

RISK FACTORS IN REAL ESTATE DEVELOPMENT IN THAILAND

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Abstract

Thailand's real estate housing development and related businesses have been blamed as one element that amplified the negative factors in the 1997 economic crisis in Thailand. Unpaid debts from excessive loans from financial institutions before the crisis, became non-performing loans afterwards. Unsold properties became non-performing assets. The majority of real estate companies went bankrupt and left unfinished building constructions. All this destroyed consumer confidence in the real estate business, and reduced or delayed housing purchase and payment. The real estate business was branded as a non-performing business.

However, now in 2003, the real estate development industry is promoted by the Thailand government as a sector which can help boost the country's economy. Many governmental supporting policies and statements have been issued. Consumers are increasingly buying. Many companies that managed to survive the crisis, and many which were resurrected from bankrupt companies, have begun to compete in the business again, although with caution having learnt a hard lesson. But questions have now emerged as to whether this increase in sales will one day lead to a new crisis.

The aim of the paper is to describe and analyze risk factors in real estate development which should be considered to prevent future failure. It focuses on the period 1997 to 2002. It includes: reasons why the real estate business was blamed for its part in the 1997 crisis, and why it is now being promoted to boost the national economy; the effects of mistakes in governmental policies for financial institution practice; and factors that accelerate and worsen the normal downturn of economic and real estate cycles. The paper analyses many factors, and the relationships between them.

The paper shows cause-effect factors at the national level, in financial institutions, in real estate development firms, and at the consumer level. It compares and contrasts the situations in 1997 and 2003 so as to study the risk management issues.

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This paper is concerned with a highly complex situation, intertwined with the wider aspects of finance and politics, with a mixture of international and local forces, with governments and consumers, and with a period from boom to bust and recovery.

1. INTRODUCTION

Real estate business is a high return business, and naturally is therefore a high-risk business. This business was the core of concern during the 1997 economic crisis and the aftermath period, with two very contrasting attitudes: as one of the causes of the 1997 crisis, and as an industry to boost the national economy in 2002. The industry involves about 20 related jobs, and accounts for about 25% of Thailand's GDP. Thus, it is important to learn about the factors and circumstances involved during these bust and boom years.

The paper analyses factors and experiences learnt during this period, and the relationships among these factors, in the real estate business. The research approach is through synthesizing and analyzing information, critiques, and documents concerning this important topic, and through linking the banking crisis and the financial crisis.

2. REASONS REAL ESTATE WAS BLAMED AS A CAUSE OF THE CRISIS

In 1995-1996, the real estate cycle already showed indication of problems, in term of high overbuild of office blocks and condominiums. Many analysts prophesied that the real estate cycle would soon be in its 'bust' phase regardless of the exchange rate crisis (Sayarmwalla 1999, Renaud 1998, Herring 1999). In addition, the exchange rate crisis accelerated, thus exacerbating the down-turn cycle in real estate.

It will be shown how and why real estate was blamed as an important factor in exacerbating the economic crisis which resulted in national problems and real estate industry problems. Using a cause-effect method to capture risk factors, the Appendix shows the Summary of Circumstances and Factors Related to the Economic Crisis and the Recovery Period.

2.1 International Conditions and National Policy Problems

In describing the recent economic crisis in Thailand from 1997 to 2000, the important milestones and conditions, locally and internationally, have to be described for five years prior to the crisis. These milestones and conditions include:

2.1.1 International Conditions at the Time

1. Shortage of attractive investment in the advanced economic countries.
2. Low interest rates dominant in the developed world.
3. Investments in manufacturing capacity brought about by the relocating of industry from East Asia after the depreciation of the yen.

2.1.2 National Policy Problems

A. National Change in Financial System

There were two important milestones in Thailand's financial system change (Siamwalla 2000). The channels of monetary policies were rapidly changing with liberalization, deregulation and financial innovations.

1. In 1990, the acceptance of the obligations under Article VIII of the International Monetary Fund which required the lifting of all controls on all foreign-exchange transactions in current accounts.
2. In 1993, the gradual opening of capital accounts by launching of the Bangkok International Banking Facility (BIBF)².

These financial system changes were made parallel to the change in production structure as Thailand was changing from agriculture toward labor-intensive industries. This created conditions which produced the export-led manufacturing boom beginning in the second half of the 1980s through to 1996.

B. Financial System Weakness and Governance

In addition to local milestones and international conditions, the economic crisis stemmed from weaknesses in financial systems and governance (IMF 1999): private sector expenditure and poor financing decisions led to the crisis.

B.1 Weak Financial System

Financial systems' weaknesses include these factors: inadequate financial sector supervision, poor assessment and management of financial risk, the maintenance of relatively fixed exchange rates, and the implicit government deposit guarantees.

I. Inadequate Financial Sector Supervision

Most remaining foreign-exchange control measures were removed. All ceilings on interest rates were removed in 1992. The central bank's policy pushed domestic interest rates upwards, hence, there was an acceleration of the inward flow of foreign money that elevated domestic capital investment.

²Bangkok International Banking Facilities (BIBF) was established in 1993 to grant significant tax advantages from getting deposit or borrowings in foreign exchange from abroad. Banks (Thai commercial and foreign banks) that had been granted BIBF license by 1996 could significantly increase the magnitude of short-term capital inflows by reducing borrowing costs and easing access to foreign capital markets.

II. Poor Assessment and Management of Financial Risk

The rules relating to non-performing assets were changed. The Bank of Thailand chose to use the loosest of the rules: a loan was deemed to be non-performing only if principal and interest were overdue for twelve months.

III. Maintenance of Relatively Fixed Exchange Rates

The exchange rate was fixed, prior to the crisis in 1997. The central bank had a strict policy of a fixed exchange-rate. This insurance against exchange-rate movements offered tended to encourage excessive movements of capital, both inwards and outwards. Furthermore, the exchange rate was attached to U.S. Dollar.

IV. Implicit Government Deposit Guarantees

Thailand's commercial banks were supported by the Thai Government through the Financial Institutions Development Fund (FIDF)³.

B.2 Governance

Governance weakness include these factors: lack of transparency in corporate and fiscal accounting and the provision of financial and economic data.

2.1.3 Investment Boom

These factors led banks and corporations to borrow large amounts of international capital, much of it short-term, denominated in foreign currency, and non-hedged. This inflow of foreign capital tended to be used to finance poorer-quality investments.

Borrowers perceived their cost of capital to be considerably reduced. An asset price bubble was caused by ready availability of foreign capital influx.

2.2 Real Estate Industry Problems

2.2.1 Nature of Thai real estate

The real estate sector is the largest component of Thailand's national wealth (Renaud 1998). Despite that, the Thai real estate industry that has emerged during the last decade remains immature. The industry was initially built on sound growth fundamentals until about 1992-1993, and then the industry was magnified and distorted by outdated banking policies and weak credit risk management in the financial sector.

³Financial Institutions Development Fund (FIDF) is managed by the Bank of Thailand and funded by yearly contributions equal to 0.1 percent of deposits from all institutions supervised by the Bank of Thailand. When any bank lose its capital, the central bank will not allow that bank to collapse but will raise capital from the other banks (BOT 2003).

The property boom went back to the late 1980s, when Thailand was enjoying double-digit growth. Hence, there was naturally a lack of office and residential space. Supply was absorbed by justified demand only until about 1992-1993. By 1994, it was becoming obvious that supply was in excess of real requirements.

2.2.2 The Size of the Overbuild

The extent of overbuilding in Thailand before the crisis was the largest among many countries. Oversupply in the housing market had become obvious since the 1994-1995 period. A 1995 study by the Government Housing Bank showed that unoccupied residential units were about 300,000 units. By 1998, the vacancy rate of new housing stock was 28%, which represented about 350,000 units (Richard Ellis 1997, Renaud 1998). Vacancy rates in the downtown residential condominium sector had reached 50% by December 1997. Comparing the severity of Bangkok's residential vacancy rate to another city which lacked development regulation: The vacancy rate for apartments in Houston, Texas peaked at 18% in 1987.

The total office supply in 1997 had quadrupled to 6 million square meters, comparing to less than 1.5 million square meters in 1991. With a wide gap between supply and great decreasing demand, office vacancy rate spiked about 20% at the time of the crisis. In comparison, between 1992 and 1997, the office vacancy rate was 5-9% in Tokyo, 2-9% in Singapore, 3-6% in Hong Kong, 2-7% in Makati, Philippines, 2-8% in Kuala Lumpur, and 8-15% in Jakarta (JLW, 1998, Renaud, 1998).

In the case of Bangkok resource misallocation and over-investment in the housing market appeared to be the more severe, relatively and absolutely, than it was in the office market. This was internationally unusual, since the cycles in offices tend to be more volatile than for housing, because of the office's greater volatility of demand, the length of the construction period, and the lump-sum cost of releasing space (Grenadier, 1995).

2.2.3 Who Caused the Overbuild?

There are three origins which can be traced whose effects on actions and policies created the situation where overbuild was effortless.

I. Lenders

Banks, both governmental and commercial, and other types of financial institution, increased loans to real estate dramatically, from 6.3 per cent at the end of 1988 to 14.8 per cent at the end of 1996. As described in Part 2, because of changes in the financial system and international conditions at the time, an influx of foreign capital created a mood for loans which resulted in poor-quality loans.

II. Financial System Tied to Property

The business cycle naturally generates the fundamentals that initiate real estate cycles. However, in Thailand, a majority of banks use property as collateral, and the amount of a loan is based on that collateral. Banks use collateral as security. This is a close link between property and bank loans. The property placed as collateral could be used to raise more loans, whose proceeds could in turn be used to purchase more property, elevating asset price raises even further (Siamwalla 1999). On the credit risk management, loan policy was not assessed carefully on cash flows and their risks. Which, in turn, created a huge amount of non-performing loans.

III. Poor Private Investment Decision

The majority of the office buildings in the Bangkok Metropolitan Area have not been built by specialized property companies but rather by a variety of business companies with very different core businesses. Their investment decisions were not driven by sustainable rents, yields, and capital value, but by easy access to credit, tax considerations, a trophy mentality, and euphoria. Such investment and development by business companies other than professional developers were mostly for their own use, often on their own land. Consequently, owner built office space is often an inefficient utilization of space and poor property management. Another poor private investment decision was the use of off-shore short-term loans for medium to long term investments. And, many of these loans were not hedged.

3. HOW REAL ESTATE COMPANIES SURVIVED THE CRISIS

Prior to the 1997 exchange rate crisis that triggered the economic crisis, there were about 2000 real estate developers. Only 10%, or about 200 companies, of these survived.

During the crisis, consumer confidence was considerably decreased. The majority of anticipated and affordable homebuyers delayed their decision due to job insecurity and lack of trust in real estate development companies to provide housing. This demand reduction affected cash in-flow from consumers. Moreover, the decrease in cash in-flow from closed financial institutions caused many real estate developers to go out of business.

The condition of the real estate industry after the crisis, was that there was oversupply and a very severe asset price deflation, which paralleled the deflation of financial assets on the stock market.

Survival Strategies

A small number of able real estate companies managed to survive during the crisis with tactic and strategies which can be categorized in three groups: cash-flow management, financial settlement, and product strategy.

Cash Flow Management

The most important approach is to maintain cash flow, which is the main vessel of business (Dechawas 1998). Many surviving companies were able to manage the companies' cash flow by maintaining (and increasing, if possible) cash in-flow and reducing cash out flow.

Maintain cash in-flow

- Reduce prices and try to get rid of exiting inventory
- Down-size the company and continue the existing projects

Reduce cash out-flow

- Reschedule payments
- Drastically reduce operation expenses
- Most companies down-sized the company by lay off of employees
- Limit advertising expense on newspaper advertising and turn to commission on direct sales instead.

Real estate price reduction naturally occurred during economic crisis. Reducing the price to sell the product as soon as possible, even at a loss. The reason was to substitute other costs such as interest and operation cost which could produce bankruptcy.

Financial Settlement

The Thai Baht reduced its value compared to U.S. dollar from 25 Baht per 1 \$USD down to about 46 to 50 Baht per 1 \$USD during 1997 and 2000. Real estate companies that borrowed off-shore loans were faced with with huge debts overnight. It was impossible to return the loan as planned. In almost all loan cases, negotiation between loaner and debtor was unavoidable. Some negotiation solutions were to reschedule payment, both loan and interest to maintain cash flow for operation. Discounting a loan was also used, most off -shore lenders accepting a discount of at least 40% due to total lack of payback trust. Also a hedging fund was a necessity right after the exchange rate crisis, the ignition of this economic crisis.

New Product Strategy

The other strategy to survive in the next upturn of the cycle cannot depend alone on price reduction. Customers have also been cautious in the selection of products. Many developers provided a new trend of houses equipped with more value added items including more energy saving, and environmentally friendly, fittings.

Only a small number of real estate developers were able to stay in the business. Many companies finished the rest of their remaining real estate projects in debt, or became non-performing loans and went out of business.

Corporate Case Study

Two case studies are illustrated here using two successful real estate developers who are listed in the Stock Exchange of Thailand (SET).

I. Land and House Public Company Limited

Product strategy:

Comfortable house concept: instead of reducing prices, the company has conducted a product upgrade strategy, by adding more value material.

Marketing strategy:

The complete-before-sell strategy: to increase trust of consumers who lost confidence, during the crisis, of not getting houses that they had paid for, by creating a policy to complete-house construction before putting up for sale.

Financial settlement:

- Sold shares to Government of Singapore Investment Corporation
- Reduced debt negotiation, in combination with:
- Extend repayment period
- Reduced interest rate (at minimum lending rate (MLR))
- Converted debts to convertible debenture (Land and House 2003)

II. Sansiri Public Company Limited

Marketing strategy:

The first real estate developer to receive an ISO 9001:2000 Certificate. Focused on developing premium-quality real estate projects.

Financial strategy:

- In 1999, joined by Starwood Property Group, a U.S.A. venture capital, as partner
- In 2001, completed debt restructuring with its creditors, by means of cash settlement, asset swaps and debt-equity conversion.
- In August 2002, a group of new major-shareholders provided 2.6 billion Baht. This made Sansiri one of Thailand's top five property developers listed on the SET, in terms of its market capitalization as well as assets (Sansiri 2003).

4. GOVERNMENT REASONS FOR PROMOTING THE REAL ESTATE INDUSTRY AFTER THE CRISIS, 2000 TO 2002

A house is an essential for a human being. The real estate industry is a major contributor to the nation's economic growth. Hence this industry involves and impacts many parties.

A house is one of the four human essentials (house, food, medical, and clothes). There will always be a demand for housing and spaces for work and pleasures. A newly married couple or just graduated employee may needs their own dwelling. Even a growing family may needs a bigger space for living. Business both new and growing ones also needs space for work.

The real estate industry, including other related parties, accounts for about 25% of Thailand's GDP (Jatusripitak 2002). These other parties include professional designers, architects, engineers, interior designers, landscapers; contractors and subcontractors in all trades; material suppliers such as cement, steel, electrical, ceramic and sanitary; advertising fields; brokers; appraisers; construction management; financial institutions; and labor forces. The rise and fall of real estate will have a great deal of impact on these parties.

Despite the damage to the real estate sector during the crisis, the efficiency and stability of the real estate sector is a major component of Thailand's competitiveness (Renaud 1998). In an open economy that will be becoming increasingly technology intensive and services dependent, the real estate sector will keep growing in importance. 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.(Renaud 1997)

Real estate utilizes materials that are mainly locally produced. The production procedure itself is a low technology industry, labor intensive, and independent from currency exchange rate risks.

As the real estate industry increases, this will boost a major part of the national economy. The present Thai Government perceives the fact and promotes this industry by issuing many incentives policies and regulations.

5. GOVERNMENTAL SUPPORTING POLICY AND REGULATION

As the Government perceives the importance of real estate as a major sector to boost the national economy, it has issued many incentive policies and regulations both to stir up the demand side and the supply side. The main strategy is to create equilibrium between demand and supply (Jatusripitak 2002).

Demand for real estate in Thailand diminished as the result of the economic crisis. Consumer's real demand for residential and commercial space, especially intending homebuyers, delayed and postponed their buying decision. The main reason was to wait for better bargains, for cheaper housing price, which during the year 1997 till 2000 reduced year by year. 90% of the suppliers, real estate developers, have gone out of business, with only 200 out of 2000 real estate developers remaining (as explained earlier).

Government policies are essential to promote demand by homebuyers and to strengthen those who are in the real estate business and related fields. Such policies can be categorized into two following groups.

5.1 Demand Side Supporting Policy

The demand side policies were to encourage homebuyers to make quicker buying decisions. The policies have been related to reducing the cost of owning a house by providing taxation privileges and reducing the transfer fee.

1. Taxation Privileges and Transfer Fee Reduction

1.1 Reduce Special Business Tax rate on transfer fee on land and house, from 3.3 percent to 0.11 percent. Extend the reduction period for three years, from the year 2001 to the end of 2003.

1.2 Reduce Personal Income Tax, by deducting the expense of buying a house, by about 100,000 to 200,000 Baht

1.3 Reduce personal income tax, by deducting interest expense on a loan for buying or buying-renting a house

1.4 Reduce the real estate title transfer fee rate from 2 percent to 0.01 percent

1.5 Reduce the fee rate on the registration of real estate as loan collateral from 1 percent to 0.01 percent

2. Incentives for Government official under the Government Pension Funds (GPF) and the State Enterprises staffs

The government encourages home purchasing by Government officials under the Government Pension Funds (GPF), and by State Enterprises staffs. These groups are

mainly low income earners, but they have a stable and guaranteed income. The approach is to encourage home buying decisions in these groups of people by providing them with buying power. By cooperating with the Government Housing Bank (GHB), this real estate support policy provides special criteria to grant home mortgage loans with special mortgage loan packages (GPF 2003).

GHB also provide post finance for other potential home loan packages. The features include; a loan amount for 100% of the appraised value of the property; a loan period up to 30 years; and a special low interest rate (GHB 2003).

Besides all the above strategies, the present interest rate is very low and thus attracts homebuyers. The low state of interest rate is due to the decreased interest rate in western countries. This is an important factor in persuading homebuyers invest in properties rather than in a low-interest saving account.

5.2 Supply Side Supporting Policy

On the supply side, the government also issues policies to support real estate developers. The strategy is to create an equilibrium between demand and supply for the real estate industry.

1. Amendments to the Bankruptcy Act

In 1999, the Bankruptcy Act was amended. These amendments added a new section on Company Rehabilitation. This allows business corporations to have opportunities to resolve and compromise with lenders before filing for bankruptcy. These opportunities provide a period for debtors and lenders to set up a team to continue operating the business while rescheduling and restructuring debts (Ministry of Justice 2003).

2. Resolve Non-Performing Loan Problems

The Thai Government set up the Thai Assets Management Corporation (TAMC) in 2001 to solve non-performing loans (TAMC 2003). TAMC is an organization established as one of the measures imposed to resolved financial problems after the 1997 crisis.

Because of loan payment condition prior to the TAMC set up, much of the decline in the non-performing loans (NPLs) was due to rescheduling rather than tangible restructuring (BizAsia 2001).

TAMC transferred non-performing assets from commercial banks and other financial companies, under criteria stated in the Emergency Decree of the Thai Asset Management Corporation B.E.2544. Assets were purchased at a price below the loan recovery amount.

The commercial banks had to take their share of the loss and gains resulting from the debt's management. TAMC issued approximately 300 billion worth of promissory notes with the guarantee of the state rescue fund in exchange for debt transferred by the private sector financial institutions. TAMC then manages these acquired assets by restructuring debts, restructuring businesses, and/or sell the debts (for property mostly through auction). TAMC allows financial institutions to release bad debts and allow businesses to negotiate for continued operations.

3. Increase Investment Capital through Property Funds

Since 1997, under the Ministry of Finance, the Securities Exchange Commission approved principles and related regulations for the establishment of five types of property fund⁴. Property Funds are a major source of capital to be invested in properties. This form of capital market share is an investment risk.

Some of the above supporting policies decrease government income in terms of personal income tax and fees from real estate transactions. However, as the real estate business has its own cycles, many related businesses then generate another round of cash flow cycles. Thus, such cash flow cycle create economic growth and consumer confidence, and therefore political stability.

6. IMPORTANT REAL ESTATE RISK FACTORS

A summary of critical events and factors can be categorised in three stages:

1. The previous up turn of the real estate cycle was due to the inflow of foreign capital and poor investment decisions. The overheated foreign capital inflow was caused by (1) international conditions, (2) national financial and monetary systems failure, and (3) governance weakness.
2. During the euphoria period asset prices were over appreciated on land, property, and stock. The implicit government deposit-guarantee, the linkage of the loan system to property, and poor governance were parts of the causes of poor-quality loans.

⁴Property Funds have been under the care of the Office of Securities Exchange Commission (SEC). The four (out of five) types of Property Fund directly related to solving real estate issue are: Property Fund for Public Offering, Type I Fund–Property Fund, Type II Fund–Property Fund for Resolving Financial Institution Problems, Type Fund IV–Property and Loan Fund. The other type is Type III Fund–Mutual Fund for Resolving Financial Institutions Problems (SEC 2003) (SEC 2000).

3. As the crisis developed, real estate businesses survived by solving (1) cash flow management and liquidity problems, (2) financial settlements, and (3) creative product strategies.

Figure 1 assembles and compares the important factors.

Figure 1: Comparison of Factors in Financial and Monetary Systems and Real Estate Information Between the Period Prior to 1997, and Changes Thereafter

Events	Pdrior to 1977	Changes	Changes (as of year)
Financial and Monetary Systems			
*Currency Exchange System	Fixed	Float	1977
*No. of Financial Institutions (1)			
- Thai Commercial Banks	16	13	2003
- Finance Companies, Finance and Securities Companies	83	18	2003
*Interest Rate (weighted average)	11.5%	1.88%	December 2002
Real Estate Information (2)			
*Number of RE Developers	2,000+	2,00+	2002
*New Home Registration (units/years)	130,000-140,000	16,000-17,000	1993-1996
*New project Finance (Baht)	2 million	1.2 million	1993-1996

Source: (1) Bank of Thailand, (2) jatusripitak 2003

Important Risk Factors in Real Estate

Important real estate risk factors are grouped into governmental level and business level.

Government Level

- Credit risk management
 - loan regulation and control
 - appraisal standard control
- Support database center for the industry

Business Level

- Improve attitude and criteria on investment decisions
- Improve professional management ability
- Protection against foreign currency exchange
- Improve governance
- Require market survey

7. CONCLUSION

By studying how the real estate industry fared through the economic crisis, important related events and risk factors have been reviewed. The study found that the success of surviving companies depends on financial management especially cash flow management, product strategy (innovation and consumer dependent), and information-supported investment.

Real estate as a whole is a large industry that is highly cash flow dependent. Also the loan collateral system is linked very closely to property. As the real estate business impacts many other related businesses, it should be carefully managed. Although there are natural cycles for all businesses, this management is important to guard against severe impacts of over-heating as well as the downside of the real estate cycle.

Real estate is an important industry. However, as in the high risk high return concept, the more important this industry is, the more it needs good business governance, good control. The industry also needs improvements in its professional standards of doing business, and the setting up of a national real estate database center. These needs only represent the least of what should be done to lessen the impact of the next turn of the real estate cycle for the industry.

REFERENCES

- Bank of Thailand website (2003) http://www.bot.or.th/bothomepage/Special/FIDF/foundation_e.htm
- BizAsian (2001) "New Thai Asset Management Corporation to take Wings", website <http://www.bizasia.com>, *Economy Planning*, 2001-02-24 08:45:00-05
- Dechawas, Kanok (1998) "Asking for the Bottom Cycle of Real Estate Business" *Journal of Thai Real Estate Association*, Feb-Mar. 1998, pp. 1-8
- Government Housing Bank website (2003) <http://www.bhb.or.th>
- Government Pension Fund website (2003) <http://www.gpf.or.th>
- Grenadier, Steven R. (1995) "The Persistence of Real Estate Cycles" *Journal of Real Estate Finance and Economics*, Vol. 10, 1995, pp. 94-119
- Herring, Richard J., Susan Wachter (1999) "Real Estate Booms and Banking Busts: An International Perspective", *Financial Institute Center*, The Wharton School, University of Pennsylvania, 1999 (An earlier version was written for *the Conference on Asian Twin Financial Crises*, Long Tern Credit Bank and the Wharton U.S. – Japan Management Studies Center).
- International Monetary Fund (IMF) (1999) "The IMF's Response to the Asian Crisis" January 17, 1999
- Jatusripitak, Somkid (2002), Key Note Speaker Speech, Real Estate Economic Index for the Year 2002, *2002 Annual Seminar of the Three related Thailand Real Estate Associations*, Public Relation, Office of Minister, Ministry of Finance
- Jatusripitak, Somkid (2003), Key Note Speaker Speech, Real Estate Economic Index for the Year 2003, *2003 Annual Seminar of the Three related Thailand Real Estate Associations*, Public Relation, Office of Minister, Ministry of Finance
- Jones Lang Wootton (JLW) (1998), *Regional Property Markets in 1998. The Impact of Asian Currency and Stock Market Turmoil*
- Land and Houses Public Company Limited (2003), Company Profile, *Annual Report 2001* and website <http://www.lh.co.th>

Ministry of Justice website (2003) <http://moj.go.th>

Renaud, Bertrand; Ming Zhang, Stefan Koeberle (1998) How the Thai Real Estate Boom Undid Financial Institutions – What Can Be Done Now, *Thailand's Economic Recovery and Competitiveness Seminar*, Bangkok, 20th May 1998.

Renaud, Bertrand (1997), “The 1985 to 1994 Global Real Estate Cycle: An Overview”, *Journal of Real Estate Literature*, 5: 13-44

Richard Ellis (Thailand) (1997), *Bangkok Property Report, Quarter 3, 1997*, Proprietary Report to Subscribers.

Sansiri Public Company Limited (2003), Company Profile, *Annual Report 2001*, and website <http://www.sansiri.com>

Siamwalla, Ammar (2000) Anatomy of the Thai Economic Crisis, Thai Economy Watch, website <http://ThaiEconWatch.com>

Securities and Exchange Commission, the Office of (2000) “Guidelines for the Establishment of Property and Loan Fund (Type IV Fund)”, *Publication No. ON 23/2000*

Securities and Exchange Commission, the Office of, website (2003) <http://www.sec.or.th>

Thai Asset Management Corporation website (2003) <http://www.tamc.or.th>

APPENDIX

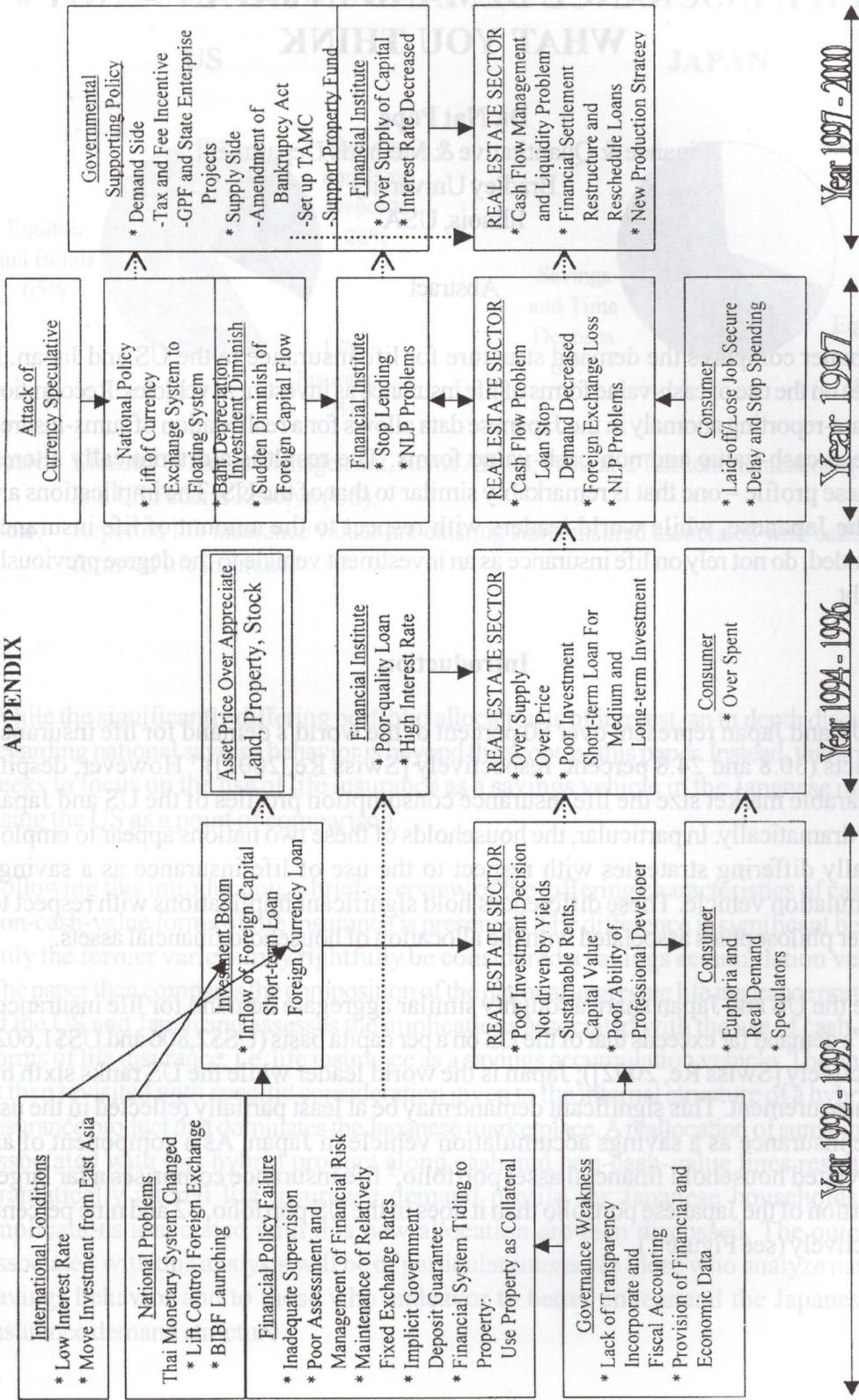


Figure 1 : Summary of Circumstances and Factors Related to Economic Crisis and Recovery Periods