rose above the U.S. inflation rate. The recession in Japan and its increased consumption tax also led to a decline in Japanese demand for imports. In addition, the semiconductor shock in Singapore reduced its demand for imports from Thailand.<sup>5</sup>

The income effect of a slowdown in the world economy had a more damaging effect on the Thai economy than the negative substitution effects produced by the overvaluation of the baht. However, the sudden slump in Thai exports provided opportunities for speculative attacks on the baht which began in earnest on July 29, 1996, following a rumor in Hong Kong about a baht devaluation in response to the large current account deficit and poor export performance.<sup>6</sup>

## Large foreign short-term debt

The rapid build-up of private short-term foreign debt liabilities was encouraged by the establishment of the BIBF in 1993 for offshore banking. The BIBF, which was set up to serve as an intermediary between overseas lenders and local borrowers, facilitated foreign-denominated loans for financial and nonfinancial companies. Commercial banks were permitted to hold net foreign assets up to 25 percent of their capital funds while the maximum percentage of net liabilities was raised to 20 percent. Most of these loans were not hedged due to the lenders' expectations of continued exchange rate stability as guaranteed by Thai law. Banks used deposits and short-term unhedged foreign currency loans to lend long-term loans in domestic currency.

The expansion of credit from banks and finance companies became dangerously large since they were able to borrow from international markets at relatively low interest rates. Bank credit expanded more than 30 percent in 1994 and 1995. Some of these loans were channeled to nonproductive sectors such as property and assets speculation. Short-term debt liabilities rapidly

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<sup>4</sup> Frank Flatters, "Thailand, the IMF and the Economic Crisis: First in, Fast Out?" Prepared for Brookings Institution/Chun Hua Institute for Economic Research (CIER) conference on *The Asian Financial Crisis and Taiwan's Role in the Region*, Washington DC, April 5, 1999, p. 8.

<sup>5</sup> Nidhiprabha, op. cit.

<sup>6</sup> Ibid.

outgrew the country's foreign exchange reserves (especially since these reserves were depleted during the government's defense of the baht in early 1997).

The collapse of confidence that began in early 1997 resulted in an unprecedented reversal of capital flows, from a surplus of US\$19.5 billion in 1996 to a US\$8.7 billion deficit in 1997. Almost all of this was accounted for by private capital, which went from an inflow of US\$18.2 billion in 1996 to an outflow of US\$8.8 billion in 1997.<sup>7</sup>

### **Weak financial system**

With annual growth rates of approximately 10 percent in the previous decade, the adherence to and enforcement of prudential rules seemed irrelevant and unnecessary. In the 1990s, Thai banks and finance companies had many poor quality loan portfolios due to risky lending practices based on collateral and personal connections.

The systematic failure of risk management systems and the lack of prudential controls enabled these lending practices. These factors led to a growing mismatch in the currency denomination of banks' assets and liabilities. When exports, the real estate and stock markets fell in 1996, many financial institutions became insolvent due to the huge amounts of non-performing loans (NPLs) precipitating a banking crisis.<sup>8</sup> For example, in 1996 the Bangkok Bank of Commerce collapsed due to its exposure to real estate loans as well as a result of mismanagement and fraud. The Thai government failed to address the systematic problems of the regulatory framework and, instead, decided to bail out depositors, creditors and shareholders of the failed bank and was reluctant to prosecute those responsible for the bank's financial trouble. As a consequence, unaccountable behavior of financial institutions and regulators continued.<sup>9</sup>

NPLs existed because of the impact of the crisis on the cash flows and balance sheets of borrowers. The main problems were weaknesses of creditors relative to debtors with respect to foreclosure, a reliance on personal guarantees in addition to or instead of collateral, large amounts of debt incurred with minimal prudential and fiduciary standards, a lack of sufficient information to trace contractual guarantees and collateral, and little or no protection of corporate assets and minority shareholders. There was also a proliferation of "strategic NPLs"—situations where debtors exploited the disarray of the financial system and weaknesses in economic and commercial laws to avoid making payments on debts.<sup>10</sup>

### **Defense of the baht**

Capital outflows, which began in the second half of 1996, intensified in December in response to declining export growth and the difficulties of financial institutions. Increased short-term capital mobility arising from the BIBF made the maintenance of the fixed rate increasingly problematic. Capital outflows continued in early 1997 as economic data worsened and concerns about the real

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<sup>7</sup> Flatters, *op. cit.*, p. 4.

<sup>8</sup> Piruna Polsiri and Yupana Wiwattanakantang, "Business Groups in Thailand: Before and After the East Asian Financial Crisis," *Center for Economic Institutions Working Paper Series*, No. 2004-13, p. 16.

<sup>9</sup> Flatters, *op. cit.*, pp. 3-4.

<sup>10</sup> *Ibid.*, p. 19.

estate sector increased. The Thai Government used its foreign exchange reserves and forward swap interventions to fight off pressures on the baht. It made periodic denials of devaluation rumors, including written commitments not to devalue. Foreign exchange reserves declined from approximately US\$40 billion in the third quarter of 1996 to US\$38.1 billion by the end of February 1997. The government had also incurred forward obligations totaling US\$12.2 billion. Therefore, net foreign exchange reserves had fallen from US\$40 billion to US\$26 billion.<sup>11</sup>

Through the second quarter of 1997, the Thai government continued its defense of the baht. On three different days in May, it either used or committed US\$6.1 billion, US\$9.7 billion and US\$10 billion of its foreign exchange reserves. The government then reverted to forbidding Thai banks from lending baht in the offshore market. This proved to be an effective temporary measure and imposed large losses on foreign speculators with short positions in baht.<sup>12</sup>

Since the defense of the baht was conducted largely through forward swap transactions, the country's true foreign exchange reserve position was not apparent from official figures. Until late May, the Minister of Finance claimed to not have been aware of the massive depletion of foreign exchange reserves. There was also no record of a discussion at high levels of the government of the need to change or abandon the fixed exchange rate system.<sup>13</sup>

Further deterioration of economic news and the resignation of Thai Finance Minister Annuay in late June caused another speculative wave and brought about the inevitable collapse of the baht. By the end of June 1997, the country's net foreign exchange reserves stood at only US\$2.8 billion (approximately seven percent of its value in late 1996). With no alternative course, the government finally floated the baht on July 2, 1997. At that time, the baht was generally thought to be overvalued by 10 to 15 percent, suggesting a devaluation from the pre-crisis rate of 25 to somewhere in the range of 28 to 31 baht per dollar. By mid-July, the baht hit 30 to the dollar and continued to depreciate.<sup>14</sup>

The depreciation of the baht and the increase in interest rates had immediate negative effects on the cash flows of nonfinancial companies that had high short-term unhedged foreign denominated loans but held long-term baht denominated assets. These developments aggravated liquidity and solvency problems in the financial industry. Consequently, approximately one third of the financial institutions in Thailand became insolvent.<sup>15</sup>

## East Asian Crisis

Without a nominal anchor and the lack of policy credibility, when the Bank of Thailand decided to float the baht on July 2, 1997, its value fell by 56 percent through January 1998. This large currency depreciation aggravated the foreign debt burden, causing a credit crunch, high interest

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<sup>11</sup> Ibid., p. 5.

<sup>12</sup> Ibid., pp. 5-6.

<sup>13</sup> Ibid., p. 6.

<sup>14</sup> Ibid., pp. 5-7.

<sup>15</sup> Polsiri and Wiwattanakantang, op. cit, p. 16.

rates, bankruptcy and financial disintermediation. The loss of consumer and business confidence stemming from the recession exacerbated the contraction in investment and consumption.<sup>16</sup>

Thailand's total foreign debt in July 1998 totaled US\$87 billion; 68 percent was private debt. The amount of foreign debt created by banks and financial companies was US\$33 billion. The massive depreciation of the baht resulted in the reduction of these institutions' net worth and led to a sharp fall in private investment. Loss of confidence and growing pessimism caused by bank failures and layoffs forced households to cut back on consumer spending. A further fall in the baht triggered by regional disturbances raised the debt burden and propagated the debt-deflation mechanism. The new flexible exchange rate regime created new foreign exchange risks and uncertainties. The need to establish exchange rate stability precluded a significant fall in the domestic interest rate and prolonged economic recovery.<sup>17</sup>

Exports did not respond sufficiently to the large real depreciation of the baht. There were several reasons for the failure of exports to stimulate the economy, despite abundant idle resources and a real wage cut. Devaluations by Thailand's competitors made Thai products less attractive than they would have been and, more importantly, contagion effects around the world caused a slowdown in economic activity from major trading partners. The reduction of imports from Thailand stemmed primarily from the income effect, which outweighed the gain from the substitution effects of the baht depreciation. The fact that exporters could not gain access to export credit aggravated the economic slump. Also, Thai banks became more cautious in lending because of the rising levels of NPLs.<sup>18</sup>

### **Countering the Crisis: The IMF Program**

During this period, the IMF claimed to have given many private warnings about Thailand's macroeconomic imbalances and the need for policy adjustments. The IMF maintained that making its concerns public would have provoked the crisis. In December 1996, the IMF urged the government to adjust its exchange rate system by lowering the weight of the U.S. dollar in the fixed rate currency basket. In May 1997 the IMF recommended an immediate devaluation of the baht of 10 to 15 percent, increased flexibility in the rate and other measures related to the government's macroeconomic policy as well as attempts to strengthen the financial sector. Communication between the IMF and Thai government officials included verbal and written reports, letters and telephone calls as well as secret visits by IMF officials to Thailand.<sup>19</sup>

In August 1997, the Thai government signed the first Letter of Intent (LOI) asking the IMF for assistance.<sup>20</sup> In November, the ruling coalition lost confidence in parliament, and a peaceful change of government followed. Unlike its predecessors, the Democrats, the leading party in the new government, the Royal Thai Government (RTG), had a reputation for being relatively transparent. Several widely respected economic advisors were appointed to key cabinet posts. The new government signed a second LOI with the IMF agreeing to not only honor all the

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<sup>16</sup> Nidhiprabha, *op. cit.*

<sup>17</sup> *Ibid.*

<sup>18</sup> *Ibid.*

<sup>19</sup> Flatters, *op. cit.*, p. 6.

<sup>20</sup> Polsiri and Wiwattanakantang, *op. cit.*, p. 16.

previous government's commitments, but to also "take a number of additional measures to strengthen the policy package and reinforce public confidence in the program" (from the first paragraph in the second LOI).<sup>21</sup>

That year, especially after the change of government in Thailand, the country came to be seen as one of the IMF's star pupils, though "partner" might have been a better description as the RTG took almost full ownership of the IMF program. The new government also had general public support in its commitment to develop a recovery program with the IMF, especially given the discredited policies of the former government.

However, the crisis turned out to be far deeper and widespread than both the Thai government and the IMF had predicted in 1997. In successive LOIs with the IMF, economic growth forecasts were revised relentlessly downwards (see Exhibit 2 on GDP growth projections in LOIs to the IMF).<sup>22</sup>

### **Financial Sector Reforms**

The IMF program had two major components: stabilize the macro economy and restore financial market stability. The program targeted improving the economic governance and competitiveness of Thai industries and reforming and rehabilitating the financial sector.<sup>23</sup>

The IMF faced a conundrum with regard to its recommendations on a macroeconomic level: the outcome of the program needed to demonstrate credibility to investors whose risk premia on Thailand was soaring so interest rates needed to increase; doing so, however, further undermined solvency and deepened the depression.

Similarly, there was little progress in the financial sector. The Thai government faced strong, conflicting pressures. Debtors feared stricter foreclosure and bankruptcy laws. Bankers wanted assistance with recapitalization without significant capital write-downs. Domestic and international creditors wanted to ensure that government guarantees on their loans to banks and finance companies were honored.<sup>24</sup> NPL rates rose, and banks and the remaining finance companies accumulated substantial losses.<sup>25</sup>

As economic conditions deteriorated, popular discontent began to develop. Stories proliferated about insurmountable problems caused by the credit crunch. Business people complained about lack of access to and the extremely high cost of bank credit. The complete collapse of the baht made the cost of foreign loans unbearable, thus fueling the NPL problems in the financial sector.<sup>26</sup>

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<sup>21</sup> Flatters, op. cit, p. 11.

<sup>22</sup> Ibid., pp. 1-2.

<sup>23</sup> Polsiri and Wiwattanakantang, op. cit, p. 16.

<sup>24</sup> Flatters, op. cit, p. 16.

<sup>25</sup> Ibid., p. 13.

<sup>26</sup> Ibid., p. 13.

*Macroeconomic policies*

Despite the government's monetary and fiscal discipline, the baht continued to fall, reaching 56 to the dollar in mid-January 1997. Rising interest rates and the collapsing baht pushed NPL rates higher. The negative wealth effects of the depreciation and collapse of the asset markets, together with the failure of credit markets due to financial turmoil, depressed domestic demand. The export slump persisted, as did a severe contraction of imports as the current account adjusted to a huge drop in net capital outflows. GDP started to decline in the second half of 1997, and continued its downward trajectory in 1998, outpacing declining official projections.<sup>27</sup>

Unemployment tripled from 1996 to 1998. In early 1998, it was clear that the recession would be deeper and last longer than forecasted. Exports, imports, investment and manufacturing production continued to decline. However, there was no change in policy direction (except for a gradual relaxation of revenue targets). Meanwhile, the collapsing baht, rising interest rates and declining real estate value continued to create major problems in the financial sector: NPL rates continued to rise and banks in addition to other financial companies accumulated substantial losses.<sup>28</sup>

Although the IMF continued to support its focus on tight monetary and fiscal policies, by July 1998 there was widespread public pressure on the government to reverse its strict monetary and fiscal stance as this was viewed as a major contributor to the growth of NPLs and the declining real estate sector. As a consequence, mid-1998 marked a watershed in the evolution of Thailand's IMF program: the absence of the anticipated rapid recovery and the growing disarray in the real and financial sectors forced a re-evaluation of the program and the development of new approaches. In August 1998, the government announced its new policy in the fifth LOI to the IMF. Monetary policy was switched from exchange rate to money growth targeting in order to produce reductions in the interest rate and increases in bank lending. The fiscal deficit was increased with funds set up for job creation, local public works and socially beneficial community activities.<sup>29</sup>

*Financial sector recapitalization*

The Thai government provided a blanket guarantee for depositors to increase confidence in the banking industry and strengthened prudential regulations, loan classification and adequacy to restore the effectiveness of the financial industry and increase financial sector transparency and competition. For example, during 1997 and 1998, several emergency amendments to the commercial banking and finance company laws were passed to allow the country's central bank to intervene immediately with non-viable financial institutions. The government assisted financial sector recapitalization by increasing the foreign ownership limit of banks and finance companies from 25 percent to 100 percent over the subsequent ten years.<sup>30</sup>

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<sup>27</sup> Ibid., p. 12.

<sup>28</sup> Ibid., p. 13.

<sup>29</sup> Ibid., p. 15.

<sup>30</sup> Polsiri and Wiwattanakantang, op. cit, p. 17.

In the early part of the IMF program, the government announced a tightening of NPL standards, stricter requirements for provisioning against bad loans, and an increase in capital adequacy ratios to international standards. By mid-1998, the average NPL rate was 33 percent (see Exhibit 4 on NPL rates in 1998). As NPLs and operating losses piled up, the capital adequacy of banks diminished. Accumulated losses alone were sufficient to wipe out the equity of a number of institutions, even before provisioning for bad loans. The government was anxious not to force more bank or finance company foreclosures, however, it had to force financial institutions to take some drastic measures to increase their capital. In most cases, this would require that existing shareholders undertake substantial losses. In the absence of adequate incentives, banks were unwilling to do this. In addition, the fact that several of the major shareholders of banks were extremely well connected and influential made the government reluctant to enforce any negative consequences. Another concern for the government was that banks were unwilling to issue new loans for fear of aggravating their NPL problems.<sup>31</sup>

A compromise—the August 1998 package of THB300 million—was introduced so that financial institutions that met specified prudential conditions received public funds (which they would be required to repay at a later date). The government also set up the Asset Management Corporation to assist finance companies to write off NPLs.<sup>32</sup> During the remainder of 1998, there was very little progress in bank recapitalization: not a single bank took up the recapitalization offer. Meanwhile, NPLs continued to rise and although interest rates were falling, there was very little bank lending. Borrowers saw very few profitable investment opportunities and lenders did not want to risk further increases in NPL rates.<sup>33</sup>

The government decided to apply more pressure: it used moral suasion on banks to reduce interest rates and increase lending. In January 1999, the government required all financial institutions to submit detailed recapitalization plans. However, the plans were required only for the period to June 1999, at which time stricter loan loss provisioning requirements would apply only with respect to 60 percent of the value of NPLs.

Out of the 91 finance companies that existed in Thailand in 1996, 71 were closed down in 2000. Out of the 14 domestic banks that existed in 1996, four were closed down, two were taken over by the government and four had majority foreign ownership. Most financial institutions that survived had recapitalized by obtaining direct equity investments from foreign partners and issuing shares and capital securities.<sup>34</sup>

### **Corporate Sector Reforms**

The government's second policy commitment to the IMF was to facilitate corporate restructuring. Two types of initiatives were launched in 1998: (i) a commitment to overhaul economic laws related to bankruptcy, foreclosure, property rights and restrictions on foreign investors; and (ii) the development of informal, voluntary processes aided by tax and other incentives to facilitate arbitration without recourse to bankruptcy and foreclosure. Major reforms included amending

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<sup>31</sup> Flatters, *op. cit.*, pp. 16-17.

<sup>32</sup> Polsiri and Wiwattanakantang, *op. cit.*, p. 17.

<sup>33</sup> Flatters, *op. cit.*, pp. 20-22.

<sup>34</sup> Polsiri and Wiwattanakantang, *op. cit.*, p. 17.

bankruptcy and foreclosure laws, establishing an effective bankruptcy enforcement framework, developing sound out-of-court procedures for voluntary debt restructuring, streamlining institutional arrangements for corporate debt workouts, and establishing an effective legal scheme for asset recovery through court-based bankruptcy and court-controlled debt restructuring and reorganizing.

### *Economic Laws*<sup>35</sup>

With regard to the first initiative, the government had committed to bringing 11 new economic and commercial laws into effect by October 31, 1998. This deadline was not met. Delays were due to preparing and presenting the laws to parliament, political battles between the government and interest groups and protests by rural debtors (such as farmers) who were alarmed at the prospect of being forced into personal bankruptcy on the basis of personal guarantees on loans under the new laws.

However, the most important barrier was the opposition from a group of wealthy debtors, many of whom were members of the Thai Senate (among them was TPI's CEO), who mounted a major public campaign against the new laws. This opposition campaign appealed to the national sentiment of fear about sellouts to foreigners exploiting the popular notion that small powerless Thai debtors were being forced by rich foreign creditors into personal bankruptcy.

In order to preserve an image of popular support for the new laws, the government met some of the opposition's demands such as offering concessions with respect to minimum debt limits for bankruptcy and foreclosure laws to apply, relaxing liabilities related to personal guarantees and reducing the number of years for which sanctions would apply for personal bankruptcies.

### *Corporate Debt Restructuring*

The second initiative involved setting up the Corporate Debt Restructuring Advisory Committee (CDRAC) in June 1998 to oversee and facilitate voluntary debt restructuring negotiations under a market-oriented framework. Members of CDRAC included both creditors and debtors. However, de facto, the CDRAC process covered only creditors who were financial institutions.<sup>36</sup> By February 1999, less than 10 percent of over THB750 billion of debts had been settled.<sup>37</sup> By 2000, approximately half of the cases that went through the CDRAC process were completed.<sup>38</sup> However, progress on the 80 percent of debts outside the CDRAC system was slower.<sup>39</sup>

Corporate restructuring was financial rather than operational. It generally involved debt restructuring negotiations with creditors that led to lower interest and principal payments or an increase in the maturity of the company's debt, exchanging equity securities for debt, and offering creditors the company's equity securities. The government also implemented reforms to improve corporate governance focused on strengthening the board of directors, improving the

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<sup>35</sup> Flatters, op. cit, pp. 22-23.

<sup>36</sup> Polsiri and Wiwattanakantang, op. cit, p. 18.

<sup>37</sup> Flatters, op. cit, p. 24.

<sup>38</sup> Polsiri and Wiwattanakantang, op. cit, p. 18.

<sup>39</sup> Flatters, op. cit, p. 24.

institutional framework for accounting and auditing practices, improving the quality and reliability of company information and strengthening minority shareholder rights.<sup>40</sup>

## Corporate Restructuring

Due to their restructuring experience after the collapse of Australia's economic boom period in the 1980s, Australian corporate recovery specialists played a key role in restructuring the corporate structure in Thailand after the East Asian crisis. For example, the three accounting firms through their Thai joint ventures—Deloitte Touche Tohmatsu Jaiyos, Ernst & Young and KPMG Peat Marwick Suthee—given the task of valuing the assets of 56 failed Thai finance companies for their eventual liquidation staffed teams from their Australian offices.<sup>41</sup>

The IMF had been criticized for failing to push through its initiatives to end crony capitalism in Thailand by not giving support to the financial professionals entrusted with enforcing good governance. These corporate recovery specialists often worked with little guidance and support from the Thai government and the IMF. They had parsimonious budgets to develop viable restructuring plans in court-appointed bankruptcy cases. Often working in isolation, they were bitterly opposed by Thai boards reluctant to give up control. Much of the debt restructuring was aimed at companies that were in trouble because of poor financial decisions. In many instances, especially in banks and finance companies, there was little attempt to disguise massive fraud.<sup>42</sup>

The huge fees expected by these corporate recovery experts turned out to be illusory. In the first year of the crisis, U.S. companies—corporate advisors who had been sent in to clean up the corporate sector—made a lot of money. Critics of the Thai government claimed that U.S. companies such as Lehman Brothers, Goldman Sachs, Morgan Grenfell and GE Capital acted more like corporate raiders than advisors. The Thai government, reeling from the early successes of these advisors, capped fees for consultants. “We have been coming to Thailand for a year now without any reward,” said an Australian executive.<sup>43</sup>

Anti-foreigner sentiment, relating to bankruptcy and insolvency in particular, had been rising since the economy collapsed, and specifically since the IMF attached conditions to its August 1998 package. Critics of the Thai government claimed it had sold Thailand to foreigners by forcing debt-ridden companies into bankruptcy and tightening bankruptcy and foreclosure legislation.<sup>44</sup> On March 12, 1999, the rhetoric grew more strident as the Thai administration and the Senate faced off in a confrontation over a Bankruptcy Bill which the government regarded as the cornerstone of its program to reform Thailand's debt laws. The unelected senators, many of whom were the country's most heavily indebted businessmen, had stripped the most rigorous provisions from the Bill while claiming to the public that Thailand was being sold out to

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<sup>40</sup> Polsiri and Wiwattanakantang, op. cit, p. 19.

<sup>41</sup> Bruce Cheesman, “Thai Anxiety: Australians To The Rescue,” *Australian Financial Review*, 13 March 1998.

<sup>42</sup> Bruce Cheesman, “Thai Recovery Work is Risky Business,” *Australian Financial Review*, 13 March 1999.

<sup>43</sup> Ibid.

<sup>44</sup> “Murder Shocks Thailand-based Debt Companies,” *The Nation*, 12 March 1999.

foreigners. These claims fell on increasingly receptive ears, especially among farmers and rural workers—the people who had lost their jobs as companies were restructured.<sup>45</sup>

Peter Brimble, a consultant who conducted structural adjustment planning for the Thai government and multilateral agencies, said, “Over the past year or two, there has been a ground swell against the prospect of foreigners snapping up goodies on the cheap.” He explained that debt restructuring and liberalization were narrowing the choices for companies operating in heavily controlled sectors. “Those that accumulated wealth in sectors like the liquor industry will be able to buy their way out. Others will have to bring in financial or strategic partners to help them out.” Brimble cautioned foreign consultants, “If you go into a sensitive business, you have to step carefully. It is like walking into a Mafia-controlled town.”<sup>46</sup>

### **Restructuring the Kaset Thai Group**

The sugar industry, which operated under price controls and lacked efficiency, exemplified how business was conducted in Thailand. The industry’s main participants had the backing of the government so despite their high levels of debt and inefficiency they were able to set domestic prices, allocate export quotas and exclude competition (new mills were banned). Of the 46 sugar mills in Thailand, 11 were burdened with a combined debt of US\$45 billion. In a bail-out package in November 1998, the government injected US\$1.7 billion as part of a financing agreement involving 12 local banks, four finance companies and 35 Thai mills. This arrangement highlighted the Thai government’s sensitivity to changing the status quo of an industry that employed approximately 500,000 people. The government’s decision-making process to liberalize its protected industries was slow for fear of political consequences.<sup>47</sup>

Deloitte Touche Tohmatsu Jaiyos Co. was hired by five local creditor banks—Krung Thai Bank, Bangkok Bank, Thai Farmers Bank, Thai Bank and Bank of Ayuthaya—to rehabilitate Kaset Thai Sugar Co., Thai Identity Sugar Co. and Ruamphol Enterprise Co., Thailand’s largest sugar mills. The mills, owned by the Siriviriyakul family, were on the verge of bankruptcy with combined debts of US\$450 million when the Thai court appointed South Sathorn Planner Co. Ltd, a division of Deloitte Touche Tohmatsu Jaiyos, to administer the restructuring on January 1, 1999. Michael Wansley, a partner in Deloitte’s Melbourne office, was assigned to head the court-supervised debt restructuring of the three sugar mills.<sup>48</sup>

Wansley proposed three solutions for the Kaset Thai Group’s debts: a new bank loan for capital injection, new strategic partners and a conversion of debt to equity. All three options would have diluted the owner’s control of the mills. Wansley subsequently uncovered a large scale fraud of US\$5.3 million which was missing from one of the mills. On March 10, 1999, Wansley was gunned down as he traveled to Kaset Thai’s main sugar mill, 150 miles north of Bangkok. In Thailand, violent settlements of local business disputes were common. Police charged a member of the Siriviriyakul family for ordering the execution, however the case remained in criminal

<sup>45</sup> “Murdered by the People he Tried to Save,” *The Australian*, 13 March 1999.

<sup>46</sup> Margo Towie, “A Sweet deal Turns Sour and Deadly,” *Business Review Weekly*, 9 April 1999.

<sup>47</sup> “Thai interior minister expects to arrest Australian’s killer this week,” *Associated Press Newswires*, 13 March 1999.

<sup>48</sup> “CRIME - Find the killers quickly, says PM,” *Bangkok Post*, 12 March 1999.

court with the trial of several executives of the sugar mills making slow progress. Whether the killing was ordered by the mill owners or others challenged by Wansley, the incident highlighted how far vested interests would go to protect their stakes in Thailand.<sup>49</sup>

Following Wansley's death, creditors continued to face difficulties restructuring Kaset Thai Group's debt. In September 1999, a debt workout proposal was tabled. The plan included a capital write-down from THB100 per share to THB0.01 per share and a change of management. In addition, a new company was to be created to buy sugar produced by the group's three mills instead of relying on the existing company controlled by the Siriviriyakul family. The Siriviriyakul family managed to mount opposition to the proposal and won support from sugar-cane planters who were both creditors and debtors of the group, as well as other small creditors. On September 22 to 24, approximately 2,000 planters rallied in Bangkok to oppose the debt restructuring plan. The planters outnumbered and overpowered the bank creditors who held 75 percent of the company's total debt. As a result the case was transferred to the CBC. Bankruptcy law allowed the plan to be rejected by a numerical majority of the creditors even though they only held 20 percent of the company's debt.<sup>50</sup>

The Thai Identity Sugar Group also prepared to file a lawsuit to seek THB100 million in compensation from South Sathorn Planner Co. Thai Identity President Praphan Siriviriyakul said the company's board of directors had resolved to take civil action against the planner which he alleged did not have proper knowledge about the sugar industry and caused damage to the group. Praphan claimed the planner lacked proper knowledge of the industry, under-estimated the revenue-generating ability of the group and gave a low rating of the group's financial status, thus damaging its image.<sup>51</sup>

Over the next few months, the Siriviriyakul family pursued negotiations with creditors and formulated a new plan to restructure the company's debt. The bankruptcy law had changed and minor creditors were no longer able to block restructuring plans that had been approved by creditors holding more than 75 percent of the total debt. Negotiations with creditors took place under the CDRAC. Creditors were scheduled to vote on the new plan on April 5, 2000.<sup>52</sup> Under the plan, Kaset Thai would repay its debt of THB6.8 billion in nine to 10 years; Thai Identity would repay debts of THB3.6 billion in 12 years and Ruamphol would clear its debts of THB3.8 billion in up to 20 years, which could be reduced to 14 years by committing some of Kaset Thai's future profits to repaying its debts.<sup>53</sup> "It's basically a rescheduling of debt," an executive at one creditor bank said of the plan.<sup>54</sup>

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<sup>49</sup> Margo Towie, "A Sweet Deal Turns Sour And Deadly," *Business Review Weekly*, 9 April 1999.

<sup>50</sup> Somluck Srimalee, "Debtors Turn Restructuring into Thai Drama," *The Nation*, 4 January 2000.

<sup>51</sup> Somluck Srimalee, "TIS will file suit against South Sathorn," *The Nation*, 5 November 1999.

<sup>52</sup> Watcharapong Thongrung, "Debtor offers creditors new plan," *The Nation*, 29 February 2000.

<sup>53</sup> US\$1=THB37.505 on 2/15/2000

<sup>54</sup> Nick Cumming-Bruce, "Thai Identity Sugar, Affiliates See Deal With Creditors," *Dow Jones International News*, 9 November 1999.

## THAI PETROCHEMICAL INDUSTRY

### Company Background

Thai Petrochemical Industry (TPI) was the leading petrochemical producer in Thailand, and through its subsidiary, TPI Polene, the country's third largest cement producer. The Leophairatana family who held a controlling interest first incorporated the company in 1978. When Prachai, the CEO, and his three brothers started TPI in 1978, using seed capital from his family's rice trading business, they had a strategy of bringing state-of-the-art production techniques to Thailand. Prachai was inspired by the technology he had seen as an engineering student at the University of California at Berkeley and adapted the best solutions from petrochemical centers across the world. In the 1970s, the Thai government encouraged TPI to exploit recently discovered oil and gas reserves in the Gulf of Thailand.

TPI was considered to be a star local company by multilateral organizations and international creditors. Former Senator Prachai's ambition was to become the king of petrochemicals in Asia. The company's expansion was financed by unhedged, short-term loans from foreign creditors. Almost 60 percent of TPI's debt was foreign-denominated. Even before the floatation of the baht, there were indications of financial trouble for the company resulting from a failed currency swap. The fallout from the failed deal included the resignation of the CFO and significant shareholder, Munghorn Kriengwatana.<sup>55</sup> In spite of the signs that the economy was headed for a financial crisis and TPI's financial problems, in November 1996, just months before the crash, the IFC loaned TPI US\$500 million to fund a major expansion project on Thailand's eastern seaboard.<sup>56</sup>

### Impact of the East Asian Crisis

When the regional financial crisis hit, the company was thrown into default immediately: the servicing cost of TPI's then reported US\$3.2 billion debt virtually doubled with the floatation of the baht in July 1997 (see Exhibit 3 on TPI financials). As a result, TPI was unable to meet its interest or principal payments. In August 1997, management approached its creditors for help beginning negotiations to restructure the company's debt.<sup>57</sup>

TPI followed a strategic NPL course as Prachai declared a debt moratorium, temporarily suspending interest and principal payments in order to keep plants operating. By the end of 1997, TPI had a loss of THB69.3 billion (US\$1.7 billion), the biggest ever annual loss recorded in Thai corporate history. In late 1997, TPI appointed Chase Manhattan Bank as its financial advisor. An original suggestion to help TPI was to find a foreign investor who would be willing to take a significant stake in the company, however, Prachai opposed allowing any foreigner significant influence over TPI.<sup>58</sup> In 1998, he aggravated his creditors further when he tried to divert US\$25

<sup>55</sup> Simon Andrew, "Thai Petrochemical: Raising the Titanic," *Indosuez W.I. Carr Securities*, January 25 2000, p. 6.

<sup>56</sup> IFC Announcement, "IFC SIGNS LARGEST-EVER FINANCING FOR PETROCHEMICALS COMPANY IN THAILAND," [www.ifc.org](http://www.ifc.org), November 7, 1996.

<sup>57</sup> Andrew, loc. cit.

<sup>58</sup> *Ibid.*, p. 6.

million from his company to pay a second set of banks after claiming he didn't have any money to pay his principal creditors.<sup>59</sup>

## TPI's Restructuring Process

In 1999, TPI's massive expansion culminated in the construction of a second refinery even though the company was supposed to be servicing debt during this period.<sup>60</sup> Prachai approached his creditors with a restructuring plan for the then recorded US\$3.2 billion debt to 148 Thai and foreign creditors, making TPI the country's second largest corporate debtor and largest out-of-court debt-workout case.<sup>61</sup> There were rumors that the IFC—which held approximately 15 percent of the company's debt—planned to sue TPI and wanted its management fired. The IFC was reported to have said that the performance of the current management was not transparent and had been a major cause of the company's financial trouble. Prachai denied these rumors, claiming: "Whoever is coming up with these rumors should check their facts before they start such moves, which could disrupt the restructuring process of corporations."<sup>62</sup> Prachai maintained that the IFC and other creditors withheld their consent because of a dispute over the level of monetary default—when the company stopped paying both principal and interest over an agreed upon percentage of total outstanding debt and a creditor, along with at least two other creditors with more than \$50 million each in outstanding loans to the company, could call for a monetary default and take control of the company. "I have to go back to more than 100 creditors and ask for their approval, as in the earlier case they had approved a default at 33.5 percent of the total portfolio but now it's down to 20 percent," Prachai said. "If they approve this, then we will start servicing our debts immediately."<sup>63</sup> Prachai also accused IFC and other creditors of delaying the conclusion of its debt-workout plan—something that ran counter to the spirit of the World Bank, IFC's parent organization.<sup>64</sup> Thai Finance Minister, Tarrin Nimmanahaeminda, approached the World Bank to persuade IFC to agree to the terms of the plan.<sup>65</sup> TPI was cleared of any possible fraudulent acts by major shareholders and management prior to preparation of its debt-restructuring plan.<sup>66</sup>

In January 2000, Prachai reached an agreement with TPI's creditors to a debt-for-equity swap: a 75 percent stake in the company for US\$750 million in unpaid interest. But the deal foundered on two issues: the first was a write-off of US\$500 million of the debt that Prachai wanted the creditors to accept, and the second was whether TPI should declare bankruptcy. Prachai insisted that TPI was not insolvent under Thai law where liabilities have to exceed assets. Prachai was technically correct only if the 1997 baht-to-dollar exchange rate was applied.<sup>67</sup>

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<sup>59</sup> Gearing, op. cit.

<sup>60</sup> Ibid.

<sup>61</sup> "IFC agrees on TPI debt revamp," *The Nation*, February 21, 1999.

<sup>62</sup> Ibid.

<sup>63</sup> Soonruth Bunyamane and Umesh Pandey, "TPI denies creditors have rejected plan," *Bangkok Post*, February 19, 1999.

<sup>64</sup> *The Nation*, op cit.

<sup>65</sup> "IFC finally agrees to TPI Plan," *Business Day*, February 22, 1999.

<sup>66</sup> *The Nation*, op cit.

<sup>67</sup> Julian Gearing, op. cit.

On January 17, 2000, TPI's creditors Bangkok Bank, IFC, US Exim Bank, Bank of America and Citibank filed a rehabilitation request to Thailand's CBC. The creditors' steering committee submitted a petition to the court to nominate a different executor of the company's debt restructuring. The court asked both parties to discuss an out-of-court compromise on the executor. When that failed, the court decided to proceed with a hearing of the creditors' petition. Prachai was appointed executor of the debt plan in the interim period.<sup>68</sup>

Thailand's biggest commercial bank Bangkok Bank, which led the creditors' petition, faced the possibility of a recapitalization if it failed to settle a court battle with TPI as the company owed the bank US\$370 million in direct loans and THB40 billion in stand-by letters of credit guaranteed by the bank.<sup>69</sup>—an estimated exposure to the bank of US\$600 million.<sup>70</sup> In February 2000, Bangkok Bank's chairman announced that the bank did not need to increase its capital or set additional loan-loss provisions in the event that TPI's debt restructuring failed. He commented on Prachai's negotiations with the creditors, saying: "It was understandable that the TPI Chief would be resorting to every means in order to save the business he had initiated and built with his own hands." TPI's Thai creditors were reported to want the case ended through a compromise and not by bankruptcy.<sup>71</sup>

The TPI case offered a benchmark test for the nation's evolving legal system, its progress in cleaning up banks' NPLs and the effectiveness of its bankruptcy laws and bankruptcy court. TPI was not only the nation's biggest defaulter; it was one of the few cases where creditors faced resistance from the debtor. In one of the few prior cases where creditors pursued a hostile petition, the debtor emerged victorious after the court accepted its controversial claim that its assets exceeded its liabilities. The same issue was critical in deciding the TPI case: TPI valued its assets on the basis of their replacement cost. Even at the current market rates, much lower than the 1997 exchange rate used by the company, TPI would still be solvent. Creditors argued that the court should value the company as a going concern, based on cash flow over a number of years and the disposal value of the assets at the end of those years. On that basis, the creditors argued that the company was insolvent.<sup>72</sup>

Prachai maintained that the debt restructuring was only a discussion of ideas while creditors argued that TPI had declared a debt moratorium and asked for a debt restructuring. TPI's creditors used a DCF valuation by PricewaterhouseCoopers that estimated the company's assets at only US\$2.3-2.6 billion while liabilities were approximately US\$3 billion. TPI's financial advisor, Chase Manhattan Bank, accused the auditing firm of using only one valuation methodology, too high a WACC and too low a terminal value. The auditor did not give an opinion on TPI's 1998 and Q399 financial statements so the CBC could not rely on those financial statements. Prachai argued that the company was not insolvent because 1998 and Q399 financial statements showed TPI had assets more than liabilities in baht denomination (THB47

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<sup>68</sup> "Thai Court Delays Decision on TPI Debt Plan," *Reuters News*, February 13, 2000.

<sup>69</sup> "Bangkok Bk May Need More Cap If TPI Doesn't Settle-Report," *Dow Jones International News*, February 15, 2000.

<sup>70</sup> "TPI case drags Bangkok Bank down further," *Reuters News*, February 29, 2000.

<sup>71</sup> "BBL Capital Requirements Not Affected by TPI Problem," *Business Day*, February 17, 2000.

<sup>72</sup> Nick Cumming-Bruce, "BBL Capital Requirements Not Affected by TPI Problem," *The Asian Wall Street Journal*, February 29, 2000.

billion to THB28 billion). Prachai also accused the creditors of ill-intent by asking TPI to sign a process agreement and master restructuring agreement that set many unachievable conditions for the debtor (a failure to meet these conditions would allow creditors to hold up to a 75 percent stake in TPI). Despite Prachai's lobbying which resulted in an objection, withdrawal and re-objection by TPI, on March 15, 2000, the CBC ruled that TPI was insolvent, but was capable of rehabilitation.<sup>73</sup>

A planner who would manage the debtor company and prepare a rehabilitation plan was yet to be appointed. The creditors initially proposed Prachai as planner. After TPI's objection to the rehabilitation case, the creditors changed their proposal to nominate Effective Planner, a subsidiary of Ferrier Hodgson, an Australian firm which specialized in financial restructuring, corporate recoveries and insolvency management. Ferrier Hodgson, which had established a Bangkok office in March 1998, was among three advisers to the Bank of Thailand-sponsored CDRAC and was engaged in restructuring the debts of 16 Thai companies with combined debts of US\$8 billion (12 percent of Thailand's total NPLs)<sup>74</sup>

TPI countered this by proposing the company itself (and by default, Prachai) as planner. After the court ruling, Prachai remained as executor of the company until its creditors who were now owed a total of US\$3.4 billion in debt agreed on a permanent planner.<sup>75</sup>

## CREDITORS' OPTIONS

TPI's management had threatened to resign *en masse* if they lost the case and there was now a possibility that this could happen. As the creditors now had the upper hand, there was the possibility that management would yield to the creditors' requests in order to remain the company's planner. If there were good controls in place, this option may be better for creditors as the operations of the company were complex and would likely be smoother with TPI as planner than if an outsider were managing the restructuring. However, keeping CEO Prachai Leophairatana was a risk—the creditors weren't certain they could place their trust in him. But Prachai had also proven to be a formidable opponent.

The creditors' steering committee nominee, Effective Planner, believed that it could garner two thirds of the creditors' support as planner. However, they were considered to be outsiders—of not only the company but also the entire economy. Effective Planner was also viewed as an asset dispenser rather than a cash flow maximizer.<sup>76</sup> Another option, partnering with a local company who had experience in the petrochemical business and operating within the Thai economy could serve the creditors well.

A new owner was a fourth possibility—selling the entire company was an option. TPI's petrochemical complex was among the few of its kind in the world. Thailand had an expanding polymer conversion industry requiring increasingly diverse types of product. Entry price in this

<sup>73</sup> Jetsupa Thiengham, "Thai Equity Magazine: Thai Petrochem Ind," *Warburg Dillon Read*, 22 March 2000, pp. 17-18.

<sup>74</sup> "Mediators needed to reduce NPLs," *The Nation*, September 3, 1999.

<sup>75</sup> "TPI ruling positive - Thai finance minister," *Reuters News*, March 15, 2000.

<sup>76</sup> Maria Lapiz, "TPI: rehabilitation plan final – BUY," *SG Securities*, 22 September 2000, pp. 1-2.

scenario was critical as domestic polymer producers were protected by import tariffs but there was an anticipated decline in tariff rates that would alter the return profile in the industry.<sup>77</sup>

Other options in these situations including a piecemeal sale of the company and a capital write-down were not realistic for TPI's creditors. TPI was set up as a single operating unit so splitting up the various segments would require high capital expenditures and could be as risky as building a new operation. A capital write-down was an unattractive option as it would move creditors to shareholder status which would (1) reduce rights to cash flow; (2) run the risk of getting stuck with a company longer than under creditor status; (3) in cases where an 'exit from the stock' could not be pre-engineered, potentially cause the price at which the stock would sell to be lower than the conversion price and (4) prove difficult to come up with a conversion price as several classes of debt under different tenures existed.<sup>78</sup>

Therefore, the creditors faced four main options:

- Debt restructuring with Prachai and current TPI management as planner
- Debt restructuring with an external planner—most likely, Effective Planner, the creditors' steering committee nominee after the disagreements with Prachai
- Forming a strategic partnership with a local company to restructure and manage TPI
- Sale of company

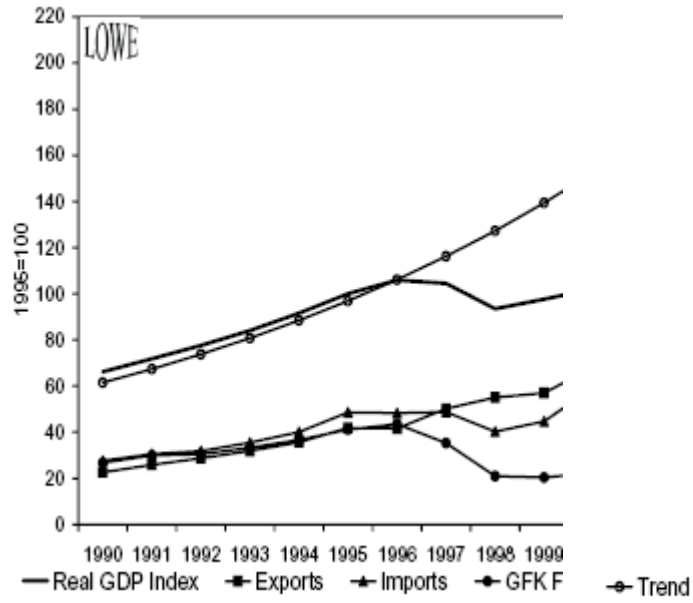
A decision had to be made.

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<sup>77</sup> Ibid.

<sup>78</sup> Ibid.

**Exhibit 1: Basic Macroeconomic Data for Thailand (1990 to 2000)**



Source: DataStream.

**Exhibit 2: GDP Growth Projections in LOIs to the IMF**

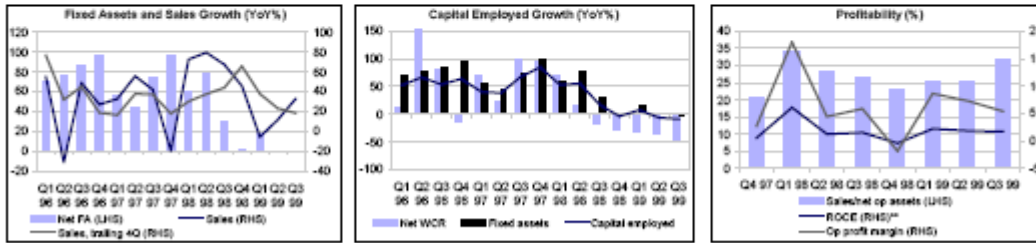
**Table 1**  
**GDP Growth Projections for 1998 in Various Letters of Intent**

LOI #	Date	1998 Growth (%)
1.	August 14, 1997	6.5
2.	November 25, 1997	0 to 1
3.	February 24, 1998	-3 to -3.5
4.	May 26, 1998	-4 to -5.5
5.	August 25, 1998	-7
6.	December 1, 1998	-7 to -8

Source: Frank Flatters, "Thailand, the IMF and the Economic Crisis: First in, Fast Out?" Prepared for Brookings Institution/Chun Hua Institute for Economic Research (CIER) conference on *The Asian Financial Crisis and Taiwan's Role in the Region*, Washington DC, April 5, 1999.

**Exhibit 3: TPI Financial Performance (Q396 to Q399)**

Summary of quarterly results																
THB m	Q3 96	Q4 96	Q1 97	Q2 97	Q3 97	Q4 97	Q1 98	Q2 98	Q3 98	Q4 98	Q1 99	Q2 99	Q3 99	YTD98	YTD99	chg YoY
Sales	4,990	9,328	7,092	6,214	7,080	7,513	12,229	11,147	11,948	10,949	11,544	12,420	15,709	35,224	39,673	33%
Gross margin	14.2%	19.6%	25.7%	26.8%	35.5%	27.1%	29.5%	23.1%	21.6%	17.8%	23.9%	24.7%	25.3%	24.8%	24.7%	
EBIT margin	10.1%	4.0%	3.6%	7.4%	15.7%	0.6%	18.1%	6.5%	6.0%	-3.5%	9.7%	7.5%	5.6%	10.4%	7.4%	
EBITDA margin	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	22.3%	12.7%	11.9%	3.1%	16.2%	13.5%	10.6%	15.6%	13.1%	
Pre-ex profit margin	9.0%	-1.1%	-0.4%	6.7%	5.7%	-33.3%	4.5%	-15.2%	-8.4%	-37.5%	-13.1%	-15.7%	-17.7%	-6.1%	-15.7%	
Pre-ex EPS (un adj.)	0.27	(0.06)	(0.02)	0.21	0.19	(1.27)	0.29	(0.88)	(0.51)	(2.11)	(0.78)	(1.00)	(1.43)	(1.10)	(3.21)	193%
Sales/net op assets	23.0%	41.6%	27.2%	22.6%	21.2%	20.4%	33.9%	29.1%	26.2%	23.3%	25.6%	25.5%	31.9%			
Op profit/net op assets	1.7%	1.2%	0.8%	0.8%	3.1%	0.6%	6.1%	1.2%	1.5%	-0.4%	2.2%	1.9%	1.7%			



Source: Company data

Source: Jetsupa Thientham, "Thai Equity Magazine: Thai Petrochem Ind," *Warburg Dillon Read*, 22 March 2000.