

# HOW THE THAI REAL ESTATE BOOM UNDOED FINANCIAL INSTITUTIONS: WHAT CAN BE DONE NOW?

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## **Abstract**

*The performance of Thailand's economy has been truly remarkable during the three decades 1965-1995.\* However, the quality of growth deteriorated significantly in the mid-1990s. Eventually, poor credit risk management and excessive lending to the real estate sector have played a major role in the distress of financial institutions in Thailand. They have led to high levels of oversupply and extremely high vacancy rates by international standards in almost all sectors of the real estate industry. How did it happen? What do we need to know about investment in real estate? What actions can assist with immediate crisis management?*

*This paper evaluates the Thai real estate cycle in light of the recent international experience. A modern real estate sector has emerged during the Thai boom but it remains immature. Real estate development is a decentralized and complex process. In Thailand investments were inadequately understood and monitored, as well as often improperly financed. As a result real estate has been a major contributor to financial distress. If real estate was not the proximate cause of the 1997 currency crisis, that crisis has deepened and amplified problems in the sector. The high level of oversupply and vacancy can imply a long and slow recovery. After showing how the boom turned into a bust, the leading concern of this paper is to show why a difficult and painful early recognition of losses is critical to shortening the recovery period. Thailand will recover, and recommendations are made for starting now to strengthen the sector.*

## **I. INTRODUCTION: NEED FOR A DIFFERENT PERSPECTIVE ON REAL ESTATE**

The Thailand financial crisis has many facets: the country has faces a systemic financial crisis, a currency crisis, a banking crisis, and an asset deflation crisis (Sheng 1998). To bolster Thailand's economic recovery and competitiveness, there are two very good reasons for focusing on the real estate crisis. First, the real estate boom and its collapse have played a major role in the demise of a very large number of Thai financial companies, and also of commercial banks. International experience can throw much needed light on the factors that may now speed up or delay the recovery of this sector. Second, the efficiency and stability of the real estate sector is a major component of Thailand's competitiveness. In an open economy that is becoming increasingly technology intensive and dependent on services, the real estate sector will keep growing in importance.

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\* Credit for this title goes to the paper by Karl Case (1991) about the Northeast USA. By sharing titles we want to emphasize generic features in the interactions between the real estate sector and the banking system of a large number of countries in the 1980s and 1990s. The field work for this paper was carried out during the brief period of 15-30 April 1998. The authors are very grateful to the numerous professionals of Thailand who generously shared their data, experience and insights, as will be readily apparent. However, we take full responsibility for the analyses, views and recommendations that are presented.

In discussing the private and public actions needed to manage the current crisis and restructure the sector, the central emphasis of this paper is that a change of policy perspective and better technical tools will be needed. International experience consistently shows that the proper way to manage a modern real estate economy is to stop considering the sector as a low-skill, labor intensive, unproductive, non-traded sector which does not need much attention. Rather, Thai policies and institutions must now pro-actively treat real estate as an important type of capital asset with its own specific asset sub-markets where unfortunately equilibrium does not continuously exist. If this were not the case, how could real estate inflict so much damage to the financial system of Thailand and other countries during the present period of rapid financial innovation, liberalization and globalization?

“The real estate sector forms a major part of any (emerging and mature) economy both by its sheer size and also by its extensive links to the other sectors of the economy. With its various components, it has the unique characteristics of being simultaneously a major input in the productive capacity of the economy in the case of office, commercial and industrial real estate and a major input in the consumption choices of households in the case of residential real estate. It is also an important vehicle for both individual and institutional investors, while also being the output of the development and construction industry and as such also a major consumer of manufacturing output. In many cases, real estate constitutes the principal form of wealth for households” (Renaud et al, 1997). For these reasons, the real estate sector should become a *closely* monitored and *financially well-documented sector* of the Thai economy.

Real estate is essentially an urban industry and the efficiency of cities is a critical component of a country’s international competitiveness. Metropolitan centers are the dynamic interface between the national and the international economy for the flow of goods, services, and information. As an economy develops and deepens, the value and quality of financial, corporate, technical and infrastructure services as intermediate inputs into the production process keeps growing. As family businesses expand and incorporate, traditional office work moves from shophouses to office towers. Large factories create a demand for industrial real estate. The demand for financial services is also highly income elastic and expands with household incomes. With rapid growth, the housing stock diversifies and retail malls compete with traditional neighborhood shops. It is therefore not surprising to find that the decade 1986-96 has seen the rapid emergence of a large modern real estate industry in Thailand, especially given Bangkok’s ambition to be a leading center for the South East Asian region.

The Thai real estate industry that has emerged during the last decade remains immature. It suffers from a number of structural weaknesses that must now be addressed in order to continue its modernization - - and lower its future volatility. International experience shows that the real estate industry is inherently cyclical, especially commercial real estate. Unfortunately, the amplitude of the Thai real estate boom that was initially built on sound growth fundamentals until about 1992-93 has been magnified and distorted by outdated banking practices and weak credit risk management in a financial sector that was also experiencing extremely rapid growth. Currently, structural flaws in both sectors have been starkly revealed, and both sectors are under great stress. The real estate boom that was overextended into 1995 is now followed by oversupply and a very severe asset deflation which parallel the deflation of financial assets on the stock market.

Non-performing real estate loans, overvalued real estate collateral and business loans improperly deflected into real estate investments and contributing directly to banking failures are a familiar story in quite a few countries. From an international perspective, the magnitude of the current overbuilding in the Bangkok Metropolitan Region (BMR)<sup>1</sup> is among the highest recorded; possibly the highest. On the other hand, the dynamics of the Thai real estate experience is far from unique. A significant number of OECD countries have experienced

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<sup>1</sup> Bangkok plus the five adjacent provinces.

serious episodes of asset inflation and volatile real estate cycles since the early 1980s. The US, the UK, Japan, France, Australia, and the Nordic Countries all have gone through significant real estate crises. So did Chile in 1982 and other Latin American countries.<sup>2</sup> What sectors in these countries have experienced the worst bubbles? What can they teach us about the factors that can speed up recovery? In France for instance, the real estate slump that followed the real estate bust of 1990-91 is finally over, after six years. There, international investors are leading the budding recovery of the office sector. Policy reviews have become less sensitive now that the losses have been allocated and absorbed. A common view is that denial and avoidance of loss recognition had extended the length of the slump and in the process increased the carrying costs of bad assets. In Japan, the real estate sector has yet to recover from the burst of a bubble in 1990, but international investors have regained interest. In the United States, the markets of Houston, Texas and Denver, Colorado might also be useful to better understand the impacts of the real estate slump in Bangkok.

There are three leading questions right now in Thailand. In what segments of the real estate sector is the level of distress the most severe and the most important for recovery? What is required in Thailand to restore liquidity and value in the sector? What structural changes are required in the real estate sector and in the financial sector to prevent the return of excess volatility and resource misallocation in the future? Answering these questions means to say what steps need to be taken to create a more mature real estate industry.

This paper is organized in five parts. Part II describes the structure and components of the Thai real estate industry and evaluates where oversupply is greatest. Part III analyzes the macroeconomic fundamentals behind the real estate boom that have originated in the wider economy, including the rapid capital inflows associated with the asset boom. Part IV analyzes the endogenous cyclical tendencies that are inherent to property markets and tend to be poorly understood. These endogenous real estate factors contribute to volatility across different segments of the market, such as offices and residential markets. Part V focuses on the management of the crisis and the very costly and crippling dynamics of carrying bad assets. It stresses the universal international experience with the benefits of following policies that facilitate early loss recognition and restore liquidity and trading. Finally, Part VI looks beyond the immediate crisis. It presents a framework for discussing the dynamics of a real estate industry and uses it to show where structural reforms are needed to improve the soundness and the resource efficiency of this sector in Thailand.

## **II. STRUCTURE OF THE THAI REAL ESTATE SECTOR**

### **A. The Real Estate Sector Is Now a Large Part of Thai National Wealth**

During the economic boom of the decade 1986-96, a modern real estate industry has emerged in Thailand. However, it is still not a mature industry as it lacks depth, proper monitoring and a modern regulatory and financial infrastructure. Most of the real estate industry's assets are concentrated in the Bangkok Metropolitan Region (BMR), except for housing and part of the hotel industry. BMR dominates the Thai economy in a rather extreme way, also by international standards. At the time of the population census of 1994, the total population of Thailand was 58.3 million, with 8.7 million people or 15 percent living in Bangkok. 56% of the entire urban population lives in the BMR, yet only 36% of Thailand's population was urban in 1995 (see also Kraas 1998, in this volume). Another factor behind

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<sup>2</sup> The most relevant international experience to understand the origins and the likely dynamics of the present Thai crisis is the Chilean currency and financial crisis of 1982 and its aftermath. A thorough analysis of the strategic decisions made in Chile under very difficult circumstances and of the factors affecting the time path of recovery would be very valuable for Thailand.

the rapid growth of the real estate industry is that value added from the services sector was almost exactly half of GDP in 1995 (49%), in spite of the major role traditionally played by agriculture in Thailand and the relatively low level of urbanization.

Valuing the total real estate stock is a very challenging task, as consistent information about the property sector is lacking. Table 1 presents our estimation of the total value of real estate stock in the BMR, based on stock, price and rental data compiled from various government departments and real estate consultancy agencies. The total wealth held in the form of real estate in Bangkok amounted to Baht 2,171 billion as of the end of 1997. Approximately one-quarter of the value is non-residential, dominated by office and retail space, whereas the rest is in various forms of residential buildings<sup>3</sup>. This total value is more than Bangkok's gross provincial product in 1997, or equivalent to 45% of the national GDP. At the end of 1997, the estimated asset value of Bangkok's property was greater than the total capitalization value of the Stock Exchange of Thailand (SET) that reached a low of Baht 1,112 billion at that time. It should be noted that this estimation of total real estate value is rather biased downwards than upwards. Due to lack of information, the estimation includes only the housing stock built after 1988. About 1 million housing units were built before that year and are not included in the estimate. Similarly, the non-residential stock recorded here is likely to be incomplete since information on commercial properties in the peripheral areas is scarce. Given that Bangkok property is only part -- although a very significant part -- of the total real estate stock of the country, it is safe to claim that *real estate is the largest component of Thailand's national wealth*.

This estimate of the total value of the real estate stock does not include hotels and tourist facilities, nor housing and real estate outside the BMR. It also excludes industrial real estate that consists mostly of serviced industrial land in the periphery of Bangkok and along the Eastern Seaboard, and not structures. A tentative breakdown in value by major market segment gives:

- Housing: 75%
- Office market: 10%
- Retail: 12%
- Industrial: 3%

These values and the relative shares of the different types of real estate assets are orders of magnitudes that are quite sensitive to the present rapid changes in market prices that are currently rapid.

By the end of 1994, some alarmed domestic and international observers were already reporting that overproduction in the real estate sector was serious and that lending to real estate should be curtailed. The shares of development companies listed on the SET were already falling sharply in mid-1995. In the case of Bangkok, resource misallocation and overinvestment in the housing market appears to be more severe, both relatively and absolutely, than it is in the office market. This is unusual. International empirical and theoretical analyses of real estate cycles show that cycles in offices tend to be more volatile than in housing. One expects large vacancy cycles in offices and relatively small cycles in apartments and multifamily units. The three main reasons for the higher volatility of office cycles are the greater *volatility of demand* for offices, the greater *length of the construction period* compared to other types of real estate, and the magnitude of *the lump-sum cost of releasing space* (Grenadier 1995).

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<sup>3</sup> This ratio of non-residential versus residential real estate is comparable to that estimated for U.S., which was three to seven in 1990 (DiPasquale and Wheaton 1992).

**Table 1. Value of the Real Estate Stock in the BMR at the End of 1997**

Sector	Space/Unit	Estimated Value (billion Baht)
<b>Commercial Real Estate Properties</b>		<b>563</b>
Office	6.2m sqm	220
Retail	3.3m sqm	270
Industrial*	16,127 rai	73
<b>Residential Real Estate Properties**</b>	<b>1,291,407 units</b>	<b>1,608</b>
Luxury condominium	29,212 units	123
Low income condominium	278,126 units	278
Detached house	407,384 units	839
Townhouse	476,265 units	316
Luxury apartment	7,711 units	31
Low income apartment	92,709 units	22
<b>Total Estimated Value</b>		<b>2,171</b>
Estimated value compared to GDP of Thailand		45%
Estimated value compared to GDP of Bangkok***		118%

\* Industrial real estate refers only to serviced land.

\*\* Residential properties include housing built after 1988.

\*\*\* Bangkok 1997 GDP is extrapolated from 1996 data.

Source: Authors calculation based on stock, price and rent data from various Jones Lang Wootton (Jan 1998) and Richard-Ellis (1997b, 1998).

In the following sections, we present the supply and financial performance of each segment of the industry (stock, completion, net absorption, vacancy rates, effective rental, debt coverage ratios, capital values). Oversupply conditions vary from market to market.

## **B. The Residential Market and Its Sub-Components**

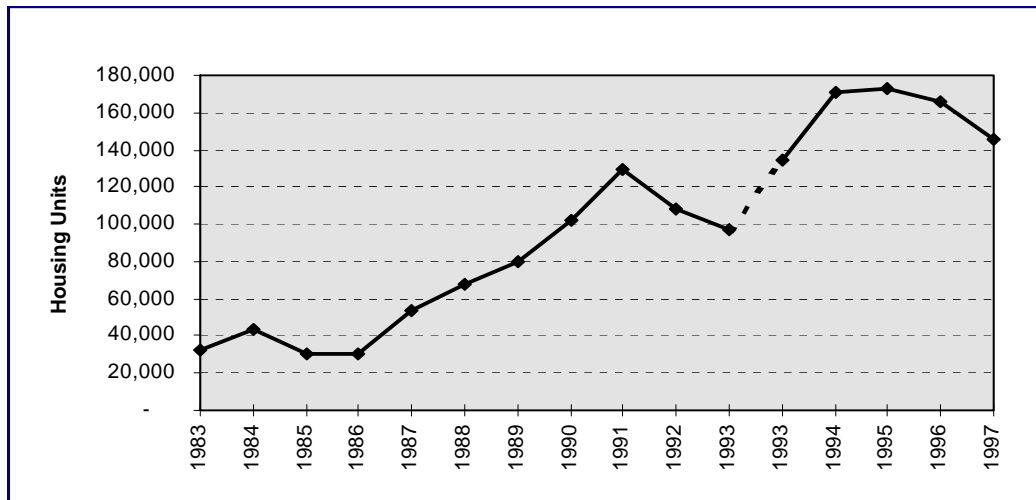
Richard Ellis (Thailand, 1998) estimates that 1.25 million new housing units have been completed in the BMR since 1988. By early 1998, the residential take-up rate was severely affected and the number of new vacant units now stands at 350,000. This oversupply is enough to shelter about 1.225 million people<sup>4</sup>, and implies a vacancy rate of 28% for the new housing stock. Combining all pre-boom and new housing units (both pre- and post 1988), the vacancy rate over the entire housing stock is estimated at 14%. However, outcome varies by type of unit: by December 1997, vacancy rates had reached 50% in the downtown residential condominium sector, and were projected to deteriorate further. To get an idea of the severity of Bangkok's residential vacancy rate, it can be compared to another city where regulation on development is also absent. Houston, Texas experienced the most severe real estate cycle of US cities during the 1980s, and its apartment vacancy rate peaked at 18% in 1987 during its crisis, while the underlying "structural" vacancy rate during the period was recently estimated at 11.9% by DiPasquale and Wheaton (1996).

### **1) Rapid Expansion of a Professional Residential Market**

<sup>4</sup> Assuming 3.5 individuals per household.

As can be seen clearly from Figure 1 for annual housing completion in the BMR, the current cycle in the residential real estate market started between 1986 and 1987. This residential market boom has led to the modernization of Bangkok's housing stock. New housing units were built not only for the city's rapidly increasing population, but also for households upgrading their housing conditions as they moved out of shophouses - or even slums - to developer-constructed modern townhouses, condominiums and detached houses.

**Figure 1. Annual Housing Completion in Bangkok Metropolitan Region**



Note: From 1993 onward, the data include five provinces instead of three.

Source: Government Housing Bank, various issues.

One fundamental change in the housing industry during this period is the emergence and rapid growth of professional housing developers. Before 1984, house construction was mainly driven by individual owner-builders (Dowall 1989). The share of developer-built housing was only 12 percent in 1984; by 1996, this share had increased to 83%. In 1996, 2,540 developers applied for land subdivision permits around the country. 1,713 were operating in the BMR in 1997.

As housing construction became an increasingly important industry, managed by independent and professional developers, annual housing completion grew dramatically, at an annual rate of 34%, from around 30,000 units per year during the mid-1980s to 130,000 units per year in 1991. The Gulf War and the political turmoil in 1991 brought down annual housing construction to less than 100,000 units in 1993 (or 134,000 units for the whole metropolitan region, the area for which statistics were collected in later years).

The boom resumed in 1994 and peaked in 1995, with annual completion of 172,000 units. By then, oversupply in the housing market had become obvious. A 1995 study by the Government Housing Bank found that approximately 300,000 residential units in the region were unoccupied (Richard Ellis 1998). This vacant stock is equivalent to two years of new housing supply in the market<sup>5</sup>. Even in the face of this vast oversupply, the momentum of housing development continued and annual housing completion decreased only very slightly in 1996. With stagnant demand, this translated into an even more severe oversupply problem. It is only since 1997, especially after the currency devaluation of early July, which drastically affected expectations, that annual housing completion began to drop sharply. The slump is

<sup>5</sup> What should have been seen as even more alarming is that more than half of the unoccupied units had already been transferred from the developers to the buyers. This implies that a significant group of buyers purchased housing units during this period not for occupancy, but for speculation, with the hope that they would later sell the units at higher prices.

expected to accelerate in 1998 and to continue in 1999, as the current oversupply takes time to be absorbed and demand is expected to drop in face of economic recession.

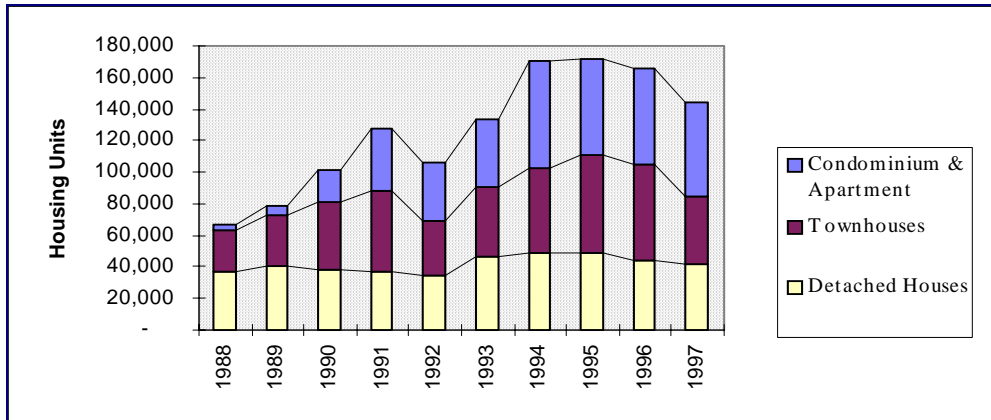
2) **Three Main Classes of Residential Units in the Bangkok Metropolitan Region**

New residential buildings in Bangkok are of three broad categories: detached houses, townhouses, and condominiums and apartments.<sup>6</sup> The composition of the new housing stock and its evolution over time is shown in Figure 2. Of the three segment of housing supply, *detached houses* appear to be the most stable, with annual completion varying between 35,000 to 49,000 units. Although these houses were also affected by unfavorable market conditions when the whole housing sector went down, the supply was much less volatile than the residential real estate sector as a whole. In certain years, detached houses even moved slightly against the general trend of residential development. We also noticed that the detached house sector was the earliest to adjust to the current housing oversupply: a significant drop in supply could be observed by 1996.

In comparison, townhouse supply has been more volatile, with an overall-increasing trend. *Townhouses* seem to be very responsive to change in overall demand for housing. During both the 1991 slowdown and the current slump, townhouse supply dropped much more steeply than other categories of housing. In the most recent recession, townhouse supply responded slightly later than the detached house sector, but also more vehemently.

One of the most dramatic changes in Bangkok’s residential development is the rapid increase of *condominiums and apartments* in the market. It was not until 1979 that the government passed the Condominium Act. Solid growth in condominiums started around 1988. Since 1988, annual supply of condominiums and apartments increased by more than 18

**Figure 2. Annual Housing Completion by Types in Bangkok Metropolitan Region**



Source: Government Housing Bank, various issues.

times from a mere 3,680 units to a peak of 68,000 units in 1994. They have now become the largest segment of annual housing supply in the BMR. A number of factors have contributed to the boom of the condominium and apartment market. The rising price of land and construction materials, the increasing difficulty of obtaining well-located land lots for new housing development, and wider recognition of the benefits of living in close proximity to the workplace or school, given Bangkok’s notorious traffic congestion, have all played a role.<sup>7</sup>

<sup>6</sup> A fourth category of duplexes is ignored here because its total supply is very small.

<sup>7</sup> See Richard Ellis’ draft report (1998) on strategic issues in the real estate sector to the Financial Restructuring Authority (FRA), p. 38.

Hidden behind this rapid growth, and not so easily observed from Figure 2, is the great volatility of the condominium and apartment segment. During the nine-year period, the greatest year-on-year increase of supply in this sector was 188%, while the greatest *decrease* was 11%. In 1994, the annual supply grew by 60%, but it *dropped* by 11% the next year. Until 1997, new supply in this sub-market had hardly responded to the current real estate slump. A much steeper drop can be expected for both 1998 and 1999.

Richard Ellis (Thailand 1998) provides estimates of the different components of housing in this group. Approximately three-quarters of the units are condominiums. Interestingly, the ratio between condominiums and apartments has changed very little over time. About 10% of the condominium units are luxury condominiums, with a typical price range between 20,000 and 60,000 Baht per square meter in 1997. The remaining are low-income condominiums with an asking price ranging between 0.5 to 1.5 million Baht per unit for a typical 30-40 square meter unit. Similarly, more than 96% of the apartment supply is low-income apartments, with a typical size of 20 to 30 square meters and typical rent between 1,800 to 5,000 Baht per month.

### **C. The Office Market**

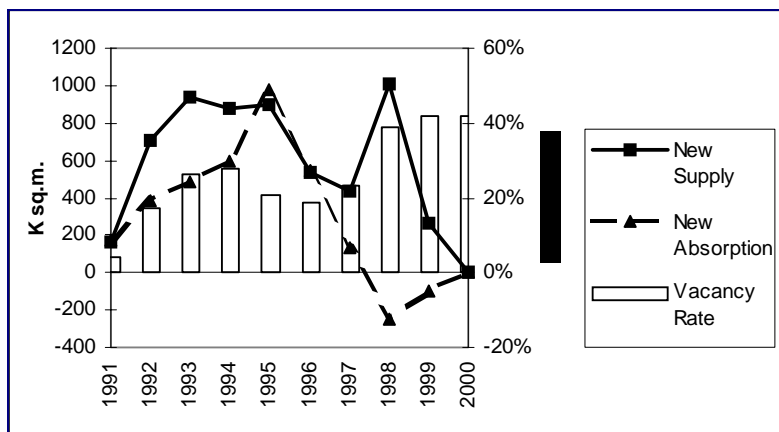
Modern office buildings were only introduced to Bangkok rather recently, but the 1990s witnessed a boom of new office space across the city, exemplified in the most dramatic manner in the new Central Business District (CBD) by Sathon Road. Total office space was less than 1.5 million square meters in 1991; by the end of 1997, total supply had quadrupled to 6 million square meters, with nearly 2 million sqm located in the CBD. Around 900,000 square meters of office space were added to the stock each year for three consecutive years up to 1995 (Figure 3).

The slowdown in 1996 and 1997 was only to be followed by a dramatic increase in 1998, which is expected to see 1 million sqm of new office space entering the market. Were it not for the current economic difficulties that resulted in the cancellation and delay of numerous projects, new supply in 1998 would be significantly greater. Two of the new office buildings under construction, Empire Towers (170,000 sqm), World Trade Center (140,000 sqm), if finished, would expand the CBD office stock by more than 15%.

At the same time, demand for new office space, while making a great leap forward, was rising much more slowly than supply. New take-up was able to keep pace with new supply only in the years 1995 and 1996. In all the other years, the gap was wide. As a result, the office vacancy rate has stayed extremely high, hovering around 20% or higher most of the years. In comparison, between 1992 and 1997, the office vacancy rate was 5 to 9% in Tokyo, 2 to 9% in Singapore, 3 to 6% in Hong Kong, 2 to 7% in Makati, Philippines, 2 to 8% in Kuala Lumpur, and 8 to 15% in Jakarta (JLW Regional Property Markets in 1998). Unfortunately, the worst is yet to come with the dramatic increase of new supply in 1998 and the *decrease* in take-up which will follow the closure of 63 finance companies. Vacancy rates for the next two years are predicted to stay around 40%. Total unoccupied office space will stand at 2.8 million square meters at the end of 1998. 280,000 new office workers would need to be employed to absorb this amount of vacant space. In the recent past, it has taken Bangkok five years under relative favorable economic environment (1993-1997) to accumulate a total take-up of this size.



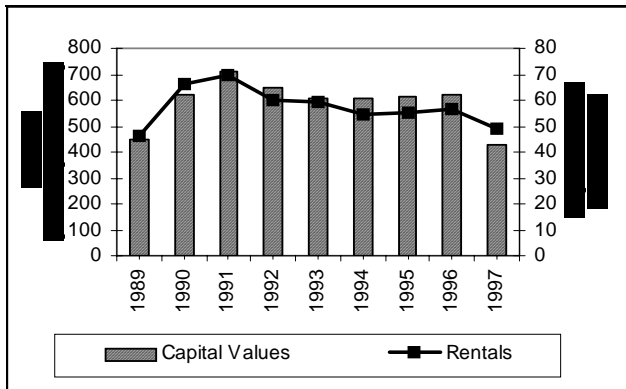
**Figure 3. Bangkok Office Space Annual Supply and Demand**



Source: Jones Lang Wootton (Jan 1998).

capital values peaked as early as 1991. The dramatic increase of Bangkok's office space therefore occurred under an environment of slowly decreasing values and vacancy rates that continued to be high. The movement in rental and capital value has been very small until 1997, which saw a 15% drop in gross rentals and a 30% fall in capital values.

**Figure 4. Average Rentals and Capital Values of Grade A Office Space in Bangkok CBD**



Source: Jones Lang Wootton (Jan 1998).

According to Richard-Ellis, only 10 such sales occurred, with the main reason behind the transactions being financial difficulties and owner occupancy requirements. *None of these 10 deals were yield driven, as has also been the case for the office development industry in general.* Local professionals stress that a frequent consequence of owner-built office space is the inefficient utilization of space and poor property management. Our own anecdotal observations suggest that a significant portion of owner-occupied office space was apparently not being fully used. The true vacancy rate for office space could therefore be even higher than reported.

At the end of 1997, total office supply was estimated at six million square meters and was out of balance with demand. Conditions in the office markets have deteriorated sharply with the fall in demand for space following the closure of the finance companies, which are expected to vacate about 200,000 square meters. Additional space will be vacated by other companies squeezed by the current liquidity crisis and falling demand for their products. In spite of the cancellation of projects, the negative annual take-up rate foreseeable for 1998 and 1999 will raise the vacancy rate for the total BMR from an already very high figure of 23% in 1997 to rates between 39% and 42% for at least the next three years (Richard Ellis 1998). Local professionals expect that vacancy problems will be less severe in the thirty grade-A, high quality, well-located office buildings, but the financial losses of the banking system will

What has been rather peculiar to the Bangkok office market is that supply did not seem to bear any relationship with rental values and capital values. As Figure 4 shows clearly, rental and

Underlying the lack of link between supply and price movements is the fact that the majority of office buildings were built by companies whose core business was *not* office property development. *Unlike the residential sector in Bangkok, where most of the properties were built by professional developers, investment and development in the office market was mostly undertaken by business companies who were not developers, and built for their own use, often on their own land.*

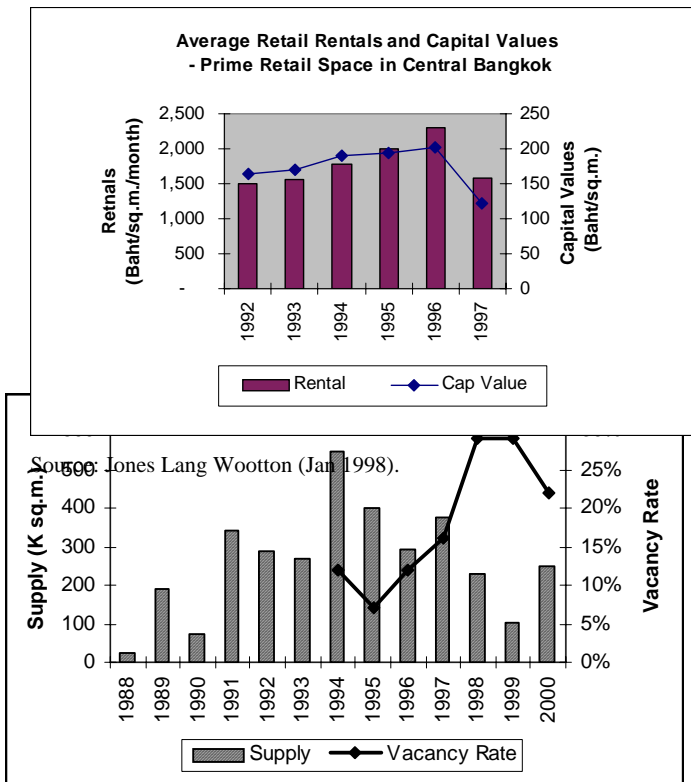
As a result, over the past decade, there have been very few sales of whole buildings.

be clearly visible in the lower-grade buildings located in secondary areas, that might remain permanently empty.

If we compare current vacancy rates in Bangkok with those observed for the office market of 19 US metropolitan areas during the overbuilding boom of the 1980-88 period, Bangkok office vacancy rates “climb off the chart” like the housing vacancy rates. During its worst three years (1986-88), office vacancy rates in Houston ranged only from 22.2 % to 25.1% (Sivitanides 1997, Exhibit 5). Office vacancy rates in Santiago, Chile following the 1982 crisis in that country could be a more relevant comparison.

*The extraordinarily high BMR office vacancy rates reflect the fact that the Thai real estate industry is immature. As noted, the majority of office buildings in the BMR have not been built by specialized property companies who understand the specificity of real estate risks and the dynamics of cycles, but rather by a variety of business companies with very different core businesses. The management of these corporations has limited knowledge of -- or interest in -- the field of corporate real estate management. Their investment decisions were not driven by sustainable rents and yields, but by easy access to credit, tax considerations, a “trophy” mentality, and euphoria. Most office owners have only one building that carries their corporate name. These buildings have now turned into bad assets: interest rate on debt has risen sharply, occupancy rates and rentals have fallen. The misguided fall-back option of treating cash-flow losses on the building as temporary is not available, because core business profits are currently poor or negative. Any hope that capital gains will eventually make up for the currently negative interest coverage ratios and the indebtedness of these assets is misplaced (see below). Substantial restructuring of these assets and of the property industry will be needed within the industry during the next two to four years. The process is likely to go forward on a building by building basis.*

**Figure 6. Average Retail Rentals and Capital Values, Prime Retail Space in Central Bangkok**



Source: Jones Lang Wootton (Jan 1998).

#### D. The Retail Market

Besides traditional stores and street vendors, a modern retail sector has very rapidly emerged in Bangkok after 1988. During the last five years, international retailers from Japan, Europe and the US have begun to play a major role in this sector. Retail space in the BMR can be broken down into department stores (45%), malls (45%), and suburban superstores (10%).

According to Jones Lang Wootton (Jan 1998) and Richard Ellis (Quarter 4, 1997), at the end of 1997 there were around 3.5 million square meters of modern retail space in Bangkok Metropolitan Region. Most of this space was built during the last ten

years, as the total retail stock before 1988 was only about 700,000 square meters. Figure 5 shows that commercial real estate development for retail use started to take off around 1991. Between 1991 and 1997, an annual average of 360,000 square meters of shopping areas was added to the city. Catering to different needs of various customers, these buildings included first-class hotels and shopping arcades, purpose-built arcades with an established anchor, small and medium sized complexes without a high-profile anchor, as well as large purpose-built stand alone discount stores in the suburban market. New retail space supply saw a general downward trend since 1994, although 1997 saw an increase in both new supply and new take-up of stores. Vacancy rates, however, have been increasing since 1995, climbing steadily from 12% in 1994 to 16% in 1997. The situation has deteriorated sharply between September 1997 and March 1998 with the fall of consumer purchases by about 22%. Once

**Table 2. Impact of Real Estate Slump: Asset Depreciation and Value Held in Vacant Units**

Sector	Estimated Value at end of 1997 (billion Baht)	Vacancy Rate	Value held in vacant space	Value depreciation in 1997	Value lost from depreciation
<b>Commercial Real Estate Properties</b>			<b>130</b>		<b>241</b>
Office	220	23.7%	52	33%	108
Retail	270	28%	76	33%	133
Industrial	73	2.9%	2	0%	0
<b>Residential Real Estate Properties*</b>			<b>300</b>		<b>138</b>
Luxury condominium	123	17%	21	10%	14
Low income condominium	278	20%	56	10%	31
Detached housing	839	19%	159	10%	93
Townhouse	316	18%	57	10%	35
Luxury Apt	31	12%	4	10%	3
Low income Apt	22	15%	3	10%	2
<b>Total Value in Vacant Units</b>			<b>430</b>		<b>379</b>

Note: For lack of data, housing price depreciation in 1997 is conservatively assumed to be 10% across the board.  
Source: authors calculation based on Table 1 and additional data from Jones Lang Wootton and Richard-Ellis, various issues.

again, there will be a sharp differentiation in asset performance across facilities: vacancies and losses will fall heavily on grade-B space in weak locations. Unlike office properties, new supply of retail space is expected to decrease significantly in 1998 and 1999. However, demand is likely to drop even more steeply with the economic recession and reduced purchasing power of customers. Some projections even expect the total retail space take-up in 1998 to be negative. The retail vacancy rate, therefore, is expected to increase, possibly reaching 29% by the end of the year 1998.

In the meantime, rental and capital values of retail space, after increasing slightly but consistently from 1992 to 1997, have experienced a 33% drop in 1997 alone (see Figure 6). This fall is expected to continue throughout 1998, given the higher vacancy rate, and to level off afterwards.

## **E. Hotels**

The hotel sector is the only market in which there is some good news. This sector hit its low point in 1992 already, when room occupancy rates fell to 53 percent. With the Baht depreciation and the following diversion of international tourists from other South East Asian destinations, occupancy rates and room rates are now going up. However, these positive trends will again favor quality assets, i.e. the higher-grade hotels. Accordingly, this increase in tourist arrivals is concentrated in the five-star sector where pricing in US dollars is practiced,<sup>8</sup> while hotels catering to a domestic Thai clientele are facing a particularly soft demand.

#### **F. Resource Misallocation: Where are Oversupply Problems the Most Severe?**

A real estate bust causes losses to owners and developers at least in two related ways. First, and most obviously, asset depreciation results in loss of wealth. Second, and not less importantly, the combination of continuing new supply entry and repressed demand leaves much space unoccupied. Vacancy rates therefore indicate the degree of misallocation of resources. Table 2 presents our calculation of the value of “distressed asset” in the form of vacant units, as well as the value lost through asset depreciation, for each sector of the Bangkok real estate. The calculation is based on our tentative estimates of total real estate value (see Table 1).

The table indicates that, although real estate depreciation in the current crisis has caused significant wealth loss, the value of currently unoccupied asset is even larger. In general, commercial real estate properties (with the exception of industrial land) were hit the hardest by the slump, because the vacancy rate is higher, and asset depreciation is much greater than for residential property. This is especially true in terms of asset depreciation. While the total value of commercial property was only one third of that of residential property in 1997, the value lost through asset depreciation in that year was three times as high. This is largely because the drop in commercial property prices in 1997 was much more serious than that in residential property prices.

However, of the total value currently held in vacant space, residential properties have a significantly larger share than commercial properties. Even though oversupply is more serious in commercial properties, the residential real estate industry as a whole was hit no less than the commercial property industry. This is because of the large stock of housing, and because of the relatively high housing vacancy rate in that industry. Note that in the table, the percentage of unsold housing units is used as a proxy for vacancy rates of residential property. Taking into account the speculative demand in housing that results in purchase but not occupation, the actual value held in vacant residential properties could be much higher.

### **III. EXOGENOUS CAUSES OF THE THAI REAL ESTATE BOOM AND BUST**

#### **A. The Wider Economy: Macroeconomic Policies, Capital Inflows, and Asset Inflation**

Property cycles are the compounded result of cyclical influences originating from the wider economy with cyclical tendencies inherent to property markets. This section presents a basic macroeconomic anatomy of the fundamental forces behind the Thai Boom and the present crisis. There are two reasons for undertaking this analysis. First, the time paths of

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<sup>8</sup> In 1997-Q3, the 12 hotel corporations listed on the SET had an estimated average debt equity ratio of 87% against a corporate average of all non-financial 350 listed companies of 279%. But with the sharp rise in domestic interest rates and the Baht devaluation on their foreign debt the average interest cover deteriorated sharply from 372% to only 66% between Q2 and Q3, affecting one third of the listed companies.

business cycles and real estate cycles are distinct, but they do interact. The business cycle generates the fundamentals that initiate real estate cycles. To evaluate the dynamics of the massive real estate cycle just experienced by Thailand, it is therefore necessary to briefly review the macroeconomic management of the economy. Second, Thailand's experience with a powerful asset price inflation both in real estate and financial equities has been shared by many countries in the late 1980s and early 1990s. This asset price inflation caught many central banks by surprise, as the channels of monetary policies were rapidly changing with liberalization, deregulation and financial innovation. Monetary authorities faced a puzzling coexistence of stable goods and product prices and a relatively flat Consumer Price Index (CPI) with booming asset prices. Monitoring the microeconomic performance of asset markets, and of residential and commercial property markets in particular, also emerged as a new and unanticipated requirement (BIS 1993, Goldstein et al. 1993).

To understand the volatility of the various sectors of the Thailand real estate industry, it is necessary to examine capital inflows. We know that surges in capital inflows tend to produce a predictable pattern of macroeconomic effects: an acceleration in domestic demand and activity, a deterioration in the external current account, upward pressure on the prices of real estate, financial assets and commodities. International comparison also shows that there are four basic causes of capital inflows: external developments, policy changes affecting the real economy, changes in credit policy, and bandwagon effects. (Werner 1993, Schadler et al. 1993). Thailand is a small, open, rapidly emerging economy and it has therefore experienced these four factors to a heightened degree.

## **B. Macroeconomic Policies and the Eroding Quality of Thai Growth in the 1990s**

The performance of Thailand's economy has been truly remarkable during the three decades 1965-95. During 1965-80, growth averaged 7.3 percent annually, and it accelerated to 7.8 percent in 1980-95—roughly twice the growth rates of other low- and middle-income developing countries. Per capita GDP more than tripled. The share of the population below the poverty line fell from 12 to 4 percent. From 1965 to 1997, infant mortality declined by two-thirds, to 27 per thousand live births. Thailand's macroeconomic management won international praise, giving it unfettered access to burgeoning international private capital inflows.

Forming beneath this robust performance of the economy, however, were fissures in the structural foundation of Thailand's success that would eventually undermine the economy's high growth momentum and became clear in retrospect:

- Fundamental weaknesses in the banking system operating under outdated regulatory rules and supervision—under-capitalization, insider lending, lack of disclosure, unsound practices, and protection from foreign competition—channeled savings into low-productivity investments.
- Economic competitiveness diminished as wage increases began to exceed productivity gains, and Thailand failed to progress to more technologically sophisticated exports.
- The contribution of public investments to total productivity growth began to shrink by the early 1990s.
- Income inequality remained disturbingly high—productivity growth in agriculture lagged that of industry; policies favored urbanization; public expenditure and taxation failed to redress rising inequality.
- Natural resource depletion and environmental degradation limited socio-economic development and posed a serious public health hazard, especially to the urban poor and disadvantaged.

There were two early warning signs: capital investment productivity fell steadily, and Thailand's external terms of trade declined for a decade prior to the export slowdown of 1996. In 1995-96, policy mistakes combined with growing structural problems rendered the economy vulnerable to external shocks:

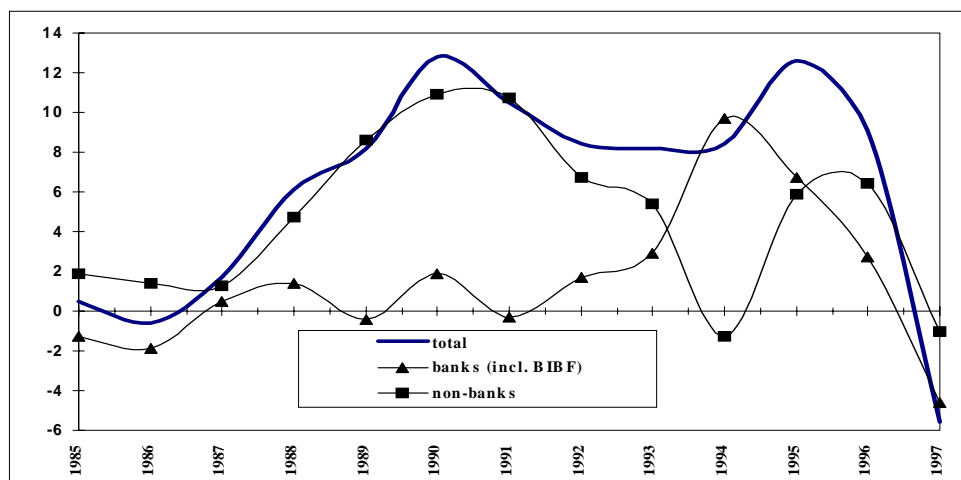
- A fixed exchange rate and public guarantees to creditors encouraged excessive private foreign borrowing, financed substantially by unhedged and progressively greater short-term foreign borrowing.
- The exchange rate peg to the US dollar aggravated the tendency to appreciation, as the dollar's rise against the yen increased the real value of the Baht.
- Inadequate supervision of financial institutions, loose private credit, and weak corporate governance created incentives to invest in speculative ventures, and led to a credit-driven boom in consumer spending and real estate.

These policies deepened the current account deficit over three years so that by July 1997, it had reached -8.0 percent of GDP. Despite speculative attacks on the fixed exchange rate in early 1997, the government failed to take corrective action in time. By mid-summer, private expectations about the sustainability of the exchange rate peg reversed abruptly. On July 2, 1997, a speculative attack on the baht finally forced the government to abandon the fixed exchange rate. This was followed by depositor runs on the finance companies and smaller banks that drove the financial sector into crisis and the economy into recession.

### C. Private Capital Inflows

**Overall Trends.** Thailand stands out as one of the countries that, together with Malaysia and China, has received the highest capital inflows relative to GDP in the world. Private capital inflows were already significant in the early 1980s, but declined as a result of the crisis in 1985-86. Initial capital inflows were led by Japan in the aftermath of the 1985 yen/dollar realignment. They surged in 1988, and ushered into the period when Thailand came to be regarded as one of the next Asian tiger economies. Between 1988 and 1996, Thailand received a cumulative total of US\$ 100.3 billion. As a stock, this foreign capital is equivalent to 55% of Thailand's 1996 GDP. As a flow, it amounts to 9.4% of GDP on an average annual basis. The year 1990 saw a peak of inflows amounting to 13% of annual GDP. Associated with the political crisis of 1992, annual inflows stabilized around an annual rate of 8% of GDP during a brief period in the early 1990s. Then inflows surged again to reach 12% of GDP in 1995. In 1997 they abruptly turned negative (see Figure 7).

**Figure 7. Private Capital Inflows as % of GDP**



Source: Bank of Thailand Quarterly Bulletin, various issues.

**Composition of Private Capital Inflows.** The composition of capital inflows (foreign direct investment (FDI), portfolio investment in equity, direct corporate private debt, bank inflows), and their intermediation through the domestic financial system, has a significant impact on asset inflation. Inflows through resident banks borrowing abroad have played a key role in Thailand. These inflows have accounted for about 37% of total inflows during 1988-96. Relatively small until 1992, bank inflows have increased sharply to 60% of total inflows during 1993-96 with the establishment of the Bangkok International Banking Facilities (BIBF) regulations. BIBF structures did not only enjoy tax advantages which reduced the costs of foreign borrowing, but they also brought smaller Thai corporations within the reach of international capital markets. Rapid capital inflows thus fall into two distinct periods. First, the period from 1988 to 1992, when remaining capital controls were removed and when financial companies and banks borrowed from off-shore markets to on-lend to domestic customers in domestic currency. Second, there is the pre-crisis period of 1993 to 1996, when the banks used the BIBF channels to intermediate foreign funds into domestic currency (see Box 1).

#### **Box 1. Bangkok International Banking Facilities (BIBF)**

The goal was simple: Bangkok should replace Hong Kong as South East Asia's financial center once the crown colony was handed over to the Chinese government in 1997. To encourage the growth of international banking business in Thailand, the Bangkok International Banking Facilities (BIBF) regulation was established in 1993 to grant significant tax advantages. The 49 banks that had been granted BIBF licenses by 1996 included Thai commercial banks as well as foreign banks with and without local branches. On the liability side, BIBF banks took deposits or borrowings in foreign exchange from abroad; on the assets side, they were lending in foreign currency to Thai residents (out-in) and non-residents (out-out). The BIBF significantly increased the magnitude of short-term capital inflows by reducing the borrowing costs and easing access to foreign capital markets for smaller and less well known Thai firms.

In contrast, the composition of non-bank capital inflows to Thailand was relatively balanced among net foreign direct investment (22%), portfolio inflows (25%), non-bank resident deposits (29%) and other loans (20%). Other borrowing, mostly composed of syndicated borrowing by domestic corporations from overseas financial institutions, was a category that experienced a significant change over time. Foreign syndicated loans accounted for 41% of non-bank inflows in 1988-92. Later, this component experienced a net outflow of capital, as Thai firms switched to other sources such as local loans and equity capital to refinance their direct borrowings from foreign financial institutions.

Overall, local bank lending, especially through the BIBF, replaced non-bank sources of foreign capital. In addition, portfolio inflows, especially bonds, accounted for an increasing share of non-bank capital inflows during the boom. Borrowings from overseas affiliates of Thai-based foreign corporations tended to be channeled through BIBF and were not classified as FDI. As BIBF loans replaced other loans and portfolio inflows substituted FDI, the net effect was a significant shortening of the maturity of Thailand's capital inflows. Between 1992 and 1995, the volume of short-term external debt more than doubled and grew from US\$ 18.9 billion to US\$ 41.1 billion.

#### **D. Access to Credit: "Unholy Alliance" Between Lenders and the Real Estate Industry**

The real estate boom has undone financial institutions in Thailand through various forms of either outdated or just poor banking. These practices are reviewed here to stress the

point that commercial property lending practices in Thailand are due for a complete overhaul. The unsatisfactory or bad practices described below point to the need for strict lending regulations focusing on sustainable yields rather than capital value. International experience shows that sound commercial credit risk management based on strict lending regulations plays a major role in avoiding serious property crises.<sup>9</sup>

**a. Outdated Forms of Secured Lending From an Earlier Era.** The banking practices in Thailand which developed during the earlier decades of growth were based on the very traditional mortgage lending practices of a large agricultural economy, but fell increasingly out of step with the new risk conditions associated with rapid urban growth under the boom. Most lending in Thailand is done on a secured basis. The collateral is generally fixed property. Thai law does not yet recognize floating liens on receivables and inventory. The loan advance is a percentage of the appraised value of the collateral. Valuation is generally done in-house. Some institutions rely on outside appraisal firms for the valuation of real estate property. While there are experienced valuers in Thailand, there is no formal certification process and the incentives to produce high quality valuation are considered weak. As the boom progressed, overvaluation has facilitated excess lending to the sector. When the steep decline in property values started, this had negative effects on the capital position of banks and the remaining finance companies. Specific loan loss provisions cover non-performing loans (NPLs), while general reserves act as a dynamic cushion for the overall loan book. As property prices slump, Thailand's financial institutions face greater provisioning requirements against NPLs, because loan provision levels depend on the assessment of collateral values. *The real estate price decline is contributing disproportionately if indirectly to the 1997-98 liquidity crunch.* The rapid recapitalization of banks is therefore essential to end the liquidity crunch.

**b. Ineffectual Real Estate Credit Risk Management** as well as the willingness of lenders to finance real estate during periods of euphoria are not unique to Thailand. Most forms of bad lending for real estate have also been experienced elsewhere during the global real estate boom of 1985-1994. They are inventoried in Box 2.

**c. Connected Lending.** In Thailand, banking capital has been controlled by a limited group of about 16 corporate and family groups. During the boom, Thailand was a lender's market with high spreads. In spite of high domestic savings rates, foreign borrowings were needed to meet investment demand. This situation was reflected in high and rising loans-to-deposits ratios. Close inter-company links and related-company transactions in the real estate sector weakened a number of financial institutions in ways that could not be easily detected and anticipated – even by management.

**d. Loan Diversion** hidden by misleading accounting and resulting from weak internal controls and weak loan supervision by lenders was common enough to be discussed in the press. For example, the management of listed companies borrowed against their core business and then redirected the funds to privately held companies heavily engaged in real estate projects and controlled by family members. Another more direct method was to borrow in the form of trade finance and then to use the funds for real estate transactions. In the latter case, proper internal controls and loan servicing and supervision should have been sufficient to control credit risk and prevent fraudulent behavior.

**e. Role of the BIBFs.** There is much circumstantial evidence that the BIBFs established in 1993 contributed to extending the real estate boom (Box 1). The BIBF also raised foreign exchange risk in this non-traded sector. The Bank of Thailand's (BOT) lax policies of exempting BIBF operations from reserve requirements and standard taxes not only made foreign funding attractive for corporate borrowers, but also encouraged commercial

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<sup>9</sup> A separate paper would be required to deal appropriately with the sound management of commercial mortgage credit risk. A section of the bibliography provides references to the US, Canadian and European experience in commercial mortgage credit.



banks to shorten the liability structure of their portfolio. The resulting lending boom undermined the monitoring capacity of banks and financial companies and impaired credit assessment. In 1995, the BOT advised commercial banks to limit real estate lending, but this guidance came late and did not affect the finance companies.<sup>10</sup> The commercial banks, which were already well aware of oversupply conditions on the real estate market, appear to have responded to the BOT. However, the weaker or less competitive institutions did not stop lending to risky activities such as real estate and consumer/hire purchase lending. Regulatory forbearance allowed marginally capitalized financial companies with low franchise value to gamble with depositors' funds by increasing their share in real estate and consumer lending. Supervisory data shows that, after 1993, the finance companies accelerated anew their lending to real estate. By December 1996, total outstanding loans by finance companies amounted to Bt 1,488 billion. Bt 418 billion (28.1%) were reported as construction plus real estate loans and Bt 363 billion (24.4%) as real estate loans.

### **Box 2. Bad Banking During Financial Liberalization and Real Estate Booms**

Financial liberalization has brought to light a wide range of important issues regarding debt, financial fragility and systemic risk. Financial innovation and deregulation during the 1980s have been accompanied by rapid credit expansion and a substantial increase in bank lending as a share of GNP in many countries. Not only did the relative volume of loans increase, but its composition changed significantly under the sharply increasing pressure of competition from non-bank lending institutions.

Lending errors were frequently made and they were more or less always the same. They tended to be systematically related to the type of financial institutions. Large commercial banks, specialized lenders, and small banks tend to take different types of risks determined by the clientele they serve. The nature of the risks and returns changes with the type of clientele. Major banks finance major "blue chip" operators; lesser banks take the rest of borrowers.

There is an important element of bad banking during the real estate boom in every country, for both real estate and other loans. Under financial deregulation, poor practices have tended to be the mark of finance companies, mutual and cooperative institutions with newly extended asset powers entering new lines of business for which they were poorly prepared and institutions with undiversified assets that were inadequately supervised. In case of intervention, bank supervisors typically found that principles of sound banking were breached in the following manner, besides cases of fraud:

- Lending had been exceedingly concentrated in a few activities, especially real estate.
- Rapidly growing real estate portfolios had not been monitored.
- Even within the real estate sector, lending had been concentrated onto a few business groups or individuals.
- Counterparty risk had been ignored. Such risk has been shown to be twice as high for real estate loans as for industrial or business loans. Yet, lenders have usually not charged a risk premium. They have been satisfied with the buildings as collateral.
- Cash flow had not been correctly analyzed. Loans could appear to be current because of the existence and use of interest cash reserves --funded by debt -- hiding cash deficiencies to cover debt service.
- Assets and liabilities had been mismatched.
- Attention had been exclusively focused on short-run fees and on maintaining activity in a market with excess capacity.
- Because of asset inflation, little concern had been shown about the risk that both the borrower and the collateral could be subject to the same shock.
- As the real estate boom went past its peak, further real estate lending took place to assist large corporate clients in unloading some of their real estate assets.
- Bank supervision during the recent sharp asset price cycle remained dominated by pre-deregulation norms and skills. It tended to perform rather poorly and late. Guidelines lagged behind market trends and did not address the increased riskiness of new lending. In the case of real estate lending, a thorough review of prudential rules, lending regulations regarding loan underwriting, and property valuation is now in progress in most countries.

Source: Renaud (1997a)

## E. Changing Composition of the Loan Portfolio of Financial Institutions

Significant amounts of lending went to non-tradable sectors, including real estate. During 1993-95, a reported 45% of net FDI and 15% net borrowing for BIBF respectively went to real estate and construction. In addition, some 5% of BIBF net lending went to the construction materials industry and 15% to financial institutions which in turn engaged in real estate financing. By the end of 1996, outstanding short-term and long-term loans by banks and finance companies to the real estate sector amounted to 800 billion Baht. Reported real estate loans in the total loan portfolio amounted to about 9% percent for banks and 26% for finance companies. However, these figures may be underestimated. Loans classified as real estate include only credit for real estate companies; loans used for property development by non-real estate developers were not treated as real estate loans. The actual portfolio for the

**Table 3. Thailand Financial Sector Loan Portfolio Composition, 1988 and 1996  
(Percentage of total lending)**

	End of Year 1988		End of Year 1996	
	Commercial Banks	Financial Companies	Commercial Banks	Financial Companies
Agriculture	7.1	1.3	3.9	0.9
Manufacturing	25.8	21.8	26.8	15.3
Construction	4.3	3.5	4.6	3.7
Real Estate	6.3	14.8	9.1	24.3
Imports	5.3	2.8	3.2	1.7
Exports	8.3	1.3	4.2	0.8
Wholesale/ retail	18.9	12.7	17.8	7.8
Pub. util./ services	7.3	7.3	10.6	7.6
Banking/ finance	6.3	9.1	7.5	11.0
Pers. consumption	10.3	25.5	12.3	27.0
Total	100.0	100.0	100.0	100.0

Source: Bank of Thailand data base.

real estate sector is therefore unclear. Indirect evidence also suggests that additional funds were diverted into real estate activities from business loans and funds raised on the stock market through equity issues.

Table 3 shows how the composition of the financial sector loan portfolio changed from the first period to the second period of capital inflows, using the two years 1988 and 1996 as examples. The acceleration of lending for real estate by both banks and finance companies is readily apparent from Figure 8, while loans to the construction industry, covering a variety of infrastructure and industrial projects, kept stable as a share of total lending.

## F. Impact of Capital Inflows on Financial Sector Behavior

During the 1980s, prior to the period of massive capital inflows, financial intermediation was dominated by the banking system. Total equity capitalization of the Stock Exchange of Thailand (SET) lagged far behind the value of assets of the banking system. After the liberalization of the capital account, banks and finance companies retained their dominant position as most of the rapid build-up in the use of external finance was channeled

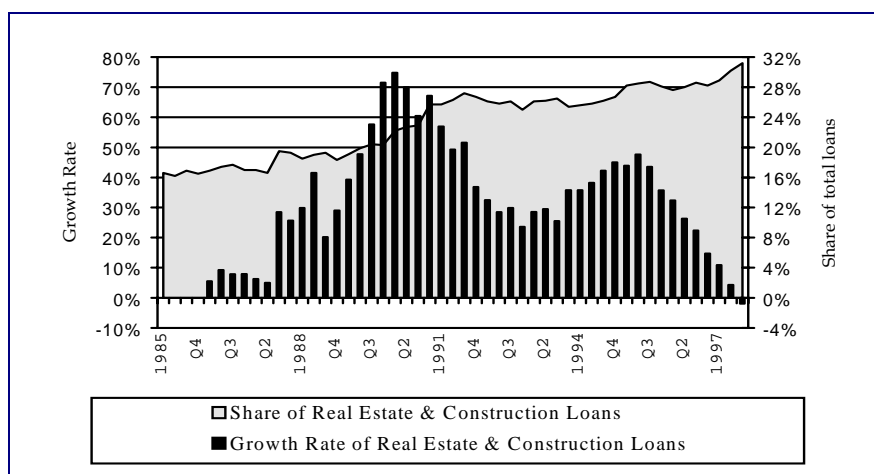
through financial intermediaries, while companies relied to a much lesser extent on capital markets.

Thailand's financial crisis once again shows that, in the present environment of rapid financial globalization, liberalizing the financial sector and opening the capital account without strengthening the regulatory and supervisory system has increasingly strong destabilizing effects. Domestic euphoria combined with the herd mentality of international "asset allocators" to produce a surge of cheap foreign capital inflows that unhinged the Thai economy from its previous path of solid growth. Sound banking was also undermined by the moral hazard of an implicit guarantee of the dollar/baht exchange rate, as well as of deposit rates. These policies further fueled the credit boom and asset inflation on both the stock market and the real estate market.

### G. Interaction Between the Real Estate Sector and the Thai Stock Market

The stock market boom itself has played a role in fueling the real estate cycle. Recent analysis of the 356 non-financial companies listed on the SET has shown that corporate over-investment was already apparent in 1993. Symptoms for that were declines in asset turnover, return on assets, profit margins, and return on equity. During the stock market boom, 46 property companies and 35 construction firms were listed on the SET and took advantage of the boom to expand their sources of funding. Taking their accounting practices at face value, the property companies as a group were highly leveraged (see also Alba et. al. 1998, in this volume). Security analysts reported high "gearing" or leverage ratios<sup>11</sup> of the order of 150% for most Thai property companies. By comparison, Hong Kong property companies, whose accounting practices are of much higher quality, had gearing ratios of the order of 40% to 50%. Not surprisingly, the liabilities of Thai property and construction companies represented the lion's share (53%) of the total liabilities of all distressed listed companies whose operating cash flow could not cover interest expenses by September 1997.

**Figure 8. Loan to Real Estate and Construction by Finance Companies: Growth Rate and Share of Portfolio**

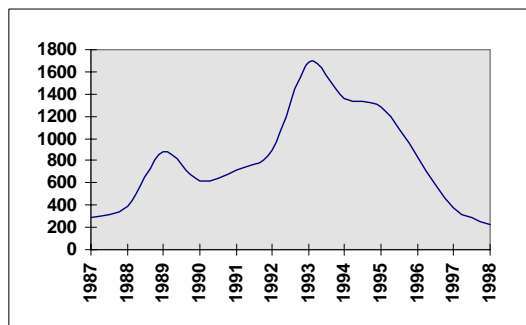


Source: Bank of Thailand, various issues.

<sup>11</sup> Ratio of debt to equity.

The price behavior of the shares of listed property companies parallels the findings of studies done on the UK and Hong Kong stock markets, where analysts found that the share prices of listed property companies are leading indicators of the performance of the property market. The share prices of Thai property companies had already started falling by the middle of 1995, some of them very steeply. This fact confirms other data indicating that, by 1995, the Thai real estate bust was on its way (see Figures 8 and 9).

**Figure 9. Thailand Stock Market Performance**



Source: SET data base.

stock market capitalization between 1995 and 1997 has amounted to 2,453 billion Baht. Reflecting the exchange rate devaluation in dollar terms, the decline in capitalization is US \$188 billion. Most of these losses affect corporations and upper income groups.

The wealth losses caused by asset deflation in the stock market and in the real estate market are of great concern for the rapid recovery of the Thai economy. Wealth losses are expected to have a depressing effect on internal demand. In the housing sector, there are asymmetries in lending between rising prices and falling prices. However, in Thailand there is little housing mobility due to the defective tax structure (see Part IV). This may soften the deflationary impact of losses in household net worth. The fall in

## H. Initial Government Rescue Actions in the Real Estate Sector

By 1996 it had become clear that massive overproduction and the rising number of non-performing real estate loans for both housing and commercial property projects were rapidly undermining the financial sector. The government proposed a number of schemes, but they came too late and were never implemented. First, there was a Bt 20 billion lending scheme for civil servants and state enterprise employees. Then a Bt 50 billion Resolution Trust Fund was proposed to take over problematic property-backed loans. The Secondary Mortgage Corporation (SMC) was created in June 1997 with the objective of securitizing mortgage loans and freeing the capital of commercial banks. However, the necessity of taking an up-front loss, technical issues regarding information on the quality of portfolios and their servicing, as well as the scarcity of potential investors make the SMC a medium term project, not a crisis management tool.

As an alternative, in March 1997, the government set up the Property Loan Management Organization (PLMO) as a special vehicle to buy problem loans from financial institutions. As a result of the late 1997/early 1998 liquidity crisis which prevents its rapid funding and for technical reasons of loan evaluation, the PLMO is not working effectively. It proved difficult for new staff to identify and value commercially viable projects in the loan files of distressed lenders. In addition, the mobilization of fresh funds to complete projects for an already oversupplied sector was questioned. Avoidance of loss recognition on completed property projects was a mirror image of that problem. The PLMO initial operations were financed by issuing Bt 100 billion zero coupon bonds of 7 years maturity at an effective interest rate of 9% that carry a guarantee by the Ministry of Finance. As an independent agency, the PLMO was expected to use its funds to assist property developers in continuing with their developing projects through debt restructuring. Financial institutions should sell the loan and collateral to the PLMO at a price no greater than the lowest valuation or the outstanding principal value of the initial loan, as assessed by three independent appraisals. Financial institutions must guarantee the equivalent of 50% of the value of the collateral sold to the PLMO and are obliged to make further loans along with the PLMO on an unsecured

basis. Losses on loans to the PLMO are realized by financial institutions prior to sales, but loans can be repurchased. The operating expenses of PLMO were designed to be covered by an asset management fee rising from 0.2% to 3% over four years. Ultimately, the PLMO was overtaken by the scale and speed of events after the July 1997 currency crisis.

#### IV. ENDOGENOUS CAUSES OF CYCLES IN AN EMERGING INDUSTRY

There are intrinsic characteristics of the real estate market that tend to perpetuate or amplify the impacts of external forces on property values and overproduction, and would generate cycles even if there were no strong external cyclical influences. These impacts are amplified by the fact that Thailand's modern real estate industry is immature in terms of practices as well as in terms of the relatively small size of the stock compared with the volume of new output. Rapid incremental growth is an unavoidable feature of an emerging industry. But what kind of adjustments should be made to turn an emerging real estate industry into a mature one and reduce its volatility? In a shallow and immature industry, is it the same factors that stimulated excessive growth which are also responsible for the steep bust? A deeper look at the endogenous causes of the boom should help us understand better the specific causes of the Thai bust and the kind of structural adjustment needed to lower volatility and mitigate future boom and bust cycles.

##### A. Intrinsic Causes of Real Estate Cycles: Supply Lags, Volatility and Duration of Shocks

International experience shows that the tendency to oversupply and output volatility in a specific real estate market is directly related to three main factors: inertia in rents, stickiness of vacancy rates, and development lags. The influence of the factors can explain differences in the functioning of individual market segments such as offices versus housing.

*a. Inertia of Rents in a Changing Economic Environment.* One fundamental reason for the persistence of real estate cycles is the lag in supply adjustment in response to a change in demand. As shown by Grenadier (1992), two types of lags can amplify and perpetuate real estate cycles triggered by external forces and economic fundamentals in the wider economy. Both are due to the considerable inertia of existing building owners in adjusting rents and occupancy levels to a changing economic environment, caused by the high transaction costs of moving in and out of space, incurred both by landlords and users. The moving cost of office relocation, for instance, is as high as one year's rent in many countries. In Bangkok, this cost is even higher: on average, the fitting cost of moving into new office space is as much as a 5 years' rent (Richard-Ellis 1998). Grenadier has shown that these entry and exit cost can create a "band of inaction", i.e. a range of demand (or rent) over which existing vacancy levels remain unchanged. In a booming market, this means space take-up can be slow to catch up with demand pressure, which in turn limits the total supply of rental space and drives up the marginal rental value. During the bust, the opposite occurs: tenants have the option to move to another place with much lower rent, but the high moving cost makes relocation unfeasible. Instead, tenants are more likely to choose to re-negotiate the leasing contract with the landlord, attempting to achieve a somewhat lower rent. Rent adjustment downward, therefore, is also sluggish.

*b. Stickiness of Vacancies.* Two factors affect the stickiness of vacancies -- demand volatility and adjustment cost. The more volatile the underlying demand and the higher the cost of space adjustment, the more sticky vacancy rates tend to be. Real estate cycles can be expected to be more persistent in an emerging market like Thailand because demand for real estate itself is more volatile, and because relocation is generally relatively more costly due to lack of a stock of readily available standardized space and high quality property management. We can also expect commercial real estate cycles to be more persistent than residential cycles

as, generally, entry and exit costs are higher for commercial than for residential properties. Moreover, the underlying demand for commercial properties, especially for office space, is more volatile than that for residential properties.

*c. Development Lag.* In addition to slow adjustment of the occupier market to changes in demand, the real estate industry is also characterized by development lag, i.e. the substantial time span between the initiation and completion of construction. The whole cycle of a development project, from the initial planning to the final completion, can take as short as several months and as long as several years. When the construction is completed, demand conditions may already have changed. This lag in construction, in combination with future demand uncertainty, results in wrong timing of project completion and *the tendency to overbuild. This tendency is compounded by the nature of asymmetric rewards from real estate development, biasing the risk assessment of the decision to build.* As Grenadier (1992) puts it, “If demand turns out to be high, the owner will gladly exercise the option to lease out all or most of the units at high rents, and benefit greatly. If demand instead turns out to be low, the owner will not exercise the option to lease all of the units immediately, but instead will wait for the market to turn around before paying the lump sum cost of leasing space. In this sense, the benefits of good outcomes outweigh the costs of poor outcomes”. Two factors affect the probability of overbuilding: the longer the construction time, and the more volatile demand, the greater the probability of overbuilding. This also suggests that the commercial real estate properties are more likely to experience overbuilding than residential properties.

## **B. Differences in Cycles Across Types of Real Estate Assets**

*a. Offices.* Because of long construction periods, high lump-sum entry and exit cost for leasing, and demand volatility, office property is the sector where the cycle symptoms are most obvious. Office development at the beginning of the boom showed signs of pent-up demand, but over-exuberance in this sector became obvious by 1995 and 1996. The over-supply in 1998 is enormous and will take many years to be absorbed. This is partly because of the long construction time needed, which increases the chance of new space arriving in the market at the wrong time, as we see it happening now. In the meantime, even with the current slump, rent adjustment is still slow, because moving cost is extremely high, offsetting any possible rent reduction benefits.

*What is specific to Thailand is that most office buildings have been built by owners and office development has therefore not been a yield-driven behavior.* Together with the momentum of office cycles, this investment behavior explains the paradox of continuing expansion in supply after 1995, when both values and rents began to erode even for grade-A office space. *Office developers did not make a cautious estimate of cash flows. They did not build for sale nor did they consider that alternative as a benchmark.*

Why did Thai corporate businesses invest in offices then? Several reasons appear to stand out:

- *Land availability.* Decisions were often based on the availability of land owned by the company.
- With outdated lending practices and difficult credit evaluation, *real estate was the only acceptable collateral* that could be used for borrowing. This created an additional incentive to build properties in an appreciating market so that the firm could borrow more to expand. This leveraging practice is sometimes known in the US as “Ponzi finance.”
- The possibility of *tax avoidance* made it more attractive to reinvest profits in real estate assets than distributing them as dividends.
- *A trophy mentality.* Symbolism, status, and value preservation converged to encourage businesses to build their own corporate centers.

- *Euphoria-based expectations* about the continuing rise of real estate values made building decisions easy to justify.
- *Easy access to loans.* As already discussed, easy money, the creation of the BIBF facilities, and the low comparative cost of capital all contributed to the Thai boom.

**b. Housing.** As shown in section II. B., the different cycles of the three segments of the Thai residential market can be explained by differences in their comparative degree of volatility. Overall, the housing sector is less subject to ups and downs, but the situation can vary across different types of housing: condominiums and apartment, for example, have many characteristics similar to office properties and experience more persistent cycles. However, what is very unexpected by international standards is the exceptionally high level of vacancy rates in the residential market, considerably above international levels. Vacancy rates reaching 28% of the new stock<sup>12</sup> show that not only is the whole housing sector in Bangkok very much over-supplied, but also suggest that investment decisions were deeply flawed for an extended period of time. Several weaknesses of this sector should be systematically examined and need to be addressed:

- Over-accumulation of land banks, due to speculation on land price. Land prices experienced an enormous appreciation during the late 1980s and early 1990s. The SET requirement on land banks for public listing appears to have been a contributing factor. It was rescinded only two years ago, when the boom was starting to turn into a bust.
- Absence of a secondary market for used housing, possibly for cultural reasons, but also attributable to the so-called “capital gains tax”, which actually taxes sales proceeds rather than capital gains, thereby discouraging property trading.
- Under-developed rental markets.
- Easy financing for developers and lack of rules and financial requirements.
- A remarkable lack of coordinated, timely, and reliable market information made it hard for developers to evaluate demand.

### C. Formation of Expectations and Investment Decisions in Thailand

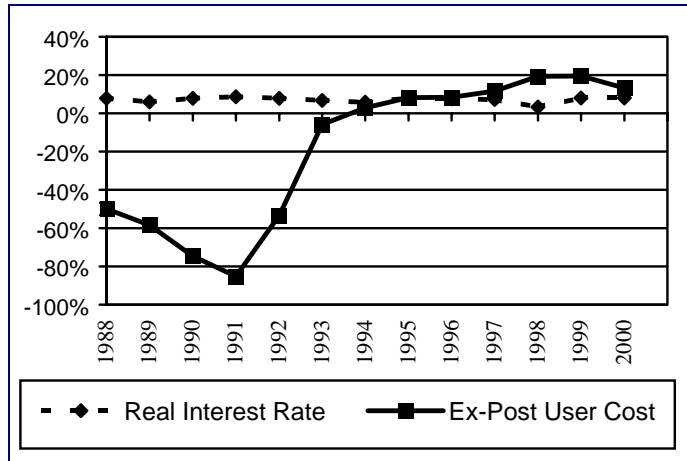
Expectations are important in all economic sectors, not only in real estate. The valuation of assets depends on expectations, and so does the possibility of bubbles. In real estate, expectations can play a fundamental role in price volatility as the existence of lags between the decision to develop and the time when the property will reach the market implies the need for anticipation. In Thailand, expectations tended to be based on extrapolation of the past and were myopic. This is particularly dangerous in an emerging market with rapid growth and an asset price inflation that seems to be sustainable in the long run.

In an attempt to better understand the changing context of expectations, we can derive indicators of the “user cost of capital” associated with investments in land and in housing during the decade. A simple measure of the realized or ex-post user cost is the difference between the observed or projected annual price change and the interest rate. The results are suggestive of the timing of turning points for rational investors in the Thai real estate cycle. Figure 10 suggests that the user cost of holding land had risen sharply by 1993 and that the real estate cycle had already taken a downturn. Yet this was the year when the BIBFs were introduced and revived a fading boom. Figure 11 suggests that housing demand should have flattened out by 1994 and that the demand for new housing is likely to remain depressed beyond the year 2000.

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<sup>12</sup> Relying on Government Housing Bank statistics and utility company data on metered units, current housing vacancies in early 1998 were estimated at 350,000 units (Richard Ellis 1998). This figure implies a startling vacancy rate of 28%.

**Figure 10. User Cost of Holding Land**

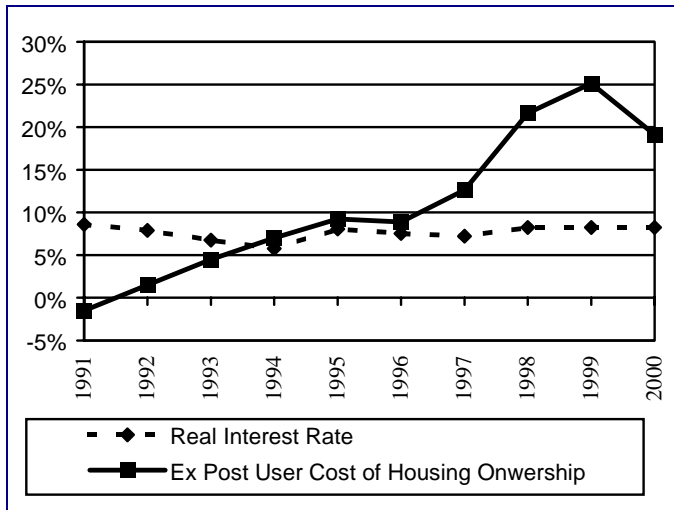


Source: Authors' calculation based on land price data from AREA 1998 and interest rate data from Bank of Thailand.

What is easily overlooked are the underlying factors determining the value of an asset, that is, factors affecting the net present value of future income generated from the asset. Real Estate is complicated and simple extrapolations can be extremely erroneous. No single formula can predict real estate prices. Neither are real estate prices totally unpredictable, following a pure random walk. Recent studies show that a good model needs to

incorporate at least three inter-related markets: the occupiers (space) market, the capital market, and the development market.

**Figure 11. User Cost of Housing Ownership**



Source: Authors' calculation based on housing price inflation estimates from ABN-AMRO 1997 and interest rate data from Bank of Thailand.

Expectations determine investment behavior. As long as price inflation is expected, new investors will enter the market. Leveraged investments are dangerous and require extra caution on the creditor side. When the user cost is sharply negative, the investor is not really bearing full risk, especially with high leverage. Unfortunately, this discretion was not always exercised by financial intermediaries in Thailand. They tried to ride on the asset inflation, without paying attention to the foundation of real estate asset performance -- cash flow from the asset.

**D. Constraints to**

**Proper Valuation in Thailand**

Stressed secured lending in Thailand has been based on real estate collateral, and thereby on property values. Yet the property valuation process appears to face significant obstacles in all segments of the Thai real estate industry. Partly because there are no valuation standards and no formal certification process, the valuation profession is not highly recognized and valued in Thailand. Property valuation for project lending has often been



done by in-house valuers who were not separated from the loan operations in most cases, thereby threatening the quality and independence of valuation.

Underlying the lack of professionalism and independence of real estate valuation in Thailand are profound difficulties with appraisal practices in the emerging real estate market. Some critical elements of an efficient market are still missing. Traditionally, three different property valuation approaches can be used: the cost approach, the sales comparison approach and the income capitalization approach. There are structural difficulties with each of these approaches in the current market, which can render appraisal results less reliable.

- ***Weak Relationship between Rents and Vacancy Rates.*** The rental market in Thailand is weak and small, except for some niches like the condominium market for foreigners. Partly as a result, there is no monitoring of either vacancy rates or rents. It is therefore hard to judge what would be a sustainable rent from a particular property. Without this notion of sustainable rent, it is difficult to apply the income capitalization approach to come up with reliable property valuation.
- ***Lack of Trading and Absence of Comparable Assets.*** There have been very few transactions in the office market. Even housing does not have a well functioning secondary market. In the absence of comparables, the sales comparison approach is not applicable. Construction costs, a possible proxy, are a very rough and inaccurate approximation of either value or replacement cost.
- ***Construction Costs and Replacement Value.*** While the construction costs of a property can be more reliably estimated, the replacement value is not equivalent to construction costs. In addition to construction costs, the replacement value is also affected by the value of the site, the valuation of which depends on market comparables, among other factors. Since July 1997, replacement costs have risen by about 30% with the devaluation of the Baht. As a result, most transactions can be expected to take place below replacement value, if the market is to be cleared at its deflated new level.

## V. MANAGING THE REAL ESTATE CRISIS AND BAD ASSETS

### A. Rapid Erosion of Asset Quality

In the aftermath of the currency crisis and the floating of the Baht on July 2, 1997, the economic picture in all segments of the real estate sector has started to deteriorate sharply. The share of distressed assets in the commercial property market is now overwhelming. Supply, which was already anticipated to exceed demand by a very large margin in early 1997, will continue to do so. This is in spite of the cancellation of projects that were on the drawing board and of construction projects underway that have been stopped. All major sectors are affected: offices, housing, and retail.

#### 1) *Another Look at Office Oversupply*

Business cycle and real estate cycles have diverged sharply after 1992-1993, culminating in a real estate bust. As shown in Part II, demand for office space has contracted sharply with the closure of the 63 finance companies and layoffs elsewhere in the business sector. Some large purpose-built buildings have lost their financial anchor tenants in the process, thereby finding their worth reduced (see Figure 4, Part II). New supply will outpace demand by a large margin for the next several years and most analysts project vacancy rates of the order of 40% for the next two years (see Figure 3, Part II).

The office vacancy rates of under 20% experienced by the United States during the second half of the 1980s were considered to be at “extraordinarily high levels”. Yet, oversupply took almost seven to 10 years to be eliminated, varying by market segment (Hendershott and Kane, 1992). In the London central office market, the office vacancy rate peaked with 18% in 1992 (Hendershott, Lizieri, and Matysiak, June 1997). It is difficult, though, to directly compare vacancy rates in an emerging market like Bangkok with those of a mature market. In an emerging market, annual additions will tend to be large as compared to the initial stock. As the base is small, vacancy rates can therefore climb rapidly. The issue is rather whether new supply is grossly out of balance with future demand. Simple physical magnitudes can throw light on the existence of oversupply. At the end of 1997, local analysts estimated that the total office stock in the BMR could reach 7,050,000 sqm by the end of 1998 and 7,224,000 sqm by the end of 1999 (see Richard Ellis, 1997-Q4, p.60). This is a fourfold increment compared to the end of 1991, when the total office stock was only 1,540,000 sqm.

What does this mean in terms of implied office employment? Based on an emerging economy standard of 10 sqm per office worker, the Bangkok office supply was increasing fast enough to accommodate an almost four-fold employment expansion from 154,000 to 705,000 persons in just seven years,<sup>13</sup> or the creation of an average of 79,000 new office worker jobs per year.<sup>14</sup> The implied compounded annual growth rate of office employment is 22% over a decade. Suggestively, actual office employment data for the BMR is not readily available for comparison. However, we understand that the actual growth rate of service employment over the last decade was of the order 6-8 percent per year. Investors in office space clearly did not take into account such a basic parameter. This is another way to say again that investment

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<sup>13</sup> For comparison, the average space for office worker in the US is of the order of 235 square feet or about 23 sqm. Sweden is providing even more space (Jaffee, 1994).

<sup>14</sup> For comparison, total office supply in the Paris region was 29 million sqm at the start of the 1985 boom. The annual supply of offices during the boom corresponded to about 110,000 to 140,000 office jobs in a service intensive urban market of 9 million people. The excess supply of office space in Paris has not yet been fully absorbed by the end of 1997. A comparison of Bangkok with other emerging Asian or Latin American real estate markets might be considered more appropriate: in 1997, the newly completed office supply in Singapore was of the order of 60,000 sqm. In Hong Kong-Central, it amounted to about 125,000 sqm (Jones Lang Wootton, January 1998).

decisions and lender behavior have disregarded the fundamentals of the Thai real estate market. As recent history shows, this has very costly consequences.

## 2) *Asset Erosion and Composition of Economic Losses in the Office Market*

The recovery of the macroeconomy and the return of the real estate sector to “normal” rents, sound yields, and satisfactory occupancy rates will not take place at the same speed. Overproduction of commercial real estate has a real economic cost: many resources channeled into real estate could have been put into other investments that would have been earning higher rates of return. To understand the specific situation in Bangkok, the dimensions of this economic cost require more detailed analysis (see Hendershott and Kane, 1992). The current value of past and future reduced cash flows caused by overbuilding. These flows include:

- The zero gross rents on vacant buildings;
- The reduced rents expected to be earned on the space in occupied buildings, as compared to a “normal rent” or to the return on alternative investments;
- Reduced cash flows also mean a decline in the value of commercial property. This reduction in rents applies to the *total* commercial stock. The value decline is related to reduced future cash flows, and should be estimated relative to the stock’s replacement cost. An important intervening factor will be how quickly or slowly existing leases in the occupied stock - that are now at above-market terms - will be renegotiated.

In the United States, “a good part of the \$220 to \$300 billion decline in value, as well as of the \$50 to \$75 billion 1982-1990 economic cost has been transferred to lenders. Much of this part shows up in the savings & loan bailout cost and in realistic estimates of formally unrecognized losses that are chargeable against the Federal Deposit Insurance Corporation’s (FDIC) Bank Insurance Fund. Additional portions are accruing to other investors that hold commercial mortgages” (Hendershott and Kane, 1992, p. 69). A similar process has just begun in Thailand.

## 3) *Distress in the Residential Stock*

Losses in the commercial sector<sup>15</sup>, large and conspicuous as they may be in central Bangkok, are less severe than those generated in the various parts of the housing sector (see Table 2). As mentioned above, the housing stock produced within the BMR since 1990 is at least three times larger in value than the office market stock (see Table 1). And while the office stock is primarily located in Bangkok, additional housing is built throughout the country. This major economic sector is neither systematically nor periodically surveyed. It continues to be poorly documented.<sup>16</sup> From a macroeconomic viewpoint, a good reason for seriously tracking the housing sector is that it is a well established indicator for the business cycle (see for instance Green, 1998).

The residential sector appears to be facing a large structural crisis. Residential developers have produced too much housing for a relatively narrow segment of the upper income population. Richard Ellis (Thailand, 1998) estimates that a total of approximately 1.25 million units have been completed in greater Bangkok since 1988. A housing vacancy rate of 28% gives rise to serious concern (see section IV.B.). Even half of this vacancy rate

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<sup>15</sup> Office plus retail.

<sup>16</sup> For instance, to measure housing starts, the Government Housing Bank derives its figures from advertisement in newspapers and magazines. This information mostly covers projects by developers. How its coverage fluctuates with market conditions is difficult to gauge. One could assume that companies in difficulty cut back on their advertising budget, or just the opposite. In any case, this is weak data.

would still be a crisis level rate in a sector that should be much less cyclical than the office market.<sup>17</sup>

## B. Cutting the Cost of Carrying Bad Assets: Denial Versus Early Loss Recognition

The immediate central issue common to all segments of the Thai real estate market are the spiraling losses associated with carrying bad assets, and what to do about them. *Falling demand, declines in rents, increases in vacancy rates and rising interest rates can turn even good real estate assets into bad ones.* This is the key lesson that has been learned from the US during the Savings & Loans crisis, from the Nordic countries during their banking crisis, from French banking regulators and the failure of specialist real estate lenders, and from other crises in the UK and Australia. During the present Thai crisis, the hidden carrying cost of a bad asset becomes very quickly -- almost explosively -- greater than the loss would be in case of recognition of the loss through sale of the bad asset, even at its new fallen value. Again, painful as the decision may be, it will usually be cheaper for the original owner to sell a bad real estate asset at a fraction of its original value than to carry it for two or three more years. In Bangkok today, especially after the baht devaluation that raised replacement costs, it is most likely for sales to take place below current replacement cost. Potential buyers will come in under very different conditions. While the value of the property to heavily leveraged existing asset holders has fallen sharply, new buyers will have far smaller or no expected cash flow losses. The rate of growth of losses is directly linked to the degree of leverage. This point can be made clearer by the use of “T-accounts.”<sup>18</sup>

### 1) T-account of a Good Asset Prior to the Real Estate Oversupply

To show how the retention of bad assets will almost universally increase systemic losses and impede market liquidity in any economy, consider a leveraged property in Bangkok in 1992. The market value of the asset is appreciating at rate of say 20% per annum. The new leasing rent rate is good at 12.5% of capital value and produces a positive cash flow after deduction of operation and maintenance costs and before financial costs of 7%. The property is financed with Bt 100 million of liability at an interest rate of 14%. Under such notional figures, we get the following t-account.

Good Real Estate Asset Account, 1992		
Capital appreciation	+ 20%	Cost of liability to carry asset - 14%
Rent	+ 7%	

This is an attractive asset. A leveraged owner is making a high return on his equity. In 1992, leverage in Bangkok were particularly high by regional standards. There were some 35 property companies listed on the SET. Investment analysts report that Thai developers had

<sup>17</sup> There is a debate in Thailand about what is the correct interpretation of the electricity connections and metering data used for estimating housing vacancies. Even assuming a 14% vacancy rate, the value of the wasted housing assets may well range between US\$4.0 and US\$ 8.0 billion. There is ample justification for periodic professional surveys of the sector. The rate of return to such work is extremely high, even under present conditions of rapidly shrinking budget.

<sup>18</sup> Fred Feldkamp Esq. suggested this presentation of the effect of carrying bad assets. This chart is helpful to show how the retention of a bad asset will increase losses and prevent the return of trading and liquidity in the market. This presentation goes back to the severe Savings&Loan crisis in Texas and is derived from the “Special Reserve Accounts” that U.S. agencies used to track the assistance provided to buyers of bad assets of failed banks. In that case, a special reserve account calculates the impact of costs so as to permit the agency and the buyer to determine the total impact of the sale (a percentage is applied to measure the amount of assistance paid).

gearing ratios (net debt to equity) that were at least three times of those typical for Hong Kong; over 150% for Thailand against 40-60% for Hong Kong. The probability of failure is high at such gearing ratios, and it is impossible to guess where unlisted private companies stand. Since 1994, there have been increased efforts to improve accounting standards for developers in Thailand, especially in the critical areas of revenue recognition and the treatment of interest costs. There is a general view that a very large number of developers may even have had gearing ratios above the 150% mark and that most of them are now insolvent.<sup>19</sup>

2) ***T-account of a Good Asset Turned Bad Through Overbuilding and the Financial Crisis***

With overbuilding, high interest rates on floating rate loans, increasing rates of delinquency among tenants and a doubling of the cost of foreign debt, a large majority of commercial real estate assets have turned bad, given the high financial leverage of owners. A bad asset account might look as follows:

**Bad Real Estate Asset Account, 1998**

Market value of assets:	- 20% p.a.	cost of liability to carry asset –18 to –25%
Net Rent:	+3.5 % p.a.	

The total impact of the bad asset is a negative rate of  $(-20 + 3.5 - 22) = -38.5\%$  per annum. This 38.5% rate is the measure of the cost of continuing to carry the liability. If the liability initially was B100 million, the growth of this liability will be explosive until the asset is disposed of or has reached its new price level, as follows:

Initial debt:	Bt 100 million
Year 1:	Bt 138.5
Year 2:	Bt 192 million

Loss recognition is not a long-term option: the liabilities on this bad asset will practically double by the end of the second year. The higher the leverage on the asset and the size of the loss as a percentage of the liability, the faster losses will grow. Early loss recognition is therefore a critical ingredient in shortening the crisis and hastening recovery. As typically happens at the beginning of a real estate bust, the real estate industry in early 1998 has remained in a state of suspended animation. Valuations and asking prices have been unrealistically high. As a result, there has been no trading yet, and the sector which had practically no secondary market has been totally illiquid. It is important to keep in mind that the real estate bust started sometimes in 1995 and preceded the currency crisis. The year of 1998 is therefore already the third year of denial of losses in this real estate.

**C. Some Factors that May Facilitate Rapid Loss Recognition in Thailand**

<sup>19</sup> Good accounting is the language of good banking. Inadequate accounting, together with weak governance, is playing a large role in complicating the speedy resolution of the crisis. Proper accounting is an issue not only in the real estate sector, but also in the SET listed corporate sector, where funds have often been diverted into real estate. For an illustration of the problems to be faced now, see Wall Street Journal (1997).

If it is so clearly in the self-interest of holders of bad assets to dispose of them to new investors, why don't they do it quickly? There are a variety of practical reasons why, until early 1998, this has not yet happened in Thailand, or at least on a meaningful scale. Meanwhile, rational domestic as well as international investors observing this self-defeating behavior will only buy when this behavior of holding onto bad assets stops. Why? Because the pressure to wait for even lower future prices does not stop until sales *without assistance* start. Four interdependent factors are expected to play a major role in the return to liquidity in the Thai economy, and in the real estate sector in particular; the enactment of the amendments to the bankruptcy law; effective and pragmatic foreclosure rules, the creation of property funds, and market-based sales of real estate assets by the Financial Restructuring Authority (FRA).

**a. Business Governance.** Why does loss recognition by business companies take so much time? Upstream of all delays, one might place the governance structure of many Thai listed as well as private companies. This governance structure is usually ill adapted to making the rapid and painful decisions needed in times of crisis. Corporate boards have interlocking directorates across a variety of companies. These boards have external directors who may be bankers or other influential members of the community, but who may be lacking experience in the core sector in which the company operates. Some members may face conflict of interest and of fiduciary responsibilities due to their ownership of interests in related companies. Other directors may be family members who may not have the training and skills to evaluate the long-term impact of decisions taken by management. During the boom, such weak governance was not a problem: board members tended to be passive supporters and cheerleaders of rapid expansion without paying due attention to risks. However, during the present period of steep asset deflation and liquidity crunch, such board structures easily lead to gridlock.<sup>20</sup>

In the real estate sector, below the limited ranks of the listed property companies, there is a very large number of 2,500 private development and property companies. Most are either in severe financial distress or bankrupt.<sup>21</sup> These companies share many of the idiosyncratic decision-making characteristics of small and medium family-owned companies in North America and Europe. Owners have difficulties when faced with the need to reorganize and shed bad assets. In value terms, these companies together control a large volume of real estate assets, but explicit policies and other forms of support to deal with this diffuse business group are missing at present.

**b. Amendments to the Bankruptcy Law.** Reorganization, company restructuring and asset disposal will be essential to unlocking the capital that is currently locked into bad projects and redirecting it to better uses. A variety of legal and practical operational obstacles has been impeding the reorganization of all forms of corporate entities, including those in the real estate sector. They have been discussed rather extensively in the recent past and appear to be on the way to be resolved.

Amendments to the Bankruptcy Act have been passed and are now for the first time being put to the test in the Chiang Mai Provincial Court in a case filed by Siam Commercial

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<sup>20</sup> The business practice of directing funds raised by listed corporations into new business ventures, independent of the listed company managed by family members, is reported to have been a frequent practice in Thailand and the South East Asia region, but it is not readily documented. During the boom, highly leveraged structures could be created by mobilizing loans from Thai and foreign banks that were then expected to be repaid at least in part from stock offerings on the booming exchange. The real estate boom and the stock market boom fed on each other, as is reflected to some degree in the regulatory reports of the finance companies. Asset inflation in both markets peaked in 1995.

<sup>21</sup> According to a Phatra Securities analysis of the corporate sector, out of 350 non-financial companies listed on the SET there were 46 property companies, and 35 construction companies. As of 30 September 1997, 28 property companies and 18 construction companies had less than 100% interest cover, i.e. their operating cash flow could not meet interest payments. These 46 companies alone represented 53% of the cumulative liabilities of the all the non-financial firms listed on the SET (Phatra Securities 1998).

Bank on the 22<sup>nd</sup> of April 1998 (*The Nation*, April 23, 1998). These amendments are expected to make formal reorganization proceedings more attractive than informal proceedings for four main reasons (see Salomon Smith Barney 1998):

- Use of formal reorganization proceedings under the amended law will avoid what is known as “the section 94(2) problem”. Under the old Bankruptcy Act, if a lender allowed a debtor to incur debt or extended money at a point in time when he knew that the debtor was insolvent, he would lose the ability to claim for that amount in any subsequent bankruptcy proceedings;
- The new rules do not require approval of 100% of creditors for a reorganization;
- Through various exemptions from the Civil and Commercial Code and the Public Limited Companies Act, the new rules permit a faster process of either reducing or increasing capital in the reorganized entity;
- The new proceedings stabilize the environment by maintaining the status quo of protecting the debtor organization from most forms of legal action, including the revocation of its license by the authorities.

The possibility of a long drawn out process in complicated cases with many creditor classes (secured, unsecured, local and foreign) and a divided governance structure is still present. Experts caution that processes could extend from five to seven years.

The issue in the real estate sector is probably a more practical one, namely of court capacity constraints and creditor priorities. Lenders will work their way down the list of non-performing loans from the top, starting with the most important cases. All real estate analysts raise the issue of bankruptcy proceedings, but it is not clear what proportion of distressed real estate assets is likely to benefit from the improved legal framework. Sometimes, important real estate assets will be near the top of a creditor’s list, in many cases they might not be. If not, informal resolution arrangements will remain liable to Section (94)2.

**c. Foreclosure Rules.** Most lending in Thailand is done on a secured basis, with the collateral being fixed property and with the loan advance being a percentage of the appraised value of the collateral. Loan foreclosure rules therefore will have a significant impact on restoring liquidity in the real estate market to permit various owners to restructure their position. Foreclosure laws are targeted to be amended by October 1998 with a goal to speed up the process of creditors being able to foreclose on properties. Currently, the procedures contained in the Thai Civil and Commercial Code are quite slow and time consuming. In particular, in order to foreclose and enter into possession of a property, there must be a failure to pay interest on the debt for a period of five years. The exact nature of the amendments and the new notice period are currently under evaluation.

**d. Need for the Development and Dissemination of Workout Techniques.** Except for property projects of a significant size, the resolution of distressed real estate projects and/or developers can be expected to depend primarily on the internal organization capacity of individual banks and on their individual operational guidelines (Gerer L’Immobilier 1997). The banks that will be creating a strong real estate department with clear negotiation and risk management guidelines, as well as solid internal control systems, are likely to reach satisfactory results. A recurring resolution problem experienced in many countries is the departure or relocation of those loan officers who originally negotiated projects at the branch level. In the worst cases, project files in some branch offices may turn out to be incomplete or almost empty.

On the owners’ side, the development and dissemination of suitable workout guidelines and documentation will save all parties considerable time, efforts and resources. Given the large number of real estate developers and the fact that the majority of them are insolvent, support to the development of such services appears to be urgent (see for instance Zuckerman 1992).

## **D. Actions Needed to Restore Liquidity in Real Estate Markets**

At the time that this paper is being written, the Bangkok real estate market is in a state of suspended animation. Asking prices are out of line with market conditions and there is little or no trading taking place. Liquidity needs to be restored in the market to permit the various corporate or household asset holders to dispose of bad debts and restructure their balance sheets. A number of measures are being taken or need to be taken. Some are of a systemic nature and are related to all types of bad assets. Others are specific to the real estate sector, or to some of its components. The approved establishment of 29 property funds by August 28, 1998 with a total amount of baht 70.8 billion is potentially a very positive development, depending on their specific regulatory framework.

**a. Real Estate Intelligence Task Force.** The development of rescue plans by the government and the evaluation of their soundness are seriously hampered by the lack of adequate information. Scarce resources are not effectively deployed due to the striking lack of reliable, timely and coordinated information. It should be very clear by now that the crisis will last for several years. At present, due to lack of data, it is impossible to make sound policy decisions to salvage those companies that could be salvaged, or to dispose of the excess stock. *Without credible data, the needed wholesale approach to the resolution of insolvent corporations in the real estate sector is either delayed or impaired.* The fragmentation of the database, its incomplete coverage, and inconsistencies in definitions used reflect the fragmentation and lack of coordination of the institutions in the sector. The creation of a well-led task force of the most skilled specialists inside and outside the government is needed. Such a task-force should be funded immediately to identify the critical information gaps for effective decision making and to direct the work needed to fill these gaps as soon as possible. The work of this group should then lead to a permanent structure that will conduct the proper periodic surveys required to monitor the various real estate sectors.

**b. Bankruptcy Law Amendments.** This issue cuts across lending to all sectors of the economy. As discussed in section V.C. above, the need for amendments to the original law has been addressed and the first court test of the new amendments was filed in late April.

**c. Foreclosure Rules and Mortgage Enforcement.** In restructuring the portfolio of financial institutions, loans need to be sold together with their collateral, which is mostly real estate. The new foreclosure rules that are needed to reduce the time and the cost of asset disposal are not yet in place (see section V.C. above). The target date for the improvement of foreclosure rules being October 1998, actual results of the change cannot be anticipated before 1999.

**d. Liberalization of Rules for Foreign Property Ownership.** Thai rules on foreign property ownership are very restrictive. They currently play against the return of stability and liquidity in the real estate sector. A politically acceptable solution must be found to allow foreign financing work in support of a faster recovery, and serve Thai interests in better asset values. In view of the present liquidity crisis, foreign capital will play a critical role in preventing the first FRA sales from taking place at very low "liquidation" prices rather than at the new, more realistic "equilibrium prices" - or no sales at all. This foreign ownership constraint seriously affects the flow of funds into the sector and thereby its restructuring. Moreover, without clear and transparent improvements, the risk premium asked by foreign investors in return for accepting uncertain legal conditions will be higher.

A solution that could balance the demands of investors and Thai interests may include:

- use of long-term leasehold
- geographic restriction on foreign land ownership
- ownership forms varying by type of assets



- property funds.

*e. Overhaul of the “Capital Gains Tax”.* The current taxation of property is in need of a major overhaul. It has contributed to resource misallocation in the sector, leaving certain markets without liquidity. In particular, it has led to the very small size, if not absence, of a secondary resale housing market. It has also contributed in an important manner to tying-up household wealth into real estate and to “feeding the bubble”.

The poor design of the tax has been documented in various recent reports. Reforming this tax can be self-financing and should be done quickly. The three main flaws of the tax have been identified. (1) This “capital gains tax” is actually an excise tax based on the value of the property. It is not based on whether the owner experienced a gain or a loss. Even if the owner disposes of his property at a loss, he will pay the excise tax. (2) The basis for the tax assessment is the “assessed value” as assessed by the Land Department not the transaction price. During the boom, assessed values were below market prices, now they are above. (3) Long-term asset holders are penalized. There is no specific timetable for the reform of this tax.

*f. Property Valuation and Credit Risk Management in Commercial Mortgage Lending.* Valuation has been a very problematic area in Thailand and central to the asset bubble, not because capable property valuers do not exist, but because the incentive structures have been wrong or perverse. There are short-term and long-term issues in this area.

Proposals for lowering the assessed value that forms the basis for the “capital gains tax” have had a negative announcement effect. As no action was taken, they have encouraged owners to hold onto their property. On the other hand, banks have used these assessed values to assess the adequacy of real estate used as collateral. Reforming the rules of valuation, the pricing of the service and their use is a major issue. Selecting the right professionals for setting reserve prices for FRA auctions is a critical immediate issue for the sector’s faster recovery.

New lending rules for development lending and for commercial properties are inevitable, and urgently needed, if the recurrence of the present problems is to be avoided. They should not be based on capital values that have proven thoroughly inadequate, but on concepts of “sustainable yields” and cash flow based lending.

*g. Supply and Allocation of Mortgage Loans during the Liquidity Crunch.* During the present liquidity crunch, most private sector residential mortgage lending has stopped. Considering the large oversupply in several segments of the residential market, the question must be asked from a public policy point of view whether scarce liquidity should be allocated to this particular non-traded sector. As noted earlier, there is a strong rationale for additional mortgage lending to recreate the liquidity needed for the disposition of the large stock of vacant properties. However, in the absence of proper information, the design of an economically justified program is difficult. For instance, in principle there is merit to providing mortgage for social mortgage lending as part of a safety program to maintain employment in a low-skill, labor intensive activity. However, in the absence of quality information, it is difficult to determine where additional injections of scarce liquidity would have the greatest effect, and at what price. After all, the crisis itself originates from the allocation of resources by the financial sector to activities with a low economic rate of return.

The only active mortgage lender is the Government Housing Bank (GHB). The allocation of its scarce funds among developers has been very competitive, but quite opaque and subject to inappropriate practices. The GHB could not ask developers to bid for its fund in the form of an auction that would raise the cost to borrowers, and heighten credit risks. It is suggested that the GHB would allow competitive bidding for its fund by asking developers to bid in the form of counterpart deposits. The dual benefit would be to prevent bad practices and to increase funding for the GHB.

**h. Property Funds.** Property funds or trusts have the objective to mobilize capital funds for the primary purpose of investing in real assets in the same manner as mutual funds invest in equities and bonds. As rapid development in mature markets like the US have shown, after a real estate crisis, property trusts can address the three problems of indivisibility, illiquidity, and lack of market information that lower the efficiency of real estate markets. Property trusts are instruments of significant interest to institutional investors such as pension funds and insurance companies and preferred to direct investment in specific projects. Such funds have the advantage of lowering barriers to investment, permitting investors to diversify their risks, and symmetrically diversifying real estate risks across a much broader range of investors. The Security and Exchange Commission (SEC) that supervises the SET began studying the establishment of property trusts in 1994. Proposals were finalized in late 1995. However, no action was taken in 1996. The SEC issued the regulations that govern property funds in February 1997. These funds are established under the mutual fund regulations and governed by the SEC Act B.E. 2535. There are two categories of funds -- "Public Funds" for offering to the public and "Institutional Funds" for institutional investors. Public funds are listed, institutional funds are unlisted. The rules for institutional investor are less stringent than those for public funds.

Given the domestic liquidity crunch, one of the important features of property funds is that restrictions on units held and minimum unit holders do not apply to foreign institutional investors. There are no restrictions on foreign ownership, which be up to 100%. Once established, a fund is a separate legal entity.

The approval of new property funds by the SEC is a very positive development for the real estate industry. However, the reported regulation, prescribing a maximum life of 5 years, may be needlessly restrictive and counterproductive. The central concern is how Thailand can actually achieve a sustained recovery. The government should avoid needless binding constraints. What might be considered is to use the same 10-year limit that applies to bank shareholding. Within that longer period, a mutual fund company could establish a closed-end, finite-life property fund, but this would be a private investor decision. In fact, it could turn out that five years might be good enough for the investors, but this should not be prejudged because changing investor preferences are an endogenous variable in the speed of recovery.

The professional skills required to manage such property funds are considerable. They are also opposite to the observed investment behavior of real estate investors during the boom and the emergence of the industry. On behalf of the government and the SEC, a third party review from a real estate point of view should be conducted of the underlying operational requirement for these new property funds. Such a review should aim to identify the weakest points in terms of governance structure, fiduciary obligations of the professions, verification of qualifications and monitoring of performance. Property funds are truly central to both a successful FRA asset disposal and recovery in the real estate industry.

**i. FRA Sales.** 30 percent of the assets of the 56 closed finance companies now held by the FRA are real estate assets. FRA sales will play a critical role in initial loss recognition and the return to trading and liquidity in the various sectors of the real estate industry. In the search for new equilibrium prices in the market, FRA sales will play a central role in the price discovery process. Over the last few months, the FRA has been developing its overall asset disposal strategy by drawing on local expertise and the experience of other countries<sup>22</sup>. The first FRA auctions will be very important in setting the tone for the entire market and for price expectations. The proper selection of the real estate assets for the first sales and the lot size will affect the range of potential bidders – and whether any sales will take place at all.

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<sup>22</sup> For reference, readers might wish to consult Lea and Tygerson 1994, who provide a formal framework for asset disposal by the Resolution Trust Corporation in the US.

## **VI. BEYOND THE CRISIS: STRUCTURAL CHANGES FOR A LESS VOLATILE AND MORE MATURE REAL ESTATE INDUSTRY**

The present crisis is most likely to lead to lasting changes in the Thai economy. Major opportunities exist to substantially improve the performance of a sector that will only grow in size and significance in the future. What are the reform areas that need to be addressed to pave the way for the emergence of a mature and less volatile estate economy in Thailand? Part V presents a practical but analytically elegant way to organize the complex range of issues to be addressed, and concludes with a list of specific recommendations.

### **A. The Modern Paradigm of Real Estate as an Organizing Framework**

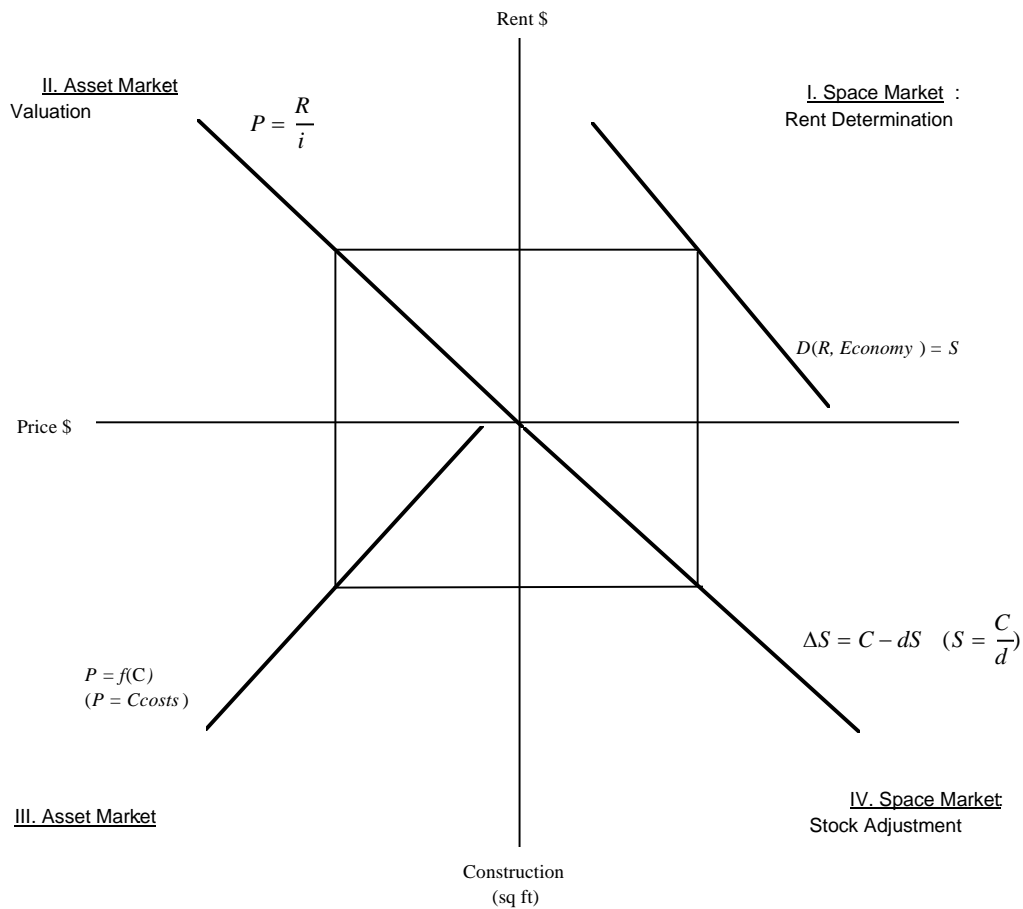
A long-term program of structural reforms of the Thai real estate sector has to be built upon a clear understanding of all the complexities embedded in the industry and the indispensable elements needed for market stability and efficiency. The complexity of modern real estate industry originates not only from its massive scale, but also from the diversity of players involved: space occupiers (households and firms), asset owners, property managers, portfolio investors, lenders, developers, construction contractors, as well as government and the public in general. How do these actors and the different elements work together? A clear conceptual framework can help clarify these issues and be used as a communication tool to show the nature and impact of reforms, which should be either directed or supported by the government. In an emerging and still immature real estate market like in Thailand, a sound analytical framework will be an invaluable tool in identifying and communicating to various public and private decision makers the weak or missing institutional elements.

Structural improvements in real estate are predominantly legal, regulatory and financial in nature. They are interacting in the actual development process. An analytical representation of the real estate has been developed by Fisher, DiPasquale and Wheaton (FDW, 1996). This modern paradigm is often called the Four Quadrant Model of Real Estate, as depicted in Figure 12. The FDW model is noted for its ability to clarify the factors of two separate, yet closely interrelated, real estate markets – the space (property) market for the *use* of space, represented by the two right quadrants, and the asset (capital) market for the *ownership* of space, represented by the two left quadrants.

The diagram is read counter-clockwise from the upper-right (1st) quadrant. The major function of the space market is to determine the level of net rental income through the interaction of supply and demand for space. Demand comes from occupiers of space, whether they are tenants or owners, firms or households. Firms' demand for space depends on productivity and substitutability of this input factor, on firms' output levels and the relative cost of space (rent). Households' demand for space depends on household income as well as housing rent. In the short run, adjustment on the supply side can only be made through the vacancy rate of the existing stock of real estate.

The second quadrant determines the price of a property. As shown in the diagram, one important link between the space market and the asset market is that the rent levels determined in the space market are central in determining the price of real assets. In acquiring an asset, investors actually purchase a current and/or future income stream. The rent is translated into a price through the so-called capitalization rate (cap rate), represented by the ray in the quadrant. The cap rate is the reservation yield that investors demand in order to hold real estate assets. This ratio is affected by four factors: real interest rates, expected growth in rents, risks associated with the rental income stream, and the tax code related to real estate.

**Figure 12. The Four Quadrant Model of Real Estate Economy**

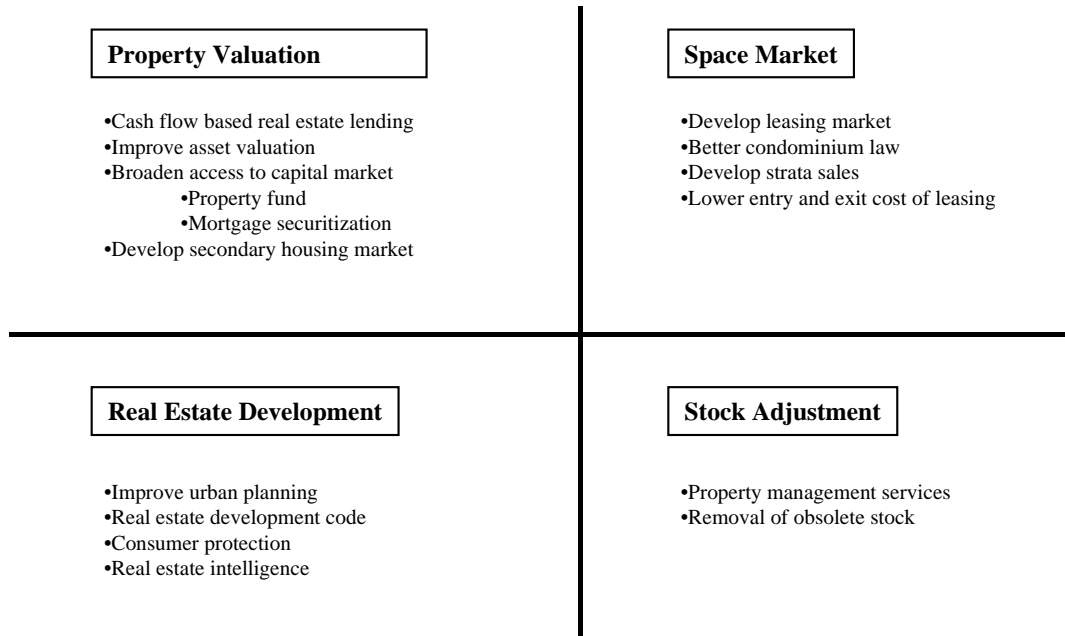


Source: Following DiPasquale and Wheaton (1996).

Taking the price of properties as determined in Quadrant 2, real estate developers decide whether to initiate new property development projects based on the possible net marginal earnings, or the marginal difference between property value and replacement cost. Theoretically, developers decide to build up to the point where the marginal replacement cost is equal to the price, as depicted in Quadrant 3. In the long run, the asset market should therefore equate market prices with replacement costs. In the short run, however, the two may diverge significantly because of the lags and delays that are inherent in the construction process. In fact, because of these lags, the price that developers use for decision may well be the expected price at the time of project completion rather than the current price.

Through construction, the asset market is linked back to the space market in Quadrant 4, which represents the process of adjustment in the total stock of real estate assets, i.e. the replacement of fully depreciated and/or functionally obsolete assets over time with new stock. In equilibrium, the rate of replacement will equal the rate of depreciation of stock, and there will be no net addition or reduction in the total stock. When the market experiences oversupply of new assets, it also acts to accelerate the rate at which older stock depreciates and is removed from the total stock.

**Figure 13. Summary of Structural Improvements Proposed for the Thai Real Estate Sector**



## B. Structural Improvements Needed in Thailand

In practical terms, the FDW model provides a framework for identifying the necessary structural elements of a well-functioning real estate market, thus telling us what is missing in the current situation and what are the impediments to market efficiency and stability. Placing the Thai real estate market against this reference framework, our preliminary analysis led us to the following list of structural reforms that need to be addressed in the Thai real estate industry for the market to become a mature one. Figure 13 summarizes the structural improvements needed in the form of the four-quadrant FDW model.

### 1) *Develop Balanced Space Markets with Sustainable Rental Cash Flows (Q.1)*

An efficient space market for the use of real estate requires tenants to be able to move in or out of space at relatively low relocation cost, rental value to adjust responsively to demand change, vacancy rates to be kept a relatively low levels (fluctuating around a so-called natural vacancy rate), and the right incentives to be provided for the tenants and owners to diligently maintain their property.

**Develop a Leasing Market.** The current development of space leasing in Thailand is comparatively backward in the office and the housing sectors, as the market is characterized by very high ownership rates in both sectors. A mix of space use and ownership certainly has its advantages in terms of property maintenance, but it also entangles investment needs and space use needs. The government should encourage the development of a leasing market through regulations that assign responsibilities and protect the rights of both leasers and leasees.

**Improve the Condominium Law.** The stock of condominiums in Thailand has increased dramatically over the past decade. The laws regulating the management of condominiums, however, are still inadequate, especially with regard to common area management. The failure of some condominium owners to pay management fees can sometimes have devastating effects on other owners and the whole building. A condominium law specifying the responsibilities of the respective agents should be put in place.

**Develop Strata Sales.** Office strata sales allow purchasers to buy only part of an office building, usually one to several floors. Such sales lower the entry cost of office ownership and therefore allow smaller businesses and investors to obtain ownership. The development of more strata sales will encourage more transactions in office properties, improve the utilization of office space and ultimately lead to a more yield-driven office property industry.

**Lower Entry and Exit Cost of Leasing.** Currently, the entry and exit cost of leasing is very high in Bangkok. The cost of moving into new office space can be as high as five years' leasing expenses. This high entry and exit cost prevents the space market from quick adjustment to changing demand conditions. Measures should be taken to lower this cost. A critical condition for low entry costs is standardized and high quality professional property management.

## 2) **Improve Investment Decisions and Asset Market Efficiency (Q.2)**

Real estate is not only space for use; it is also an asset and therefore an instrument of investment. Efficient asset market of real estate implies that it should neither be treated as a cost, nor as a luxury good. Instead, *real estate should be treated just as any other class of capital assets*. This in turn requires (a) investors who can assess and accept risks associated with property investment; (b) lenders who manage their risk properly; (c) diversified access to capital market sources.

**Move Toward Cash Flow Based Real Estate Lending.** Lending to real estate by financial intermediaries, including banks, finance companies and other similar financial institutions, should be based on the cash flows from the project ("the downstream"), rather than on speculation on the possibility of asset appreciation ("the upstream"). Bank lending, in fact, should play a critical supervision role in preventing excessive speculation in this industry. Since real estate project loans of banks are often made on relatively new properties, lenders should generally consider estimated stabilized income streams when making their assessment, and should not place undue reliance on the collateral value of a loan. The central bank should issue regulations that provide specific guidelines to banks on the practice of real estate lending, and should reflect these principles in the practice of bank examination.

**Improve Asset Valuation.** Even with a sound lending practice, when a credit does become troubled and the borrower is unable to meet his obligation, the role of the collateral increases in importance. It is critical, therefore, that sound appraisal policies and standards be in place. Moreover, asset valuation is also important for investment decisions, insurance policies, tax assessment and for the development of mortgage securitization and property funds. Providing property valuations which meet international standards is a crucial prerequisite to attracting foreign investment to revive the ailing property market. In Thailand, the profession of valuation has already emerged, but is admittedly still inadequate in many aspects. Moreover, its role is not sufficiently recognized. The country currently lacks regulations on valuation, and professional valuation standards need to be developed as soon as possible to bring valuation practices up to international standards. A coordinated, concerted effort should be undertaken to establish a national, industry self-regulated valuer certification and review system to which all real estate appraisers would be subject. Regulations also need to be installed to assure the independence of valuation from loan development, underwriting operations and other activities that are in possible conflict of interest. Lending institutions should be required to either hire independent appraisers, or strictly separate their appraisal review and control units from loan development units.

**Broaden Access to Capital Markets.** Over the long run, the development of the Thai real estate industry and the provision of affordable housing rely on access of the industry to a much broader capital market. Broadening capital access is also urgent during the current credit crunch, which poses severe liquidity problems to the industry. The Thai government has already passed laws to establish property funds and mortgage securitization to increase

access of real estate investors to capital markets. Mortgage securitization, which will help develop a secondary mortgage market can allow non-bank institutions such as pension funds and insurance companies, and even individuals, to provide financing for real estate and liquidity to the market. Property funds can mobilize the financial resources from small and foreign investors to make large real estate investments. For the two measures to achieve the stated objectives, however, many more institutional, regulatory, and fiscal arrangements need to be made. Mortgage insurance and guarantees, for instance, are often required by private-sector lenders and investors to extend sufficient financing. High-quality asset valuation practices and an effective foreclosure law are also necessary conditions for securitization and property funds to work.

***Develop a Secondary Housing Market.*** Currently, housing transactions in Thailand are overwhelmingly concentrated in new housing. This contrasts sharply with mature housing markets, where the majority of housing transactions are for resale of old housing. There are important historical and cultural reasons for the lack of resale in secondary housing, but the existing tax system also plays a big role. The problem with the tax system is that tax on housing transactions is based on proceeds, not on capital gains. Consequently, if an individual sells a house below the original purchase price, he still has to pay tax. This tax system prevents purchasers from progressing through the housing market and effectively renders residential property an illiquid asset. The taxation on housing transactions therefore should be revamped to facilitate the development of a secondary housing market.

### **3) *Strengthen the Real Estate Development Process (Q.3)***

In the past fifteen years, the growth of an entrepreneurial real estate development industry has created jobs in real estate construction that have become a critical component of the national economy. But as a relatively young industry that is not yet fully organized, the real estate sector needs improved regulatory supervision and support. It is primarily during the development phase that crucial issues are raised concerning the impact of the physical environment on society. In the long run, the real estate development in Thailand needs a sound urban planning system and development code, reliable and timely disclosure systems, accurate market information, as well as a sound tax and regulatory environment.

***Establish a Real Estate Intelligence Force.*** The lack of reliable and timely real estate intelligence underlines many of the symptoms of the Thai real estate market and contributed to the speculative fever. Information on the various segments and aspects of the property market is critical for investment decisions, valuation, banking lending, local planning, and government regulation and supervision of the industry. Since sector-wide intelligence has many characteristics of a public good, the government should take the lead in establishing a real estate intelligence force to collect and assemble information as one of the critical components of the national economic indicator system. As a first step, the information collected by various government agencies should be compiled to provide a whole picture of the real estate industry. In the meantime, the government should also encourage private sector involvement in intelligence development.

***Improve Urban Planning.*** To a certain extent, the problems with the real estate market reflect the failure of public-private coordination in urban development in Thailand. Numerous wrong types of buildings were erected in the wrong locations. The lack of effective urban planning and loose implementation resulted in more uncertainties in the market and encouraged speculation. Insufficient infrastructure provision in cities also prohibits the efficient use of urban land. Improving urban planning and plan implementation is therefore urgently needed. Nationwide, there is an urgent need to form a national urban strategy and establish a corresponding administrative authority responsible for overseeing and coordinating urban development activities. Technically, the current urban planning code needs improvement. It should adopt at least an intermediate classification system with more detailed land classifications to better guide development activities. Local governments should

be given more authority in writing plans for their cities and, more importantly, in enforcing these plans. There should also be better coordination between new infrastructure investment and urban development. Finally, the process of urban planning should be overhauled to encourage public participation and provide a forum for coordinated efforts by the public and private sectors in urban development (see also Kraas 1998, in this volume, for a similar account).

***Develop a Real Estate Development Code.*** In addition to local planning and zoning, supervision needs also to be strengthened for the development industry. Currently the financial qualification of development companies is poorly supervised. More importantly, the development industry should organize itself to improve its professionalism and discipline.

***Improve Consumer Protection.*** Consumer protection in housing transactions is still incomplete. The government has issued standard contracts for housing purchase, but there is no regulation yet on escrow accounts. Disputes often arise over the down payments consumers pay when purchasing a new housing. These down payments usually range between 10 to 20 percent and can be up to 40 percent). Other consumer protection measures also need to be established.

#### 4) ***Management and Adjustment of the Real Estate Stock (Q.4)***

***Improve Property Management Services.*** The main product provided by the real estate industry is *space over time*. For users, most space comes in conjunction with services—utilities, maintenance, security, as well as property management services. The current slump reflects the importance of property management services, as professionally managed properties endured only slight setbacks while badly managed ones suffered the greatest loss. Current practice in the real estate industry has emphasized the so-called permanent elements of the investment rather than the day-to-day operation of the property. This can have damaging effects on the industry, as existing stocks are not adequately utilized and maintained. The development of a professional property management industry with high quality standards will also facilitate the operation of the space market, lower the transaction costs of leasing activities, and thereby reduce the volatility of the overall market.

***Remove Obsolete Stock.*** The government should take prompt actions to remove obsolete building stocks, which can be either a result of aging or wrong investment decisions. These derelict or incomplete projects can otherwise inflict substantial negative externalities upon their neighborhoods.

## VII. CONCLUSION

The decade 1986-1996 has seen the rapid emergence of a large modern real estate industry in Thailand. This development reflects the rapid growth of the economy as well as Bangkok's ambition to be a leading economic center for the region. Unfortunately, the amplitude of the Thai real estate boom, which was originally built on sound fundamentals, has been magnified and distorted by outdated banking practices and weak credit risk management in a financial sector that was itself experiencing extremely rapid growth. Currently, structural flaws in both the financial and the real estate sector have been starkly revealed, and both sectors are under stress. The real estate boom that peaked sometime in early 1995 is now followed by oversupply and a very severe asset deflation which parallels the deflation of financial assets on the stock market.

This paper stresses the short-term importance of reviving liquidity and trading in the sector in order to permit businesses as well as households to restructure their balance-sheets as promptly as possible. A central point of concern is that losses on bad assets are accumulating rapidly in the short-run. While they may not always be readily measured, high



carrying costs have a large opportunity cost in terms of missed business opportunities and lost jobs. Therefore, public policies to facilitate loss recognition in the sector and the stabilization of prices at its new equilibrium level should be encouraged. The paper identifies those specific segments of the real estate sector where such policies are likely to be of particular value.

Looking beyond the crisis, several reforms can enhance and strengthen the real estate sector and reduce its volatility. International experience has identified structural and regulatory improvements that can shorten the recovery period and prevent the recurrence of the extremely sharp real estate cycle that Thailand has just experienced. Provided that reforms are implemented and the Thai economy resumes its growth soon, the very high vacancy rates in the BMR are likely to be mitigated soon. Compared to mature real estate markets like Houston which also underwent crisis, Thailand's real estate sector is increasingly professional, but remains immature. Thailand can also expect significant further urban growth, which will give the BMR the capacity to absorb the effects of this very costly first major cycle.

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