Property Markets and Land Policies in Northeast Asia The Case of Five Cities : Tokyo, Seoul, Shanghai, Taipei and Hong Kong

Natacha Aveline-Dubach, Ling-Hin Li

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The Case of Five Cities:

Tokyo, Seoul, Shanghai, Taipei and Hong Kong

Edited by Natacha AVELINE and Ling-Hin LI

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About the Publishers

The Maison Franco-Japonaise (MFJ)

The Maison Franco-Japonaise (MFJ) was founded in 1924 for the purpose of promoting scientific and cultural cooperation between Japan and France. Its founders were two prestigious persons: the writer and diplomat Paul Claudel, who was ambassador from France to Japan at the time; and the other was the Japanese businessman Shibusawa Eiichi, often referred to as 'the father of Japanese capitalism'. There are currently 26 academic French-Japanese associations affiliated to the MFJ. The French bureau of the MFJ has the task of organizing scientific events, with the financial support from the French ministry of Foreign Affairs and the French Embassy. It hosts three full-time researchers undertaking research on Japan and Asia in various fields of social sciences, and accommodates short-term visiting researchers. The library of MFJ has one of the most extensive collection of books written in French in Asia (about 50,000 titles).

The Centre of Real Estate and Urban Economics (CREUE)

The Centre of Real Estate and Urban Economics (CREUE) is a virtual research centre attached to the Department of Real Estate and Construction, HKU. All the teaching to the Department is therefore also affiliated to the CREUE. The Centre is an independent think thank meant to promote an improved dialogue between the public and private sectors. The primary task of the Centre is to examine issues relevant to the real estate community's investment programs in Hong Kong, China, and elsewhere in the region. It also aims at researching into the planning, development and management of urban real estate with emphasis on legal, regulatory, economic and financial aspects ; defining a focused agenda from which research, training, contract research and consultancy activities can grow; and encouraging work of an interdisciplinary nature by bringing academics working in different disciplines (from within the university, the territory, ans from Foreign institutions) together with professionals working in the industry, to do research and exchange views on topics pertinent to the urban agenda in Asia.

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This book emanates from a conference held at the Maison Franco-Japonaise (Tokyo) in September 10-11, 2001, entitled "Asian/European Real Estate Crisis and their Management". After further selection of additional papers, ten academic scholars/ seasoned property professional work together to provide an insightful examination of the five major land/property markets in the Eastern and North-eastern Asian region. Such a focus is the first of its kind and data on market development as well as government policies are provided with the most recent update. In these five markets, namely Tokyo, Seoul, Shanghai, Taipei and Hong Kong, the authors deliver well-elaborated analysis on market development, the dynamic of market mechanism as well as related government policies. Scholars and students in the field of land policies, housing studies, economic geography as well as urban studies will find this book a comprehensive guide to the land/property market development in these five cities.

Acknowledgments

This book has its origin in a conference held at the Maison Franco-Japonaise (Tokyo), in September 10-11, 2001 entitled "Asian /European Real Estate Crises and Their Management". The conference was organized by Natacha Aveline, research fellow at the Maison Franco-Japonaise from September 2000 to August 2002. This event allowed a stimulating confrontation of European and Asian experiences of boom-bust cycles over the past two decades. It also displayed the extreme variety of reactions in the field of market and land policy across Northeast Asia, resulting from a complex set of colonial legacies (Japanese legacy in Taiwan and South-Korea, British legacy in Hong Kong), and regional or national specific ways of addressing land issues (emphasis on Henry Georges' theory in Taiwan, emerging land markets in Mainland China). It was decided to go deeper into the comparison between Northeast Asian boom-bust cycles, rather than comparing "Asia" (as a supposedly homogenous region) and Europe.

We planned to publish an edited collection on land and property markets in Northeast Asia, and requested other recognized Asian scholars to join the project. The present book consequently includes only three papers of the conference, but we are aware of the importance of this event in the genesis of the editorial project.

We would therefore like to acknowledge our gratitude to the sponsors of the conference, i.e., Meikai University, the European Commission in Japan, the French Embassy in Japan, the French Bureau of the Maison Franco-Japonaise, the Research Center of Real Estate Systems, the French National Research Center, and the Japanese Academy of Real Estate.

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Chapter One

Introduction - The Overall Context of the Asian Financial Crisis and its Interaction with Domestic Property Markets

Natacha AVELINE

In mid-summer 1997, East Asian countries experienced a crisis of dramatic magnitude that threatened to erase half a century of economic progress. Since then, most Asian economies have been on the road to recovery, yet the financial storm continues to stimulate extensive research analysis. Although there has been little agreement on how to characterize the crisis, a broad consensus has emerged on the major structural differences across Asia, as well as on the compounded nature of this event.

This so-called '21st century-type' financial crisis was undoubtedly not a simple phenomenon, but rather a combination of currency, banking, economic, and confidence crises, as well as asset deflation. The first four issues – not to mention political issues – have been widely discussed and written about extensively. Nevertheless, there has been very little focus on the last phenomenon: asset deflation.

Yet the movement of asset values, especially property assets, has played a growing role in financial crises since 1990. Simultaneous property booms occurred in most OECD countries in the late 1980s, including Japan. This phenomenon was followed, a few years later, by a reversal of property markets of a similar synchronous nature around the world. In many countries, these boom-bust cycles in real estate severely damaged the financial system, as proved by the magnitude of the Japanese and Swedish banking crises (Renaud, 1997, L'Observateur de l'Immobilier, 1999).

In the early 1990s, while Japan and other mature economies were entering a new phase of recession, most NIEs and developing Asian countries recorded unprecedented economic growth and booming asset values (both in property and stock markets). The 1997 crisis, however, went hand-in-hand with severe slumps in real estate markets. To what extent did the property boom-bust cycles contribute to inducing or worsening the crisis across Asia? Although most analysts have acknowledged the significant impact of asset inflation and subsequent deflation in the Asia crisis, very little research has closely investigated this issue.

One pioneering work worth mentioning is the book edited by Bertrand Renaud and Koichi Mera (2000), that examines the linkage between the real estate sector and the financial crisis, with a geographical coverage of eight countries (Japan, Korea, Taiwan, Hong Kong, China, Thailand, Singapore, and Indonesia). This survey provides evidence that real estate was involved in the financial crisis in Asia, though to a different degree from one country to another. In Japan, the real estate boom was the catalyst of the domestic crisis of the early 1990s. Excessive building and highly leveraged real estate investments were also a major factor of the crisis in Thailand and Indonesia. In Hong Kong, real estate also played a causal role in the crisis, but the sharp property asset deflation was primarily due to the hike in short-term interest rates required for the defense of a dollar-pegged currency. In the other Asian countries, real estate was not a causal factor of the crisis, but contributed to worsen it in most cases (Mera, Renaud, 2000).

In the recent economic recovery in Asia, it is noticeable that countries where real estate investments were excessive and highly leveraged are currently experiencing the slowest upturn. Conversely, among economies hit the most severely by the crisis, the quickest to recover has been Korea, where bank exposure to real estate was the smallest

across Asia. Although multiple factors (including the noticeable boom of the IT industry from 1999 onwards) are involved in the recovery of Korea, as well as of other countries, the role of real estate should be adequately considered –not only to appraise the sustainability of the current recovery, but also to allow appropriate policy-making to ward off the dramatic effects of further property boom-bust cycles.

Real estate assets have the unique characteristic of being simultaneously a medium for investment and a major input to the productive capacity of the economy. Public policies in Asian developing countries have historically promoted cheap housing for low-income households to sustain low wages in labor-intensive sectors, to maintain a comparative advantage in international competitive markets. However, as financial globalization progressed, the use of real estate as a financial vehicle grew, thus generating a major contradiction between capital accumulation and labor reproduction. Asian governments were compelled to balance their position between the need to overcome this contradiction, and the need to maintain their political legitimacy. Policies specifically addressing these issues were taken through regulatory frameworks referring to land or housing policies.

The purpose of this book is to examine whether land and housing policies contributed to mitigate or to worsen the property cycles in East Asia, and whether they had a significant impact on the overall economy of each country. The survey encompasses five major Northeast Asian cities, namely Tokyo, Seoul, Taipei, Hong Kong and Shanghai.

Before examining each case study, I shall first briefly outline the overall context of the Asian financial crisis and its interaction with domestic property markets.

One of the most fundamental changes in the majority of East Asian economies in the 1990s was the dramatic increase in inflows of international capital. Net private capital inflows into Asian economies increased six-fold, from 1983-1989 to 1996, from $US17 billion to $US110 billion. By the mid 1990s, Asian countries were taking 40% of global foreign direct investments (compared with 15% in 1980) and accounted for 30% of global portfolio equity flows (compared with 2% at the start of the decade). This dramatic increase in capital flows reflected a combination of factors, on both the supply and the demand sides.

Changes in the supply of foreign capital flows

On the supply side, the lowest interest rates in most developed countries in the early 1990s were a powerful force encouraging greater flows. U.S. interest rates, in particular, fell by 200 basis points between 1991 and 1993. The low rates encouraged investors to seek higher returns overseas, thereby tempting them to accept greater risks. A second dominant factor of the 1990s on the supply side was the growth of pension funds in Western industrialized economies with enormous capital to invest. Institutional investor fund flows to emerging markets grew from $US2,454 billion in 1980 to $US7,466 billion in 1988, and than increased yearly by around $US1,000 to 2,000 billion, reaching $US20,641 billion in 1995. For the United Sates, the major supplier among Western industrial countries, institutional investments grew from 10% of GDP in 1980 to 200% in 1997 (Greenville, 2000). The majority of the new inflows took the form of portfolio rather than direct investment –flows that could easily be reversed through the non-renewal of loans (most of which were of very limited duration). The portfolios

focused on the need for diversification, and shifted towards investments of significant exposure, including property investments. The rapid changes in information technology enabled investors to move funds instantaneously around the world, thereby increasing the volatility of investments.

In addition to institutional investors, banks had become more internationalized and were therefore able to lend to emerging countries. Japanese banks, in particular, were the most induced to lend to emerging Asian economies, as they enjoyed the highest interest differential rate among international lenders, following the lowering of the discount rate to 0.5% by the Bank of Japan in 1995. They became the largest creditors in the region, providing 30% of all international loans to Asia. The influence of Japanese banks was particularly strong in Thailand –where they accounted for over half of all international lending– because the differential interest rate reached the greatest level with a local borrowing rate of 10%.

Major structural changes in the demand

The growth in capital flows to Asia also reflected a combination of factors on the demand side. First, the difference between Asian countries was not clearly perceived by foreign observers, who were still strongly influenced by the World Bank's 1993 publication *The East Asian Miracle*, praising the so-called 'Asian model of development' (World Bank, 1997). East Asia at large was seen as a success in macro-economic stability, and as offering better prospects than other regions. Economic growth accelerated to a rate nearly three times that of the world economy. Inflation rates were only half as high as those in other low and middle-income countries. Real interest rates averaged 4%,

compared with a negative 3% in other developing countries, ensuring good returns on savings and the efficient use of capital. Real exchange rates were generally competitive and less volatile than exchange rates elsewhere. Budgets were generally in surplus, and the share of government foreign debts were declining relative to GDP.

The major attractive features of East Asian markets underpinning the rush of foreign capital –high interest rates, fixed exchange rate systems and low inflation– turned out to have been optimistically overlooked by investors and caused further damage after the currency crisis. High interest rates exacerbated the banking crisis by weakening the liquidity of banks further, causing a sharp deflation of assets. Fixed exchange rate systems, pegging local currencies to the dollar on a nominal basis, severely damaged the domestic balances of payment when the yen depreciated relative to the dollar in late 1995 (Kim, 2000). As for low inflation, it was misunderstood as a signal of sound fundamentals, while asset inflation was underestimated in the macro economic indices. In short, the previously warning indicators of a crisis –too low a rate of savings, persistent budget deficits, and a high rate of inflation– which were relevant for the 1994-1995 Mexican peso crisis, did not apply in Asia.

Another key factor responsible for the dramatic capital inflows in Asia, on the demand side, was the financial deregulation implemented in most Asian economies. The U.S. government, pushed by Wall Street firms, pressed for rapid liberalization throughout Asia in the 1990s. Most broadly, the U.S. stimulated the opening of financial systems by spreading policy-relevant knowledge favorable to open markets under its intellectual and moral leadership. It also applied direct pressure on East Asian governments to open up, bilaterally and multilaterally, though organizations such as the World Bank, IMF, OECD, and Word Trade Organization (Lukauskas, Rivera-Batiz, 2001). In parallel, international

organizations, amongst which IMF and the World Bank, gave strong legitimacy to the view that the free mobility of capital, including portfolio flows, had enormous benefits for developing countries.

This view was supported in Asia by domestic investors, firms and banks, who exerted pressure on their ruling authorities to deregulate financial markets. The opening of capital accounts allowed investors to escape from rigidities in their domestic financial systems, and provided them with abundant foreign capital (relatively inexpensive compared with that available in the domestic market). Deregulation was also seen as profitable for Asian firms, because it enabled them not only to contract foreign funds offshore, but also to tap foreign capital markets. In a similar vein, deregulation offered opportunities to domestic banks to profit from arbitrage by borrowing at low interest rates abroad and on lending domestically –and in some instances internationally– at much higher rates.

It is worth noting that Asian economies chose to liberalize their financial markets despite the fact that they had already unprecedented levels of domestic saving rates –close to 40% of their GDP in many instances– and that firms had created substantial overcapacity of investments in some industrial sectors. The new inflows of foreign capital were thus used as a new source of finance for corporations or institutions already overexposed to the domestic financial system, which could not service past credit without access to new loans. They also provided funds for risky investments, such as in stock or real estate, as long as foreign investors underestimated the dangerous trends in these markets (Jomo, 1998).

Dominance of foreign indirect investment

Boosted by both 'pushing' and 'pulling' factors, foreign private capital flows in Asian emerging economies recorded unprecedented growth in the early 1980s. In 1995 and 1996, they exceeded $US200 billion each year (Table 1).

Indirect investment, i.e., mostly portfolio investment and bank loans, soon overshadowed FDI, which had been so far the predominant component of capital flow in emerging countries. The dominance of direct investments was particularly pronounced in the five most severely hit countries. In 1995 and 1996, indirect investment exceeded by over five times that of direct investment in these countries. Bank loans (included in the 'Other investment' category in Table 1) dominated, with a share over 60% of indirect investments and half the total private inflows. FDI nevertheless grew steadily, because the rapid appreciation of the yen after 1985 encouraged Japanese manufacturers to transfer a large proportion of their production (particularly the low end of the technology spectrum) to the lower-labor-cost countries of Asia – namely Thailand, Malaysia, and Indonesia.

The Asian crisis highlighted the significant difference in behavior of investors in the three types of investments mentioned above. Foreign direct investment proved to be the most resilient inflow, while bank inflows, and to a lesser extend portfolio inflows, were the most volatile. There are indeed fundamental distinctions between direct investment and financial capital flows. In direct investment, the foreign investor bypasses financial market intermediation and outlays the budgeted capital to selected projects. Thus, assuming that all the necessary studies and investigations have been made before the capital commitment, financial capital flows enter the host country through financial

market intermediation, thereby relying on the financial markets –among them the banking sector– to allocate foreign capital. In the latter case, investors have no direct control over the uses of their capital, and may not even know who the end users are. But when the debt service is guaranteed either explicitly or implicitly by the debtor's government or international institutions, as was the case in most Asian countries, investors have little incentive to care about how the funds are eventually used (Yang, 2000).

Table 1. Net capital flows to emerging East Asian economies ($US billions)

	1992	1993	1994	1995	1996	1997	1998	1999	2000[b],	2001[c],
Total										
Private capital flows	112.6	172.1	136.3	226.9	215.0	147.6	75.1	80.5	70.9	127.8
Direct investment	35.4	59.4	84.0	92.6	113.2	138.6	143.3	149.8	153.0	144.6
Portfolio investment	56.1	84.4	109.6	36.9	77.8	52.9	8.5	23.3	30.4	33.5
Other investment	21.0	28.3	-57.3	97.4	24.9	-43.9	-76.7	-92.5	-112.5	-50.3
Official flows	21.2	17.2	3.4	11.7	0.4	23.5	44.7	3.0	14.4	6.6
Change in reserves[a]	-56.9	-63.7	-63.6	-117.9	-114.2	-73.1	-37.8	-78.5	-102.2	-00.7
*Asian-5 economies**										
Private capital flows	29.0	31.8	36.1	74.2	65.8	-20.4	-25.6	-24.6	-40.6	-18.1
Direct investment	7.3	7.6	8.8	7.5	8.4	10.3	8.5	10.2	12.0	7.2
Portfolio investment	6.4	17.2	9.9	17.4	20.3	12.9	-6.0	6.3	6.6	3.0
Other investment	15.3	7.0	17.4	49.0	37.1	-43.6	-28.2	-41.1	-59.2	-28.3
Official flows	2.0	0.6	0.3	0.7	-0.4	17.9	19.7	-4.7	5.0	-1.9
Change in reserves	-18.1	-20.6	-6.1	-18.5	-5.4	-30.5	-52.1	-44.5	-17.2	-20.3

Source: Raja, Siregar, 2002.

*Indonesia, Korea, Malaysia, the Philippines, and Thailand

a. A minus sign denotes a rise; b. estimate; c. forecast.

Direct and indirect foreign investments also differ in the commitment over time of the foreign investor in the recipient country. For FDI, the capital commitment is long-term, and investors are responsible for the success or failure of their project. By

contrast, indirect foreign investment can be withdrawn from the market very quickly, both for equities and loans. In Asia, short-term loans (3-month loans) were a large component of international lending. Foreign banks could therefore quickly reverse their positions without being accountable for the inefficient use of their capital.

The difference between the three types of investments is also well illustrated by the move of capital flows after the outbreak of the currency crisis. While FDI continued to flow into the five emerging Asian countries mentioned above in 1997, indirect capital flows were dramatically reversed from an inflow of $US57.4 billion to an outflow of $US30.7 billion. The maximum outflow occurred in the case of bank lending ($US43.6 billion), later followed by portfolio investment ($US6.0 billion in 1998). The pattern of capital outflows, however, significantly differed across Asia. Bank debts were the main route of capital outflows in Thailand and Korea. By contrast, in Malaysia, Indonesia, the Philippines and Taiwan, portfolio investments, along with bank debts, played a major role in triggering the crisis. Some analysts consider them as key factors of the propagation of the crisis at the regional scale (Tsurumi, 2001). The growing importance of portfolio and short-term banking flows proves that international investment is becoming more and more volatile. It also clearly indicates that a growing proportion of international capital funds are likely to target stock and real estate markets. The volatility of these flows is exacerbated by the short-term horizon of the institutional investors, who are judged on their quarter-by-quarter (or month-by-month) performance. As Stephen Greenville puts it:

> *In a market dominated by such investors, there are no Friemanite stabilizing speculators to buy when the price falls. Even rational investors join the herd (Greenville, 2000).*

Immature domestic financial systems

These large and volatile international capital flows interacted with immature domestic financial systems. Most East Asian countries had officially adopted rules consistent with international financial standards well before the crisis started, but these rules were not properly enforced. Hong Kong and Singapore were nevertheless an exception: as the two financial centers of Asia, they could not function efficiently under any lack of or prudential oversight of their very large financial sectors. Elsewhere, banking sectors were poorly supervised and lacked prudential reforms. The fact that financial liberalization was undertaken without adopting appropriate policy frameworks across Asia can be explained by the lack of experience of the governments, and by the cost generated by such regulations, both for firms (higher levels of reserves or provisions required in the short run) and for governments (building the administrative capacity to supervise financial markets). But there was also a strong incentive for domestic financial institutions to escape from prudential regulations, as short-terms loans carried lower interest rates than their long-term counterparts, thereby increasing opportunities for profitable arbitrage (Noble, Ravenhill, 2000).

Poor banking supervision could not, therefore, prevent domestic banks from relying heavily on short-term resources. Loans of less than one-year maturity dramatically increased in many countries, reaching a share of 60% loans in Thailand, Korea and Indonesia; and between 45 and 60% in Malaysia and the Philippines (Bhalla, Nachane, 2001). Banks eagerly borrowed short-term loans to finance long-term projects, especially in Korea, Malaysia and Thailand. This generated a maturity mismatch, which

cumulated with a currency denomination mismatch, as short-term borrowing was offshore and long-term lending onshore.

Symbiotic relations between financial institutions and industrial corporations

Weak corporate governance in Asian countries also played a key role in the misallocation of financial resources. Close, symbiotic relations between banks and industrial corporations encouraged bank lending to risky investment (including investment in real estate assets) and led to the accumulation of non-performing assets and high corporate gearing ratios. The dominance of the banking system, in a context where large corporations are often controlled by family owners, and investment decisions made jointly with banks as part of the corporate groups, also accentuated the misallocation of credit funding. Unproductive investments were often cross-subsidized from other branches of corporate groups (Stieglitz, Yusuf, 2001). Ironically, the dominance of the banking system, which had such ill effects on the allocation of financial resources, resulted from the sound and prudent budgetary policies of the Asian governments. Without fiscal deficits, there was not need to develop government bonds, and without public free-risk bonds playing the role of a benchmark, corporate bond markets could not expand and provide alternative financing vehicles to bank loans.

New prospects for construction in Asian world cities

Real estate investments in Asia in the early 1990s are often referred to as speculative, but it is worth recalling that Asian property booms relied on robust

fundamentals in the early period. The tremendous economic growth of the region was accompanied by enormous urbanization, and the major cities captured a growing share of both national population and production (Table 2). At the same time, Asian cities were progressively integrated into a transnational system, linking the nations through the imperatives of globalization, and taking the form of a large urban corridor between the Tokyo area and Northeast China (Lo, Marcotullio, 2001). The accumulation of networks based on this functional urban system has focused the development on the largest Asian cities and increased their status of 'world cities'.

Table 2. Population densities in major Asian cities

	Tokyo Prefecture	Tokyo 23 wards	Singapore	Hong Kong	Shanghai center + inner suburbs	Shanghai center	Taipei	Seoul
Population (x 1000)	12,059	7,920	3,737	6,311	9,909	6,339	2,593	10,231
Surface (km2)	2,186.84	616	581	1,095	2,156	280.1	272.14	627.06
Population density (inh/km2)	5,514	12,848	6,432	5,763	4,596	22,634	9,528	16,315
Population of the total metropolitan area[a]	32,877		3,737	6,311	13,044		5,803	20,189
Share of the metropolitan area[a]	26%		100 %	100 %	1%		27%	44%

a. Tokyo Metropolitan area includes 4 prefectures. b. Population of the metropolitan area to the national population.

Sources*: Mitsui Fudôsan Kanren Tôkeishû* (2001), Lo and Marcotullio (2001), Nihon Kantei Kyôkai (2001)

To meet the requirements of both global and regional needs, cities in this region spared no effort to improve their infrastructure and redevelop their urban areas. Large amounts of public funds were invested in new transportation facilities. Before the 1997 crisis, 11 new international airports were slated to open within the next 10 years in

different Asian cities (Lo, Marcotullio, 2001). Investments also targeted the development of roads and railroads, in an effort to facilitate access to large cities. Another important response to global economic pressures was the development of infrastructure for high-speed transmission of information. Almost each major Asian city had its TNCs quarters, as well as a project of 'industrial park' in its suburbs.

At the same time, as financial liberalization progressed, the need for prime office buildings increased, along with the growing demand for luxury housing for expatriates and newly rich local households, having enjoyed stock and property asset inflation. Large-scale redevelopment projects were undertaken by the private sector to meet this new demand. Traditional centers were suddenly replaced by first-rate, modern cores with high-rise office buildings, expensive condominiums, and luxury hotels –all easily accessible from an international airport by expressway and/or railway. Asian cities competed to erect the highest skyscraper in the world to be the symbol of the ability of NIEs and emerging economies to catch up with mature industrialized countries, notably those in the West. In 1986, the 10 tallest buildings in the world were all in the USA. Ten years later, 4 of the top 10 were in Asia: Petronas Towers in Malaysia; Central Plaza and Bank of China Tower in Hong Kong; Shun Hin Square in Shenzhen. This achievement was the tangible expression of the success and pride of the East Asian countries, most of which had suffered under colonization by empires in the past (Mera, Renaud, 2000). Just before the crisis, a major Japanese development company, Mori Building, planned to build in Shanghai a record-breaking tower of 94 stories (460 meters high). But the bursting of the 'invisible bubble' in the largest Chinese city, followed by the September 11th terrorist attack in New York, led to the temporary abandonment of the project. However, before the Asia crisis, there was a widespread belief that any new development

project would prove profitable because of the tremendous growth of the economies. Governments encouraged this belief through ambitious planning projects allowing high floor-area ratios (FARs) and loose construction rules. Investment of sizable amounts of public funds in modern infrastructure and facilities also supported the view that the demand for real estate was insatiable.

The real estate euphoria came to an end in 1997. The belief that land prices would rise forever, supported by the lack of experience of land cycles in most countries, turned out to be a myth. The rush to new building projects, regardless of the real absorption capacity of demand, provoked overbuilding in many cities. Vacancy rates started to rise sharply, both in newly constructed office buildings and condominiums. The currency crisis thus hit already sluggish real estate markets in some countries. For example, in Bangkok, the office vacancy rate was estimated as high as 23% before the outbreak of the crisis (Renaud, 2000). Needless to say, the collapse of local currencies accentuated the impact of the crisis in the real estate sector, as many development projects were put on the market at a time when the demand for both office and housing was drastically reduced.

Banking exposure to real estate

Property has distinctive features that tend to exacerbate the risks taken in the banking sector – particularly in countries with immature financial systems.

First, real estate construction projects require extensive funding. They involve long-term financing with a high ratio of leverage. In the absence of alternative financial vehicles –for example, the securitization of real estate– banking loans become the dominant mode of financing. In the Asian context of the 1990s, the high leverage of banking loans was made more dangerous by the significant share of short-term loans

issued in dollars, as domestic banks financed real estate with long-term loans in local currency. The cumulative mismatching of loans, i.e., both maturity and currency mismatching, was thus exacerbated in the case of real estate investments.

Second, property assets, and in particular land, can be used as collateral for banking loans. Such a practice is observed in countries combining immature financial markets and inflated land prices. It was used, for example, in Lebanon, where land was considered the most valuable security during the war (Aveline, 2000). Land collateralization has been also widely used in Asian countries, as land prices inflated faster than financial interests and share dividends under the economic boom.

The practice of land collateralization becomes particularly dangerous when massive capital inflows pour into real estate, because it raises the collateral values, thereby encouraging the belief in the appropriateness of these values. When techniques for credit risk assessment by banks are poorly developed, banks tend to rely mostly on the collateral value instead of paying attention to the soundness of the borrower's business prospects and capacity for loan repayment. Investors are thus encouraged to buy land in order to secure easier access to bank credit allocations. This creates an endogenous and self-filling dynamic based on the myth of 'ever-rising land prices', by which inflation of real estate assets stimulates further lending, encouraging, in turn, further investment in real estate.

In Asian countries, including Japan, banks were not only keen to grant loans to real estate, but they relied heavily on collateralized property in their risk assessment, and used loose underwriting standards for loans (e.g. maximum loan-to-value ratio). The real estate sector absorbed 20 to 50% of total banking portfolios before the outbreak of the crisis, in 1997 (Table 3). The share of lending to property was particularly high in Hong

Kong SAR, Malaysia, Singapore, and Thailand. Elsewhere, it was less pronounced, notably in the Philippines (where the growth experience was less dramatic) and in Korea, where capital flows tended to be channeled more directly to the *chaebols* (large industrial conglomerates). Flexible underwriting standards allowed the banks to lend up to 100% of the collateral value, except in Hong Kong where the ratio was much lower (50 to 70%, Table 3). This proved to be particularly dangerous when property prices were rising rapidly and beginning to deviate from fundamental values.

As a consequence, non-performing loans mushroomed in Asia after 1997, except in Hong Kong SAR and Singapore, where the quality of banks and bank's supervision have been traditionally high. In 1998, non-performing loans accounted for 22.5% of bank assets in South Korea, 20% in Indonesia, 15% in Malaysia and 25% in Thailand. Estimates of non-performing loans in China vary, but some sources estimated them to over 20% of the assets of the state banks as early as in 1997 (Wang, 2000).

Empirical studies on the linkage between lending booms, property cycles, and financial crisis across Asia have shown a strong positive correlation between the growth of private bank lending and real estate prices. Furthermore, Collyns and Senhadji (2002) have provided econometric evidence that the response of property prices to banking credit is asymmetric and depends on whether property prices are rising or falling: the response during periods of rising property prices is much higher than the response during periods of declining prices (three times higher in the test of four selected countries). The higher response of property prices to banking credit in the increasing phase of the cycle confirms previous evidence that there is myopia intrinsic to real estate lending when property values have been climbing steadily for sustained periods of time (Renaud, 2000). As for the subsequent lower response in the declining phase of the cycle, it reflects the

fact that banks tend to reduce the share of credit to the property sector, and therefore decrease their exposure to the property market once the real estate bubble bursts. The asymmetry also reflects downward rigidity of property prices, at least in the short run, as investors are reluctant to sell property at a price lower than the purchase price (the 'lock-in effect'). A similar asymmetry, though of much weaker importance, was also observed on the stock markets.

Table 3. Banking system exposure to risk (% of assets at the end of 1997)

	Property	Collateral	Non-performing loans		*Capital*
	Exposure (%)	Valuation (%)	1997	1998	Ratio (%)
South Korea	15-25	80-100	16.0	22.5	6-10
Indonesia	25-30	80-100	11.0	20.0	8-10
Malaysia	30-40	80-100	7.5	15.0	8-14
Philippines	15-20	70-80	5.5	7.0	15-18
Singapore	30-40	70-80	2.0	3.5	18-22
Thailand	30-40	80-100	15.0	25.0	6-10
Hong Kong	40-55	50-70	1.5	3.0	15-20

Corsetti, Pesenti, Roubini, 2001

A third factor that contributed to amplify the magnitude of the boom-bust cycle was the immaturity of the real estate sector, which was even more acute than that of the financial sector. In most countries, property markets were not adequately monitored with accurate and timely information. Development companies also lacked experience in marketing methods. They overestimated the demand in some real estate sub-markets, bringing about a sharp rise in vacancy rates in the concerned segments. For example, in Bangkok, the supply of condominiums focused on the tiny luxury sub-market. New housing units in this segment increased by more than 18 times from 1988 to 1996 –from 3,686 to 68,000 units–, while the large demand emanating from middle-range households was left unsatisfied (Renaud, 2000). In some instances, development companies also

lacked experience in construction. This was particularly obvious in Shanghai, where public companies constructed, through development subsidiaries, poor-quality office buildings unable to meet international standards, in the prestigious new Pudong CBD.

Finally, intrinsic characteristics of real estate markets tend to amplify cyclical influences originating from the wider economy. There is an inherent tendency towards overproduction in the real estate sector, which can be explained by at least three factors: inertia in rents, stickiness of vacancies, and development lags (Renaud, 2000). Inertia in rents is due to the high 'entry and exit' costs, particularly in the case of office buildings. High transaction costs tend to slow down space take-up when prices are booming; after the bust, tenants tend to renegotiate their existing rents instead of moving into cheaper locations, thus hampering the adjustment mechanism (Grenadier, 1995). Stickiness of vacancies results from the combination of 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. In the case of emerging countries, demand is more volatile that in their advanced counterparts, and entry costs can be very high due to the immaturity of the financial markets (particularly in Korea, see chapters 4 and 5). Development lags are the consequence of the long gestation of real estate projects. For office space, an estimate of the average lag between the initiation and the completion of construction is two and half years (Grenadier, 1995). By the time the project is completed, reversal in demand may have occurred, especially if most of the buildings are put on the market at the same time –which typically happens when markets are booming. This tendency towards myopia is compounded by the asymmetric rewards from real estate development. Owners do not totally adjust in accordance with the subsequent upward and downward phases of the real estate cycle: they follow the trend when prices are rising,

renting at high levels; but when prices are declining, they prefer to wait for the next cycle rather than to lower their rents, to avoid the high cost of leasing space (Grenadier, 1995).

The Japanese crisis in the background

Although Japan was not directly concerned by the currency crisis, the collapse of the Japanese 'financial bubble' in 1991 played a key role in inducing the boom and the subsequent distress in the East Asian economies. The story goes back to the early 1980s, when Japan took its first steps towards financial liberalization –as did East Asian countries a decade later. Control of offshore capital investment was progressively removed after 1981, and Japan became, in a few years, a major capital exporter to most OECD countries and to many middle-income developing countries. Japan's share of long-term capital outflow among the G-7 countries plus traditional exporters Denmark, the Netherlands, Switzerland and Saudi Arabia grew from a quarter in 1982 to nearly 90% in 1987. In 1989, more than half of all foreign direct investments in these countries came from Japan (Werner, 1994). These massive flows were triggered by the Plaza Agreement of September 1985 (see chapter 1), which led to a major yen-dollar realignment, followed by a dramatic lowering of the discount rate by the Japanese central bank (from 5 to 2.5% between 1985 and 1986). Easy and cheap credit at home fuelled the real estate market boom, where new incentives in the form of liberalization of urban planning and construction rules strongly favored investment. The combination of easy money and growing demand for prime office buildings and top-of-the-line condominiums generated by the financial liberalization, brought about a surge in land prices in the major Japanese metropolitan areas.

The soaring value of land provided the collateral against which Japanese firms could borrow at home to buy assets abroad. Much of this investment took the form of portfolio investments (U.S. bonds and other securities), but direct investment –notably in real estate– also held a significant share. From 1984 to 1989, Japanese Foreign Direct Investment (FDI) increased by more than five times (from $US10,155 million to $US67,540 million, Chart 1). During this period, a wide range of Japanese firms engaged in real estate investment of unprecedented size around the world. The share of FDI in real estate relative to the total FDI flows –a mere 4.2% in 1984– peaked at 20.9% in 1989. In the U.S., real estate accounted for 63% of these investments. These funds flowed broadly to resort locations familiar to Japanese tourists, provided that foreign investment and other regulatory barriers in these countries allowed such investment (which was not the case for most East Asian countries, where purchase of property by foreigners were strictly controlled). Typical recipient regions in Asia/Oceania were Guam or Hawaii[1], the Australian Gold Coast, and to a lesser extend, Hong Kong or Singapore (Table 4). Similarly, Japanese real estate investments targeted cities around the world with a high proportion of finance and other services and developed property markets, to finance office and hotel construction in the central business districts. Cities such as New York, Los Angeles, London, Paris or Sydney attracted a significant share of these investments (Farrell, 2000).

With easy access to credit and inflating collateral values at home, Japanese investors were not encouraged to pay attention to the soundness of their investments abroad. Rather than seeking long-term returns, they anticipated short-term capital gains

[1] From 1987 to 1991, Japanese investment in California, Hawaii and New York alone accounted for over 72% of FDI in the United States (Farrell, 2000).

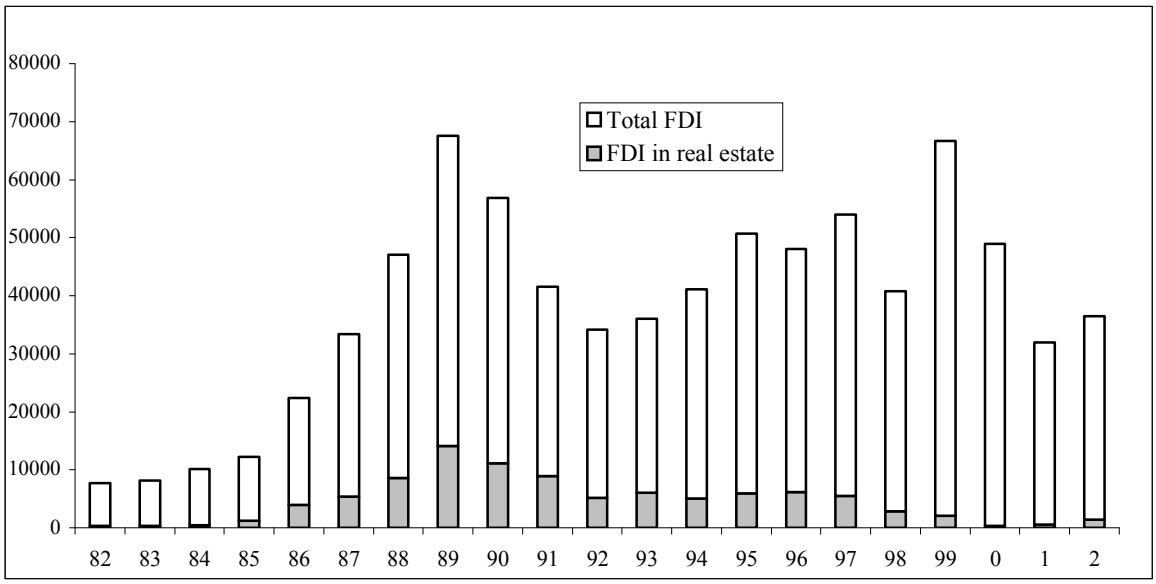
and resorted to risky investments. Such strategies are hardly surprising, given the very low yields on real estate historically recorded in Japan, especially relative to the enormous capital gains generated by land transactions. However, a noteworthy fact is that local institutional investors, i.e., insurance companies or mutual funds, usually followed the herd, and started to seek short-term capital gains rather long-term yields. Needless to say, such behavior triggered property booms or exacerbated existing ones, in most local property markets. This process coincided, in many countries, with major moves towards financial deregulation, which further destabilized the property sector. This factor might explain the unprecedented simultaneity of property booms around the world in the late 1980s (Renaud, 1997).

Yet the boom of Japanese real estate foreign investments abroad did not last long. In 1991, the bursting of the Japanese 'financial bubble' caused a slump in asset values –stock at first, then land–, thus drying up the source of Japanese speculative investment abroad. Total FDI capital flows decreased by 49% from the peak year 1989 to 1992 ($US67,540 million down to $US34,138 million), and then regained momentum, underpinned by the transfer of part of the Japanese production to the lower low-labor-cost East Asian countries. By contrast, real estate FDI followed a downward slope from 1989 on, falling to $US5,122 million in 1994, then to $US380 million in 2000, with a share of a mere 1% of all FDI capital flows (Chart 1).

The outbreak of the crisis in Japan coincided with the boom in East Asian economies, and with subsequent inflation in property and share values in NIEs and emerging economies. This was not incidental. Japanese investments once again played a role in recipient countries' property markets, but this time not through FDI. It was Japan's

domestic policy choices for her own financial crisis that indirectly played a role, by fuelling local banks with easy money. In the aftermath of the bubble's collapse, the Japanese Ministry of Finance (MoF) adopted a 'soft landing policy' towards bad debts, concealing the magnitude of the problem in the hope that the economy would recover –instead of requiring banks to actively clear away their bad debts. As assets values continued to fall, the government lowered the official discount rate to help Japanese banks recover with high interest rate margins. In 1995, the rate was lowered to an unprecedented level of 0.5%. The MoF also encouraged banks to expand lending, in the hope that they would resolve their problems.

Chart 1. Trends in Japanese FDI and real estate FDI, 1982-1999 (in million $US)



Source: composed by the author with data from *Mitsui Fudôsan Kanren Tôkeishû 2003*

Table 4. Geographical distribution of Japanese FDI in real estate ($US million)

Major host country	1981-1989	% by country	1991	% by coun-try	1994	% by country	2002	% by coun-try
United States[a]	24,160	69	5,512	60	4,415	81	195	14
Australia	3,502	10	1,282	14	151	3	1,035	74
United Kingdom	1,695	5	830	9	90	2	171	12
The Netherlands	1,200	3	324	4	61	1	-	-
Hong Kong	1,278	4	60	1	57	1	7	-
France	487	1	161	2	97	2	-	-
Singapore	553	2	85	1	236	4	-	-
Canada	477	1	107	1	12	-	-	
World	34,742	100	9,125	100	5,447	100	1,373	100

a. Includes heavy investment in Hawaii and Guam. Source: *Mitsui Fudôsan Kanren Tôkeishû 2003*

The historically low interest rates pushed money abroad, particularly in emerging Asian economies, where great returns could be expected (as previously mentioned, the interest differential rates reached almost 10% in Thailand). From 1994 to 1996, Japanese outstanding loans in Asia ballooned from $US40 billion to 265 billion. Japanese banks were the larger creditors of the region, providing 30% of all international loans. The flow of Japanese credit abroad not only fueled Asia domestic banks with easy money; it also caused the depreciation of the yen, and in so doing, decreased the competitiveness of Asian exports relative to Japanese exports in third countries. Furthermore, when the financial crisis hit Asia in 1997, Japanese banks exacerbated the crisis by selling loans to Asian companies in order to improve their position at home (Amyx, 2000). Japanese banks also contributed to impede the recovery in Indonesia. To be able to meet the requirements of the BIS, they refused to write-off large amounts of bed debts by Indonesian companies, thereby encouraging other major lenders to adopt a similar behavior (Amyx, 2000).

The Japanese dramatic cycle of land and stock assets was thus an indirect factor of the property cycles in Asian NIEs and emerging economies. In other words, Japanese banks and public authorities, by delaying the disposal of their bad debts, contributed to export the domestic 'financial bubble' in other Asian countries. It is therefore necessary to investigate more closely the domestic management of the Japanese financial boom.

A preview of the book

This book examines the property markets and land policies in five major Northeast Asian cities. The selected cities can be assigned to groups with respect to land issues. The first group gathers together Tokyo, Seoul, and Taipei. The South Korean and Taiwanese capital cities were colonies of the Japanese Empire during the first half of the 20th century. Although the concept of land and housing policies significantly differs in the three countries, the legacy of Japanese occupation is still very much visible in the operational methods of urban planning in South Korea and Taiwan. Furthermore, agrarian reforms were undertaken in the three countries after the Second World War –though under very different conditions from one country to another– facilitated by the U.S. presence. These reforms ensured more equitable distribution of land and agricultural income, raised agricultural productivity, and, in consolidating land ownership in the predominant production sector of that time, contributed to maintaining political stability (Koppel, Kim, 1993). This is in sharp contrast to most Southeast Asian countries, which have not experienced major land reform, despite considerable investments in agricultural expansion and rural development. These countries consequently still suffer from uneven income distribution and strong inequality in access to land.

The second group of selected cities, Hong Kong and Shanghai, are not affected by land reform, as they did not experience the development of private ownership. In Hong Kong, the former British government chose to keep land ownership in the hands of the public, and introduced a land-lease system, which was maintained in the Special Administrative Region (SAR) after the handover. A similar system has been progressively introduced, since 1987, in some urban zones of Mainland China (starting in Shenzhen), under the new 'socialist market economy'. Hong Kong and Shanghai thus share the major feature of having a total public monopoly over land. The two cities, however, strongly differ in the way both private and public bodies operate on property markets. While Hong Kong has a long tradition of open and sophisticated property markets, real estate in Shanghai is still in its emerging stage.

In the first chapter, Natacha Aveline elaborates on the background of this idea behind this book. She then examines the impact of the land structure and its related policies on the last boom-bust cycle in Tokyo, highlighting the major role of FAR deregulation in Chapter Two. Chapter Three focuses on the key issue of land information in Japan. Noboru Hidano and Yoshiro Yamamura give an account of the poor accuracy of the official land values, and propose a hedonic price index to improve the monitoring of property markets in the Tokyo central Business District. The fourth chapter deals with property markets and land policies in Seoul. Jae-Young Son discusses the bubble thesis for Seoul's real estate, emphasizing the strong shortage of land partly caused by restricting land-use policies. Shin-Young Park provides a complementary discussion of housing issues in Chapter Five. Z.M. Ge and Ling-Hin Li observe in Chapter Six the role of public land ownership in the emergence of a sizeable local housing market in Shanghai. This is followed by Chapter Seven in which Chien Han, Andrew Liu and Shu-Yun Huang

examine how the Taiwanese property markets are influenced and distorted by the land valuation and taxation systems. The final city is Hong Kong, which is examined by Ling Hin Li on the destabilizing effects of contradictory land policies on Hong Kong's real estate markets in Chapter Eight. Finally, in Chapter Nine, Natacha Aveline and Ling-Hin Li compare the major changes in property values over the last decade in the selected cities and examine more closely the linkage between land and real estate cycles in each sub-sector.

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Chapter Two

Property Markets in Tokyo and the Management of the Last Boom-Bust Cycle (1985-2002)

Natacha AVELINE

Introduction

In the late 1980s, the small Japanese archipelago challenged the economic supremacy of the United States. Skyrocketing land prices became the absolute benchmark from which to measure the growing wealth and financial power of Japan. According to the Japanese Economic Planning Agency estimates, the land of the capital city of Japan was valued as much as the whole of the United States in 1991[1]. It was said that the Emperor could even have bought the entire territory of California with the proceeds from the sale of the Imperial Palace grounds! Booming land and stock values allowed Japanese companies to buy such icons of American capitalism as the Rockefeller Center and Colombia Pictures. After 1990, however, Japanese land markets changed - from boom to bust. The 1990s witnessed a loss in land asset value estimated at ¥800 trillion ($6.04 trillion) nationwide, or the equivalent of 1.6 times gross domestic product[2]. Comparisons with the United States no longer favour Japan, and American commentators are now in turn comparing the current situation in Japan to that of the Great Depression in the U.S.

[1] According to these estimations, an 80 percent mortgage on all Tokyo estate in 1988 ($US7.7 trillion) could, in theory, have allowed Japanese investors to acquire all the land in the Unites States ($US3.7 trillion) and all public companies ($US 2.6 trillion).

[2] *Yomiuri Shimbun*, September 12, 2001. Estimations vary between ¥800 trillion to ¥1000 trillion.

(Dattel, 1999).

The magnitude of this land market cycle should not obscure the fact that land values were already considered excessive in Japan even before 1985; hence despite the continuous decline over the past decade land values have only just been realigned to their 'pre-bubble' levels. Such values are far higher than those recorded in other large cities in Europe or in the United States. For example, the average land price in Tokyo's ward area is around 7 times that of Paris's 20 wards, despite a GNP/capita and a population density of similar scale[3].

It is generally acknowledged that expensive land prices in Tokyo cannot be explained by the scarcity of urban land[4], or by economic fundamentals. Yet explanations of this striking feature are divergent. Scientists dealing with Japanese land issues can be roughly divided up into two groups. The first group comprises American and Japanese economists using neo-classical approaches (Hatta, Miyao, Ide, Mera, and Elderstein among others). They argue that the current tax system and urban planning rules strongly hamper urban development and therefore sustain inflated land values. Consequently, they advocate addressing the 'land problem' with a massive liberalization of town planning and tax regulations. The second group is composed of a few economists (Noguchi, Hasegawa, and Hanayama among others) and most Japanese planners. Contrary to the first group, they consider that expensive land prices are due to loose planning regulations and more generally to an excessively weak involvement of public authorities in urban development. The second group advocates the strengthening of public control over land

[3] The population density in Tokyo 23 wards and Paris 20 wards+3 surroundings prefectures was respectively 12,848 and 8,079 inhabitants/km^{2,} in 2001.

[4] Several authors have discussed the 'land scarcity myth' in Japan. See, among others, Calder (1986) and Noguchi (1992).

markets. Both groups, nevertheless, recognize the misallocation of land resources generated by the tax system during the 'bubble period', in particular the misallocation due to the excessive protection of farmers until the tax reform of 1991.

The purpose of this chapter is to examine closely the various constraints over the land markets in Tokyo and to observe how they interacted during the last boom-bust cycle period. The chapter is divided into five subsequent sections. In the first section, the major features of land ownership structure and regulations are briefly outlined. The second section discusses the striking prominence of land over buildings in Japan and its effect in terms of land policy and information. In the third section, the author reviews the changes in commercial and residential land prices in Tokyo over the past two decades, focusing on the roles played by tax and urban-planning regulations in each real estate sub-sector. The forth section examines the relationship between the land market cycle and the economy in general. Finally, the author reviews public policies addressing land problems over the past two decades.

1. Major features of Japanese land structure and regulations

Fragmented land ownership

Undoubtedly, land markets in Tokyo are hampered by numerous constraints. For historical reasons, land structure is highly fragmented. In 2002, residential parcels owned by individuals were on average 211 sq.meters in Tokyo's 23 wards. Almost half of them (46%) were smaller than 100 sq.meters. The proportion was even higher in the two central wards of Chuo and Chiyoda, where it reached 75% and 61%, respectively[5]. In addition, property rights are intricate, especially in the central wards, as one parcel

[5] Tokyo Municipal Government, *Tôkyô no tochi 2002*, p.56-57.

frequently holds three different types of rights: the right on the landed property (*sokochiken*), the land-lease right (*shakuchiken*) and the building tenant right[6] (*shakkaken*). Plot fragmentation and multiple ownership rights mean that redevelopment requires the time-consuming and expensive intervention of specialized operators to purchase the various property rights on the tiny plots to create sizable parcels.

Taxation on land

The heavy inheritance tax burden also plays a role in the splintered pattern of land structure. The marginal rate of bequest tax rises rapidly to 70%, and there is no simple way to create a tax-exempt trust for one's heirs. As a result, inherited landed property has often to be divided up and partly sold to pay the bequest tax. However, the other taxes are not particularly heavy by international standards. The effective rate of the property tax stands well below 1% of the land market value, a level commonly observed in Europe and in the United States. It was even officially acknowledged, in 1992, that the effective tax rate was 0.05% of the land market value in Tokyo. Additional taxes on land ownership have been introduced to curb speculation, namely the 'special tax on land holding' *(tokubetsu tochi hoyûzei* in 1973) and the 'land price tax' (*chikazei* in 1992), but the wide range of exemptions have significantly reduced their scope. Similarly, taxes on property transfers (tax on real estate purchase, special tax on land holding for the local authorities,

[6] The *shakuchiken* cannot be compared to the English leasehold right. The *shakuchiken* cannot be sold on the market without the agreement of the holder of the *sokochiken*, despite the fact that the value of the former is generally far higher than that of the latter (typically 80% and 20% of the land market value, respectively). The high share of the *shakuchiken* right is due to the fact that lump-sum fees paid by the lessees, when the land-lease contract was established, occupied a high share of the land value at the time.

registration and stamp taxes[7]) do not weigh heavier on taxpayers than in other countries. Short-term capital gains are, nevertheless an exception, because the resale of land within a period of five years is severely taxed.

Urban planning and construction rules

Town planning and construction rules form a comprehensive framework devised to control urban growth in the metropolitan areas. Land-use plans are divided into two major zones: UPAs (Urbanization Promotion Areas), where development is allowed; and UCAs (Urbanization Control Areas) devoted to future development. However, looking at Tokyo's urban form, town planning and construction rules do not seem to have channelled or even controlled urban growth. UPAs are much larger than the actual urbanized zones. UCAs are dotted with numerous "mini-developments" or construction clusters. Land prices between UPAs and UCAs consequently do not differ as much as, for example, they would in European countries[8]. In the UPAs, idle land can be seen everywhere even in the sought-after areas of the center, often taking the form of temporary parking lots. Middle-rise or high-rise buildings are mixed up with clusters of detached houses, as if the 'invisible hand' was that of each landowner. Why is Tokyo's urban profile so chaotic? The answer is to be found in the supremacy of land over real estate, which has been acknowledged and even supported by public authorities over the last century.

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[7] In Japanese, respectively, *fudôsan shotokuzei,tokubetsu tochi hoyûzei (the part of the tax specifically levied on transactions), tôroku menkyôzei* and *inshizei*.

[8] For example, in the vicinity of Aodaiba station, in Yokohama, prices in UCAs are only 20 to 30% lower that in UPAs. In Paris, the difference would be about one to ten.

2. The supremacy of land

Looking at surveys and research papers on Tokyo's property markets, the central feature is the infrequent reference to the term 'real estate' (*fudôsan*) when referring to the property market. Instead, 'land markets' (*tochi shijô*), 'land bubble' (*tochi baburu*), 'land boom' (*tochi bûmu*), or expressions of the like referring to land, are used to describe the change in property markets at large. The term fudôsan, literally meaning 'immobile asset', was introduced in Japan in the early Meiji period, via the package of laws imported from Europe. In fact, this concept did not match the Japanese notion of property, as a strong distinction between *land* and *building* was already the norm (Inamoto 1989, 2000). The use of the term *fudôsan* has consequently been extremely limited over time, in spite of the growth of real estate markets after the Second World War. Nowadays, it is still restricted to specialized uses, in relation with its primary legal meaning (real estate property, real estate inheritance, real estate seizure**,** real estate transaction, real estate registration[9]) or in reference to the real estate industry (real estate industry, real estate company, real estate appraiser, real estate management, real estate accounting[10]). Yet the recent use of the terms 'real estate securitization' (*fudôsan shôken*ka) and 'real estate cycle' (*fudôsan saikuru*) reflects the growing influence of the Anglo-saxon approaches and methods in the Japanese real estate sector.

[9] Respectively *fudôsan shoyû*, *fudôsan sôzoku, fudôsan, fudôsan torishiki, fudôdan tôroku*.

[10] Respectively *fudôsangyô, fudôsan gaisha, fudôsan kanteishi, fudôsan kanri, fudôsan keiei*

The prominence of land over construction

The prominence of land over real estate in Japan should not be surprising, given the scant interest in constructions erected on land. Whatever their appearance or their historical background, buildings have been considered to have little neither cultural nor even economic value. The destruction of the major historical civil patrimony of Tokyo provides a strong evidence of the lack of consideration for buildings[11]. Another evidence of the poor economic value of buildings is given by the method used by certified real estate appraisers (*fudôsan kanteishi*), which tend to under-use the discounted cash flow method (based on the expected rate of return of the real estate property) in favour of market comparison of land values, estimated by comparisons with official land values and land transaction prices in the same or a similar area[12]. More generally, real estate professionals do not use the wide range of tools and methods that are well developed by Anglo-American liberal analysts to survey property markets, as Japanese have sought the benefits generated by land (taking the form of profit from the sale of land parcels as well as 'hidden assets' on the balance sheets) rather than the profitability of real estate investment. The focus is on land, even in the academic field, as proven by the trouble taken to use property markets data in hedonic price formulas (Hidano & Yamamura in the subsequent chapter, Suzaki & Ôta, 1994).

The prominent role of land is also evident in the change in land rights over the past five decades. Strong protection for tenants was introduced during the Second World War to prevent landlords from evicting families while the head of the family was fighting on

[11] Although a townscape preservation policy has been introduced in Japan in the late 1960s, the Tokyo region lags far behind other areas, such as Kyoto and Nara. In 1993, the 23 Tokyo wards had only 11 districts of historic township, mostly located in Bunkyo-ku (Hohn, 1997).

[12] For further details on appraisal methods, see Aveline, N. (1995).

the front. However, there is a sharp difference between tenants of housing units (*shakkakensha*) and land-lessees (*shakuchikensha*). Both enjoy strong protection of their contracts –provided the building is not rebuilt, but the latter dramatically benefit from the sale of their tenant's right while the former do not. In Tokyo, land-lease rights can be sold up to 90% of the market value of the land, leaving a very small portion to the owner of the landed property (the *sokochikensha*). Land lessees can thus be to a certain extent classed as landowners, and it is probably safe to say that they have benefited from the supremacy of land over construction.

What are the roots of this absolute prominence of land? Several factors can be put forward to explain this striking feature.

The first one that comes to mind is the pattern of natural disasters regularly occurring throughout the Japanese archipelago. Typhoons, earthquakes, volcanic eruptions and tsunami have regularly damaged constructions and even destroyed sizable areas in Tokyo –not to mention the Second World War– that resulted in the destruction of most of the urbanized areas in the capital city. In such a highly vulnerable context, land was the only physical asset that could not be seen as being ephemeral.

A second factor is the physical features of the constructions. Prior to 1980, decaying wooden-framed housing units and 'pencil buildings' covered a large part of Tokyo. Although many of these sites have been redeveloped over the two past decades, a significant portion of the land in the capital city is still occupied by old wooden houses and narrowly-built apartment buildings. This fact partly results from the Land and Building Lease Act, which prevent land-lessees from rebuilding their construction (if they do, a new contract based on the current value of land must be negotiated). But the

major cause of the poor quality of construction in Tokyo may be the lack of public housing policies to supply public housing units and provide funds to property owners.

The low building density is partly the result of the poor state of construction. By the end of the 1980s, the average height of constructions in Tokyo's 23 wards did not exceeding 3.4 stories (including ground floor), whereas it reached 6.5 stories in Paris (Noguchi, 1991). Building density in Tokyo is far lower than in other large Asian cities, such as Seoul, Shanghai, Singapore and Hong Kong. This low building density, combined with the poor quality of the buildings, has facilitated the distinction between land and constructions, thereby enhancing the status of land.

Another factor increasing the mobility of construction is more fundamentally based on the Japanese conception of historical patrimony. As Berque puts it, " *the Japanese tradition […] has put the stress on codifying temporal forms (rituals) rather than spatial forms (urban morphology) […] the most noticeable feature of Japanese cities is their relative lack of monuments; it seems here that monumentality […] stands less in the buildings than in the perpetuation of gestures. What recalls to individuals their common belonging to a society is the pregnancy of the group on their current behaviour rather than its involvement in the material form of the city*"[13]. A strong evidence of this argument is provided by the implementation of the recent policy imposing protection on several 'historical buildings' in Tokyo. For example, the Mitsubishi group has rebuilt in Marunouchi some of its old office buildings targeted as historical patrimony, integrating

[13] Berque, A. (1993) : "La tradition japonaise…a placé plus de poids sur la codification des formes temporelles (les rituels) et moins sur celui des formes spatiales (la morphologie des villes) … ; la caractéristique remarquable des villes japonaises est l'absence relative de monuments ; il apparaît qu'ici la monumentalité …réside moins dans les édifices que dans la perpétuation des gestes. Ce qui remémore aux

them into high-rise buildings. The fact that these 'old buildings' are made out new construction materials does not matter, provided that the 'gesture' of rebuilding them is properly implemented.

An additional cause of the high status of land is the priority given to private land ownership (whether landed property right or land-lease right) over public welfare. As previously mentioned, UPAs are large enough to house construction, even on remote parcels, and public authorities are highly reluctant to use compulsory purchase for the sake of public purposes. In addition, there is no strong policy to protect old buildings comparable to those of Europe, nor any policy encouraging specific forms of land use. Landowners do have to respect the land-use regulations set by the land use plan and apply for development permits, but they can escape many constraints and enjoy higher FARs in the numerous 'district zones' introduced after 1980.

Tax policies have also accelerated the rate of land price increases and discouraged investment in housing stock. In particular, preferential taxation of agricultural land in urban areas has encouraged both land hoarding and inefficient low-density land use.

Last but not least, land would not have been so highly regarded if land values had not dramatically increased during the post-war period. From 1955 to 1991, residential land prices increased by more than 200 times in the six major metropolitan areas, whereas GDP and consumer price respectively grew by 56 and 6 times, respectively, over the same period. Despite the sharp decline of land values in the last decade, the price of residential land is still around 100 times that of 1955.

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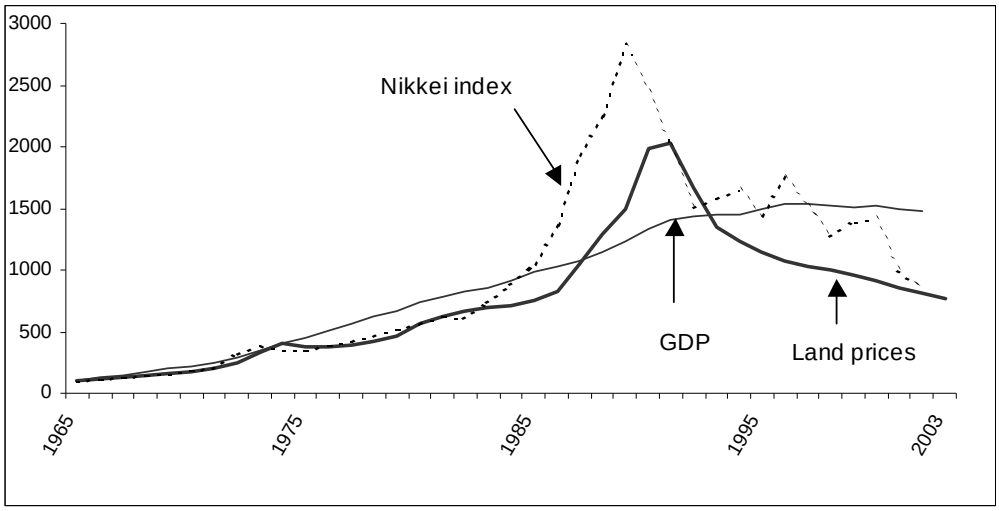
individus leur appartenance commune à une société, c'est la prégnance du collectif dans leurs conduites présentes, plutôt que son investissement dans les formes matérielles de la ville »

Chart 1. Change in residential land prices in the six major Japanese metropolitan areas from 1965 to 2003 (1965 = 100)



Source: composed by the author with data from *Mitsui Fudôsan Kanren Tôkeishû 2002*.

The six major metropolitan areas are Tokyo, Osaka, Nagoya, Yokohama, Kyoto and Kobe regions.

Low taxation on land ownership and easy release of parcels from their constructions[14], together with continuously rising land values (except in 1974 and after 1991), have led landowners to become reluctant to sell their properties. Consequently, urban planning tools avoiding the definitive transfer of land, such as land readjustment and urban renewal procedures (respectively *tochi kukaku seiri* and *toshi saikaihatsu*) have been used more and more by both private and public developers. In parallel, real estate companies and institutional investors have developed new kinds of contracts allowing construction on someone else's parcel. This trend is named *sofutuka* (from the English word 'soft' and the Japanese 'ka' for transformation) whereby the development process is softened by avoiding land transfer. Under the progress of 'soft' development formulas,

land has tended to be less and less mobile in terms of property transfer, whereas construction has kept its amazingly high turnover pace, thereby reinforcing the sharp contrast between land and buildings. Given the growing potential of land use through perpetual building renewal, it is no surprise that land has been considered by far the most valuable asset and has thus been widely used as collateral for loans.

The basics of land policies

It would be difficult to definitely say whether public policies are the result of this supremacy of land, or whether they generated this supremacy (particularly due to the lack of housing policies), but the unquestionable fact is that public policies regarding urban planning and real estate issues have traditionally put the stress on land issues.

Institutional arrangements for the control of land use in Japan go back to the pre-war period, but the current regulatory framework has been constituted in response to the three post-war land booms: the City Planning Act introducing UPAs and UCAs, enacted in 1968 to prevent further sprawl after the land boom from 1961 to 1962; the National Land use Act in 1974, providing state legislation for comprehensive planning, after the nationwide speculative period culminating in the period from 1971 to 1973; the Basic Land Act in 1989, followed by various reforms implemented 1990 to 1991, after the dramatic surge in land prices from 1985 to 1991 in the largest metropolitan areas. A public institution, the National Land Agency (*Kokudochô*), currently supervised by the ministry of Land, Infrastructure and Transport, was founded in 1974 to monitor land markets nationwide.

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[14] We consider here that found owners and land-leasers have a similar kind of ownership on land. As for building tenants, many have moved from their previous places since 1941. They hold new kinds of contracts, similar to rental contracts in other countries.

Despite the filling out of a comprehensive regulatory framework, the general philosophy of land policy has not significantly changed over time. It has never lost faith in the mechanism of the free market and the notion that a land policy giving preference to public welfare over private rights would inevitably harm the effective utilization of land (Hanayama, 1986). Land policy has not, therefore, tried to impose social intervention on the private ownership of land. Rather, its major concern has been to seek adjustment of land markets through indirect means. Two main routes have been followed, simultaneously or alternatively, depending on the property market's conditions: securing the stability of land values, and promoting a greater supply of land in urban areas.

Efforts to stabilize land values have taken two main forms: 1) introduction of new tools to curb speculation, such as taxes on underdeveloped land and short-term transactions or Price Control areas where local authorities have the right to reduce the value of land transactions; and 2) compilation of official land prices that depart from the market values and are used as benchmarks for various uses (tax bases, certified land appraisal).

The promotion of a greater supply of land has sought to provide affordable housing in the largest metropolitan areas and has mostly taken the form of deregulation of urban-planning and construction rules. The strong belief that the best utilization of land occurs under free market mechanisms has led public authorities to allow a dramatic rise in FARs in the center of cities (to provide affordable apartment units in medium or high-rise buildings) and to grant massive development permits in the remote suburbs (to provide affordable detached houses).

Contrary to the cases in other cities in Asia such as Seoul or Hong Kong, there has been no attempt in Japan to determine quantitative objectives for housing construction in

the capital city. Rather, an official definition has been given to designate an 'affordable' housing price (set at 5 years' total income of white-collar worker) and land supply policy accordingly, no matter how far from the city center. In fact, the distance of affordable housing units from Tokyo's CBD dramatically changed during the last land cycle. Taking the official ratio of 5 years' salary for a typical housing unit of 75 sq.meters, the supply was located 30 to 40 kilometres from the center in 1985, than extended out 50 to 60 kilometres from 1990 to 1991, before re-contracting to 30 to 40 km during the last decade[15].

Strategic information on land

Given the highly strategic role of land in Japan, both as a valuable asset and as an expensive resource for industrial and human settlement, information on land has become a major pillar of public intervention. Far from being limited to a simple instrument for monitoring land markets, it is aimed at no less than market regulation. Official land values therefore do not display *actual* land prices (i.e. real values of land transactions) but 'prices under normal conditions' (*seijô kakaku*), or in other words, non-speculative prices. How is it possible to compile such values? It is useful to take a closer look at the general setting of official land prices.

Contrasting with the great diversity of data on housing and office markets, information on land markets is provided by only a few institutions and shows a remarkable convergence. In the two major metropolitan areas of Tokyo and Osaka, official or quasi-official land prices are issued each year: the *kôji chika* ('Official Prices')

[15] Noguchi, 1992, p.99, for the period up to 1991 ; Tokyo Metropolitan Government, *Tôkyô no tochi 2002* (p.16) for the period 1991-2002. In 2002, the average price of a condominium was ¥46. 7 million in Tokyo 23 wards or 6,1 the

issued nationwide every March by the National Land Agency; the slightly less official *kijun chika* ('Reference Prices') issued nationwide six months later in the 47 prefectures; and additional data on land prices issued twice a year, in summer and in winter, by Tokyo and Osaka prefectures. Whatever the nature of these different statistics, they are all based on the appraisal of a sample of parcels (respectively 17,000 parcels nationwide for the *kôji chika* and 26,000 for the *kijun chika*,) using a similar appraisal method. Two official appraisers, who take into consideration both discounted values of rentals and actual transaction prices at similar locations, evaluate the price of each point[16]. Official evaluation committees then review the reports by the appraisers and make final judgments to capture the 'normal prices' by lowering or upgrading official land values. Official prices therefore tend to underestimate land values when markets are booming and to overestimate them when markets are sluggish.

Operators involved in property markets are perfectly aware of this fact, since they have a rather accurate knowledge of the actual trends on land markets. However, no private institution would attempt to challenge these official data. For example, the Japanese Real Estate Research Center (*Nihon Fudôsan Kenkyûjo*), founded by the Daiichi Kangyo Bank, also issues statistics on land values on a regular basis. More than 500 certified experts are sent twice a year (in March and September) to 140 cities, to appraise the value of residential, commercial and industrial parcels. But despite the high cost and painstaking work involved by this compilation, no information is displayed on land values. The results take the unique form of indices, which in addition seem to move

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yearly wage of a 'white collar' worker (*sarari-man*).

[16] The three appraisal formula are the following : 1) take as reference the transaction value of similar parcels in the vicinity ; 2) take into consideration the cost of developing the plot ; 3) cash-flow method. For further details on land approbatif methods, see Jinno (1990) and Aveline(1995).

in accordance with official statistics. In fact, the National Land Agency has a very strong involvement in the JRERC, not only to complete its own information but also to make sure that the secret on actual changes in land markets will be kept.

Japan is probably the only industrialized country where the information system on land values has been introduced primarily to regulate the markets (though South Korea and Taiwan have modelled their systems on the Japanese one). As official values are used as a benchmark for public and private land transactions and for government assessment of inheritance and property taxes, they might play a stabilizing role, particularly with regard to the value of the loan collateral (Kerr, 2002). However, the last cycle has proved the poor ability of such device to prevent dramatic changes on property markets. In addition, the lack of reliable information might also have a destabilizing effect on land markets-aggravating their volatility rather than reducing it.

3. The changes in commercial and residential land prices in Tokyo during the so-called 'bubble period'

One result of the dominance of official land price data is that observation of changes in the land markets must rely on official data. One must be therefore be aware that the following description tends to underestimate the actual magnitude of the land cycle.

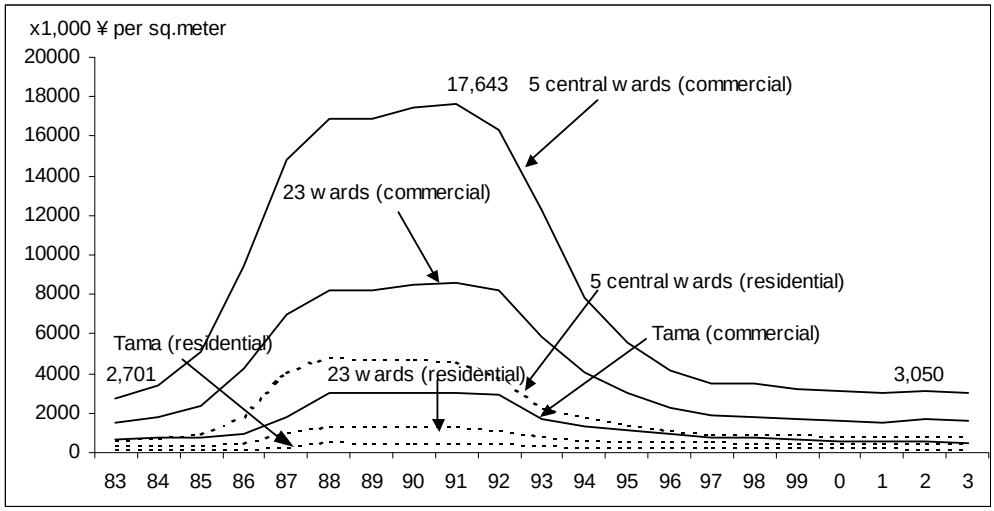
General description

The rise in land prices began in the three central wards of Tokyo. Commercial land (land devoted to office or retail industries) started rising in Chiyoda, Chuo and Minato

wards in 1983. This trend was followed, in 1985, by a rise of land values in other business and commercial areas in the 23 wards. From 1986 to 1987, the inflation spread to the residential areas of Tokyo, then to the neighbouring prefectures of Kanagawa, Saitama and Chiba in that order, following a clockwise motion from the high-income to the lower-income residential areas (Mera, 2000). It is worth mentioning, however, that the five central wards (Chiyoda, Chuo, Minato, Shinjuku and Shibuya) experienced by far the sharpest increase in land values. From 1983 to 1991, commercial prices rose by 6.5 times, reaching an average value of ¥17.6 million per sq. meter. The National Land Agency's appraisals peaked at ¥38 million per sq.meter in West Shinjuku and Ginza in 1991. The boom in residential areas was of similar magnitude in the five central wards, since prices rose sevenfold (from ¥669,000 to ¥4,678,000 per sq.meter) during the period from 1983 to 1989. In the other parts of the metropolitan area, commercial and residential land increased respectively by 3-4 and 2-3 times, commercial land keeping the top position. Even remote suburban areas experienced significant increases in land prices. For example, in West Tama, an area some 40 to 50 kilometres west of the center of Tokyo, commercial and residential land values went up by 4 and 2 times (from ¥680,000 to ¥3 million per sq. meter, and from ¥200,000 to ¥500,000 per sq.meter) respectively.

The tide turned in the land markets in 1991, taking two distinct patterns. First, residential land values decreased less sharply than commercial land values: respectively by 53% and 73% in the 23 wards from 1991 to 1998. Secondly, the gradient of decrease was much more acute in the center than the periphery. Consequently, commercial land is currently under its previous 'pre-bubble' level in the central wards of Tokyo, whereas residential land in the suburbs is still above its 1983 values.

Chart 2. Change in commercial and residential land prices in Tokyo Prefecture from 1983 to 2003



source: composed by the author with data from official land prices (*kôji chika*), Tokyo Municipal Government, *Tôkyô no tochi 2000* for the period 1983-1985, and *Tokyo no tochi 2002* for the period 1985-2003.

How did the Japanese land market cycle reach such a magnitude, in particular within the five central wards? There has been much discussion about the generative factors of the 'land bubble'. New trends such as the internationalization of financial activities and structural changes in the Japanese economy did undoubtedly increase the demand for office space during the 1980s, which worsened the shortage of land in the central districts of Tokyo. However, as stressed by Noguchi, the rate of land price increase was greater than that of office rents (Noguchi, 1990). Hence the stratospheric levels reached by land prices in the center of Tokyo during the late 1980 cannot be explained only by the concentration of economic activities. It is thus necessary to examine more accurately the role played by the land structure and its related regulatory framework in the process of urban development.

The practice of jiage ***in the center of Tokyo***

Before the early 1980s, Tokyo was mostly covered by narrow buildings of small or medium size, shaped in accordance with the extreme fragmentation of the land structure. To meet the new demand of prime office space for larger buildings, it was necessary to assemble several parcels, thus implying the purchase or transfer of a sizable number land ownership rights. Specialized agents called *jiage-ya*[17] undertook this painstaking work. Given the low height of constructions in Tokyo, there was a huge gap between the fairly high, legally permitted, volumetric ratios set in the land-use plans (FAR, Floor Area Ratio, ratio of the floor space to the site area, *shitei yôsekiritsu*) and the effective building density (*gaisan yôsekiritsu*). In Tokyo's 23 wards, legally allowed FAR was set on average at 242% in 1984 (meaning that a 242 sq. meter floor area could be built on a 100 sq.meters parcel), whereas the actual density was as low as 90%. Even in the central wards, where legally allowed ratios reached up to 1,000% in several business zones, actual density did not exceed 400% on average (410.6 % for Chiyoda, 347.4% for Chuo and 192.7% for Minato[18]). There was a great potential of building densification from which *jiage-ya* could benefit.

The low building density in Tokyo was not only the result of the fragmented land structure; it was also produced by the peculiar methods used to calculate the effective allowable FAR for each parcel. In fact, volumetric ratios effectively allowed have to be checked parcel-by-parcel, according to the width of the adjacent road. Below a 12-meter

[17] The word *jiage-ya* comes from the action of *jiage* (litterally 'to raise land') which orginially consisted in making up reclaimed land. *Jiage* is now ordinarly used to designate the action of gathering small plots to make up a large parcel. This action is undertaken by operators called *jiage-jin* or *jiage-ya*, but the latter term has become pejorative, as its meaning changed into 'land price raiser' during the period of the 'bubble'

[18] Tokyo Metropolitan Gouvernment, *Tochi no tochi 2000*, p.68.

road width, effective volumetric ratios fall under the level of the legally allowed ratio on the land-use plan. For example, a parcel located next to a 4-meter-wide road will be granted no more than 240% volumetric ratio, even if the legally allowed ratio is set at 800%. As the road network is very narrow inside residential blocks in the center of Tokyo, only low-rise buildings may be built there. However, if a parcel adjacent to a small road is contiguous to a parcel adjacent to a road wider than 12 meters, and if both parcels are developed together as one construction site, then the higher legally allowed volumetric ratio set in the land-use plan applies. In the previous example, the allowed building density of the parcel adjacent to a 4-meter street jumps from 240% to 800%.

Jiage-ya followed a similar strategy to purchase land: at first, to buy small contiguous plots occupied by individual houses at low prices, in accordance with the low effective building density allowed; then, purchase as soon as possible the 'masterpiece' of the puzzle, i.e. the parcel adjacent to a wide street –providing the whole perimeter with the maximum allowed volumetric ratio. After combining the plots, the resulting parcel was sold to a developer at a high price, in accordance with the high effective density. Given the rarity of large parcels in the early 1980s in Tokyo, one can easily figure out the tremendous profits generated by this *jiage* process.

Table 1. Designated and actual FARs in Tokyo's 23 wards

	1984	1986	1988	1990	1992	1994	1996	1998	2000	2002
Designated FAR (*shitei yôsekiritsu*) A	242,0	242,0	243,0	252,0	252,3	253,0	253,5	253,7	254,0	254,4
Actual building density (*gaisan yôsekiritsu*) B	92,0	94,6	99,3	104,6	110,8	116,7	122,8	129,1	132,5	136,1
Gap of density (1-B/A)x100	62%	61%	59%	59%	56%	54%	52%	49%	48%	46%

Source: Tokyo Municipal Government, *Tokyo no tochi 2000* for 1984, and *Tokyo no tochi 2002*,for 1986-2000.

At first, *jiage-ya* gained most of their profits from this grouping process –since owners of individual houses in the cores of residential blocks did not realize how much their parcels were worth as pieces in the larger 'puzzle'. In many cases, land was leased to tenants, so the purchase of land rights by the *jiage-ya* was seen as a good opportunity by land-owners to get rid of the land-lease contract and to get back their share of the land value[19] (usually 20%). However, landowners soon became aware of the high potential of their properties and tried to sell at the highest possible price. The land spiral thus spread into the core of residential zones distant from arterial roads, which were previously protected from speculative transactions. *Jiage-ya* agreed to pay excessive prices for these tiny plots because they were seeking sizable profits from the assembly of parcels. But when the real estate bubble burst, along with the sharp increase in interest rates, many *jiage-ya* were stuck with scattered land holdings purchased at excessive prices, which were totally unmarketable.

As a result of the *jiage* process, the discrepancy between legally allowed and effective building volumetric ratios was progressively reduced during the 1980s and 1990s. In 1983, the 'gap of density' amounted for 62% of the legally allowed density, whereas it fell to 46% in 2002 (Table 1). Yet the gap would have been filled quicker if legally allowed ratios had not been increased meanwhile (from 242 to 254.4%). As mentioned previously, public authorities have based part of their land policies on the 'massive supply of land' by increasing FARs. The rise of designated legally allowed ratios was undertaken through the revision of land-use plans: changing the designations of zones and increasing the building ratios inside the zones. Yet the most effective way to

[19] When the owner of a landed property wants to sell his parcel, he must convince the land-lessee to leave and provide him compensation (typically 80% of the market value).

increase FARs was to designate new types of zones where the established rules would not apply.

This policy started in 1981 with the introduction of a 'district system' (*chiku keikaku*), modelled from the German B-plan. At first, this system only allowed stricter FAR, building coverage and other regulations, in areas considered worthy of protection. But in 1987, the 'Special District Plan for Redevelopment' was introduced, which allowed bonuses to FAR and deregulation. The latter purpose soon exceeded by far the former, and the designation of districts mostly sought deregulation of land-use and construction rules (Ishida, 1994). Such policies were far from being limited to Japan. In other industrialized countries, development zones of similar kind were introduced or increased in number during the 1980s. However, the district system paved the way for further fragmentation of planning control in Japan, because it fitted well with the traditionally sketchy planning process in this country[20]. Increasing fragmentation of the urban planning process during the 1980s undoubtedly allowed more flexibility to meet rapidly the demand of commercial and office space. But it caused severe damage on a broader scale. High-rise buildings were erected without taking into consideration their impact outside the development zone. This not only worsened the overall traffic

[20] Overall pictures of global scale such as master plans, land use plans or road plans, certainly do exist, but concrete projects are not implemented in accordance with global objectives. For example, roads and even railroads are developed piece by piece, taking opportunities of land readjustment or urban renewal projects to expand. This fragmentary conception of urban planning results to some extent from the extreme spreading out of existing urban zones which hampers the effective control over the whole territory. It also results from the reluctance of landowners to sell their property, the reluctance of public authorities to use compulsory purchase, and, more fundamentally, the need to gain a broad consensus for each project, thus requiring a rather small-scale of implementation.

congestion but also aggravated environmental problems in the city (pollution, lack of sunlight, among others).

Impact of the increase of volumetric ratio density in land prices

Yet the major ill effect of the increase in building density was to drive up land prices, contrary to the official expectations of land policies. How could that all happen? We have already mentioned the filling up of the FAR gap by *jiage-ya* and the spreading of the price inflation it caused within the quiet low-rise residential areas. We must now examine more closely the causal link between building density and land prices. According to the official theory, such a link does not exist. Official expectations are based on the unrealistic assumption that land values are totally inelastic to building density: increasing the FAR does not upgrade land values but increases the aggregate floor surface and leads to a lower price per housing or office unit. In fact, however, land values are elastic to building density. When purchasing land, developers first estimate the aggregate revenue that can be generated from the sale of the total floor area, taking the current market prices as a basis; then they deduct the various expenses (including the profit expected from the project) to infer the maximum amount they can pay for the parcel[21]. If the FAR is increased, aggregate revenues rise proportionally to the increase in the floor area, but costs do not move accordingly. Some expenses are inversely proportional to the increase in FAR, but others are not, because there are economies of scale in the construction process. As a result, revenues grow higher than costs, thus significantly increasing the residual amount available for land purchase.

[21] According to the « backward count theory » expressed byTopalov (1974), adapted to the French planning context of the 1980s by Vilmin (1991) and discussed in J-J., Granelle & Vilmin, T. (1993) .

In the case of Tokyo, the rise in land prices caused by the increase in FARs was even more pronounced than in other cities, for two main reasons: 1) in most of the high-rise areas, office and commercial space was built rather than housing units, increasing the aggregate revenues, and accordingly, the residual amount devoted to land. 2) The rise in FARs was widely announced as a key issue of the public land policy. Purchasers of land could thus expect further deregulation when land values became too excessive to secure profitable development projects. The loud talk of deregulation (including FAR increases) also made landowners more reluctant to sell land, and thus drove up prices, as they could reasonably expect that their parcels would gain value from later deregulations.

On the other hand, companies were also encouraged to purchase land by the strong incentives of the tax and accounting rules. They could deduct 100% of their land investments from their taxable revenues and use their land portfolio as collateral for further investments, without having to pay a tax on the 'unrealized profits' (*fukumi eki*) generated by the increase in land values. Given the favourable prospects for further rises in land prices and deregulation of urban-planning rules, along with the light taxation on land ownership, there was no need to bring forward developing land, and many companies just kept their parcels vacant (Hasegawa, 1990)**.**

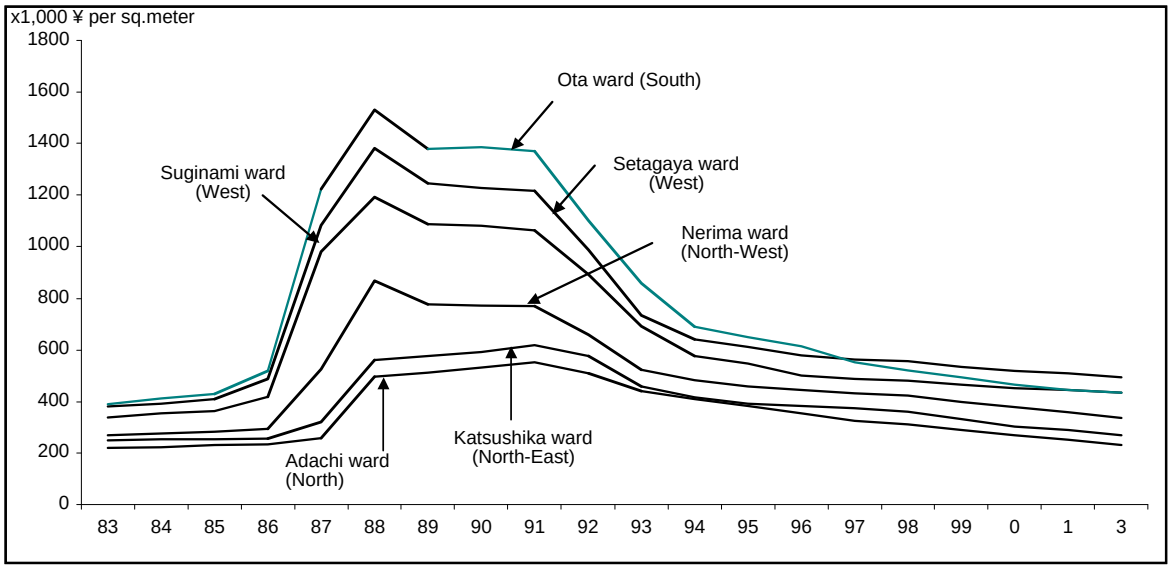
Construction nevertheless progressed at a rapid pace in Tokyo, particularly in the office sector. From 1983 to 1992, a total of 3,633 hectares of office floor area was built in the 23 wards, 56% of which was concentrated in the 5 central wards. Not surprisingly, it was in these wards (except in Shinjuku) that the sharpest increase of residential land values occurred, under the *jiage* process. But the spread of land inflation in the residential sector affected the peripheral wards differently. In the outer ring of the ward area, there

was no great difference in residential land prices between the wards prior to 1983. Residential land values ranged from ¥250,000 to ¥390,000 per sq.meter. Nevertheless, after 1986, prices rose more sharply in the western and southern wards than in their eastern and northern counterparts. In the most sough-after residential wards of Ota, Setagaya and Suginami, land values increased 3.5 times on average, whereas they rose only by 2.5 times in most of the eastern and northern industrial wards. There is something striking in this pattern. One might expect the land rise to have been more acute in the cheaper wards, especially after 1987, when affordable residential land prices went beyond the reach of well-off households in the most expensive wards, as it happened for example in Paris.

The tax system played a major role in this pattern. Capital gains on both residential and commercial land are taxed when the owner sells his parcel. Yet if land has been held for a period of more than ten years, individuals can avoid taxation of the capital gain if they reinvest the same amount into a new property within a period of one year. This specific tax device, called *kaikae tokurei*, enforced until 1987 and reintroduced after 1993, was aimed at encouraging residential land owners leaving or running a small business in the center to release their parcels for office construction. Selling a parcel in the center provided sizable capital gains that the owner had to reinvest as soon as possible. He or she could thus afford to buy very expensive housing units in the most desirable residential areas of western Tokyo. This explains why the spiral spread towards the most western sought-after residential zones, regardless of the excessive values, which jumped over ¥9 million per sq.meter in the most expensive sites[22].

[22] Tokyo Metropolitan Government, *Tôkyô no tochi 2000*, p. 18.

Chart 3. Change in Residential Land Prices in 6 Wards of Tokyo (1983-2003)



Source: composed by the author with data from official land prices (*kôji chika*), Tokyo Metropolitan Government,, *Tokyo no tochi 2002* for the period 1983-1985.

4. Land inflation and the general economy

The land boom in Japan was very closely linked to the general economy. It is generally acknowledged that the 'bubble' was triggered in part by the low interest policy followed by the Bank of Japan (BoJ) right after the Plaza Agreement of 1985. According to this Agreement, the Japanese currency had to be increased to reduce the huge American trade balance deficit towards Japan. The BoJ intervened on the monetary markets to raise the level of the yen in response to international pressure. However, the BoJ began, at the same time, to lower the official discount rate, to balance the expected slide in Japanese exports by expanding domestic demand. From January 1986 to April 1987, the official discount rate fell from 5% to 2.5%, thus fuelling the property sector

with cheap loans. While the loans outstanding for the manufacturing sector increased by 75% from 1984 to 1989, those to the real estate sector expanded by 195% during the same period. Major landowners, especially large corporations, enjoyed further credit opportunities through the use of land collateral to secure loans, as the value of their land portfolios boomed. They could, in addition, levy funds directly on the newly deregulated monetary and financial markets. This new supply of funds was partly reinvested into speculative purchase of land and shares, but it was also broadly used for domestic and foreign direct investments, allowing industrial groups to expand over the world.

Cause and consequence of the high GDP growth

With the increase in demand for office space in Tokyo, both from domestic and international firms, the shift from an export-based economy to an increasingly domestic-based economy was smoothly achieved by the expansion of the property markets, in accordance with the recommendation of the official Maekawa Report, published in 1986. In addition, domestic consumption at large was supported by the 'wealth effect' generated from the rise in value of individual properties. The Japanese economy thus enjoyed a boom from 1986 to 1990, with annual GDP growth exceeding 4%. Undoubtedly, the 'land bubble' occurred with the best possible timing and helped the Japanese economy to cope with the rise in the value of the yen (*endaka*).

Although one cannot deny that the low-interest-rate policy of the Bank of Japan was a major factor behind the dramatic magnitude of the 'land bubble', it is possible that the land boom would have occurred even if interest rates had been higher. Land values had already started to increase in the central business districts of Tokyo as early as 1983, supported by a steady demand of office space. Land booms occurred in many other

industrialized countries during the same period, even in Paris –despite an increase of real interest rates in France after 1986. Therefore, one must not only consider the interest rate policy, but rather the overall context of deregulation –not only towards financial and monetary markets, but also towards property markets– to comprehend the land surge in Tokyo.

Equity stock prices and land prices

A striking feature of the Tokyo's land bubble was its similar trend to that of the stock markets. From 1983 to 1985, the Nikkei index increased around five times. This strong surge of corporate shares occurred slightly ahead of the rise in the official land prices (by about 6 months) in the major metropolitan areas. Many commentators have therefore argued that the two cycles were closely linked. Stone and Ziemba (1993) found that changes in the stock markets influenced changes in the real estate markets, and not the other way around. However, the poor reliability and the time lag of the official data used for this causality test do not allow definite conclusions to be drawn[5]. According to another theory, the increase in share values was, at least partly, caused by the booming value of corporate land portfolios. This is not, however, consistent with the change in share values in the various industries during the bubble period. Companies holding the largest land portfolios (paper, railway industries) and those owning the most valuable land assets (real estate industry) generally recorded a fourfold increase in their share values. Conversely, companies involved in the financial, IT, and insurance industries, which land assets were far less significant than the previous group, enjoyed dramatic rise

[5] Compilation of official data takes three months, whereas shares prices are immediatly available.

in their share values, up to more than 10 times in some cases (Aveline, 1995[23]). Land and stock markets have thus been exposed to common factors, namely low interest-rates and optimistic prospects of emerging service and financial industries in a new deregulated environment. It is difficult to ascertain which of the two markets went ahead, but it is clear that both markets were closely interwoven. Undoubtedly, profits generated on the stock markets were reinvested on land markets, and *vice versa*, during the period 1985-1989.

5. Public policies towards the 'land bubble'

The reaction of public authorities towards the land cycle can be divided up into three major periods: a period of *laissez-faire* from 1985 to 1989; a period of strong opposition towards speculation (1989 to 1993) and a period of 'post bubble' policies.

The laissez-faire *period*

From 1986 to 1989, the government did not really take any drastic measures to curb land price inflation in spite of the growing misallocation of land resources. The reasons are threefold:

1) Increasing land prices offered good prospects to the construction industry despite the decrease in yields. This trend was in accordance with the shift of the Japanese economy towards domestic markets, as recommended by the Maekawa Report.

2) A major part of the population enjoyed a rise in their property assets. Similarly, corporate landowners benefited from the leverage effect of land inflation and from profits

[23] According to the Annual Corporation reports of 1,700 companies.

on land sales.

3) The Japanese government took great advantage of the surge in land prices. It enjoyed rising tax revenues as well as huge profits from the sale of public land until 1987.

Several measures were nevertheless taken to curb the most excessive effects of speculation. In 1987, the sale of public land was abandoned. In the same year, the *kaikae tokurei* special tax device was removed and a new tax on short-term resale of land (two years) was introduced. However, probably the most effective measure to rein in excessive speculation was the strengthening of public control over land transactions between 1987 and 1990. It might seem paradoxical that such a severe constraint upon private land ownership could have been introduced in a country where ownership rights are so strongly protected. In fact, the control of land transactions was a legacy of the previous land boom of 1971-1973. To prevent further inflation of land prices, local authorities were allowed to designate new 'control zones' (*kanshi kuiki*) in areas where speculation could arise. Under to this system, transactions of parcels larger than 2,000 sq.meters had to be reported to the local authority, which had to make sure that the reported transaction values would not greatly exceed the 'normal values' based on official prices. If a reported value were considered excessive, a lower price would be recommended to the seller; and if he or she did not behave accordingly, the case would be reported in the media (newspapers, television). Such a threat was normally strong enough to persuade sellers to follow the directive of the local control committees. However, the scope of the control was not significant until the mid-1980s, as most of transactions concerned parcels of less than 2,000 m^2. After 1985, the size of the targeted parcels was progressively reduced, down to 100 m^2 in Tokyo's 23 wards in November 1987. The control was thus fully implemented only during the two last peaking years of the land cycle (1988-1990). It was

then progressively relaxed after the crash of the land markets, to avoid hampering the already sluggish property markets. During the short period of time it was fully implemented, the control over transactions turned out to be rather effective. According to a survey made by the author on a sample of 131 transactions in the Tokyo Prefecture over the period 1987-1989, land prices were reduced by 20% to 40% in most cases by the Prefecture committee. The control was especially efficient in the remote western suburbs. For example, near Hachioji (40 minutes by train from the center), reported prices were reduced by as much as 60 to 70% (Aveline, 1995).

Fighting against speculation

After four years of land euphoria, things became more worrying. Skyrocketing land prices started to seriously threaten the investment capacity of companies and the savings of households. Worst of all, the inflating money supply threatened to cause a general rise in consumer prices. The Bank of Japan thus decided to increase the official discount rate: within 15 months (from May 1989 to July 1990), it rose from 2.5% to 6%. Meanwhile, banks were ordered to limit further real estate loans to the same rate as the growth in their overall general lending. These measures were soon followed by the crash of the second-hand condominium and office markets. Land prices also started to decrease in Tokyo, but the National Land Agency did not acknowledge the reverse trend in land markets before 1992, to avoid a panic on the land markets. Official data even displayed a continuous rise in land values in 1991 in the Tokyo Metropolitan Area, while the crash in land markets was already obvious. After 1992, The National Land Agency pursued its 'soft landing policy' by overestimating the level of official land prices.

It is generally assumed that the credit tightening policy of the BoJ was the primary

cause of the real estate crisis. Yet endogenous factors were already leading property markets over the precipice. Yields on rents had fallen below 1% and many new office buildings were empty. What also undoubtedly hastened the crash in the property sector was the reverse attitude adopted by the public authorities to address land issues, beyond the monetary measures previously mentioned. The Basic Land Law advocating a wide range of reforms was adopted in December 1989. Although this act did not specify any concrete measures, it was a strong signal of the change in public policies. Several months later, the Economic Planning Agency and the BoJ published reports displaying the enormous discrepancy between actual land values and theoretical land values calculated by the discounted cash flow method (Bank of Japan, 1990). The discrepancy was called a 'bubble' (referring to the well-known theory of speculative bubbles) and the cause of this anomaly was speculation. Using the bubble theory allowed the public authorities to undertake reforms in a more simplistic and understandable way, by putting the blame on speculators (Aveline, 1997).

The core of the Basic Land Law was the tax reform, adopted in 1990 and enforced in 1991. It was aimed at discouraging further speculative land purchases and to bringing underdeveloped parcels onto the market. The concept behind this reform was again the belief in the market mechanism, with the expectation that a dramatic increase in land supply would automatically provoke a significant decrease of land values. Besides, it allowed punishment to be dealt out to the 'speculators' (i.e. the landowners of unused parcels), accused of having generated the bubble.

The new regime put consequently a heavier taxation on land transactions and land ownership. The long-term capital gain tax (for resale of land over a 5-year period) was raised for individuals and corporations. The corporate capital gains tax became a totally

separate tax from the general corporation income tax, thus preventing corporations from offsetting capital gains with losses elsewhere. Two main measures were taken to strengthen land ownership: the introduction of a new property tax (*chikazei*), which symbolized the best government intention to break the 'land myth' and the removal of the tax privileges of agricultural land (agricultural land within UPA had to be taxed at the same rate as urbanized land). None of the two measures, however, actually caused a drastic increase of land supply. The scope of the new property tax was reduced under the pressure of the corporate lobbies. Initially projected to be 1% of the market value of land, the tax rate was actually fixed at 0.3% in 1992. Further exemptions were introduced, and the tax revenues dropped from ¥605,3 billion in 1993 to ¥1 billion in 2001[24]. The new taxation system on farmland did not provoke a massive supply of land, but it did encourage farmers to build housing for rent on their parcels.

Following the tax reform, two other major revisions were implemented in the early 1990s in accordance with the objectives of the Basic Land Law. In September 1991, the revision of the Land and Building Lease Act was adopted (enforced in 1992). The new regime did not reform the existing land lease contracts, but introduced new types of short-lease contracts strongly protecting land ownership, to promote the use of underused parcels. The maximum leasing period was set to 50 years for residential use and from 10 to 20 years for business use (family restaurants, gasoline stations, etc). In 1992, the reform of the town planning and construction rules completed the set of measures addressing land issues. This revision was aimed at rationalizing and strengthening the public control over FARs. It also allowed construction in the UPAs with, in counterpart, a stronger control of development projects. Finally, it increased the number of urban

[24] Ministry of Finance, *An Outline of Japanese Taxes*, 2002, p.370.

planning zones in the UPAs, from 8 to 12.

Post bubble policies

The three main revisions based on the Basic Land Act were devised to depress skyrocketing land prices, but they were enforced too late. In 1992, official land prices in Tokyo Prefecture had already decreased by 10.3% on average in the 23 wards and by 8% in the business zones. With the drop in land values, the crash of the stock markets and the rise in interest rates, the Japanese economy had entered a recession. In 1992, GDP growth fell from 2.9% to 0.4% and the financial system began to face a growing mountain of bad debts. The BoJ quickly lowered the official discount rate, from 6% to 1.5%, within two years, from 1991 to 1993.

Under the new circumstances, the land-related reforms were considered irrelevant. The tax system was accused of impeding the recovery of the property markets. Hence the new property tax, which had symbolized the anti-speculative attitude of the central government, was further lessened. Taxation on short-term capital gains was similarly lowered, and the *kaikae tokurei* device was fully reintroduced in 1993.

Early forecasts predicted that the recession would not last very long. Banks did thus not publish complete information about their bad debts –in the hope that stock and land markets would soon recover. However, after a few years, several financial institutions went bankrupt with debts far exceeding their capital, threatening the stability of the entire Japanese financial system and the credibility of Japanese banks abroad. After 1997, the Japanese government ordered banks to disclose more accurate information on their financial statements.

In the late 1990s, the government shifted from an 'anti-speculative' policy to a policy promoting 'efficient land use' (*yûkô riyô*). The primary purpose was to dispose of bad debts by boosting land values (or at least limiting their fall) through an increase in building density. This new policy also legitimised the removal of previous reforms. In 1998, the new property tax was removed. The other taxes were maintained, but many measures were introduced to lessen the tax burden of both individuals and corporations. Tax incentives were also introduced to promote housing investment: a two-year program of tax exemptions on loans from 1998 to 2000, followed by a new system of tax reductions running until 2003. In September 2001, the listing of Real Estate Investment Trusts (REITs) on the Tokyo market Exchange was begun. REITs are companies that manage portfolios of real estate, including office buildings and commercial facilities, to earn profits from shareholders. Real estate companies are now eagerly establishing REITs, but they are lobbying for a drastic revision of inheritance and gift tax, to make these products more competitive with other financial products. Generally, despite the lightening of the tax framework, the tax burden is still considered too heavy by corporations. They ask for a further deregulation of the 'dinosaur' regulations.

Pressure was also applied to deregulate existing land-lease contracts, since surveys have shown that land-lessees were on average wealthier than their landlords in Tokyo (Noguchi, 1992). However, there is a strong consensus to maintain the current rules, as most of the land-lessees are elderly people who cannot be easily moved from their local community. The new land-lease contracts introduced in 1992 have gained some success, through to a limited extend. In 2002, 15,480 housing units (including 4,125 condominium

units) had been supplied in the Tokyo Capital Region through this system[25]. A new kind of short-term building tenant contract (*teiki shakka*) was also introduced in 2000 to increase the flexibility of the housing rental market. Alike the land-lease contracts, the new rental contracts cannot be renewed after the term of the rental period. Tenants and landlords can decide freely upon the rental period, thus allowing temporary use of buildings.

Town planning regulations were also revised through the new framework. The new set of measures seeks two main objectives: 1) promote the best economic use of land by increasing the building density; 2) achieve the best social use of land by providing a better urban environment, through the development of open space, the construction of public facilities and the participation of citizens in the town planning process.

Promoting the economic use of land involves bringing back idle parcels to the markets – either unmarketable plots purchased by *jiage-ya* during the bubble period, or former industrial sites (especially on the waterfront). The effective use of these parcels should be secured through two major means: 1) Establishment of a 'bank of underused land' nationwide, using Internet resources, where underused parcels can be registered (by public corporations, NPO, professionals and individuals) and advice can be found. 2) Cooperation between private landowners of scattered parcels or former industrial land, to allow the redevelopment of large sites. This task will be undertaken by specialized institutions, such as the public corporation Urban Development Corporation (UDC, *Toshi kiban seibi kôdan*) and the incorporated foundation Organization for Promoting Urban Development (OPUD, *Minkan toshi kikô*). Both institutions will purchase land, with

[25] Mitsubishi Fudôsan, *Fudôsan kanren tôkeishû*, n°26, 2003, p.123. The Tokyo Capital Region encompasses the Tokyo Prefecture (23 wards and the Tama area) and the four adjacent prefectures (Saitama,

government guarantees and non-or low-interest loans, redesign the land structure and provide basic infrastructure, then sell it to private or public developers.

The new framework gives more autonomy at the local level to 'achieve the best social use of land'. Local governments can choose whether they will keep the distinction between UPAs and UCAs in the master plans or not. They can also decide, through municipal ordinance, that district plans should be designated with citizens' acceptance. Since May 2001, local authorities are allowed to set up 'semi-urban zones' (*jun toshi keikaku kuiki*) in areas outside urban planning zones, where district areas or land-use zones can be designated to allow better control of development.

Urban renewal as a means to encourage deregulation

The overall relaxation of previous anti-speculation measures did not rein in the bad debts, which officially reached ¥37 trillion in September 2001 (perhaps closer to ¥50-60 trillion, according to unofficial sources). Of that amount, about ¥15 trillion was secured by land – meaning that even a slight drop in land prices is likely to rock the financial sector. The Koizumi government, urged to solve the problems of non-performing loans and revitalize the economy, listed an urban renewal policy as one of its seven high-priority policy issues, and founded an urban revitalization headquarters in September 2001. The primary purpose of this new urban renewal policy, referred to as 'town regeneration' (*toshi saisei*), was to boost land values –and consequently collateral values, as well as to stimulate domestic consumption (Aveline, 2003a). Little public funding was to be directly involved in the renewal projects, as the government's intervention primarily consists, as usual, in creating new types of districts where normal

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Chiba, Ibaraki and Kanagawa).

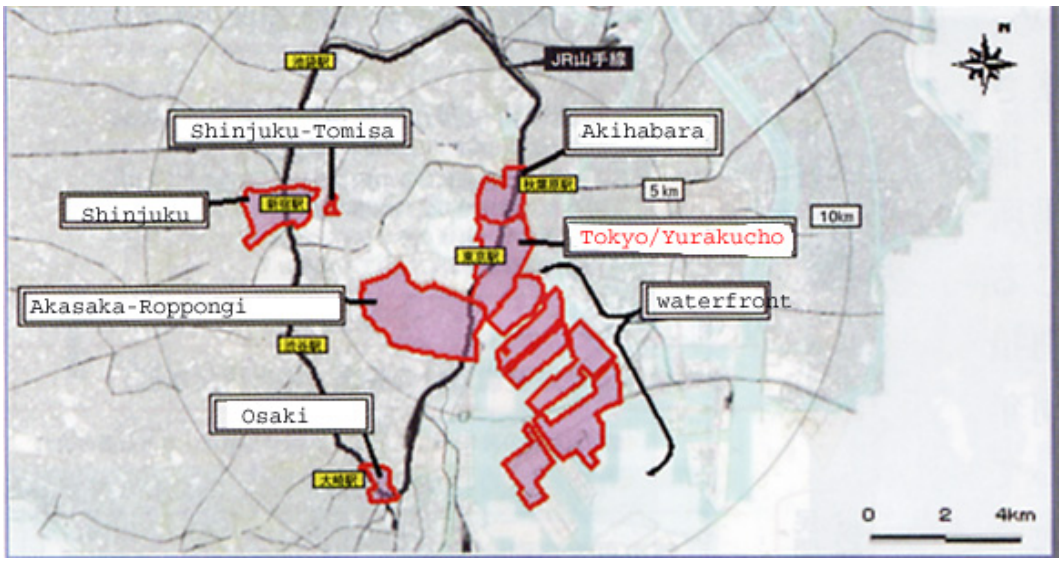
rules (in particular FAR regulations) are relaxed. One of the first steps of the *toshi saisei* policy was to approve, in April 2002, a bill designed to end the government monopoly on development planning. The new regulations allow private companies to submit development plans to the ministry of Land and Transports, provided they receive the approval of two-third of the landowners in the targeted area. The approval procedure for the development takes only 6 months, and private contractors are granted interest-free loans to cover the cost of the roads, parks and other facilities that are traditionally developed by the public sector.

Seven districts covering 2,370 ha, mostly concentrated along the bay area, have been accordingly designated in Tokyo 23 wards as 'priority urban renewal areas' (*toshi saisei kinkyû seibi chiiki,* map 1). This new step up in deregulation has resuscitated an old project of Mitsubishi Estate, seeking to transform the Marunouchi area into a Manhattan zone. Mitsui Estate's plan proposes that the current FAR, already at the highest in Japan (1,000%) could be boosted to 2,000%, and the maximum height of buildings rose to 200 meters, without substantially affecting transportation or sewers in the area. This project has been so far repeatedly rejected by the Construction ministry and the Tokyo Metropolitan Government, but the designation of a priority urban renewal district in the vicinity of the Tokyo and Yurakucho stations can be seen as en encouraging move.

Needless to say, the designation of these districts has provoked strong opposition among planners and 'anti-deregulation' economists. As Hasegawa puts it, the

government is trying "to treat the wounds of the bubble by the bubble"[26]. But can a new land bubble possibly occur in the near future?

Map 1. The priority urban renewal districts in Tokyo (2003)



At a first glance, large-scale development proved to have pushed up land values. In 2003, land prices in central Ginza –the most expensive for the 18 straight year– rose for the third year in a row, by 6% to ¥12.72 million per sq. meter. Land values soared likewise in Shinagawa and Marunouchi districts, owing to renovated office buildings, prime accessibility (new Shinkansen bullet train station in Shinagawa), and increased attractiveness of urban living by the opening of new luxury stores. This trend, however, is limited to a small group of 'favoured few' downtown locations. Elsewhere, land prices are continuing to decrease, with record decline rates in Yokohama and Chiba where large-scale development projects, unable to compete with Tokyo's downtown

[26] Hasegawa Tokunosuke (2002), « Tsukurareta bûmu no uragawa wo misugosuna » (Let us not overlook the dark side of the boom that we generated), *Economisto*, February 26, 2002, 46-47.

redevelopment districts, are facing a severe office glut (with vacancy rates ranging from 10 to 20%[27]).

Therefore, the notion that massive redevelopment will serve as an engine for reinvigorating the Japanese economy is fairly questionable. Over 2,2 million sq. meters new office space hit the market in the 23 wards of Tokyo in 2003, a record one-year supply exceeding by far the 1994's at the peak of the bubble (Chart 4). The ratio of empty space in Tokyo's five central wards is expected to surpass in 2004 the record 8.08 % set in 1994[28]. In the intensifying competition to attract tenants, the new extra-large buildings next to the JR Yamanote-line will capture most of the demand, as only 5%[29] of the total stock of office buildings meet the standards of prime office space (i.e. a surface over 30,000 sq. meters) in the three central wards. Most of the companies currently involved in large projects are major developers, such as Mitsubishi Jisho, Mitsui Fudôsan or Mori Building. They expect large adjustments on the office markets, with a massive migration of tenants from the post-war generation of office buildings, owned by medium-size companies and individuals, to their new prime office buildings[30]. They are confident that they will largely be unaffected during the 2-to-3 years of forecasted high vacancy rates (from 2003 to 2005).

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[27] Non official estimation quoted in the Nikkei Weekly, February 24, 2003.

[28] According to Miji Shoji Co estimates quoted in the Nikkei Weekly, September 15, 2003, the average office vacancy rate in the central five wards of Tokyo (Chiyoda, Chuo, Minato, Shinjuku and Shibuya) reached 8,57% at the end of August 2003, 2,51 percentage points higher than the same period in the previous year.

[29] Only 640 buildings among 12 377 buildings in the 3 central wards can be considered prime office buildings.

[30] Statistics on Tokyo's office market show that the large-scale buildings (more than 330 sq.meter per floor) from the late 1990s record the lowest vacancy rates in comparison with small and medium-sized office buildings.

Undoubtedly, the frenzy of large-scale project development is far from being primarily demand-driven. Depressed business conditions, marked by large corporate restructurings, do not encourage expanding business space. In addition, Tokyo's role as the business center of East Asia is diminishing rapidly amid China's ascendancy, while the population aging is expected to contract the number of workers after 2010.

In fact, the construction of urban complexes is mainly driven by unprecedented opportunities to construct large projects in Tokyo. In addition to the dramatic decrease in land values, the following three key factors are strongly encouraging large-scale construction in the center of Tokyo.

1) Large tracts of land are now available after a long process of purchasing and assembling small parcels, which started in the period of bubble euphoria. A typical example is the Mori Building's Roppongi Hills complex (office, retail and residential), opened in April 2003[31]. It occupies a massive 759,700 sq. meters on the edge of the city's popular nightlife district. The purchase of land started 16 years ago, when the center of Tokyo had very few large land tracts.

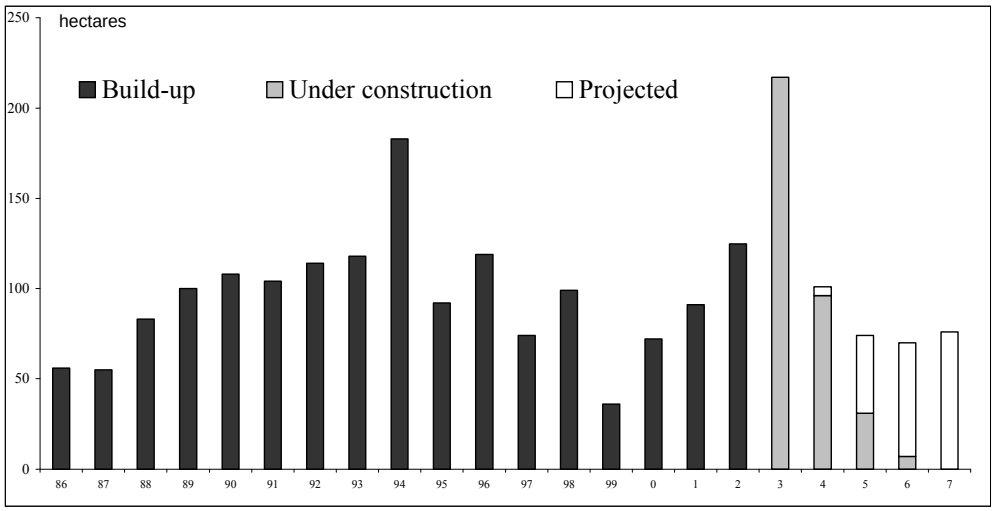
2) The release of large development sites through the sale of land previously owned by the Japan National Railways following its privatization in 1987. Most of the current large-scale projects are going ahead on JR company land. These sites are particularly well located, along the Yamanote loop railway, and adjacent to major railway central stations. Typical examples are Shiodome (31 ha of land), Shinagawa (17 ha) and Yaesu (6.5 ha).

3) Deregulation of floor-area-ratios in central locations, allowing the rebuilding of low or middle-rise office buildings into high-rise constructions.

[31] This redevelopment project, referred to as 'the ultimate in urban life', costed almost $ 4.2 billion. The complex includes 209 stores, 800 condominium units, a high-grade hotel and entrainment facilities.

While the 1994 record vacancy returned to a normal level in about three years, supported by a boom in information technology and an steady demand of foreign firms in the financial sector, it seems unlikely that the coming oversupply will be easily absorbed, given the poor prospects of the business environment. This does not, however, discourage the central State and the Tokyo Metropolitan Government to keep promoting redevelopment through the deregulated frameworks, in the hope that it will regenerate the economic conditions by rising Tokyo's attractiveness as a world city. Large real estate companies may take advantage of this policy, at least in the short run, but small and medium-scale landowners, as well as municipalities and citizens of the remote suburban areas will be the looser of the construction boom in central Tokyo.

Chart 4. Construction of large offices in Tokyo's 23 wards



Source: composed by the author with data from Mori Building, 2002.

Large office space refers to buildings over 10,000 sq.meters in floor area.

Only floor area for office use has been taken into consideration**.**

Table 2. Major Redevelopment Projects in Central Tokyo

	Area in hectares	Cost in billions yens	Key tenants, facilities	Number of residences
Roppongi district	11	500 (all projects combined)	-Goldman Sachs (Japan) ltd. -Cinema complex -Hotel	793
Marunouchi district	111	63 (Marunouchi building only)	Mitsubishi Tokyo Financial Group -Mizuho Financial Group	-
Shiodome district	31	140 (land for Shiodome City Center only)	-Dentsu Inc ; -Fujitsu Ltd. -Theater	1,800
East side of Shinagawa station	5	184 (land only)	-Mitsubishi Heavy Industries Ltd. -Mitsubishi Motors Corp	852
Former Defense Agency site	10	400 (all projects combined)	-Hotel -Convention center	700-800

Source : Nikkei Weekly, April 28, 2003.

Conclusion

The last land boom-bust cycle, triggered by the Plaza agreement in 1985, provided favourable conditions to help the Japanese economy shift from being export oriented to more domestic consumption oriented. Low interest rates, together with booming land and stock markets, offered strong support for private investments in office and residential construction in Tokyo, as well as in other large cities. This was facilitated by the relaxation of urban planning rules and the strong incentives of tax regulations to invest in the real estate sector. Such rapid changes in the structure of the economy were achieved thanks to the supremacy of land over construction, allowing a more flexible use of parcels, and conferring to land the highest status of any collateral.

In the early stage of the land boom, the central government took great advantage of the rising land values. It even fuelled the bubble with low interest rates, loose construction rules and various signals encouraging private investment in land

development. But, after a few years of this regime, the skyrocketing levels of prices started to threaten the macroeconomic equilibrium (through pressure on consumer prices) and to challenge the mythic 'one-class-society' structure. The central government consequently reversed its attitude towards land markets, increased interest rates and introduced 'anti-speculative' measures targeted at investments in property. It was impossible to avoid the subsequent crash of share values, given the high sensitivity of the stock markets to the change in interest rates. But the government managed to limit the panic on land markets by publishing overestimated official land prices and counselling the real situation of bad debts until the late 1990s. Failure to deal quickly with the crisis inflicted –and still continues to inflict– enormous damage to the Japanese economy.

These macro-economic and monetary policies have left significant marks on the urban pattern of large metropolitan areas. In the capital region, the urban fringe expanded outwards, up to 50-60 kilometres from the center, forcing part of the population to endure more than three hours of commuting a day. Those who acquired 25-year mortgage to buy their first house in the remote suburbs will have to sell at a greatly reduced price (provided they can even find a buyer) if they want to move to a better location closer to their working place and to key facilities. In the central zones, large urban projects offer the best living and working conditions to the wealthier households. Not far from these prestigious urban redevelopment areas, in the zones where the *jiage-ya* operated before being blown away by the bursting of the bubble, lies the legacy of the *jiage-ya's* handiwork in the decaying wooden houses and empty lots.

Public authorities have a responsibility to improve the urban environment. This would be supposedly the goal of an urban renewal policy. But the government's concern has once again opportunistically turned about-face, shifting from an anti-speculative to a

pro-speculative policy. Neither of the two policies is likely to improve the living environment. The former is short-termed and tailored to the ascending phase of a cycle –and is therefore usually implemented too late, while the latter does not allow an adequate allocation of land resources since it encourages the more profitable uses; moreover, it raises speculative expectations of further deregulation and keeps land values at high levels.

This latest experience of a land boom-bust cycle clearly shows that land policies are not sustainable in Japan. Policies are alternatively addressed to cope with excessive land values when property values are inflating, and are subsequently designated to boost the economy in deflationary periods. These ups and downs result from the fact that land policies are not really designed to adequately address town and housing issues. Rather, they are primarily designed to manage land as a financial asset class, and they depart from this view only when excessive land prices challenge the myth of 'one-class society' or threaten to push up consumer prices.

The Japanese urban planning and construction rules are thus far from rigid by international standards, contrary to what is often stated by neo-liberal Anglo-Saxon analysts. Constraints to urban development do exist, and even play a major role, but they result more from the emphasis given to land ownership rather than from public control on land-use and construction. The framework of regulations related to town and housing issues focuses on securing the equality of landowner's rights (both corporate and individuals, including land-lessees, who can be assimilated to the landowner group) instead of seeking the most adequate land use. This is where the problem lies. In giving the priority to land ownership while relying on the market mechanisms, urban policies cannot prevent major distortions in the allocation of land resources. Japanese public

authorities should therefore not only keep full control over city development; they should also consider limiting the scope of land ownership to achieve better regulation of land uses.

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Chapter Three

Can an Assessed Land Price Index Work in a Bubble Period? An Assessment by a Hedonic Land Price Index in Tokyo's CBDs

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Introduction

Although the expansion of the land price bubble in the late 1980's and its collapse markedly affected the world economy, especially the Japanese recession in the 1990's, few academic analyses have determined the actual price changes during the period and examined the problems of land price indices for commerce and office use. A number of studies have used housing price indices, although they have not necessarily focused on land prices. This is partly due to the reduced importance of land prices in North American and European countries in which urban areas have been developed and occupied by durable housing and offices. This is not the case in Japan or other East and Southeast Asian countries.

Property value is the price of the set of the land and building structures. However, it is worthwhile examining the land price changes during the bubble periods, as the structure of the land market is simpler to analyze and is more effective and responsive to the economic and demand changes than the housing or office property market in Japan. The institutional characteristics of land use and buyer's constraints for purchasing land in

Japan include the lack of control over the subdivision of land, flexible zoning and mixed-use, and the ease of obtaining mortgages for buying land. This last characteristic was dismissed at the end of the bubble period due to the strong intervention of the government. Unfortunately, most of the land price indices in Japan are constructed using the assessed value and the naive mean of the land prices without considering the quality of the land.

Tackling these shortcomings is crucial to examining the real market conditions and making decisions about land policies. Hence, this chapter will construct a rigorous land price index for commerce and office use at the local level and discuss the variables that influenced the changes in land prices in the market from 1981 to 1992. The structure is as follows. The existing thesis on the land and housing index is reviewed in section 1, and land price data are reviewed in section 2. Section 3 presents the method and the data used to build an index in Tokyo's CBDs. The hedonic functions are estimated in section 4, and the estimated index is discussed and compared with the official assessed price changes in section 5. The major variables affecting the intertemporal changes in the land index are identified in section 6.

1. Property Price Index and Methods to Estimate the Index

Hill, Knight, and Sirmans (1997) stated that there are three methods to estimate intertemporal indices for assets or property, *i.e.*, hedonic, repeat sales, and hybrid methods. The hedonic method has a long history (Haas,1922[1], Wallace,1926[1], Court, 1939; Griliches, 1971; Rosen, 1974; Ohta, 1975; See Hidano, 2002, for detailed

[1] Colwell and Dilmore (1997) discuss Haas's and Wallace's hedonic models which were produced much earlier than Court's model.

discussion) and has been divided into two types, *i.e.*, an explicit time-variable model and a strictly cross-sectional model (Gatzlaff and Ling, 1994). The former model usually assumes constant implicit prices, with which we are unable to build an index for the bubble period in which the types and characteristics of the behaviors of actors in the market varied markedly. The latter models have been criticized due to their sample selection bias, functional and variable selection bias, and subjectivity in setting standard bundles of attributes of the hedonic functions. Bailey, Muth, and Nourse (1963) developed the repeat sales model. Although many studies have used this model, problems remain with sample selection bias and inefficiency in obtaining data. Case and Quigley (1991) proposed a way to combine these two methods, and Hill, Knight, and Sirmans (1997) resolved the problems associated with heteroskedasticity using Harvey's method (1976). However, they again used constant implicit prices in their models. Interestingly, Meese and Wallace (1997) found that the constant implicit price hypothesis was rejected in Oakland and Fremont from 1970 to 1988 by comparison of the results obtained using the repeat sales, hedonic, and hybrid methods. Hybrid models were developed partly to examine the value of age and depreciation of housing, which are essential in the estimation of the rate of return in housing investment. It should be noted that vacant land never has these characteristics. The motivation to obtain repeated sales data for land price analysis is less than that in the case of the housing index.

Attempts to construct the indices on non-housing properties in urban areas are limited because of the lack of data. Miles, Hartzell, and Guilkey (1991) discussed the index of industrial estates, and Fisher, Geltner, and Web (1994) dealt with commercial estates in Chicago. Matysiak and Wang (1995) compared the index of transaction prices for commercial estates with assessed values. Gatzlaff and Geltner (2000) discussed the

characteristics of the repeat sales regression model by comparing the bonds indices. Munneke and Slade (2000) developed a new approach, which can cope with sample selection bias using a probit choice model. However, all of these studies adopted constant implicit price assumption.

2. Land Price Data in Japan

Officially Announced Assessed Land Price

The Land Agency of Japan (now the Ministry of National Land, Infrastructure and Transportation) publishes officially announced assessed land prices or publicly announced land prices. The assessed values announced by the National Land Agency indicate an appropriate level of land prices for the economy and show the actual market price level. These goals are contradictory. In a bubble period, the government should slow the accelerated increases in land prices and officially guide this reduction .Even taking this into consideration, the differences between the real figure and the published assessed figure are very large. Without an accurate land price index, the government seemed not to in detail.

It should be noted that although the system will continue, the real transaction prices in Japan will be open to the public from 2004 if the bill to disclose all transaction prices to the public is accepted by the Diet.

Other Data

Some studies of Japan (*e.g.*, Mera and Renaud, 2000) have adopted the land prices data from the Real Estate Research Institute. However, the Institute's data,

including the highest commercial land values in major cities in Japan, are published every six months. These are assessed prices, which have the same problems as described above.

3. Method and the Variables

In the 1980s bubble in the Tokyo Metropolitan area, land parcels were traded not only by estate agents but also by a tremendous number of new firms and individual investors who did not have the experience necessary to enter the land market. The market conditions were extremely unstable. Thus, it is necessary to adopt a method that can estimate the most flexible parameter sets for changes in the implicit prices of the land attributes. In line with Goodman (1978) took this approach, we use the strictly cross-sectional hedonic approach to estimate the land index,

$$\text{Ln } P_{it} = X'_{it}\ \beta_t \qquad t=1,..n$$

where P is the unit price of land *i*, X'_{it} is the logarithm of the value of the attribute bundle of the land, and *i*, β_t is the parameter vector at time t.

We collected data on 1073 sales transactions of land for commercial and office use with no buildings, to avoid the influence of building structures on land prices. The data were from the Chiyoda and Chuo Wards, which are CBDs in Tokyo, from transactions between 1981 and 1993. We visited and surveyed the characteristics of each lot of land, taking photographs and measuring the landscape and the actual socioeconomic

geographical conditions. Using precise maps from 1981 to 1993 (in Japan CBD maps are generally corrected and published annually), we could identify neighborhood attributes at the time of the transaction. Table 1 summarizes the variables observed.

Institutional Restriction

Although zoning and land use controls are not effective in Japan, the potential use of land in CBDs is strongly restricted by regulation of the maximum floor area over land area ratio (Floor Area Ratio, FAR) under the building codes of the Building Standards Law and City Planning Law. This ratio is officially assigned to every lot of land in city areas. In addition, the FAR serves to control of the vertical line of building facades, with incremental bonuses to lots that face roads 6 to 12 meter in width or within 70 meters of roads with widths of 15 meters or more. To measure the potential space capacity of a lot, we have to modify the official FAR to give an effective FAR by taking these regulations into consideration (see Hidano, 1997,2002; Hidano *et al.*, 1995).

Introduction of Accessibility Measure

The Tokyo metropolitan region has more than 40 million residents and at least five centers, *i.e.*, Tokyo, Yokohama, Kawasaki, Chiba, and Urawa-Omiya (now Saitama). In Tokyo district, CBDs are located in various areas, such as Marunouchi, Kasumigaseki, Ginza, and Nihonbashi in the Chiyoda and Chuo wards, and Aoyama, Roppongi (Minato Ward), Shibuya, Shinjuku, and Ikebukuro, among others. The city is far from monocentric, and the conventional measure of the distance to a CBD cannot be applied. Hence, we introduce an accessibility measure to identify the location proximity to urban activities (see Hidano, 2002 for details) as follows:

$$ACC_i = ACC_i^c + ACC_i^p + ACC_i^f$$

$$ACC_i^c = 1/A_I \left[\sum_j (T_j / q_{ji}^2) \left((S_I / q_{ji}^2) / \sum_k (S_k / q_{jk}^2) \right) \right]$$

$$ACC_i^p = 1/A_I \left[\sum_j (N_j / q_{ji}^2) \left((Z_I / q_{ji}^2) / \sum_k (Z_k / q_{jk}^2) \right) \right]$$

$$ACC_i^f = 1/A_I \left[\sum_j (S_j / q_{ji}^2) \left((S_I / q_{ji}^2) / \sum_k (S_k / q_{jk}^2) \right) \right]$$

where ACC_i^c is accessibility of land *i* for commuters, ACC_i^p is accessibility of land *i* for shopping and other personal activities, and ACC_i^f is accessibility of land *i* for company activities. A_I is the area of zone *I*, which includes land *i*, T_j is the number of secondary and tertiary sector workers who live in zone *j*, S_j is the number of secondary and tertiary sector workers working in zone *j*, N_j is the population of zone *j*, Z_j is the number of retail and service workers who work in zone *j*. There are 85 zones in the Tokyo Metropolitan region is 85, and q_{ji} is the minimum generalized cost from land *i* and zone *j* of transportation by rail or car defined as travel cost plus travel time multiplied by the time value estimated with wage rate. These values are calculated using the data of exact transaction time. The minimum generalized costs are obtained by a transport network search procedure every year to allow accurate estimation of accessibility.

Other variables

In addition to on-site survey data, effective FAR, and accessibility measures, conventional variables obtained from transaction records, geographical maps, and statistics were also collected (see Table 2).

Although it is advisable to estimate quarterly or monthly hedonic functions to

obtain accurate land price indices, the numbers of samples were not sufficient to satisfy this requirement. We estimated functions every six months, although we understood that the sample size was, in general, still considered small to avoid sample selection bias. As discussed above, the characteristics of Tokyo are rather different from those of large cities in North America and Europe, and the mixed use of land and randomly distributed socio-economic characteristics with a homogeneous population are dominant. Thus, selection bias is not such a serious problem in the analysis of Tokyo's CBDs. Table 3 shows the distribution of major variables used in the regression.

4. Estimations of Hedonic Price Functions

Selection of variables

To find consistent variables over time, we first estimated the parameters of the hedonic function for each period and then selected variables according to Akaike's Information Criterion r(AIC) or R square. However, we found no consistent statistically significant variables expanded over time. For example, Table 4 shows the OLS estimations for the first half of 1981. These equations include the following variables: time of transaction, annual sales of retail/area, effective FAR, ACC, distance to central government offices, and landmarks. Other variables were omitted because the signs of their coefficients were not appropriate or their t-statistics were not significant. On the basis of AIC, equation 3 should be selected from among these three functions. Table 5 shows the coefficients of functions estimated for the first half of 1990. The estimation was performed with the six variables, *i.e.*, time of transaction, distance to central government offices, effective FL ratio, ACC, annual sales of retail/area, and uniformity of building height. In this case, it would be appropriate to select equation 3. Thus, there are

differences between the variables included for the first halves of 1981 and 1990.

Variable selection based upon AIC means that variables witch are included in hedonic functions might be inconsistent across periods. This can cause problems in that the properties of the hedonic price index might vary between periods because the variables that are included for one period differ from those for another.

To construct a land price index that has a consistent set of land attributes, we estimated functions with fixed variables for every period, without variable selection based on AIC or R square, as described below.

Estimation results

The five variables used in the estimation were month of transaction, commercial area, distance to central government offices, annual sales of retail/area, effective FAR, and ACC. The other variables were excluded because the signs of their coefficients were not appropriate for at least five time periods or because the variable had the same value for all land lots.

The estimation results for each period are presented in Table 6. The coefficients of effective FAR were significant for nearly all of the periods. Effective FAR is a fundamental variable that represents the productivity of the land, and its coefficient value is distributed between 0.42 and 1.31[2]. Furthermore, there was a large increase in elasticity of the effective FAR in the second half of 1985 and the first half of 1986, and a decline after 1989. During these periods, the market was considered to be under extremely heated bubble conditions. Large fluctuations in the FAR parameter indicate the irrationality of

the land market.

The value of the ACC parameter ranges from 0.091 to 0.315, which indicates that the elasticity of ACC is lower than that of FAR, and the variance of the ACC parameter over time is higher than that of FAR. There were large increases from the second half of 1983 to the first half of 1984. This might have been the result of concentration of investment in particular areas that had relative advantages with regard to transportation accessibility at the beginning of the bubble.

The distance to central government offices parameter showed statistically significant values for many periods, and there was a large increase around 1988. For the annual sales of retail/area parameter, the coefficients were more significant in the periods around 1986. This indicates that there was intensive real estate investment in land of high commercial productivity at the beginning of the bubble.

In summary, at the beginning of the bubble, from 1984 to 1985, the land market was more rational in terms of existing accessibility to transport and commercial activity, while after 1987, when the bubble was at its peak, appreciation spread to other areas of high FAR that would provide the possibility of future development.

Structural changes

We observed large changes in the parameters of ACC, effective FAR, and other variables in the period from 1984 to 1986, which suggest the possibility of changes in the characteristics and structure of land market.

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[2] This result probably applies only to areas in the heart of Tokyo, such as Chiyoda and Chuo. In peripheral commercial areas, it is possible that the construction of buildings has not reached the regulatory limits of building code and so there is no guarantee that FAR is an effective measure.

We conducted a Chow-test[4] to look for such structural changes. This test involves the creation of new data sets by matching the data for each period with those for the previous period and performing analysis of variance on that data set.

The results are presented in Table 7. At the F-value, statistically significant values can be seen between 1984 and 1985, at the beginning of the bubble, which suggests a structural change in the market before and after the period. Furthermore, this structural change can be seen to have begun in the first half of 1984. After the first half of 1991, the F-values increased, indicating the rapid collapse of the bubble. In this respect, our analysis suggests that for Tokyo's CBDs, the bubble began before 1986 - 1987, which is commonly viewed as the beginning of the bubble, and that it continued until 1991.

5. The Index

To construct the index, it is necessary to determine the standard bundle of attributes of land if we adopt the strictly cross-sectional method. The changes in land prices over time should vary due to differences in the price ranges in which transactions have been

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[4] There are two independent data sets for which the numbers of samples are n_1 and n_2 for which the following two regression equations have been obtained ($\beta_k(t)$: parameter).

$$Y= \alpha_1(t)+ \beta_1(t)x_1+ \beta_2(t)x_2+ \dots + \beta_k(t)x_k + u \ (t=1,2)$$

Chow analysis of variance test examines the following hypothesis for those two regression equations.

$$H_0:\ \beta_1(1)= \beta_1(2), \cdots, \beta_k(1)= \beta_k(2), \alpha_1(1)= \alpha_2(2)$$

If the null hypothesis is true, it is possible to estimate a single function from a single data set that integrates the two data sets. Accordingly, if RSS is a restricted residual sum of squares (the residual sum of squares for the integrated data) and Ros_{si} is the residual sum of squares for the data element, then

$$F=\frac{\{\overline{RSS}-(RSS_1+RSS_2)\}/(k+1)}{(RSS_1+RSS_2)/(n_1+n_2-2k-2)}$$

follows an F-distribution with (k+1, n_1+ n_2-2k-2) degrees of freedom.

made. We generated three different indices to reflect the markets for upper, medium, and lower price levels. The representative bundle of attributes are defined as the sample mean -standard deviation for the low level, that of mean for medium, and mean plus standard deviation for upper level based on the 1981 land price distribution. The standardized bundle and the indices are shown in Tables 8 and 9.

The Trends of the Index

Figure 1 shows the trend of changes in prices as compared with the previous year. It is interesting that the increase in land price in Tokyo's CBDs began in 1983 and the drop in increase ratio first began in the first half of 1985 and secondly stared in the second half of 1986, with the index beginning to decrease from the first half of 1988. These observations have not been reported previously. The beginning of the bubble was before the time usually mentioned, *i.e.*, 1986. We would like to compare the trend of this index and the changes in officially announced assessed land price. We estimated an index (OI) based on the mean officially announced assessed price changes of lots assessed during at least successive two-year periods. These two indices look very different. First, our hedonic index depicts spontaneous changes in land prices during the bubble period. Second, it fluctuates within a much larger range than does the OI.

6. Major Variables Affecting the Changes in the Index

With regard to the dynamics of the housing index, Case and Shiller (1989), Archer, Gatzlaff and Ling (1996), and Clapp and Giaccotto (1998) discussed the rationality of appreciation using the rent index. Gyourko and Voith (1992) compared local

market and national appreciation. Mills and Simenaner (1996) analyzed the constant quality index over the United States. Clapp and Giasccotto (1994) reported that expected inflation and unemployment may affect the dynamics of the index rather than dividend or other economic variables. Archer *et al.* (1996) showed that the appreciation was due to rather idiosyncratic factors and the immediate environment rather than rational variables. We cannot discuss the appreciation thesis because of the lack of rent data, especially accurately quality controlled office rent data for the 1980s. However, we can analyze the influence of the economic variables on the index of Tokyo's CBDs. Mera and Renaud (2000) analyzed the major variables for the Tokyo land bubble using publicly announced land prices. However, as we described above, the data did not reflect the land market dynamics.

Therefore, we estimated the following equation by OLS:

$$CRP = X'_t \beta_0 + X'_{t-1} \beta_1 + X'_{t-2} \beta_2 .$$

where CRP is the percentage change of the medium price level index from previous period[5], and X'_t is the vector of explanatory variables, which is also the percentage change from the previous period, and the subscript t represents lagged terms. β_i is the parameter vector. The variables taken are summarized in Table 10. The observation period was from the first half of 1981 to that of 1992.

The index developed here controls all quality variables, including the amenities, neighborhood externality, location, and transport accessibility of the land. The results

[5] Note that, in this section, the change of price index is not a comparison with the previous "year", but with the previous "period."

suggest the importance of manufacturing industry investment for investor reference of future economic conditions in Japan during the bubble periods.

First, we selected equipment investment, newly constructed office buildings in Tokyo, bank debt for the real estate industry, and GDP. The results of estimating the function that includes these variables are presented in Table 11.

Next, we investigated the lag period that should be applied to the explanatory variables. For equation 1 to equation 3 in Table 11, parameters were estimated with a lagged variable of from zero to two periods applied to equipment investment. A lag of either one period for the bank debt for the real estate industry, in relation to newly constructed office buildings in Tokyo, or two periods for GDP applied to the other variables. Comparison of the three functions indicates that equation 1 with no lag shows statistical significance in R^2.

We estimated functions that include variables of newly constructed office buildings in Tokyo and bank debt for the real estate industry with a lag of zero or two periods for equations 4 and 7. A comparison of these equations indicates that equation 1, which contains variables with a one-period lag, is statistically significant. The results indicate that there is a half-year delay in the effect of bank lending activity and office building construction on land value.

As a result, the changes in these three variables influence the changes in hedonic price index. In particular, it is possible that industrial investment activity had a large effect on land value. Moreover, lending to the real estate industry was also a significant factor. Although the rise in land value began in about 1984, lending to the real estate industry increased in the period from 1986 to 1987. These results suggest that the lending activities of financial institutions during this period fueled the land price bubble.

Conclusion

The study reported herein was performed to develop a sound land price index for Tokyo's CBDs, to depict the real changes in the prices during the 1980s and the beginning of the 1990s. A strict cross-sectional hedonic method was applied to real transaction data of commerce and office use land in the CBDs. The results suggest that the price changes during the bubble period were much more dynamic than expected, and symptoms of the increases in land prices were found as far back as 1984, earlier than initially thought. These observations were made with the development of a rigorous land price index, which accurately depicts real price changes by fully taking into account the changes in quality of land over time. It should be reemphasized that our analysis comprehensibly adopts the salient variables, which explain the cross-sectional land price changes in CBDs, i.e. the accessibility showed a good fit with the complicated railway system in Tokyo, and the effective FAR to take into account the real building capacity of the land. These variables have not been adopted in a comprehensive manner by previous studies in Tokyo.

The indices that use officially announced land prices, which are the mean values of changes of assessed land prices, do not depict the actual situation during these times. We also found that, among the variables that affected price changes, industrial investment activity and lending to the real estate industry had a large effect on land value, even in the bubble period. However, it is not easy to find a robust set of variables that can explain the price changes in land because of a lack of sufficient periods observed. For accurate estimation, real transaction prices and dates with a large sample size over time and across

Tokyo's CBDs are required.

Thus, the transparency of the real transaction data of land prices and housing should be examined, and real price changes should be monitored, not only in Japan but also in other Asian countries. When such data are available, appropriate discussion will be possible based upon the actual conditions.

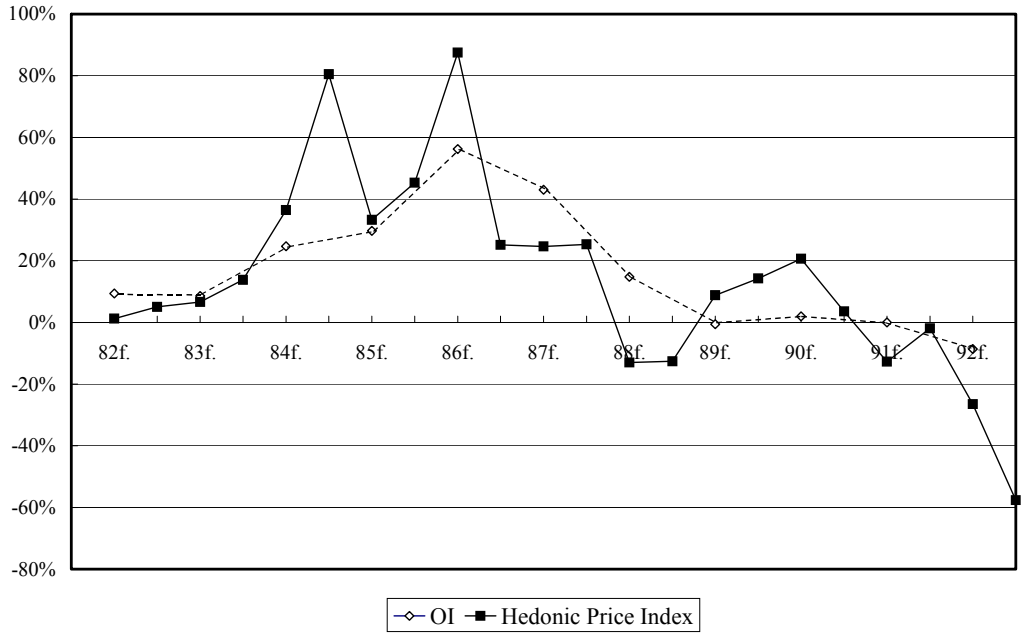

Figure 1. Dynamics of the Hedonic Price Index and Comparison with OI

Table 1 The Characteristics Observed on Lot of Land

Characteristics	Measurement and Criteria
Inclination of the land	observation
Direction to the land	south or other directions
Width of road and pedestrian	direct measure 50cm unit
Street planting	including low height plants
Grade of road	major street or back street
Shopping area	more than 4 plots are occupied by shops among 6 plots adjacent to the land
Open space	existence of front yard of buildings for public, well maintained parks or open spaces
Elevated roads or railways	the existence of unpleasant sight
Uniformity of height of buildings	more than 8 buildings among 10 buildings adjacent to the lot
Landmark	existence of historic and symbolic structures within 50 meters or seeable distance
Visibility	distant view such as large-scale parks, hovers, impressive
Electric and utilities poles	installation in the underground facilities

Table 2. Other variables for hedonic equations

Variables	unit	source
Width of the roads	meter	transaction record
Lot size	square meters	transaction record
Length of lot facing the main road	meter	transaction record
Shape of lot	dummy (square shape=1)	transaction record
Corner of road	dummy (corner=1)	transaction record
Distance to the nearest railway station	meter	transaction record
Land use restriction	dummy	transaction record
Distance to Marunouch business	meter	map
Distance to Kasumigaseki	meter	map
Density of small buildings	dummy	map
Density of workers	person per hectare(spatial unit: chouchoume)	Jigyoushotoukei (Management and Coordination Agency)
Density of retail and service	person per hectare (spatial unit: chouchoume)	Jigyoushotoukei (Management and Coordination Agency)
Retail sales per area	ten thousand yen per square meter (spatial unit:chouchoume)	Tokyo no shougyoushuusekichiiki (Tokyo Metropolitan Government)

Table 3. Summary Characteristics of Variables

Variables	1981f				1981l				1982f				1982l				1983f				1983l			
	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max
Transaction month	3.7	1.5	1.0	6.0	2.6	1.1	1.0	5.0	3.7	1.6	1.0	6.0	3.1	1.6	1.0	6.0	4.5	1.6	1.0	6.0	3.6	1.5	1.0	6.0
Lot size	153	122	41	666	225	217	51	775	227	499	34	2913	136	91	31	441	229	356	29	1898	180	160	36	650
Effective FL ration	432.9	189.6	200	800	454.1	117.9	260	800	439.3	172.6	250	800	392	132.7	230	755	408	116.2	158.8	700	448	134.6	258	800
South direction	0.381	0.492	0	1	0.273	0.456	0	1	0.364	0.489	0	1	0.52	0.509	0	1	0.45	0.504	0	1	0.13	0.09	0.03	0.39
Shape	0.119	0.328	0	1	0.273	0.456	0	1	0.091	0.292	0	1	0.03	0.186	0	1	0.09	0.291	0	1	0.22	0.42	0	1
Width of road	8.762	6.136	3	26	9.295	5.8	1.5	25	10.41	7.432	2.5	27	11.4	8.746	1.8	36	12	8.698	3	36	12.6	7.715	4.3	27
Width of pedestrian	0.698	1.316	0	4.8	1.114	1.391	0	4.8	1.282	1.951	0	6	1.4	2.115	0	9	1.59	1.865	0	5	1.84	2.247	0	7
Street planting	0.262	0.445	0	1	0.227	0.429	0	1	0.152	0.364	0	1	0.24	0.435	0	1	0.23	0.424	0	1	0.33	0.477	0	1
Grade of road	0.238	0.431	0	1	0.227	0.429	0	1	0.394	0.496	0	1	0.45	0.506	0	1	0.39	0.493	0	1	0.42	0.499	0	1
Uniformity of height of buildings	0.357	0.485	0	1	0.364	0.492	0	1	0.394	0.496	0	1	0.41	0.501	0	1	0.43	0.501	0	1	0.49	0.506	0	1
Landmark	0.071	0.261	0	1	0.227	0.429	0	1	0.091	0.292	0	1	0.03	0.186	0	1	0.09	0.291	0	1	0.04	0.208	0	1
Existence of elevated structure	0.095	0.297	0	1	0.091	0.294	0	1	0.061	0.242	0	1	0.07	0.258	0	1	0.14	0.347	0	1	0.04	0.208	0	1
ACC	0.138	0.139	0	0.39	0.159	0.116	0	0.41	0.13	0.105	0.002	0.351	0.1	0.109	0.017	0.388	0.2	0.122	0.016	0.404	0.13	0.09	0.03	0.39
Distance to Marunouchi	2547	878.5	400	4400	1895	774.3	800	4100	2158	930.7	700	4200	2284	991.8	800	4700	2962	826.6	1100	4800	2736	941.3	1100	4400
Distance to central government offices	2886	1057	800	5400	2805	1270	800	5500	2697	994.5	600	4700	2666	1227	700	5500	3006	1052	890	5100	2600	981.6	800	4900
Distance to the nearest railway station	285.1	216.6	30	890	250	202.8	50	800	264.7	220.5	50	900	227	187.8	25	750	216	126	27.78	500	221	109.6	50	700
Annual sales of retail/area	29.95	38.08	1	136	28.64	39.47	1	103	24.73	44.17	1	133	15.7	32.4	1	106	19	35.44	1	131	34.3	48.9	1	131
Retail and service workers/area	655.6	408.2	112	1668	637.3	373.7	160	1792	557	385.2	68	1524	515	401	120	1557	710	520.4	200	2084	672	399.3	168	1496
workers/area	922.1	580.5	200	2648	930.7	521	228	2332	885.8	562.3	135	2020	780	513.2	150	2010	1042	569.7	408	2360	1028	540.1	284	2040
Ginza area	0.095	0.297	0	1	0.136	0.351	0	1	0.152	0.364	0	1	0.07	0.258	0	1	0.05	0.211	0	1	0.09	0.288	0	1

Variables	1984f				1984l				1985f				1985l				1986f				1986l			
	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max
Transaction month	3.6	1.6	1.0	6.0	2.7	1.4	1.0	6.0	4.0	1.6	1.0	6.0	2.8	1.6	1.0	6.0	4.2	1.5	1.0	6.0	2.6	1.4	1.0	6.0
Lot size	224	298	35	1313	163	125	26	599	174	255	18	1438	182	287	20	1602	210	230	35	1093	215	203	33	901
Effective FL ration	399	151.4	180	800	432	167.5	160	910	441.2	178.8	200	1000	449	159.1	189	800	455	160.8	72	800	458	175.7	180	800
South direction	0.481	0.505	0	1	0.432	0.501	0	1	0.619	0.49	0	1	0.42	0.497	0	1	0.51	0.505	0	1	0.6	0.494	0	1
Shape	0.058	0.235	0	1	0.159	0.37	0	1	0.127	0.336	0	1	0.23	0.422	0	1	0.15	0.356	0	1	0.2	0.403	0	1
Width of road	11.45	9.797	3	50	9.955	7.27	3	36	11.39	7.104	3.5	26	10.8	6.709	1.5	27	12.3	7.988	1.2	40	11.1	7.016	3.5	33
Width of pedestrian	1.308	2.165	0	9	1.52	2.105	0	9	1.449	1.637	0	5	1.41	1.445	0	5	1.68	1.675	0	5.2	1.48	1.732	0	9
Street planting	0.173	0.382	0	1	0.25	0.438	0	1	0.19	0.396	0	1	0.27	0.45	0	1	0.31	0.466	0	1	0.28	0.451	0	1
Grade of road	0.346	0.48	0	1	0.205	0.408	0	1	0.349	0.481	0	1	0.35	0.482	0	1	0.36	0.485	0	1	0.28	0.454	0	1
Uniformity of height of buildings	0.385	0.491	0	1	0.227	0.424	0	1	0.333	0.475	0	1	0.37	0.487	0	1	0.4	0.494	0	1	0.4	0.494	0	1
Landmark	0.154	0.364	0	1	0.114	0.321	0	1	0.175	0.383	0	1	0.18	0.385	0	1	0.2	0.404	0	1	0.1	0.303	0	1
Existence of elevated structure	0.038	0.194	0	1	0.068	0.255	0	1	0.048	0.215	0	1	0.02	0.127	0	1	0.07	0.262	0	1	0.1	0.303	0	1
ACC	0.118	0.114	0.01	0.38	0.136	0.114	0.01	0.37	0.156	0.125	0.003	0.383	0.11	0.095	0.004	0.387	0.15	0.131	0.004	0.437	0.12	0.111	0.01	0.36
Distance to Marunouchi	2831	1130	700	4900	2745	847.3	1200	4700	2706	908.5	600	4600	2610	849.8	800	4500	2581	796.7	700	4600	2532	1019	600	4700
Distance to central government offices	2884	1137	800	5400	2611	908.7	600	4500	2594	949.7	800	4500	2721	940.8	900	4900	2652	818.7	800	4800	2882	1140	800	5100
Distance to the nearest railway station	208.1	110.5	50	600	223.4	95.67	30	400	253.4	196.1	10	1000	265	181.3	40	1200	294	222.6	20	1000	262	165.7	10	1000
Annual sales of retail/area	33.44	49.67	1	141	25.02	46.61	1	135	31.11	47.4	1	140	32.5	54.31	1	142	25.4	45.84	1	132	35.3	52.47	1	156
Retail and service workers/area	549.4	438.9	132	1989	836.6	574	52	1987	763.6	553.4	63	1893	547	402.1	45	1608	661	581.6	105	1887	602	484.1	126	1848
workers/area	869.8	613.2	152	2368	1158	787.3	68	2800	1021	663	90	2280	847	566	186	2117	933	718.9	168	2531	898	641.2	193	2100
Ginza area	0.115	0.323	0	1	0.068	0.255	0	1	0.032	0.177	0	1	0.05	0.216	0	1	0.05	0.229	0	1	0.02	0.129	0	1

Variables	1987f				1987l				1988f				1988l				1989f				1989l			
	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	mean	S.D.	Min	Max	mean	S.D.	Min	Max
Transaction month	4.8	1.0	2.0	6.0	2.4	1.5	1.0	6.0	4.8	1.3	2.0	6.0	2.7	1.3	1.0	6.0	4.1	1.7	1.0	6.0	1.9	1.1	1.0	5.0
Lot size	201	162	30	798	200	270	16	1754	106	116	18	566	203	271	26	1488	239	222	50	1021	234	333	14	1850
Effective FL ration	477	193.7	120	876	438.2	171.8	180	800	437.1	158.6	200	800	411	151.6	200	800	469	136.8	180	700	418	145.5	120	700
South direction	0.607	0.493	0	1	0.446	0.502	0	1	0.561	0.502	0	1	0.5	0.509	0	1	0.43	0.5	0	1	0.47	0.503	0	1
Shape	0.23	0.424	0	1	0.179	0.386	0	1	0.146	0.358	0	1	0.17	0.379	0	1	0.1	0.306	0	1	0.14	0.35	0	1
Width of road	11.39	7.38	2	27	11.66	9.241	3	50	11.12	8.138	2	36	14.8	12.57	3.5	50	15.3	9.087	4	40	10.7	7.156	2	28
Width of pedestrian	1.643	1.477	0	4.8	1.48	1.604	0	5.5	1.451	2.081	0	9	1.79	2.529	0	9	2.44	2.718	0	9	1.16	1.314	0	3.5
Street planting	0.262	0.444	0	1	0.304	0.464	0	1	0.268	0.449	0	1	0.27	0.45	0	1	0.41	0.366	0	1	0.22	0.417	0	1
Grade of road	0.262	0.444	0	1	0.268	0.447	0	1	0.366	0.488	0	1	0.27	0.45	0	1	0.43	0.362	0	1	0.3	0.46	0	1
Uniformity of height of buildings	0.361	0.484	0	1	0.232	0.426	0	1	0.22	0.419	0	1	0.33	0.479	0	1	0.43	0.361	0	1	0.14	0.35	0	1
Landmark	0.18	0.388	0	1	0.179	0.386	0	1	0.171	0.381	0	1	0.03	0.183	0	1	0.08	0.277	0	1	0.09	0.294	0	1
Existence of elevated structure	0.016	0.128	0	1	0.071	0.26	0	1	0	0	0	0	0.13	0.346	0	1	0.04	0.2	0	1	0.13	0.333	0	1
ACC	0.136	0.104	0	0.44	0.089	0.1	0	0.39	0.095	0.093	0.003	0.36	0.09	0.118	0.001	0.377	0.12	0.113	0.003	0.435	0.12	0.115	0.01	0.36
Distance to Marunouchi	2665	817	500	4100	2526	1008	500	4600	2553	942	800	4400	2667	1054	700	4300	2576	950.6	700	4800	2498	1049	700	4700
Distance to central government offices	2882	1037	800	5100	2660	1138	800	5400	2937	876.1	1400	5100	3103	1113	1100	5100	2792	964	800	5200	3024	997.4	1150	5100
Distance to the nearest railway station	303.1	236	50	1000	285.5	171	30	800	331.5	198.8	80	800	332	268.7	50	1000	286	216	40	800	265	182.6	30	780
Annual sales of retail/area	34.13	64.52	1	210	30.57	50.33	1	155	25.61	51.91	1	159	40	62.32	1	176	23.3	42.56	1	130	31.3	56.07	1	180
Retail and service workers/area	703.7	470	123	1698	500.1	443	109	1904	564.6	433	119	1772	614	374	143.5	1303	658	482.7	105	1741	611	490.3	102	1727
workers/area	996.7	705.1	172	2390	880.4	704.8	116	2569	838.9	623.9	189	2335	928	476.5	280	2263	970	717.4	171.5	2575	902	737.8	133	2643
Ginza area	0	0	0	0	0.036	0.187	0	1	0	0	0	0	0.03	0.183	0	1	0	0	0	0	0.02	0.125	0	1

Variables	1990f				1990l				1991f				1991l				1992f				1992l			
	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max
Transaction month	4.2	1.6	1.0	6.0	2.5	1.3	1.0	5.0	4.5	1.6	1.0	6.0	2.3	1.6	1.0	6.0	4.6	1.0	3.0	6.0	1.9	0.8	1.0	4.0
Lot size	259	271	38	1471	242	219	37	847	226	313	10	1488	289	329	44	1174	264	341	56	1263	138	126	62	578
Effective FL ration	416.4	145.1	200	700	459.2	188.2	160	800	418.3	176.2	200	770	508	168.8	230.4	800	460	173.9	150	800	424	129.3	240	700
South direction	0.444	0.503	0	1	0.435	0.501	0	1	0.591	0.503	0	1	0.55	0.506	0	1	0.5	0.511	0	1	0.21	0.419	0	1
Shape	0.133	0.344	0	1	0.065	0.25	0	1	0.045	0.213	0	1	0.41	0.501	0	1	0.21	0.415	0	1	0.11	0.315	0	1
Width of road	14.09	11.29	2.5	40	12.87	10.16	3	50	9.886	6.387	2.5	27	14.8	9.176	4	27	11.2	10.6	2.5	50	7.87	4.621	2.5	18
Width of pedestrian	1.364	1.678	0	5.3	1.137	1.539	0	4.8	0.868	1.267	0	5	1.72	1.382	0	3.5	1.2	1.573	0	5	0.73	1.106	0	2.5
Street planting	0.244	0.435	0	1	0.326	0.474	0	1	0.182	0.395	0	1	0.52	0.509	0	1	0.21	0.415	0	1	0.21	0.419	0	1
Grade of road	0.311	0.468	0	1	0.283	0.455	0	1	0.136	0.351	0	1	0.38	0.494	0	1	0.21	0.415	0	1	0.11	0.315	0	1
Uniformity of height of buildings	0.178	0.387	0	1	0.196	0.401	0	1	0.227	0.429	0	1	0.21	0.412	0	1	0.25	0.442	0	1	0.16	0.375	0	1
Landmark	0.044	0.208	0	1	0.043	0.206	0	1	0.091	0.294	0	1	0.07	0.258	0	1	0.21	0.415	0	1	0.05	0.229	0	1
Existence of elevated structure	0.133	0.344	0	1	0.043	0.206	0	1	0.091	0.294	0	1	0.1	0.31	0	1	0.13	0.338	0	1	0	0	0	0
ACC	0.084	0.105	0	0.35	0.091	0.115	0.01	0.38	0.071	0.098	0.009	0.363	0.12	0.111	0.01	0.348	0.05	0.058	0.003	0.224	0.06	0.054	0.01	0.15
Distance to Marunouchi	2461	955.2	900	4700	2465	834.6	600	4200	2291	830.3	800	3900	2366	979.5	800	4200	2388	967.4	700	4700	2121	739.1	700	3800
Distance to central government offices	2934	1050	800	5400	3071	1046	800	5100	2768	1006	800	4800	2786	1275	900	5100	3021	1081	900	5200	2584	1103	1100	4300
Distance to the nearest railway station	343.6	256.3	20	1000	323.8	176	10	780	321.4	218.6	50	800	308	186.5	30	840	297	308.4	40	1000	326	160.7	80	630
Annual sales of retail/area	27.87	53.46	1	190	38.59	59.2	1	199	22.82	44.12	1	123	24.7	43.6	1	121	38	62.79	1	160	22	31.45	1	109
Retail and service workers/area	627.4	378.4	133	1720	620.2	415.1	116	1377	654.6	533.8	115.5	1925	644	502.4	133	1789	596	470.7	115.5	1939	750	421.9	123	1489
workers/area	922.5	628.6	182	2749	1016	482.7	182	2008	1014	717.9	189	2905	1037	675.3	182	2305	892	587.1	157.5	2250	927	494.3	186	1947
Ginza area	0.022	0.149	0	1	0	0	0	0	0.045	0.213	0	1	0.03	0.186	0	1	0.08	0.282	0	1	0	0	0	0

Table 4. Selection of Variables (Estimates of Hedonic Functions ; First half of 1981)

	eq. 1	eq. 2	eq. 3
Transaction month	0.00810 (0.104)	-0.00493 (-0.0612)	-0.00493 (-0.065)
Annual sales of retail/area	0.04232 (1.577)	0.04110 (1.547)	0.04038 (1.529)
Effective FL ratio	0.51034 (3.391)	0.50349 (3.390)	0.50789 (3.425)
ACC	0.08839 (2.166)	0.09136 (2.269)	0.09185 (2.293)
Distance to central government offices	-0.07301 (-0.704)	-0.07623 (-0.794)	
Landmark	0.08004 (0.592)		
Constant	12.20636 (9.304)	12.29253 (9.969)	11.68341 (12.164)
Sample size	42	42	42
Adjusted R^2	0.6784	0.6821	0.6853

Table 5. Selection of Variables (Estimates of Hedonic Functions ; First half of 1990)

	eq. 1	eq. 2	eq. 3
Transaction month	0.28084 (1.292)	0.31089 (1.573)	0.30429 (1.5321)
Distance to central government offices	-0.7268 (-2.993)	-0.68824 (-2.926)	-0.72992 (-3.122
Effective FL ratio	0.69655 (1.856)	0.78258 (2.341)	0.84630 (2.551)
ACC	0.27873 (2.803)	0.25332 (2.788)	0.24483 (2.689)
Annual sales of retail/area	0.03350 (0.658)	0.05238 (1.190)	
Uniformity of height of buildings	0.19476 (0.665)		
Constant	17.88285 (5.636)	16.84728 (6.128)	16.93615 (6.092)
Sample size	45	45	45
Adjusted R^2	0.6044	0.6089	0.6156

Table 6. Estimates of Hedonic Functions

	Coefficient (t-statistics)											
Variables	1981f.	1981 l.	1982 f.	1982 l.	1983 f.	1983 l.	1984 f.	1984 l.	1985 f.	1985 l.	1986 f.	1986 l.
Transaction month	-0.00493	0.043654	-0.12935	0.031578	0.112171	0.077245	0.057953	0.034635	0.108143	0.085778	-0.00719	-0.08366
	(0.07)	(0.32)	(-0.92)	(0.42)	(1.25)	(0.95)	(0.68)	(0.39)	(1.01)	(1.06)	(-0.51)	(-0.89)
Distance to c.g. offices	-0.07623	-0.31096	-0.3629	-0.08902	-0.45793	-0.20596	-0.17625	-0.32711	-0.53599	-0.70094	-0.73105	-0.66019
	(-0.79)	(-1.17)	(-1.78)	(0.76)	(-3.91)	(-1.08)	(-1.48)	(-2.12)	(3.28)	(-4.42)	(-3.44)	(-3.68)
Annual sales of retail/area	0.041099	0.076124	0.001612	0.018965	0.051685	0.06564	0.05368	0.039332	0.058472	0.039676	0.092487	0.071067
	(1.55)	(1.40)	(0.03)	(0.58)	(2.41)	(3.55)	(2.47)	(1.48)	(2.26)	(1.71)	(2.67)	(2.59)
Effective FL ratio	0.50349	0.68274	0.71259	0.663692	0.514754	0.701281	0.698345	0.419137	0.835752	0.885583	1.137695	0.942029
	(3.39)	(1.63)	(2.74)	(2.80)	(3.28)	(4.48)	(4.25)	(1.95)	(4.36)	(4.32)	(5.09)	(4.66)
ACC	0.091385	0.095401	0.110352	0.106	0.090532	0.092616	0.231614	0.186274	0.224425	0.210283	0.242361	0.265538
	(2.27)	(1.20)	(1.78)	(2.57)	(1.65)	(2.15)	(4.49)	(2.37)	(3.74)	(3.58)	(3.54)	(4.99)
Constant	12.29253	12.79707	13.61119	11.46136	15.09349	12.0228	12.38682	15.6303	14.54897	16.03001	14.91596	15.81067
	(9.97)	(3.24)	(6.89)	(5.37)	(11.30)	(8.27)	(7.09)	(6.78)	(6.82)	(7.16)	(7.23)	(6.62)
Adj. R^2	0.6821	0.7773	0.6048	0.582	0.6586	0.5509	0.6782	0.6814	0.7211	0.6778	0.7072	0.743
Sample size	42	22	27	29	44	44	52	44	63	62	55	60

	Coefficient (t-statistics)											
Variables	1987 f.	1987 l.	1988 f.	1988 l.	1989 f.	1989 l.	1990 f.	1990 l.	1991 f.	1991 l.	1992 f.	1992 l.
Transaction month	0.272062	0.025436	0.079308	0.096161	-0.38721	0.067318	0.310889	-0.10204	-0.02885	-0.08185	0.186595	-0.26452
	(1.01)	(0.19)	(0.49)	(0.61)	(-3.60)	(0.52)	(1.57)	(-0.98)	(-0.62)	(-1.31)	(0.67)	(-0.87)
Distance to c.g. offices	-0.82573	-0.75844	-0.61015	-0.90941	-0.9687	-0.96319	-0.68824	-0.94062	-0.62478	-0.70112	-0.4917	-0.13048
	(-2.51)	(-4.16)	(-1.53)	(-3.90)	(-2.81)	(-3.70)	(-2.93)	(-2.03)	(-2.03)	(-2.12)	(-2.45)	(-0.44)
Annual sales of retail/area	0.092013	0.068636	0.021976	0.003467	0.093051	0.089355	0.052379	0.003475	0.106828	0.063832	0.03279	0.04458
	(3.13)	(1.67)	(0.88)	(0.10)	(2.65)	(2.59)	(1.19)	(0.93)	(1.73)	(1.49)	(0.96)	(0.57)
Effective FL ratio	0.75906	1.0407	1.122484	0.993495	1.311986	0.632843	0.782583	0.846606	0.756693	0.731715	0.520728	1.131259
	(4.19)	(4.40)	(4.10)	(3.10)	(4.40)	(2.89)	(2.34)	(2.89)	(2.59)	(2.40)	(2.53)	(1.78)
ACC	0.248638	0.241353	0.161604	0.209741	0.156602	0.169837	0.253317	0.154767	0.205489	0.331937	0.112608	0.315459
	(4.13)	(2.88)	(2.42)	(2.86)	(2.76)	(2.60)	(2.79)	(2.68)	(1.76)	(1.76)	(1.82)	(1.52)
Constant	17.84288	16.01103	14.12471	17.42829	16.23799	19.87161	16.84728	18.92242	16.5627	17.81553	16.4616	10.30312
	(7.63)	(7.51)	(4.36)	(5.21)	(5.24)	(6.94)	(6.13)	(6.07)	(5.01)	(6.37)	(6.88)	(1.91)
Adj. R^2	0.7778	0.725	0.6676	0.6693	0.6226	0.7131	0.6089	0.6723	0.8573	0.6429	0.6089	0.6024
Sample size	59	56	41	34	49	61	45	46	22	29	24	19

Table 7. F-test

	F-statistics		F-statistics
1981f. -1981l.	1.61939	1987f. -1987l.	0.480275
1981l. -1982f.	1.307949	1987l. -1988f.	0.246678
1982f. -1982l.	0.698387	1988f. -1988l.	0.93484
1982l. -1983f.	1.123521	1988l. -1989f.	1.94741
1983f. -1983l.	0.547148	1989f. -1989l.	2.420902*
1983l. -1984f.	2.821779*	1989l. -1990f.	0.895511
1984f. -1984l.	8.904328**	1990f. -1990l.	0.658618
1984l. -1985f.	3.7663**	1990l. -1991f.	1.762179
1985f. -1985l.	7.038387**	1991f. -1991l.	3.595025**
1985l. -1986f.	1.047109	1991f. -1992f.	9.253476**
1986f. -1986l.	0.470334	1992f. -1992l.	3.687388**
1986l. -1987f.	1.124226		

*:5%sig., **:1%sig.

Table 8. Standard Bundle of Attributes

Variables	upper	medium	lower
Month of transaction	April and October	April and October	April and October
Distance to gov.offices	1960	2560	3500
Annual sales of retail/area	103	35	5
Effective FL ratio	690	480	250
ACC	0.22541	0.15962	0.0578

Table 9. Hedonic Land Indices

	upper		medium		lower		0 I
1981f.	3,456,206	—	2,608,625	—	1,543,015	—	—
1981l.	3,927,462	—	2,490,336	—	1,132,871	—	—
1982f.	3,965,592	(14.7%)	2,640,656	(1.2%)	1,319,766	(-14.5%)	(9.4%)
1982l.	3,617,867	(-7.9%)	2,615,439	(5.0%)	1,427,704	(26.0%)	—
1983f.	4,245,015	(7.0%)	2,816,154	(6.6%)	1,438,826	(9.0%)	(8.6%)
1983l.	4,525,622	(25.1%)	2,977,351	(13.8%)	1,415,306	(-0.9%)	—
1984f.	5,987,191	(41.0%)	3,841,115	(36.4%)	1,641,089	(14.1%)	(24.7%)
1984l.	7,673,679	(69.6%)	5,373,170	(80.5%)	2,829,058	(99.9%)	—
1985f.	9,361,086	(56.4%)	5,118,630	(33.3%)	1,783,035	(8.6%)	(29.7%)
1985l.	14,894,225	(94.1%)	7,808,427	(45.3%)	2,631,304	(-7.0%)	—
1986f.	21,664,522	(131.4%)	9,596,147	(87.5%)	2,373,608	(33.1%)	(56.2%)
1986l.	19,816,745	(33.0%)	9,771,498	(25.1%)	2,858,957	(8.7%)	—
1987f.	24,248,523	(11.9%)	11,959,982	(24.6%)	3,656,634	(54.1%)	(43.0%)
1987l.	26,209,498	(32.3%)	12,242,743	(25.3%)	3,353,902	(17.3%)	—
1988f.	20,310,746	(-16.2%)	10,405,984	(-13.0%)	3,361,561	(-8.1%)	(14.8%)
1988l.	21,719,150	(-17.1%)	10,701,441	(-12.6%)	3,380,664	(0.8%)	—
1989f.	28,399,629	(39.8%)	11,324,208	(8.8%)	2,529,415	(-24.8%)	(-0.6%)
1989l.	23,939,024	(10.2%)	12,226,497	(14.3%)	4,233,984	(25.2%)	—
1990f.	25,730,471	(-9.4%)	13,660,497	(20.6%)	4,615,927	(82.5%)	(2.0%)
1990l.	24,136,130	(0.8%)	12,665,217	(3.6%)	4,610,973	(8.9%)	—
1991f.	22,773,329	(-11.5%)	11,923,059	(-12.7%)	3,946,567	(-14.5%)	(0.1%)
1991l.	23,991,207	(-0.6%)	12,424,179	(-1.9%)	3,902,647	(-15.4%)	—
1992f.	13,205,931	(-42.0%)	8,765,576	(-26.5%)	4,477,979	(13.5%)	(-8.6%)
1992l.	9,652,077	(-59.8%)	5,263,201	(-57.6%)	1,607,675	(-58.8%)	—

Table 10. Summary of the Variables

Variables	Source	
GDP	Kokuminkeizaikeisan	(Economic Planning Agency)
Equipment Investment	Kokuminkeizaikeisan	(Economic Planning Agency)
Current Profit	Houjinkigyoutoukei-kih	(Ministry of Finance)
Consumption Expenditure	Kakeichousa-nenpoi	(Management and Coordination Agency)
Disposal Income	Kakeichousa-nenpoi	(Management and Coordination Agency)
Bank debt for real estate industry	Kensetsutoukei-geppou	(Ministry of Construction)
Money Stock (M^2+CD)	Keizaitoukei-nenpou	(Bank of Japan)
Newly constructed office building in Tokyo	Kensetsutoukei-geppou	(Ministry of Construction)
Building Construction Stars	Kensetsutoukei-geppou	(Ministry of Construction)
Official Discount Rate	Keizaitoukei-nenpou	(Bank of Japan)
Average Contracted Interest Rates on Loans and Discounts	Keizaitoukei-nenpou	(Bank of Japan)
The Nikkei Stock Average	Keizaitoukei-nenpou	(Bank of Japan)
TOPIX	Keizaitoukei-nenpou	(Bank of Japan)
Yields of Government Bonds (Longest-term Bonds)	Keizaitoukei-nenpou	(Bank of Japan)

Table 11. Influence of variable on land price changes in Tokyo-CBD

	Coefficient (t-statistics)						
Variables	eq. 1	eq. 2	eq. 3	eq. 4	eq. 5	eq. 6	eq. 7
Equipment Investment (same period)	4.4681 (5.289)			3.73749 (4.353)	4.30786 (4.037)	4.25197 (4.796)	4.26444 (4.177)
——— (previous period)		3.45252 (2.634)					
——— (two periods before)			1.23138 (0.643)				
Newly constructed office building in Tokyo (same period)				-13.7832 (-2.503)			
——— (previous period)	-15.4265 (-2.501)	-15.229 (-1.833)	-8.09655 (-0.878)			-17.2371 (-2.715)	-23.761 (-3.497)
——— (two periods before)					-15.2474 (-1.662)		
Bank debt for real estate industry (same period)						1.23202 (2.357)	
——— (previous period)	1.46047 (2.844)	1.23358 (1.840)	1.28701 (1.650)	1.41044 (2.760)	1.34179 (2.205)		
——— (two periods before)							0.10031 (0.170)
GDP	1.96203 (0.655)	1.1686 (0.277)	-1.3293 (-0.212)	2.1300 (0.627)	6.14691 (1.597)	3.89024 (1.197)	2.29261 (0.576)
Constant	-5.58507 (-0.373)	8.59497 (0.399)	5.45006 (0.210)	-4.47864 (-0.253)	-17.1882 (-0.982)	-5.29514 (-0.318)	19.20594 (1.008)
D/W	2.495	2.434	1.695	2.368	1.955	2.418	2.211
Adjusted R^2	0.6311	0.3284	0.2558	0.5728	0.5008	0.5915	0.4662
Sample size	23	23	23	23	23	23	23

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Chapter Four

Korean Land Market, Land Policies and Economic Crisis

Jae-young SON

Introduction

From 1961, the South Korean government promoted exports of manufactured goods with various financial and fiscal measures. This government-led export-oriented growth policy was successful, and South Korea's per capita GNP rose from under U$100 in 1960 to U$10,076 in 1995.[1] A number of large firms, especially those with good political connections, greatly benefited from the growth policy and became powerful business conglomerates (*chaebols*). Many analysts both inside and outside the government raised concern about the conglomerates' monopoly of financial and human resources, primitive corporate governance, overlapping investments, and eventual viability. However, as long as the economy grew quickly, such problems could be hidden.

Another important legacy of fast economic growth was massive rural-to-urban migration, as most export industries and related services were concentrated in a few major cities. The urban population of overall population was 28% in 1960, but increased to 57.3% in 1980 and 79.7% in 2000. In the 1960s, rural-urban migration to large cities

[1] Per capita gross national income (GNI) came down to US$6,723 in 1998 mainly due to exchange rate fluctuation. Per capita GNI in 2000 had climbed back to US$9,628 as a result of economic recovery and the stabilization of the Korean currency.

took place in various parts of the country, but the pattern was changed in the early 1970s. For example, the Capital region, which consists of Seoul, the city of Inchon and the Kyunggi Province, absorbed more of the migrants than any other regional center in the country. The Capital region accounted for 28.3% of the population in 1970, but the ratio increased to 46.3% in 2000.

As in other fast-growing countries, land, housing, and other real estate prices rose rapidly along with economic development. Property price increases were especially prominent where population and industry were concentrated. Real estate inflation in turn affected government, industries, and people's daily life. Concern arose about property speculation, rising housing costs, pressure on production costs, and increased public expenditure. The government introduced various measures to solve land and housing problems, but these policies failed to work against market forces.

The Southeast Asian countries were hit by foreign exchange crisis in early 1997, and in November South Korea also fell from grace[2]. Many problems that have been hidden behind the continuous economic growth suddenly surfaced, demanding immediate solutions. The very structure that had enabled the country to succeed turned out to have severe problems: excessive government interference in the economy –especially in the financial sector-, *chaebols* spending huge amount of money in risky investments, and bank lending to *chaebols* with little analysis of the proposed projects.[3]

[2] During those six months, the government maintained that the South Korean economy was different from the other Southeast Asian countries. For instance, the South Korean economy had a stronger manufacturing base, its exposure to foreign debt was relatively small compared to GNP, and it did not have such a large property price bubble as in other countries. However, it turned out that such differences weighed less than the fundamental weaknesses shared by South Korea and other Asian countries.

[3]On average, South Korean manufacturing firms had a debt amounting to four times their equity at the end

Under the IMF-prescribed restructuring program, money supply was severely tightened, and banks had to tackle bad debt problems head on, thus causing the bankruptcy of 8 out of the 30 largest *chaebols*. In 1998, about 60 firms went bankrupt every day, and unemployment reached 1.7 million, pushing up the unemployment rate to 7.9% at the end of that year.

From the start of the economic crisis, simple calculations showed that the South Korean economy could not outgrow its huge internal and external debt, and that massive asset sales and foreign direct investments (FDI) were required. Radical measures were introduced one after another to promote foreign investments and to free the economy from burdensome regulations. Important reforms related to the real estate market were among such measures, because real property was frequently the most valuable asset the indebted firms had to sell. In addition, the practices of the real estate industry and the behavior of its participants had changed as a consequence of the traumatic experiences of the economic crisis. Real estate market today is quite different after from the market before the economic crisis..

This chapter describes how South Korean real estate market trends and policies have changed before and after the economic crisis. Land market is the focus of the discussion as the housing market is dealt with in a separate chapter. Section 2 introduces market trends up to mid-1990s. Policy makers perceived speculation as the cause of land inflation, and tried to suppress speculation. Land taxes and regulations that were designed based upon this perception are explained in Section 3. The consequences of the economic crisis in the real estate industry are discussed in Section 4. It is emphasized that the South

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of 1996. Comparable figure for Japan was 1.5, for Taiwan it was 0.86, and for the U.S. it was 1.5.

Korean crisis was different from that of other countries where the property price bubble was an important causal factor. Section 5 shows how the market changed after the crisis, and what the prospects are for the South Korean land market and land policies.

1. Land market trends before economic crisis

1.1. Land market trend

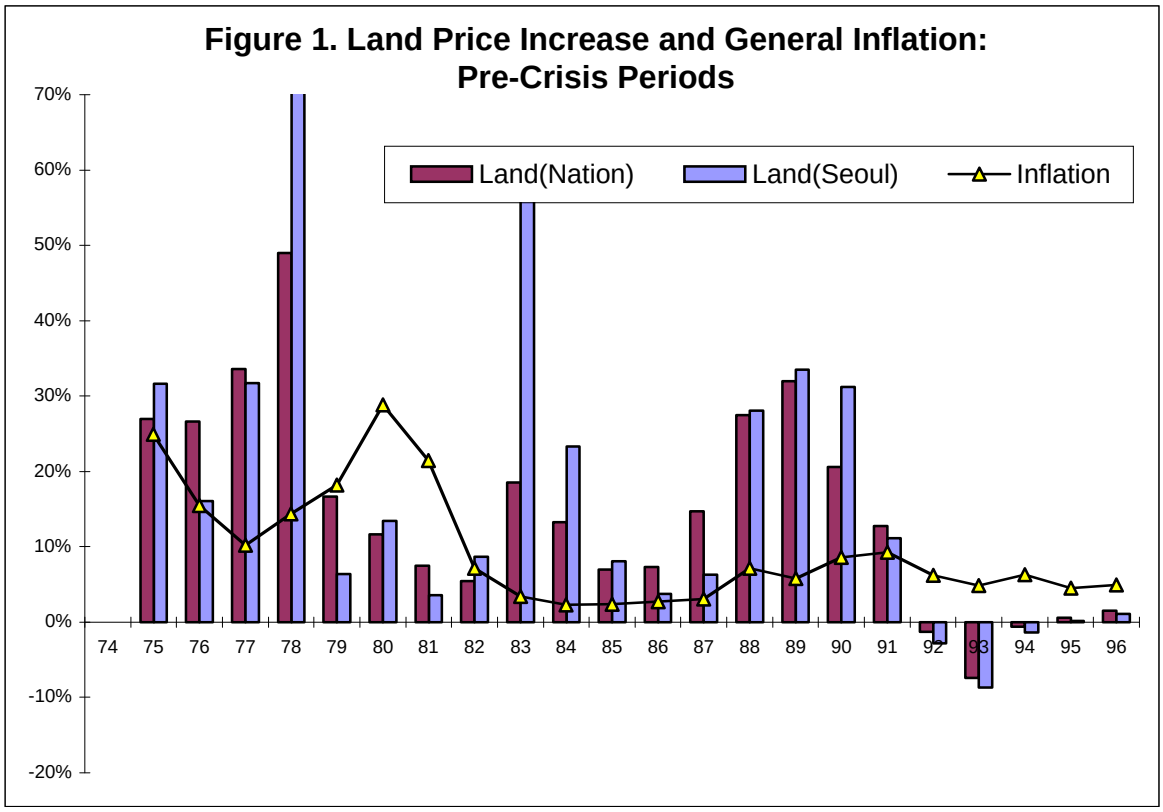
From the time the South Korean government began collecting land price data in 1974 until 1996 (the year before the economic crisis), the average annual rate of land price increase was 14.2% for the nation and 17.2% for Seoul. Figure 1 shows that, until the 1980s, land price increases exceeded the general inflation for a long time, except for two to three years in the early 1980s when South Korea suffered from the second oil shock. Unofficial data from Korean Appraisal Board indicate that there was also a sharp inflation in the price of land in the latter half of the 1960'. The rate of price increases dropped with time, and price began to fall in absolute terms for the first time in 1992. Many countries, including Japan, the Southeast Asian countries, and the Scandinavian countries, experienced almost simultaneous property price fluctuation in the late 1980s and early 1990s at a similar rate, but the cause of land price deflation in South Korea was different from the causes in these countries, as will be discussed later.

Figure 1 shows that land prices rose in a stepwise pattern. The price increase was pronounced in the late 1970s, for a short period around 1983, and in the late 1980s. Some have conjectured that Korean land prices follow a 10-year cycle, but data series are too short to identify long-term price cycles, and such a cycle was not confirmed in the late 1990s. Instead of trying to identify cyclic movement of land prices, most studies in the early 1990s concentrated on the causal relationship between real estate prices and

macro-economic variables. These stuides agreed that land price increases were closely related to the supply of liquidity in the economy (Son, 1991; Park, 1992; Kim, Suh, and Yoo, 1992; Kim, Jaang, and Kim, 1991). Foreign capital inflow in the late 1960s, the Middle East construction boom in the late 1970s, and an unprecedented export boom in the late 1980s were good explanations for the stepwise land price inflation.

A cross-section of land prices reveals wide differences among the ons and cities, with Seoul having the highest price increase, followed by other large cities. It indicates that the increase in land price was closely related to the industrial development and migration concentrated in the large cities. Within each region, zoning and other land use regulations determine land price to a great extent. For instance, Chae (1998) estimated hedonic land price functions from a large sample of 1996 Seoul land parcels, and found that, all other things being equal, land in commercial zone was 52% more expensive than land in the residential zone, and land in the green zone was 12% cheaper than in the residential zone. This indicates that regulations impose binding restrictions on the market. Without government interference, land prices at the boundary of two different uses would differ from one another only in development cost, otherwise the market would convert the land from a low priced (i.e., lower productivity) use to high priced (i.e., higher productivity) use. However, in South Korean cities, the price gap among the land parcels in commercial, residential, industrial, and green zones is too large to be explained by development costs.[4]

[4]This fact alone does not indicate that the current allocation of land among different uses is not optimal. The social costs associated with specific land use must be considered in any discussion about the optimal allocation of land. However, we believe that the current allocation is biased against urban use, given that despite any reasonable conjecture about the social cost of urban land use, the current price gap between farmland and urban land seems to be too large.



Indeed, less than 5% of all land in South Korea is directly used for urban economic activity, i.e., for residential, commercial, industrial, and public facilities such as schools, roads and railroads. There is much evidence that the distribution of land between urban and rural uses is not adequate. The total area of urban land in 1995 is 2.26 times that in 1960, but secondary and tertiary industries have increased production 22.4 times in real terms in the same period. Also, Kim (1991) notes that from 1973 to 1990, the amount of residential and commercial building sites in urban areas increased by 65%, while the urban population more than doubled in that period, significantly decreasing the amount of available land per capita. As rising land-use intensity in cities cannot explain such a large gap, one can conclude that there has been shortage in urban land. Of course, there are rigorous studies that draw the same conclusion (Hannah, Kim, and Mills, 1993;

Kim ,1994; Choi, 1994; Son & Kim, 1998.

1.2. Land as an asset

Figure 2 shows the performance of various asset groupd, assuming the same amount of investment in each asset group in 1974. Up until 1991, land in large cities gave higher returns than corporate bonds, stocks, or savings deposit (not shown). After the property market went into recession in 1992, the long-term rate of return on land in Seoul came down to the same level as corporate bond. For the whole period, corporate bonds seem to have been the best investment vehicle, as the rate of return was the most stable. However, if one was willing to spend the time and energy to select good land parcels, then the reward must have been much greater. Indeed, land used to be the favorite investment instrument for people of means.

Investment in real property, however, is not for everyone, as it is lumpy and relatively expensive. The general public resented the fact that the rich became richer by owning speculative property. This resentment was reinforced by casual presumption that speculation by a greedy minority was causing land price increases, which in turn pushed up housing costs for ordinary people. Right or wrong, this general sentiment was a major driving force behind the evolution of land policies before the economic crisis.

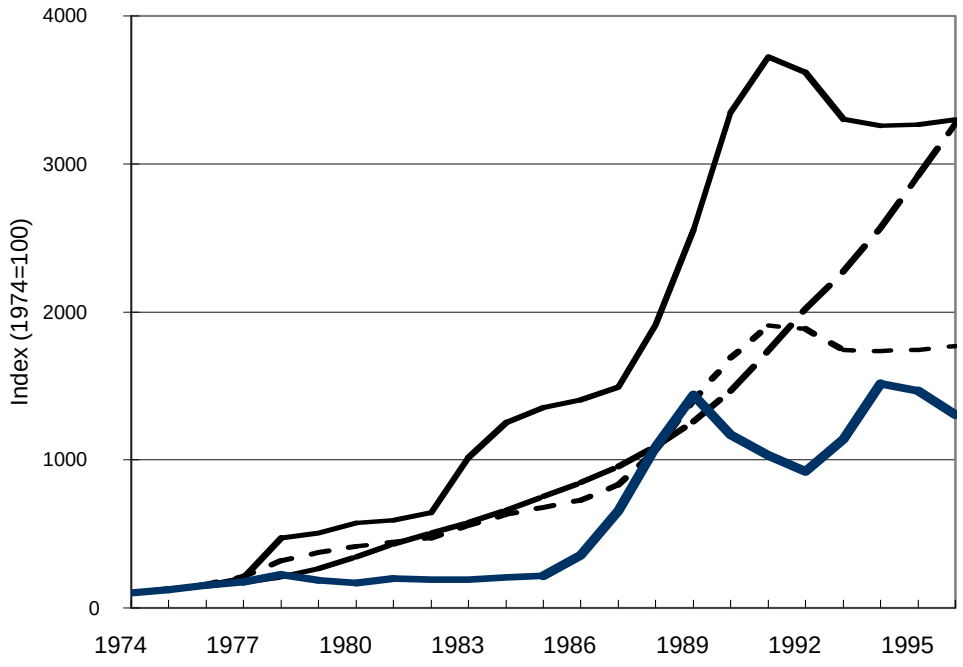
2. Land Policy and Institutions

2.1. Overview

As with other policies, land policy has been backed by the specific perception that the problem has to be solved by government intervention. The evolution of land policy clearly reveals policy makers' presumption that land price increases were caused by

speculation. Land prices determined by the market were perceived to be too high relative to the intrinsic values of land. Based on this assumption, the government tried to 'correct' the market through various measures. Whenever property price began to rise sharply, the government came up with ever-stronger measures to suppress speculation. As such emergency measures later formed part of the permanent regulations and system of taxes, South Korean real estate policy has developed a strong anti-speculation bias, which has only recently begun to be shed.

Figure 2. Investment Returns on Land and Other Assets: Pre-Crisis Periods



The first ever anti-speculation measure was the Property Speculation Suppression Tax, a predecessor of the present capital gains tax, introduced in 1967. This tax was

levied on corporate land that was determined to be speculative according to a crude set of rules. This approach, of first determining whether a certain parcel of land was speculative, and then heavily penalizing such a holding, was passed on through many other taxes and regulations. Anti-speculation measures were used to deter frequent property transactions, penalize the ownership of 'unnecessary' or 'excess' properties, and discourage private land development. This policy evolution culminated in the so-called 'Land *gongkaenyum* legislation' in 1988. Word by word, Land *Gongkaenyum* is translated as a concept that emphasizes the public control of land. It meant that society could legitimately restrict the rights of landowners on ownership, use, and disposition for the public good. With the Land *Gongkaenyum* legislation, the government introduced an upper limit on residential land ownership, a special charge to recapture development gains, and a tax levied on unrealized capital gains from under-utilized land[5]. This measure, combined with other anti-speculation tools, was aimed at suppressing demand for land. High-speed economic development, however, required more and more urban land, and anti-speculation measures could not work against the increase in land prices.

Land use regulations are in principle necessary to control externality effects, but they often keep the market from satisfying the increasing demand for development or redevelopment. In South Korea, regulations on land use and development were designed largely as anti-speculation measures, and as a result accelerated land price inflation by restricting the supply of urban land. As demand exceeded supply in urban land markets, a large gap emerged between the price of undeveloped land (farmland and forest land) and urban land, even after accounting for development costs. As a result, a development permit usually entailed large capital gains (i.e., development gains) reaped by speculative

[5] For details on Land Gongkaenyum policy measures, see Son (1997).

landowners and developers. Some of these speculators did not hesitate to use illegal means, including bribery to influential officials, to obtain a development permit or information on public projects. Scandals surrounding land development permits occured, forcing the government to strengthen the regulatory framework related to land development. In a normal commodity market, a high expected future price will increase the supply, but in the South Korean land market, such a supply response was hampered by regulations on land use and development.

By the mid-1980s, as private land development became increasingly difficult, large-scale development projects came to be monopolized by a few public corporations, such as the Korea Land Development Corporation (KLDC; renamed as Korea Land Corporation or Koland in 1996) and the Korea National Housing Corporation (KNHC). These public developers had the power to compulsorily purchase land in the project areas, and benefited from simplified legal and administrative procedures specifically reserved for them. Heavily influenced by government policy goals such as the Capital region growth control, public developers neglected to supply residential and industrial land in the Capital region, where the demand for urban land was growing fast. This supply bottleneck resulted in a shortage of urban land. Consequently, inflation in housing prices and other real estate prices was inevitable, regardless of how strong the demand control measures were.

Hannah et al. (1993) convincingly argue that stringent regulations restricted the supply of residential land, and the land price increases resulting from this shortage explain South Korea's rapid housing price increases. Their paper represented an emerging consensus among researchers and policy makers in the early 1990s that deregulation of

the land market should be given a higher priority in land policy than the traditional demand control measures. Land prices in South Korea were indeed high, but this fact could not given as evidence for market failure. The high prices correctly reflected the scarcity of urban land.

In this revisionist way of thinking, the government had to learn to trust the market, gradually eliminate unwarranted market intervention measures, and diversify land supply channels. The government moved in that direction in the mid-1990s. Among the wide-ranging deregulation efforts that were initiated by the new administration in 1993, those targeting land use regulations were given high priority. The main land deregulation measure was the reform of the land-use planning system. The ten national planning zones were simplified into five zones to allocate more land for development purposes. In some planning zones, the regulatory framework was changed to accommodate easier development . For instance, a positive list of permitted uses was replaced by a negative list of restricted uses in the semi-agricultural areas. Limited efforts to open up land development to the general private sector were also initiated to facilitate the conversion of farmland to urban use, and to alleviate the social costs arising from the capital region growth control measures. Although the government did not cast off the traditional anti-speculation angle of land policy, these deregulation measures alleviated urban land shortage and contributed to property price stability. There were, however, many side effects due to insufficient planning and infrastructure investment. In retrospect, the good planning and infrastructure investments required for the creation of urban land were not provided by the deregulation drive alone. More details of current land regulations and taxes are given in the next section.

2.2. Regulations and public involvement

Planning system

At the national level, five planning zones are designated by the National Land Use and Management Act: the Urban Planning Area and Village Area are for development purposes, the Agricultural Area and Natural Environment Protection Area are for preservation purposes, and Semi-agricultural Area is for mixed purposes. Of all the land in South Korea, 15.6% is currently designated for development purposes, and most of that falls under Urban Planning Areas The Urban Planning Act in turn divides the Urban Planning Area into residential, commercial, industrial, and green zones, and building regulations are specified for each zone in the Building Act. About 80% of the Urban Planning Area is designated as a green zone, leaving only small area for full-fledged urban uses.

As mentioned before, the centerpiece of the deregulation drive in the mid-1990s was the introduction of the Semi-agricultural Area as one of the five national planning zones. The Semi-agricultural Areas mostly consist of farmland and forestland, where preservation is not judged to be critical. Initially, small-scale development projects involving less than 30,000 sq.mter of land and no pollution of water or air were in principle allowed in this area. As the total area of Semi-agricultural areas amounted to 26.1% of all land in Korea at the time, the area where urban development was allowed would have more than doubled from 16% under the previous regulatory system. The government expected that the land shortage problem was over once and for all. However, as hundreds of homebuilders around major cities rushed out to the nearby Semi-Agricultural Areas and applied for development permits for their ‘small scale’

apartment complexes, it became clear that the deregulation had invited a planning disaster. This problem forced the government to gradually restrict development.

A host of overlapping regulations was further established to achieve specific policy objectives to supplement this basic framework of land-use regulation. For instance, greenbelts were designated around major cities to prevent urban sprawl; farmland and forest land was preserved by a conversion permit system; the areas around water supply sources, historic sites, and military bases are not allowed to be developed, and the capital region is now subject to another layer of land use regulations to stem population concentration. These regulations are supposed to be subordinate to the basic land-use planning system, but they often impose more severe restrictions on land development.

Excessive regulations have kept the market from using land for higher productivity uses. In large cities, residential land has a high-density usage, but vast areas of adjacent areas remain idle. Among the many regulations on land use, the measure that affects land prices the most is the designation of greenbelt. A greenbelt is a donut shaped ring around major cities in which almost no development is allowed, other than the repair of existing buildings. The total area of the greenbelt amounts to 5.5% of all land in Korea, more than the total surfaceof land currently used for urban purposes. Greenbelt regulation affects the land market more than this quantitative significance because some greenbelts are designated in good locations. Moving outwards from a major city, we can clearly identify inner boundary of the greenbelt by observing the sudden change in the skyline, from high-rise apartment complexes to farmland. Seoul and a few other major cities have outgrown the greenbelt, and large-scale developments are now located beyond it. With little prospect of development, land prices within the greenbelt are severely depressed,

although they are located within easy access of the city.

Transaction regulations

Under the land-to-the-tiller principle framed in the South Korean constitution, farmland purchase is allowed only for bona fide farmers. For forestland acquisition, a detailed forestation plan is required. If one wants to buy farmland and convert it into industrial land, for example, then one has to place an option on the land and to get a conversion permit before closing the deal. A permit is necessary to convert farmland or forestland to urban use, and when the permit is given, special charges are levied to fund the replacement of lost farmland or forestland and to recapture development gains.

When land speculation is anticipated in an area, the government can designate the area as a Land Transaction Report Area. Any buyer has to report their transaction to the local administrative office. If speculation is more acute, then the government designates it as a Land Transaction Permit Area where a permit is required to validate any transaction.

Korea is not the only country with too many taxes on real estate. But the South Korean rel estate taxes are peculiar in several aspects. First, local taxes are local only in the sense that the local government collects them and utilizes them as its own revenue. Assessment standards, tax rates, and administrative procedures are all specified in the Local Tax Law, which is enacted by the central government. Local governments have limited discretion in giving exemptions to attract investors[6].

Moreover, residents see little connection between the local public services and the taxes

[6] This does not mean that investors, domestic or foreign, are not given local tax incentives for their investment. There are many, but most exemptions and reductions are given by laws enacted at the central government level.

they pay, because the central government takes the eventual responsibility for providing public services.

Second, real estate taxes have been actively exploited to pursue various policy objectives. For instance, if a land transaction is suspected of having a speculative motive, then punitive tax rates are applied. Many taxes have progressive rate structure, as this is perceived to help redistribute capital gains or encourage large landowners to sell off excessive land holdings. In the capital region, real estate acquisitions are often subject to higher taxes, becuse the government wants to disperse the population and industry to other regions. As a result, the tax system is very complicated, especially because of the elaborate and complicated set of criteria to classify land acquisition, holding, and sale into the speculative and non-speculative categories.

Third, the tax burden is high for acquisition, low during the holding period, and be varies at sale. Acquisition tax (2% of acquisition price) and registration tax (3%), and other surtaxes are applied at the time of acquisition, but there is little economic rationale for such a high burden, except perhaps that those who purchase real estate are more likely to have money. On the contrary, as the assessed value of real estate holding taxes is very low, the holding of land is a minor tax burden. On average, the effective land holding tax is estimated to be around 0.2% of the market price, and the effective tax rate on houses to be 0.2-0.3% (Rho et al., 1996). On the sale of land or property, capital gains are taxed separately from other income. The capital gains tax rate is progressive and relatively high, but as the tax was initially introduced as a punishment for speculators, there are generous reductions and exemptions given to ‘innocent’ property owners. If a household has been owned for more than three years, then the owner is exempted from taxation, except in the

case of truly large and expensive homes.

Fourth, real estate taxes are levied on land and building separately, as the South Korean Property Right Law clearly distinguishes between land and buildings. Even when it is more convenient to calculate the tax from the whole property, as in the case of capital gains tax, the tax is divided into the amount due on land and the amount due on improvement of the buildings. For real estate holding, the property tax is on improvements only, and land is taxed separately by the Comprehensive Land Tax. The Comprehensive Land Tax was introduced in 1988 to discourage large land holdings, after the general public discovered that 5% of individual landowners possessed 62.5% of land nationwide. The tax office normally adds up the values of all the land holdings belonging to an individual or a corporation, and applies progressive rates, but the final outcome is a complicated compromise with three fixed rates and two progressive rates. Applying progressive rates is possible only when the ownership records of all land are computerized, and a uniform assessment standard is used nationwide. The government currently runs a computerized land ownership record system and determines the amount of tax for each individual. The amount of tax owed is then divided in proportion to the land values in the localities where the owner holds land, and each local government is responsible for collecting its share.

Fifth, to ensure the uniform assessment of land, the Ministry of Construction and Transportation has employed a new centralized mass appraisal system since 1989. A sample of 450,000 standard lots nationwide are evaluated annually at full market value by licensed appraisers, and the rest of 27 million privately held parcels are assessed using land price tables which contain multiplication factors to account for the differences in

characteristics of the land parcels. This change in assessment has enhanced the performance of most land taxes, but fearing the taxpayer's complaints, about 35% of the appraisal value is used for land holding taxes.

Lastly, the government has been preoccupied with recapturing development gains arising from the change in land use and public investment projects. Having previously tried various measures to recapture development gains with little success, the government introduced the Development Gains Charge in 1989 as part of the Land *Gongkaenyum* legislation. The law stipulates that 50% of land price increases above purchase price, investments, and the 'normal rate of land price increase' are to be paid to the government. As this charge may diminish the incentive for land development, the government suspended it for one year in 1998 and cut the rate to 25% for subsequent years. Another attempt to recapture development gains was the Excessive Profits Tax on Land, also introduced as part of Land *Gongkaenyum* law. It was intended to recapture windfall gains on an accrual base. It was, however, more of an anti-speculation measure, because it only taxed vacants lots and other excess land holdings. This tax was radical in that it was levied on unrealized capital gains, but it was repealed in 1999 (Table 1 describes Korean real estate taxes).

2.3. Major Institutions

It is argued that the regulations on land use and development have restricted the supply of urban land. Related regulations are mostly central government functions. Any substantial changes in urban planning must be approved by the Ministry of Construction and Transportation. The thirst for power on the part of the central government is one reason for the centralization of planning power, but lack of expertise and financial

resources on the part of the local government is probably a more important reason for the current domination by the central government. However, it is fair to say that local government has had little opportunity to improve its skills and accumulate expertise.

In addition to centralized planning power, major development projects have been carried out by public corporations under the uspices of the Ministry of Construction and Transportation. From the late 1970s to the early 1980s, several special acts were passed to facilitate land development by public developers. Such acts designate public developers (local government, KNHC, or Koland) who are obliged to follow standardized development methods, but can take advantage of their special power in acquiring raw land and receive preferential treatment in obtaining permits for the planning process. A comprehensive development plan is drawn up before the start of a project and is implemented efficiently. After a project is completed, the public developers must provide inexpensive residential or industrial land to homebuilders or manufacturing firms. In this way, the development gains arising from the project either subsidize the homebuyers or are retained by a public entity. However, there is a question as to whether the public developers have responded to the market condition fast enough. Kim (1991) analyzed five Koland projects near Seoul and found that, with proper discount rates, the ratio of the average price sold to the sum of land purchase and infrastructure costs ranged from 1.9 to 9.3. In a standard monocentric city model, the ratio would be 1 if land was efficiently allocated between urban and non-urban uses. The reality, that public development has generated large profits, indicates that the developers are failing to supply a sufficient quantity of residential land.

As for real estate-related financing, the government effectively blocked financial

resources diverted into real estate as it tried to mobilize as much resource as possible to promote the export-oriented manufacturing sector. Banks were banned from granting loans for the purpose of land purchase (except when the target was the construction of small houses and factories), for construction projects, or for the purchase of large houses mixed office-residence mixed buildings, or for other real estate business. As a result, real estate finance was in effect limited to builders of small-size apartments. This regulation was only lifted in 1998. As official housing finance could only partially support the construction companies and homebuyers, they had to rely on financial instruments that did not involve financial intermediaries. One of these instruments was the *chonseii* rental system, in which an owner of a house borrows from the tenant (for further details on the *chonseii* system, see Chapter Five). Another was the prior sale of houses. Rules on housing supply allowed the construction companies to receive contract deposits and interim payments before the houses were completed. In fact, homebuyers directly supply funds to the builders without the involvement of financial intermediaries. In 1994, such contract deposits and interim payments amounted to 26 trillion won, 3.5 times as much as the official housing construction loans supplied that year (Lee, 1995).

3. Economic Crisis and Land Policy Changes

3.1. Economic crisis and real estate market

The real estate market was one of the sectors that was hardest hit by the economic crisis. From the last quarter of 1997 to the end of 1998, the land price index fell by 13.8% nationwide. Land prices in large cities, especially Seoul, fell by more than in the small cities, and commercial land showed larger price fall than residential or undeveloped land.

Housing prices also declined sharply. During this five-quarter period, the national house sale price index fell by 13.2%, and the *chonsei* rent index by 20.1%. The number of new housing units buit in 1998 was about half that built in 1997, and other indicators of the construction sector (i.e. construction investment, building permits, new construction contracts) collapsed. The ratio of ublic to private contracts in total construction orders was 44% to 57% in 1997, but as the private sector retrenched because of high interest rates and mounting uncertainty, the ratio changed to 66% to 34% in 1998. An unprecedented number of construction firms went bankrupt. Five hundred and twenty-two contractors (13.4% of all such firms in early 1997), 433 home builders (15.8%), and 1,321 specialty contractors (6%) went under in 1998.

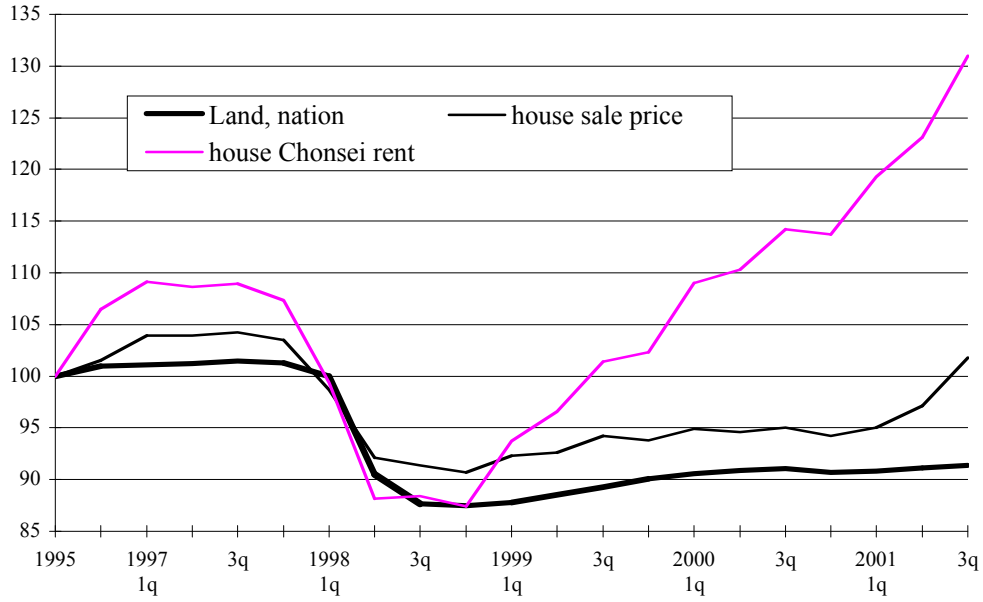
The collapse of the real estate industry was common to most countries experiencing an economic crisis. However, South Korea was different from other affected countries where a property price bubble was one of the most important causes of the crisis. In other countries, oversupply in the real estate sector generated a substantial fraction of the bad loans that jeopardized the financial sector. The week financial sector in turn could not support the real economy. By contrast, in South Korea the real estate sector was mostly closed off from financial resources, and there was not much overbuilding. The economic crisis, and especially the problems in the financial sector, preceded the troubles in the real estate sector - not the other way around. As a result, price trends in South Korea differed from those in other affected countries such as Japan and the Southeast Asian countries. These countries experienced a sharp increase in real estate prices, followed by an equally sharp price fall just before the crisis. For instance, during the late 1980s, Japanese financial institutions made huge – and in many cases reckless – real estate loans, which were the main factor in driving up prices. Many researchers thought that real estate

prices had deviated from their fundamental value. The bubble could not sustained when the government introduced a total real estate loan ceiling in 1990, and the price of real estate began its free fall. A hudge amount of loans consequently turned bad, and the financial sector could not cope with the massive defaults. As the financial sector could not perform its normal functions, the real sector was badly affected, with a result of a prolonged recession.

In South Korea, real estate prices have gradually fallen or remain stable since 1991 until the start of the crisis. After the outbreak of the economic crisis, real estate prices stopped falling within a relatively short time, as explained below. Such evidence indicates that South Korean real estate prices fell in 1998 due to a worsening of the fundamentals of the economy, rather than a bursting of the price bubble (K.H. Kim, 2000; Son and K.Y. Kim, 1998). On a more rigorous level, Kim and Lee (2000) ran a co-integration test on whether or not a stable long-run equilibrium relationship existed between the price of real estate and the variables representing the fluctuation of overall economic activity. The existence of an equilibrium relationship allows one to exclude the possibility of a price bubble.[7] Their conclusion was that from 1974 to 1999, there was no evidence of a price bubble.

[7] In contrast, several earlier studies such as Kim et al (1991) and Kim and Suh (1993) empirically tested the existence of a speculative bubble in the South Korean land market using data up to 1990, and concluded that there was a bubble in the land market. However, the fundamental problem with such tests is that the validity of the test hinges on the correct specification of the market fundamental, which is inherently difficult. Although Kim and Lee (2000) approach is not entirely free of the problem of misspecification, the procedure is much simpler because the bubble term does not have to be estimated as it had to be in the earlier bubble tests.

Figure 3. Real Estate Price Trends After the Crisis
(end of 1995=100)



Whether it was a bubble or not, the prospects were bleak until late 1998, but the denial of the bubble scenario is important, as it helps in the understanding of how the market moved by observing the major components of the fundamental values of real estate. If the real estate price is the discounted rental income, and if all parameters remain the same, the value of real estate is :

$$V = R/(i-g),$$

where R is the periodic rent, i the interest rate, and g the growth rate of rent.

During the first half of 1998, R decreased roughly by 20% in the case of *chonsei* rent, and probably by more for office and commercial space, i shot up from around 12-13% to over 20%, and under the assumption that the nominal growth rate of GDP was similar to g, g fell from over 10% to 3% or lower. Under these conditions, real estate

value should have been less than 15% of the previous level. Of course, property owners were much more optimistic than this rule-of-thumb calculation, but prospective new investors were more pessimistic.

Economic conditions began to stabilize in late 1998, in part as result of earnest reform efforts on the part of the government. Compared to the 1997 year-end figures, the benchmark interest rate (3-year corporate bond rate) came down to 8.1% in March 1999 from 30%, the exchange rate fell from 1,227 to 1,415 won to the U.S. dollar, and the stock market index from 619 to 396 points. Although the real sector recovered more slowly and unemployment was still high, the real estate market gradually brightened up from late 1998 onwards. Such a quick recovery in the real estate market was in sharp contrast with the Japanese trend. In South Korea, the real estate market collapsed in 1998, because the real economy (i.e. the market fundamentals) turned bad, not because there was a price bubble. As the real economy recovered, the real estate market stabilized.

3.2. Reform of the Real Estate Policy

Opening the market to foreigners

All segments of South Korean the market had been gradually opened to foreign investors, but the crisis accelerated the pace. With aggressive market opening measures in April and May 1998, the South Korean market became fully open except for 31 out of 1,148 industries, and a further 8 industries were opened up in January 1999. Today, partial or full limitation is only imposed on industries related to national defense, agriculture, the mass media, and a few others, thus making market accessibility in South Korea comparable to that of most OECD countries.

As for real estate, all aspect of market activities are now fully open to foreigners, who can compete with domestic firms on equal footing. For instance, in theory, foreigners can buy raw land, develop it, build houses or other structures, and rent or sell them. Such a project is hard to execute in reality, but it is due to land use and development regulations, which are applied to all private firms regardless of the developer's nationality. In 1998, the government changed the law to allow private firms to be designated as developers in public land development projects, just like Koland or KNHC. Enterprising investors, both foreign and domestic, may now be involved in large-scale land development.

Previously, foreigners had to obtain a permit to buy land in South Korea, and a permit was given only when the land acquisition was deemed necessary for bona fide business operation. Individuals were, of cours, much more constrained than corporations in the acquisition of land. In June 1998, however, the doors to the land market were swung open. Foreigners, individuals, and corporations alike, are now able to purchase land regardless of type, size, and proposed use of land.[8] This change has removed a major huddle in attracting foreign investment in general, and has substantiated the general market opening measures described above.[9]

[8] Restrictions are imposed only on land within military facility protection areas, historic sites, and environmental protection areas, where a permit is required. In addition, because farmland can only be owned by farmers who directly till the land, non-resident foreigners cannot acquire farmland.

[9] For instance, a foreign investor can purchase a South Korean firm that possesses land deemed to be non-essential to its operation (i.e., speculative), and retain the land afterwards. Under previous regulations, they had to sell the land within five years after the acquisition of the firm. The only difference between a Soith Korean and a resident foreigner now is that the latter has to file a 'land acquisition report' to the local administrative office after a purchase. A non-resident foreigner has to get a foreigner's identification number from the Office of Immigration Services before registering his or her ownership.

In the broad context of capital market liberalization, the foreign equity ownership ceiling and barriers against mergers and acquisitions, friendly and hostile, were removed, and most corporate bond market and money market were opened up in July 1998. Further liberalization measures were implemented so that by 2001 all foreign exchange transactions would be unregulated, except for those related to criminal activities (eg. money laundering) or international agreements (eg. UN sanctions). Regarding the movment of foreign exchange related to real estate investment, resident foreigners are now treated equally with South Korean individuals or corporations[10]. In addition to removing obstacles to foreign direct investment, the FDI Promotion Act provides various tax incentives in high-tech industry and other growing industries. When a firm in these sectors purchases a real estate asset, acquisition tax, registration tax, property tax, and comprehensive land tax may be exempted or reduced for up to 15 years.

Deregulation in the real estate market

To revitalize the real estate market, the government lifted many regulations and taxes that had restricted the transaction, ownership, and development of land. The government suspended land transaction permit requirements, abolished residential land ownership regulations, temporarily stopped imposing development gains charge, and abolished the excess profits tax on land.

In addition to these deregulation measures, the government took steps to change the greenbelt regulation. Greenbelt designation in small and medium cities that should not have had the greenbelt in the first place has been totally lifted, and parts of the greenbelt

[10] Non-resident foreigners have to file a report with the bank through which they bring in money for property investment, and income from that investment can be sent out by filing a report to that effect.

around major cities will be deregulated if such deregulation is judged to be non-detrimental to the environment. If the greenbelt land can be developed and put into a higher productivity use, then the real estate market will be fundamentally affected. For instance, we see a numeric sub-urbanization trend in South Korea that is similar to the U.S. and Europe, but the profiles of households living in the central city and suburbs, the motivations of families leaving the city center, and the land-use patterns in each area are quite different. Greenbelts have induced high-density land uses within the city area because land and housing prices have been pushed up. Those who move out to the satellite cities tend to be lower income households, and they can only afford high-rise, high-density apartments, even in the suburbs. If the greenbelt regulation were relaxed, then we would probably experience a suburbanization of rich families moving out to single family homes built in areas currently designated as greenbelt.

Measures to revitalize the housing industry

The collapse of the housing construction industry caused both short-term and long-term problems. In the short-term, unemployed construction workers pushed up the unemployment rate and raised the instance of related social problems. In the long-term, the shortage of housing supply cause a subsequent inflation in housing prices. The government implemented temporary emergency measures to revive the housing industry, and permanently repealed the housing price regulation.

First, there was a temporary reduction in the real estate taxes. Those who purchased a new house smaller than 85m^2 (915 sq. ft.) before the end of June 1999 paid reduced acquisition tax and registration tax, and were given exemption from capital gains tax. For other houses, the usual condition for exempting capital gains tax was temporarily relaxed

to include households that owned their houses for one year, instead of the normal three years. The amount of National Housing Bonds that a real estate buyer had to purchase was also cut by half.

Second, a total of 10 trillion won in financial assistance was provided to homebuilders, new buyers, and *chonsei* landlords for the purchase of unsold apartments, installment payments of purchased apartment, and the return of *chonsei* deposits. The timely inflow of installment payments was especially important as it created construction finance to homebuilders. If that flow of finance had ceased, then homebuilders would not have been able to continue their work and buyers would in turn have panicked and stopped further installment payments.

Third, the price limitation on new houses was subsequently lifted. With the sale price regulation, the government had to enforce an elaborate screening test to control the numbers of those qualified to buy a house at a regulated price and to check when a purchaser could reenter the new house sales lottery. With a massive stock of unsold houses in the country, the government abolished this regulation for most houses in 1998.[11] With this deregulation, the rationing scheme of new houses was also changed. For instance, a buyer of a new apartment was allowed to sell the unit for a profit at any time, even before completion of the construction. Also, homebuilders were no longer required to build a specified percentage of small houses for low-income households. With this deregulation, homebuilders could build apartment complexes composed only of luxury houses, or run advertisements about how easily their new apartments would be sold at a premium.

Improving the link between the capital market and the real estate market

In February 1998, the government abolished the restriction on real estate loans as part of its financial sector deregulation measures. It was expected that building of large houses, non-housing real estate development, and the acquisition of existing houses would become easier following the deregulation. In addition, the government established legal framework for issuing asset-backed securities (ABS, September 1998) and mortgage-backed securities (MBS, January 1999), and introduced the Real Estate Investment Trust (REIT) in April 2001.

MBS can be issued either by a special purpose company (SPC) set up under the ABS Law or by a specialized mortgage pooling company. As an example of the latter, the government, together with major financial institutions, established the Korea Mortgage Corporation (KoMoCo) in September 1999, which was modeled on the Fannie Mae Corporation in the United States. Just like any other secondary market intermediary, KoMoCo buys mortgages from primary lenders, pools them, and issues various forms of MBS in the capital market. Such activity is supposed to provide funds to primary lenders for the granting of additional housing loans. However, South Korean banks now have little need for such a service, as they are awash with cash after the *chaebols* became more prudent and scaled back their investments. Banks compete fiercely to enlarge their share of the housing loan market, but they would rather keep such loans in their portfolio. As a consequence, the KoMoCo has had difficulty in finding lending institutions that would sell mortgages. The government had to instruct the NHF to sell part of its loan portfolio to the KoMoCo, although as a government fund, the NHF has better ways of raising funds

[11] The regulation currently applies only to small houses built with National Housing Fund loans in the capital region.

than selling loans. In 2000, three issues of the KoMoCo's MBS, valued at a total of 1.28 trillion won, were offered based on the NHF loans, and an additional two issues valued at a total of 0.75 trillion won were offered in September 2001.

4. New Trends and Prospects in Real Estate Market and Policies

4.1. Foreign investment and its impact

Attracting foreign investors to the South Korean real estate market was one of the key strategies for economic recovery. However, the initial response from foreigners was cooler than the government hoped for. From the time the market opened up in June 1998 through to March 1999, foreigners acquired 5,140 thousand *pyong* (4,163 acres) of land in 2,241 transactions, and the total purchase price was 2.2 trillion won. However, most were overseas Koreans acquiring residential land or land acquisition that accompaned mergers and acquisitions. Pure real estate investment was not substantial, except for the acquisition of office buildings by Volvo Korea and HSBC in 1998.

Such disappointing result was explained by several factors. First, there was still a large gap between the asking price and the price foreigners were willing to pay. Korean property owners typically evaluated their property at historic costs, which contained the optimistic element of large capital gains, but foreigners thought that discounted income flow was a more appropriate measure of the value. It has already been discussed that a low prospect of rental income growth and a high interest rate would dramatically reduce the asset value of a property. Foreign investors typically valued South Korean property at less than half of asking price.

Second, there was little common ground for mutual understanding and trust. As the market had been most totally closed to overseas investors until then, South Korean real

estate owners and managers had no need to accumulate information required by foreigners for due-diligence. Prospective buyers could seldom confirm a property owner's claims by hard evidence. Also, property owners were not familiar with the property transaction procedures normal to foreign investors, and freely contacted as many prospective buyers as possible both directly and indirectly. The following comment of a Hong Kong consultant summed up foreign investors' bewilderment:

"*Foreign investors (more accustomed to real estate professional methods elsewhere) found the whole situation rather confusing with property owners' representatives (official and unofficial), a multitude of local as well as foreign brokers (qualified and unqualified) and self-appointed compradors come knocking at their hotel doors claiming to be authorized representative for the property. To compound the problem, there have been instances where supposedly confidential information were openly mishandled.*"(Wong, 1998).

Third, competent and reliable professional assistance was not readily available. In the eyes of foreign investors, South Korean real estate professionals did not seem very competent. Appraisers were not trained in the incomes appraisal approach, and brokers did not have the knowledge of, and experience in, the real estate deal procedures customary in the U.S. and other countries. In addition, not many real estate professionals spoke fluent English, and the management of property could be a headache, as there were few specialized management firms.

Fourth, despite earnest reforms by the government, there were still too many peculiarities in the South Korean real estate market. The *chonsei* rental contract was hard to understand, and even harder to explain. Why are there two similar taxes for real estate

acquisition, and at such high tax rates? Why should the capital region locations be penalized by higher taxes? Which is speculative property and which is not for tax purposes? What is *pyong*[6] and why are building codes so different from other countries? Fex could provide comprehensive anwers to these questions.

For these reasons, foreign investors initially preferred acquiring non-performing loans (NPLs) with collateral attached, rather than real property per se. The first important real estate related deal was the sale of NPLs by KAMCO, a bad bank funding South Korea's financial restructuring process, to a partnership of Loan Star Fund and Merrill Lynch in December 1998. The total value of original loans was 564.6 billion won, but KAMCO had purchased them at 238.8 billion won, 42.3% of the original value. The Loan Star partnership's successful bid was 201.2 billion won, of which KAMCO provided 30% of the equity. Foreign investors had the priority claim on proceeds up to 20% IRR and principal, and after that, KAMCO's share was also 20% IRR and principal. Any remaining assets were divided at a ratio of 6 to 4 between the two parties. These investors set up a special purpose company (SPC), which sold off the real estate collaterals. Similar NPL sales continued afterwards.

Many of the foreign investors' complaints were legitimate. Until then, South Korean real estate professionals, not to mention property owners, had never been exposed to 'the global standard' in real estate. However, the learning process started immediately, and the knowledge and experience accumulated in the market quickly spread. Foreign professional real estate brokerage and consulting firms such as Colliers Jardine, BHP, Vigers, and Kearny Buck Co. set up branch operations in Seoul and were instrumental in

[6] The *pyong* is the standard measure for land and floor surfaces in South Korea. It is equivalent to 3,3 m2. There are similar standards in Japan (*tsubo*) and in Taiwan (*pin*).

this spread of knowledge. Foreign investors on their part began to have better understanding on the South Korean real estate market. There were four major office building transactions in 1999, and nine in 2000. The most important deal was made in 2001, involving the brand new I-Tower (renamed Star Tower after the deal), which is the largest commercial building in Seoul with two hundred and twelve 190-m2 floor spaces. Lone Star Korea paid 663.2 billion won in that transaction. In all, foreigners purchased more than twenty large buildings with a total purchase price amounting to over two trillion won.

4.2. New trends and prospects

Low prospects of capital gains

Looking into the future, few think that sharp property price inflation such as was experienced in the late 1980s will not be repeated. Long-term trends in demography, economic growth, and macro-level housing market conditions indicate that the housing and land market had been changing even before the advent of the economic crisis. The economic crisis might merely have forced the market to face the future ahead of time. Firstly, the population growth has slowed, and inter-regional migration has stabilized. From 1960 to 1980, the nation's population increased by 49.8 percent, and from 1980 to 2000, by 23.2 %. Over the next twenty years up to 2020, the National Statistical Office forecasts a growth of only 10.8 %, with a negative growth occurring sometime around 2030. Seoul's population grew by 242.1 % between 1960 and 1980, but it is expected to come down to mere 5.7 % between 2001 and 2020. The capital region's population growth was as high as 60.5 % during the past twenty years, but it is expected to slow down to 16.8 % over the next twenty years. Population growth, both nationally and in the

capital region, will be less of a determining factor in the growth of housing and land demand.

The growth in income is also slowing down. From 1965 to 1980, real per capita GNP grew by 10.2 % annually, and over the next fifteen years to 1995 it showed an annual growth rate of 8.6 %. The economic growth in terms of the real Gross Domestic Product (GDP) is expected to be around 5 % annually in the future. In the housing market, the housing supply ratio has continuously increased since the early 1990s, and is expected to reach 100 % in 2002. Although the housing supply ratio is a controversial measure, one cannot deny that the problem of the absolute lack of housing stock is being solved. These long-term trends indicate that the future real estate market will be more stable than before, with less opportunity for capital gains. Buyers experienced this kind of future during the economic crisis.

With low prospects for capital gains, homebuyers now view a housing unit as more as durable consumer good than as assets to sell for a profit. The market closely follows changes in demand, and as a consequence size, type, quality, and the location of housing are being diversified.[12] Changes in demography will accelerate the diversification of housing demand patterns. The 2000 census figures show that South Koreans are marrying later than previously, have fewer children, are less reluctant divorce, and are aging fast.

[12] During the economic crisis, high-rise downtown luxury apartments were introduced and proved a success as they appealed to high-income households. In the past, such households had to settle for houses that were large but had a similar design and quality to small houses. Another success was apartment complexes composed only of large units, which tacitly excluded low-income households. The next hit product was the suburban high-rise mixed-use apartment complex which boasted a sports club, shops, and other amenities within the building. Currently, developers are switching to small houses for low to mid-income households whose demand has not been met in the last three years.

Despite –but not necessarily contrary to– predictions, house prices rose sharply in 2002 and 2003, prompting the government to adopt a series of anti-speculation measures. On the macro-level, there is a general agreement on the two most important causes of this price rise: the shortage of house construction in the recent past (i.e., during the economic crisis), and unprecedented low interest rates and abundance of housing finance, which have encouraged house purchase both for residential and for investment purposes. Interestingly, the recent housing inflation showed a very different pattern than previously.. First, the price rise was concentrated on apartments that were located in smarter parts of Seoul and the surrounding new towns. In contrast, during the late-1980s boom, the prices of land, houses, stocks, antiques, and virtually all other assets rose together, and for real estate the inflation was observed nationwide. Second, although the sale price of apartments rose sharply in 2002 and 2003, *chonsei* deposits stagnated. In contrast, during the late-1980s inflation, both rents and sale prices rose together.

These peculiar patterns in the recent inflation of property prices have ignited a controversy about their causes. Some observers suspected that a bubble is developing in certain locations. Others believed that people have correctly valued the differences in quality of life among the different locations. If the former argument were correct, then control of housing finance would be warranted to prevent a price bubble. If the latter argument were correct, then a more microeconomic approach would be necessary. For instance, many people have demanded that the government upgrade the educational system in less advantaged locations. Without waiting for the conclusions arising from this controversy, the government announced a plan to impose heavy taxes on owners of more than two houses. This measure was an unfortunate reversal of the trend that had begun to recognize the real estate sector as a normal economic sector.

The demise of *chonsei* contracts

As for income property, the low prospects of capital gains in general give property owners incentives to convert *chonsei* contract into monthly rental contracts. Several factors explain this trend. Firstly, the interest rate is at an all-time low, and after disasters experienced during the economic crisis, people with money shy away from risky investments. Landlords prefer a stable monthly income flow instead of a lump sum *chonsei* deposit. Second, the high conversion rate between *chonsei* deposits and monthly rents reinforces the landlord's incentive. The conversion rate used to be fixed at 2 % per month (24 % per year) .[13] Considering that the savings account interest rate is now in the range of 4 to 5 % a year, a 2 % monthly conversion rate seems to be high even after considering the risk factors.[14] After the economic crisis, the *chonsei* landlords found it attractive to convert all or part of the *chonsei* deposits into monthly rents using the high conversion rate. As more and more landlords and tenants entered into monthly rental contracts, low general interest rates have slowly pulled down the conversion rate to around 1 % a month or less. For tenants, an increasing share of the monthly rental solves the old problem related to the recovery of the *chonsei* deposit at the end of the rental term, but raises a new problem. When a *chonsei* contract is converted into a monthly rental, the tenant may not have sufficient income to pay for the rent even if he or she has substantial savings equal to the returned *chonsei* deposit. Over the past two years, the capital region

[13] For example, if the going *chonsei* price of a house was 100 million won, and if the tenant paid 50 million won as a deposit and converted the remaining 50 million into monthly rents, then the tenant would have to pay 1 million won per month.

[14] What was peculiar about this conversion rate was that it did not move with market interest rates; it was always 2 % a month regardless of capital market conditions. We think that the reason for this rigidity was

has experienced a small crisis in the rental housing market. *Chonsei* prices have been steadily rising as fewer landlords will accept the *chonsei* rental contracts, and converted monthly rents have become a heavy burden for tenants.

A remaining fundamental question is whether the *chonsei* contract will remain a dominant rental form in the future. A *chonsei* deposit is an unofficial loan given to the landlord by the tenant, and is a legacy of an undeveloped financial market. The *chonsei* deposit is smaller than the sale price mainly because the market anticipates capital gains from property ownership. A *chonsei* tenant enjoys the same service as an owner-occupier, but does not pay for taxes, repair costs, and depreciation. A *chonsei* deposit would thus be larger than the sale price of the house if no capital gains were expected. The ratio of *chonsei* deposit to sale price is currently high and rising. When the ratio reaches a high enough level, many tenants would rather buy a home or other relevant property using the returned *chonsei* deposit and a bank loan. In short, the *chonsei* rental contract is not a viable arrangement, and has dim prospects for capital gains and an active real estate finance market. It is expected to lose its dominance in a property rental market.

The broad acceptance of 'global standards' in real estate practices

The economic crisis shattered the common beliefs, such as 'real estate prices will always rise', under which the South Korean real estate market operated. With continuous real estate price inflation, *chonsei* rental contracts, the purchaser financing of new house construction, the requirement of real estate collateral when granting loans, the holding of real estate being the most reliable asset, and cost-based appraisal standard all made sense.

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that the monthly rental housing market was not large enough. As only a few landlords and tenants ever used the conversion rate, old conventions persisted.

However, after the economic crisis, such long-established practices suddenly became inadequate. This change of environment increased uncertainty, and pushed down real estate prices further. Although the real estate market stabilized in a relatively short time, the experience of market collapse and contacts with foreign investors have taught market participants that the South Korean market should be incorporated into the international real estate market. Investors, developers, tenants, buyers, managers, and professional advisors are frequently foreigners, and market practices established in the U.S and other advanced countries are being transplanted. Even when a deal is made between two South Korean parties, the benefits of a rigorous analyses of the property based on hard evidence are appreciated.

A closer link between the capital market and real estate market reinforces need to adopt global standards. The capital market is global in its scope, and information flows fast. The real estate market is inherently local, and information flow tends to be sporadic and limited. Despite these contradictory characteristics, the two markets have been increasingly close knit through development of ABS, MBS, REITs, and other property-related financial instruments. Today, the real estate market is viewed as an integral part of the capital market in many countries. As explained before, South Korea introduced all these financial instruments in the wake of the economic crisis. Not confined to real estate-backed securities, the ABS market is developing fast. Although it will take time and more favorable market conditions for MBS and REITs to be accepted as important investment alternatives, the real estate related lending market is growing fast as banks and other financial institutions vie for market share. From the perspective of real estate developers and investors, these trends signify new financing opportunities thatdid not exist before 1998. If they can convince the financial institutions, then real estate

developers and investors can now raise sufficient funds from the capital market, directly or indirectly.

To satisfy financial institutions, however, real estate developers and investors must attain to the high levels of transparency and rigorous project analysis that are common in the U.S. and other countries. Knowledge and experience of global standards in real estate practice is spreading fast. It is easy to imagine that after several years, South Korean real estate professionals and investors will advance on foreign markets armed with newly accumulated skills.

Conclusion

In the mind of the policy makers and the general public, the real estate sector has always been seen as a trouble spot, rather than a legitimate business sector with an important role to play in normal economic development. The presumption of real estate policy was that speculators caused continuously high price increases, and that by suppressing speculation all could live in peace. Based on this perception, anti-speculative real estate regulations and taxes systematically distorted the market. Of course, this presumption is wrong.

Recent reform of regulations and taxes are signs of change. Policy makers have begun to recognize that the real estate sector is a normal, productive sector, in which competent professionals should actively seek and create new opportunities. With this new perception, South Korean real estate policies, market conventions, and professional training will gradually approach global standards. For instance, if the government tried its best to slow down property price inflation in the past, then it will promote the 'highest and best use' of property in the future, recognizing that prices determined by a well-functioning market are of no concern to the government.

Going forward, government's influence in the real estate market will be reduced. The public monopoly of land development will be broken, albeit gradually. The financial sector will be more closely linked with the real estate sector. As real estate-related finance becomes more easily available, *chonsei* rental contract will lose their current universality. Foreign investors and professionals will be much more active, and their local partners will quickly gain knowledge and experience in working in international environments.

Armed with new skills, Korean firms will advance to other countries.

What is happening in the South Korean real estate market can be summed up as the 'rediscovery of the market'. Many reforms opened up the market internally as well as externally. Domestic investors, professionals, consumers, and their foreign counterparts all moving into new market environments, and the real estate industry is coming out of the shadows at last.

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Chapter Five

Housing Performance and Housing Policy in South Korea

Shin-young PARK

1. Introduction

Housing is a major capital resource that affects every aspect of national life. How people live and how much they pay for shelter have a significant effect on their personal well-being. For these reasons, all nations, regardless of whether they are oriented towards free markets or central planning, are intervening in the housing market. However, the degree of intervention in each country varies with the country's population growth and migration, income level, climate, and the political objectives of its government.

The South Korean government has consciously pursued policies designed to foster economic growth, in the conviction that the ensuing economic prosperity would filter down to the poorest members of society. South Korean society has achieved considerable improvement in the supply and quality of its housing. South Korea's housing stock almost matches the number of households that require an independent residence, and various housing quality indicators show that the average household is living in larger and better housing than ever before. Nevertheless, it is obvious that sharp increases in the prices and rents or new housing have a profound impact on the affordability of housing

for lower-income groups, because the supply of low cost rental housing units continues to shrink. Therefore, the South Korean government is still faced with a housing problem, namely, the disparity between the stock of available dwellings and the quantity of low-cost housing units needed by poor urban families.

This chapter provides a perspective on the housing policies of South Korea over the past three decades. The first section reviews the information available on the housing situation in South Korea, and the second section discusses the government strategies in response to housing problems.

2. The Housing Situation in Korea

2.1 Households and Housing Demand

South Korea's population and households have undergone a substantial change in growth and structure over the past few decades. The population in 2000 was 46 million, witch was about 85 % larger than it had been forty years before. At present, both the birth rate and death rate are low, and the population growth rate has decreased from 3.0 percent in 1960 to 0.7 percent in 2000. However, both the birth and the death rates are low, and the population growth rate has decreased from 5.6 persons in 1960 to 3.1 people in 2000. These two factors influence housing demand, as shown in Table 1.

In addition to the factors mentioned above, migration has also influenced housing demand. People have been migrating from underdeveloped rural villages to advanced urban areas since 1960. To take advantage of infrastructure and to provide work, new manufacturing activities were located in the major metropolitan areas, especially in Seoul, which occupies only 6.5% (606 sq km) of South Korea's total land area. Seoul's share of the total South Korean population increased from 9.7% in 1960 to 21.4% in 2000. If one

considers the population of the entire Seoul Metropolitan Area (SMA), which includes Seoul, Inchon, and Kyunggi Province, almost half of the national population resides in the SMA, an area that is only 11.8% of South Korea's total land area. The SMA had not made preparations to absorb such a large number of new inhabitants, and as a result, an inevitable housing shortage occurred in the SMA, as shown in Table 3.

Table 1 - The Population and Household Growth: 1970 to 2000

	1970	1975	1980	1985	1990	1995	2000
Population (x1000)	31,435	34,679	37,407	40,420	43,390	44,554	45,985
Average rate of population growth		2.06	1.57	1.56	1.43	0.53	0.63
Household (x1000)	5,576	6,648	7,969	9,571	11,355	12,958	14,312
Average rate of household growth during 5 years (%)		3.97	4.02	3.73	3.48	2.68	2.01
Average of household size	5.24	5.04	4,55	4.09	3.71	3.31	3.12

Source: National Statistical Office, *Population and Housing Census*

Table 2 - The Changes in Residential Population by Region

	1960	1970	1980	1990	1995	2000
Total	24,989	30,852	37,407	43,411	44,609	46,125
%	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Urban area*)	6,997	12,685	21,401	32,308	35,033	36,762
%	(28.0)	(41.1)	(57.2)	(74.4)	(78.5)	(79.7)
Seoul	2,445	5,536	8,364	10,627	10,231	9,891
%	(9.7)	(17.9)	(22.4)	(24.4)	(22.9)	(21.4)
SMA	5,198	8,731	13,279	18,583	20,189	21,346
%	(20.8)	(28.3)	(35.5)	(42.8)	(45.3)	(46.3)

Source: E. Mills and B. Song (1979). p. 8 and National Statistical Office, Annual *Population and Housing Census*. After 1995

Note: *) Urban area are the places where more than 50,000 inhabitants live.

2.2 Housing Stock and Conditions

The housing stock increased rapidly, from 4.4 million in 1970 to 11.4 million in 2000, while the number of ordinary households, except single-person households and non blood-related households, increased from 5.6 million in 1970 to 11.5 million in 2000. Over the past three decades, housing stock has increased by 268%, while the number of ordinary households has increased by 206%. The housing supply ratio, that is, the ratio of housing stock to the number of households, declined continuously from 78.2% in 1970 to 69.4% in 1988. This was due to rapid urbanization, the spread of the nuclear family system, and an insufficient investment in housing. In a 1988 effort to stabilize housing prices and rents, the South Korean government inaugurated a massive housing supply in its 'Two Million Housing Construction Plan' that included 5 New Town Development Projects around Seoul. In the year 2000, the housing supply ratio was 96.2 %, and it was expected to reach 100 % in 2002

Table 3 - The Housing Situation in Korea

	1970	1980	1985	1990	1995	2000
Total Number of Households (x1000)	5,857	7,969	9,571	11,355	12,958	14,312
Total Number of Ordinary Households1)(A)(x1000)	5,576	7,470	8,751	10,223	11,133	11,928
Numbers of Housing Units (B)(x1000)	4,359	5,318	6,104	7,374	9,570	11,472
Housing supply Ratio(C:B/A)	78.2	71.2	69.8	72.4	86.0	96.2
C in SMA*)	64.5	60.2	59.7	63,9	76.7	83.2
C in Seoul*)	56.8	56.1	55.3	57.9	68.0	71.0

Source: National Statistical Office, *Annual Population and Housing Census*

Note: 1) Ordinary household figures exclude non-blood relationship households and one-person households.

*) The Department of Construction and Transportation (2001)

However, this ratio has some significant shortcomings. It does not show the adequacy of supply, because the number of ordinary households does not include single-family households that need housing. It gives no information on whether or not houses are of the desired condition. It does not take into account any specific shortage in particular locations or certain income groups.

According to the increase in the housing supply rate, the number of apartment houses and their weight in total housing stock has increased dramatically. An apartment house is an attached housing unit in a building that is five or more stories high, each unit being individually owned by a moderate-income family. This is somewhat different from western European countries. The perceived need to increase the production volume stimulated the construction of high-rise buildings. Between 1970 and 2000, the number of apartment houses increased 158.5 times. In contrast, the number of single detached houses decreased from 4,359,000 in 1970 to 4,337,000 in 2000.

In addition, the South Korean government encouraged private builders to construct multi-family housing units such as row houses and multi-family row houses. A row house is an attached housing unit in a building with four or fewer stories, each story of the house individually owned. A multi-family row house is also an attached housing unit in a building with four or fewer stories with each unit individually owned, but each building smaller than 660 m². The purpose of the government plan is to increase housing supply in narrow spaces and to promote owner occupation, and as such, many governments pursue this as a political agenda (Kemeny, 1981). Consequently, multi-family housing units comprise almost 60 % of the total South Korean housing stock, and in the SMA there are fewer detached houses and more multi-family housing units than in other regions.

Table 4 - the Trend of Types of Housing Units in Korea

		1970	1980	1985	1990	1995	2000	1970-2000 increasing units
Numbers of Housing Units (x1000)		4,359	5,318	6,104	7,374	9,570	11,472	7,113
Single Detached house (x1000)		4,154	4,652	4,719	4,727	4,337	4,069	-85
Multi-Family Housing (x1000)	Apartment	33	374	822	1,628	3,455	5,231	5,198
	Row house	146	162	350	488	734	813	667
	Multi-family row house	-	-	-	115	336	453	453
Other		25	131	213	202	343	393	368

Source: National Statistical Office, *Annual Population and Housing Census*

Table 5 shows that living conditions in South Korea steadily increased from 1980 to 2000. The average house size increased from 68.4 m² 1980 to 83.8 m² in 2000. Dwelling area per household increased from 45.8 m² in 1980 to 63.1 m² in 2000. The disparity between the average size of a house and the dwelling area per household is due to two factors: vacant homes, and the fact that the dwelling area per household includes non-blood relationship households and single-person households. In addition, the number of dwellings with hot running water and a flush toilet increased very rapidly. Overall, the number of households living in physically adequate and uncrowded housing units increased significantly between the 1970s and year 2000. Despite these changes in housing quality, it is estimated that a number of households still live in acute housing circumstances.

Table 5 - Housing Quality Trend in Korea

		1980	1985	1990	1995	2000
quantative indicator	dwellings per 1000 population	14.2	15.1	17.9	20.7	24.9
	housing supply ratio(%)	72.8	71.7	72.4	86.0	96.2
	average habitable floor space	68.4	72.6	80.8	80.5	83.8
	rooms in housing	3.3	3.5	4.0	4.3	4.4
residential level of household	average of residence per household	45.8	46.4	51.0	58.6	63.1
	average dwelling space per person	10.1	11.8	14.3	17.2	20.1
	Average number of room per person	0.47	0.51	0.71	0.90	1.09
level of facilities	hot water supply(%)	10.0	20.0	34.1	74.8	94.1
	flushing toilet(%)	18.4	33.6	51.3	75.1	87.4
	modern kitchen(%)	18.2	35.1	52.4	84.1	93.9

Source: Source: National Statistical Office, *Annual Population and Housing Census*

2.3 Tenure

It is difficult to explain housing tenure in South Korea, because the tenure composition of South Korean housing stock is atypical. In western European countries, housing tenure usually comprises four different types: public rented, private rented, owner occupied, and others, including rent-free. However, this classification is not used in South Korea, because for a long time South Korea has had a minimal number of public rental housing units.

Therefore, in South Korea, household occupants can be broadly categorized as either owner occupants, those who live in housing units they own, or rental occupants, those who live in housing units supplied through the market, mainly by private landlords. Rental occupants use one of two alternative forms of rental arrangements, *chonsei* or monthly rental. As a result, tenure composition is composed of owner occupied, *chonsei* rental, monthly rental, and other tenures.

The *chonsei*, a more common rental system than monthly rental, requires a tenant to put approximately 50 % of the market value of the housing price down as a deposit (key

money) and the deposit is then returned at the end of the lease term, which is legally two years The landlord is not restricted as to the use of the deposit and frequently uses the *chonsei* contract as a leverage to invest in additional housing units. Landlords who cannot afford to pay the total cost of their additional housing units sometimes purchase the units by not returning the *chonsei* deposit immediately. The capital gains from home ownership fuels the continuous inflation in housing prices. The House Lease Protection Act and the Civil Code provide protection for tenant's deposit if the tenant creates a security lien on the real property in the amount of the deposit.

The main reasons why the *chonsei* rental agreement prevails in South Korea are the high interest rates and the underdeveloped housing finance system. A tenant who has 50 % of the market value of a property cannot purchase a house due to the lack of a well-functioning housing finance system. Typically, a young married couple starts off family life in a monthly rental unit and begins to save money for a *chonsei* deposit. After several years of saving, the family is able to move into a small *chonsei* rental unit. As their savings accumulate and grow, they can move to successively larger and nicer *chonsei* units, and eventually they are able to buy a home using their returned *chonsei* deposit as a major source of funding. Consequently, a *chonsei* deposit is, in effect, an informal loan form a tenant to a landlord.

The ratio of households residing in their own houses decreased from 63.1 % in 1975 to 54.2 % in 2000. In Korea, almost 90 % of rental households live in privately owned rental housing, because only 6 % of total housing units are public rental housing, including 5-year rental housing. As a result, rental households are suffering from rent increases.

Table 6 - Housing Tenure in Korea

	1975	1980	1985	1990	1995	2000
Numbers of total households (000)	6,754 (100)	7,969 (100)	9,571 (100)	11,355 (100)	12,958 (100)	14,312 (100)
Owner- occupied (000)	4,260 (63.1)	4,672 (58.6)	5,127 (53.6)	5,667 (49.9)	6,910 (53.3)	7,753 (54.2)
Chonsei Rental (000)	1,171 (17.3)	1,904 (23.9)	2,201 (23.0)	3,157 (27.8)	3,845 (29.7)	4,036 (28.2)
Monthly Rental (000)	1,049 (15.5)	1,231 (15.5)	1,893 (19.8)	2,173 (19.2)	1,875 (14.5)	2,118 (14.8)
Free or Other (000)	215 (3.2)	162 (2.0)	350 (3.7)	358 (3.1)	328 (2.5)	401 (2.8)

Source: National Statistical Office, *Annual Population and Housing Census*

2.4 Prices

From the 1960s to the 1990s, housing prices rose faster than real incomes and general inflation, because the housing demand exceeded the housing supply. According to the official housing and rental price statistics as stated in 1986, housing prices and *chonsei* rents, both nationally and in Seoul, rose almost 50 % between 1988 and 1990, as shown in Table 7. The large inflow of foreign currency created a huge and fluid liquidity, the stock market continued to break records, and assets of all kinds including housing increased in value. At that time, many low-income families could no longer afford the rising rents, and they began to demand higher wages.

Housing prices began to fall in 1991, but *chonsei* rents did not begin to decrease until 1997. The fact that housing prices decreased up 1995 was due to the government's 'Two Million Housing Construction Plan' that was in place from 1989 to1993. As a result of this plan, 600,000 housing units were constructed between 1990 and 1997, as shown in Table 9.

In 1998, the year in which the South Korean economy was devastated by an economic crisis, the average housing value decreased by 12.4 % over the previous year, whereas the *chonsei* market decreased by 18.4 %. In the Seoul Metropolitan Area, housing prices decreased by 13.2 %, while *chonsei* prices fell by 22.7 %. In 1999, when the economy had recovered and exhibited a 10.9 % GDP growth rate, the housing market started to recover, going up by 3.4 %. At that time, *chonsei* rents increased by 16.8 %. Even though the economy was unstable, both housing and *chonsei* prices increased by two-digit numbers in 2001, as shown in Table 7.

It is difficult to determine the relationship between housing prices and *chonsei* rents. As housing prices decreased in 1998, *chonsei* rents also decreased; as housing prices increased from 1987 to 1990, *chonsei* rents also increased. However, when housing prices decreased from 1991 to 1995, *chonsei* rents increased.

Housing affordability, as measured by the ratio of housing sale price to annual income (PIR) and by the loan-to-value ratio (LTV), has increased. The Korea Housing Bank, which was privatized and renamed the Housing and Commercial Bank in 1997, suggested that the PIR was nine times the price of housing in 1990. However, it fell to five times in 2000 because of the overall increase in income and the stabilization in housing prices.

In addition, people could obtain housing loans very easily, and the interest rate had decreased steadily. As a result, LTV increased from 12.1 % in 1990 to 38.1 % in 2000. Compared to the 70-80 % LTV in developed countries, South Korea's LTV rate is still small. However, considering the fact that housing finance has been the most neglected sector in the South Korean housing market, it could be said that this is a remarkable

development. Mortgage interest rates declined to about 7 % in 2001.

3. The Strategies of Government Response to Housing Problems

Although government policies have led to some improvements in housing, they have not solved the housing problem. Indeed, in some respects they have intensified the housing problem, especially for low-income families. As a result, even though the quality of housing for the poorest families has improved, high numbers of urban and rural poor still live in slums without toilets, plumbing, or other basic amenities.

In addition, the unequal distribution of income and wealth leaves many people with jobs and incomes that cannot meet the rising cost of housing and rent, while others remain well off. According to the research of Son, Won, and Moon (2001), the housing expense rate of lower income groups is greater than that of higher income groups. A given household in the lowest income group spends around 25 % of its total income and about 30 % of its cash income on housing, whereas the higher income household spends between 5 and 10 % of their income on housing. One reason why poor families suffer from inadequate housing and pay too high a proportion of their income for rent is that the South Korean government does not consider whether people deserve housing assistance or not[1]. Instead, the government places special emphasis on the supply of new housing for household that can afford to buy it. The government considers the supply of new housing as the strategy to achieve the filtering process, b t this has ended in failure.

[1] The KNHC has to run its business like an enterprise. The KNHC cannot provide public housing in larger quantities because of financial constraints.

Table 7 - The trend of the increasing rate of housing price and *Chonsei* rent

	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01
The Increase of Housing Price Nationally	7.1	13.2	14.6	21.0	-0.5	-5.0	-2.9	-0.1	-0.2	1.5	2.0	-12.4	3.4	0.4	14.3
The Increase of Housing Prices in Seoul	2.0	9.1	16.6	24.2	-2.1	-5.4	-3.2	0.5	-0.6	1.5	2.0	-13.2	5.6	3.1	11.3
The Increase in *Chonsei* Rent Nationally	19.4	13.2	17.6	16.8	1.9	7.5	2.4	4.6	3.6	6.5	0.8	-18.4	16.8	11.1	11.6
The Increase in *Chonsei* Rent in Seoul	18.3	7.3	12.4	16.2	3.9	7.8	0.4	5.0	3.4	6.6	-1.1	-22.7	22.2	13.8	11.9

Source: Korea Housing Bank, *Monthly Housing Financial Review*

Table 8 - The Change in PIR and LTV

	90	91	92	93	94	95	96	97	98	99	00
The Change in PIR	9.0	8.2	7.5	6.9	6.4	5.7	5.2	4.6	4.6	4.2	5.0
The Change in LTV	12.1	13.2	17.0	22.2	21.5	21.5	28.3	29.4	33.2	33.1	38.1

Source: Ministry of Construction and Transportation (MOCT.

This part of the chapter reviews the historical changes in housing policy, and examines the national housing fund and public housing policy, the two main pillars of housing policy for low-income families.

3.1 A Historical Review of Housing Policy

Housing development in the public sector was initiated in 1962 as part of the first Five-Year Economic Development Plan (1962-1966). During that period, the construction of infrastructure and industrial plants was given high priority, while the housing sector was relegated to a low priority. Housing was viewed as something that each household had to solve by itself. The government confined its role in setting up basic rules and institutions. In 1962, the Korea National Housing Corporation (KNHC) was established as a government agency to construct public housing. The Public Housing Act (1963) was enacted in 1963.

In the Second Five-ear Economic Development Plan period, the focus was shifted to the construction of multi-housing units and to the rehabilitation of inadequate and illegal housing units. The Land Re-adjustment Law was enacted in 1966 to encourage

public sector development at the urban periphery, and to increase land supply for the purpose of land use. The Korea Housing Bank was established in 1968 to provide financial support for both public and private housing construction.

Concern over the housing problem grew in the 1970s because of the continued shortage of urban housing. A Ten-Year Housing Construction Plan, in addition to the Five-Year Economic Development Plan, was established with the aim of building 2.5 million housing units from 1972 to 1981. In 1972, the Housing Construction Promotion Act was enacted to ease land acquisition and development problems. With this Act as an impetus, the government assumed a proactive attitude towards solving South Korea's housing shortage problem. Through this Act, private developers were organized, and large construction companies started to build large-scale housing estates. However, the allocation of budgetary or financial resources in the housing sector remained minimal.

In the late 1970s, real estate speculation became a national phenomenon, and housing prices began to soar. In 1978, the Comprehensive Anti-Real Estate Speculation Measures (CAPS) were established. The emphasis of this policy was very much on government intervention in the housing market. To solve housing shortage in large cities, large-scale housing complexes were developed as government initiatives. Since then, apartment-type housing has prevailed in South Korea.

The provision of new housing units for sale and distribution has been institutionalized since 1977. This was based on a contractual saving scheme that entitled subscribers to apply for newly built dwelling units based on the amount of accumulated deposits and the length of subscription time. Only those who had subscription deposits could apply to purchase housing sold at the regulated price, which was the price ceiling set by the government. The government thought that a regulated price would be a good

device to help those who wanted to own a house. The gap between the market price and the regulated price amounted to a windfall gain for those lucky enough to be chosen to participate in this program. It can be supposed that the chosen people were middle-income households, considering the low LTV. Consequently, there were large disparities in housing consumption between low and middle-income households. In addition, price regulation reduced the profits of builders and housing construction companies. In 1989, the regulated price was changed to reflect the construction cost plus normal profits, and in 1999 it was abolished.

In the 1980s, economic stability was a more important policy objective than economic growth, and the top policy priority was given to a balanced regional growth. In 1980, the Residential Land Development was formulated, the purpose of which was to ensure an adequate housing supply by requiring public sector land developers to provide low cost residential land to builders, and the National Housing Fund (NHF) was established to assist housing construction. Public developers, such as the KNHC and the Korea Land Corporation (KLC) established in 1981, implemented an expedient development procedure called ‘public development’. This new procedure obviated the need for the permits, intergovernmental conferences, approvals, or licenses normally required for a private developer. In a public development, the developer first acquires all the land in the project area, using compulsory purchasing power if necessary; draws up a comprehensive land use plan; installs various types of infrastructure; and undertakes other engineering works. Developed land is then sold to builders and commercial property developers, sometimes at subsidized prices. This kind of land supply mechanism has contributed to the mass production of housing.

The government introduced a 'bond-biding' system in 1983 as a device to

discourage speculative housing purchases. The purchaser was required to participate in a competitive bidding process when purchasing newly built housing, and the bond was ascribed as income of local government.

The highlight of the housing policy in the late 1980s was the Construction Program for the 'Two Million Housing Construction Plan' from 1988 to 1992. The government adopted this program because the excess of households over dwellings increased, and building new houses to reduce this shortage was seen as the key to a successful housing policy. From 1980 to1987, the housing industry built about 220,000 houses annually, roughly 150,000 units short of the estimated annual need. The government announced its intention to build two million houses over five years, which was equal to one-third of the existing housing stock in 1987. From 1988 to 1992, more than 2 millions units were added to the housing stock, equaling the total production in the previous decade. The annual average of 0.6 million new units outpaced the rate of household formation, which averaged only 0.4 million per year.

The lack of land for building new housing units was solved when the government decided to develop five new towns near Seoul with a total planned population of over 1.5 million near Seoul, which is the centre of the housing problem and suffers from serious housing shortages and excessively expensive housing prices. Due to the massive housing supply produced by the 'Two Million Housing Construction Plan', spiraling housing prices were halted and the housing sufficiency rate began to increase. The capacity of the construction industry also increased during that period, and it built even more houses in the mid 1990s. As a result, there was the accumulation of unsold housing units on the market.

Table 9 - Statistics Related to Housing Supply

	Number of housing starts	Housing Supply Ratio	Housing Investment in GDP	Per Capita GNI
71	130,000	77.3%	3.8%	$289
72	110,000	76.3%	3.1%	$319
73	142,560	75.5%	3.7%	$396
74	158,110	74.8%	5.5%	$541
75	179,951	74.4%	5.2%	$594
76	169,970	73.3%	4.8%	$799
77	203,545	72.6%	5.4%	$1,009
78	300,107	72.5%	6.8%	$1,399
79	251,048	72.0%	5.8%	$1,636
80	211,537	71.2%	5.5%	$1,598
81	149,837	70.5%	4.2%	$1,749
82	191,420	70.2%	4.9%	$1,847
83	225,990	70.2%	5.8%	$2,020
84	222,047	70.1%	4.9%	$,2,190
85	227,362	71.7%	4.6%	$2,229
86	288,252	69.7%	4.9%	$2,550
87	244,301	69.2%	4.8%	$3,201
88	316,570	69.4%	5.3%	$4,268
89	462,159	70.9%	6.0%	$5,185
90	750,378	72.4%	8.8%	$5,886
91	613,083	74.8%	8.9%	$6,810
92	575,492	77.5%	7.8%	$7,183
93	695,319	80.6%	8.2%	$7,811
94	622,854	83.5%	7.5%	$8,998
95	619,057	86.0%	7.4%	$10.823
96	592,132	89.2%	7.1%	$11,380
97	596,435	92.0%	6.3%	$10.307
98	306,031	92.4%	6.2%	$6,742
99	404,715	93.3%	4.7%	$8,581
00	433,488	96.2%	3.9%	$9,628

Source: Korea National Housing Corporation, *Yearbook of Housing Statistics*

The bank of Korea *National Accounts*

Note : Housing investment in GNP is based on constant prices in 1995

Per capita GNI before 1975 are per capita GNP.

Starting in 1993, the government began to remove some of the tight restrictions and regulations on financial institutions such as banks and life insurance companies. Those measures included interest rate deregulation, money supply control abolition, the deregulation of fund management, and the expansion of the business scope of financial institutions. Money supply deregulation meant that the government allowed financial institutions to lend their money to private builders for real estate development projects. Almost everyone assumed that the public would benefit greatly from this shift to a free market approach, and that the finance system would become much more efficient. Unfortunately, the deregulation of the finance system was the main cause of South Korea's economic crisis in 1997. In 1998, record-high interest rates and unemployment lead to a severe decrease in the construction of new housing units. The number of housing starts declined to almost half that of the previous year, as shown in Table 9.

The government thought that revitalizing the housing market would reduce unemployment, control inflation, and increase economic growth. Therefore, it tried to support the private housing market by various measures, including: abolishing the sale price regulation of newly constructed apartment and the 'bond-biding' system; making each household member over 20 years of age eligible to establish a subscription deposit to buy a new apartment; exempting acquisition and registration taxes for those who bought new or unsold apartments; and setting the mortgage ceiling at 70 % of housing price for genuine first-time buyers. After implementing these measures, housing prices and rents tended to recover, as shown in Table 7. In 2000, the South Korean housing market regained stability as the national economy recovered.

3.2 The National Housing Fund (NHF)

The NHF, created in 1981 through an amendment to the Housing Construction Promotion Law (HCPL), has been a very important instrument in housing supply policy. The NHF has specialized in financing the production of small dwellings, usually less than 60 m², for sale or rent. Since 1999, the remit of the NHF has been extended to provide 5-year temporary rental housing units smaller than 85 m² constructed by private builders for the purpose of supporting housing construction.

The NHF is a preferable loan due to its low rate of interest and long-term redemption. The interest rates are within the range of 7.5% to 9.0 % for houses for sale and 3.0% to 4.0 % for rental units. The loan is passed to buyers of completed dwellings and is repaid over 20 years. The maximum loan amount per household is approximately 30 to 40 % of a unit's construction cost. With regard to the financing of newly built housing, 3,043,000 housing units, almost 36% of the total number of housing units constructed between 1981 and 2000, were financed through the NHF.

Since 1992, partial loans from the NHF have been provided to households who rent houses through the *chonsei* rental system. The interest rates for these *chonsei* loans depend on the status of the household. For example, households whose *chonsei* deposit is under 35 million wons are provided loans with a 3 % interest rate and a redemption period of 2 years. Even though the loans for *chonsei* tenant have increased between 1997 and 2000, their share is still a very small amount of the NHF loan portfolio, as shown in Table 11. Therefore, the NHF could be said to be a typical supply-side subsidy designed to increase housing output with no discrimination towards dwelling occupants. As a result,

the average income of NHF beneficiaries is equivalent to that of an average city worker who can afford to buy a house.

Table 10 - Housing Units Provided by the National Housing Fund

(units: thousands)

		81-01	96	97	98	99	00
Housing units provided by NHF	Housing for sales	1,940	137	120	35	41	43
	Housing for rent (including 5-year rental	1,103	27	135	114	98	88
	Total	3,043	164	255	149	139	131
Number of housing starts		8,480	592	596	306	405	433

Source: MOCT(2001)

Table 11 - the Portfolio of the National Housing Fund (units: 100 million wons)

	1997	1998	1999	2000
Total amount of loan/each year (A)	46,271	55,884	74,492	84,199
Loan for *chonsei* tenant(B)	1,450	2,050	5,500	11,300
B/A (%)	3.1	3.7	7.4	13.4

Source: MOCT(2001.5)

This NHF is managed by the Ministry of Construction and Transportation, through the Korea Housing Bank (KHB). The NHF mainly consists of National Housing Subscription Savings Deposit, National Housing Bonds, loan collection, Housing Lottery, borrowings and contributions from the government, and so forth. The proportion obtained from National Housing Bonds is 47.5 , as shown in Table 12. The national housing bond is compulsory, and is sold to those who register new base and carry such as housing and

automobiles. These bonds have a 5-year maturity base and carry a 5 % coupon rate. The contribution of the government is only 0.8%, which is exceedingly negligible.

Table 12 - Resource Mobilization in NHF (1981-2001)

	Amount (trillion won)	Proportion (%)
Total	43.4	100.0
National Housing Bond	20.6	47.5
Borrowing from public expenditure	11.0	25.3
Borrowing from government for special expenditure	3.5	8.1
National Housing Subscription Savings Deposit	1.0	2.3
Housing Lottery	0.8	1.8
Government Contributions	0.3	0.7
Other	6.2	14.3

Source: MOCT (2001.5), *National Housing Fund*

Note: 'Other' includes surplus from profit, profit from this term, and reserve accounts for bond interest. Loan collection is excluded.

The annual average increase in the rate of resource mobilization of the NHF from 1981 to 1999 was 26.1 %. When the average of increase is broken down into 4-years periods, such as 1981-85, 1986-90, 1991-95, and 1996-99, as shown in Table 13, it can be seen that it reached a plateau in the 1990s. This is the reason why the resource mobilization of the NHF depends so much on the real estate business cycle.

Table 13 - Increasing Rate of Resource Mobilization, NHF, 1981-1999

	Average	81-85	86-90	91-95	96-99
Increasing Rate (%)	26.1	24.2	44.6	17.2	15.9

Source: MOCT (2000.10) *Improving Management and Operating System of National Housing Fund*

However, when the rate of increase of the NHF is compared to the rate of increase

of other economic variables such as nominal GNP, real GNP, building construction permits, housing construction permit, consumer price, and housing price, the NHF's rate of increase is the highest, as shown in Table 12. The fact that the demand for NHF is very high may well indicate that the NHF is the most important tool in solving the housing shortage in South Korea.

Table 14 - The Average of Increase of Economic Variables, 1981-1999

	NHF	Nominal l GNP	Real GNP	GNP Building Construction Permits	Housing Construction Permits	Consumer Price Indices	Housing Price Indices
Increasing rate(%)	26.1	14.4	7.2	8.6	10.7	5.3	3.7

Source: MOCT (2000.10) *Management and Operating System of National Housing Fund*

In addition, the government's extremely low contribution to the resource mobilization in the NHF is a serious problem. To raise low-cost funds on a long-term basis, the government established a legal framework for issuing asset-backed securities (ABS) in September 1998. In January 1999, mortgage-backed securities (MBS) were introduced. In April 2001, the Real Estate Investment Trusts Act was enacted. MBS can be issued either by a Special Purpose Company set up under the ABS Law or by a specialized mortgage pooling company. As an example of the latter, in September 1999 the government established the Korea Mortgage Corporation (KoMoCo) in conjunction with major financial institutions. KoMoCo buys mortgages from primary lenders, pools them, and issues various forms of MBS in the capital market. Such activity is supposed to provide funds to primary lenders to make additional housing loans. However, KoMoCo had difficulty in finding lending institutions that would sell mortgages. Until June 2001,

KoMoCo issued MBS valued at 1.52 trillion wons based on the NHF loans**.**

3.3 Public rental housing

Public rental housing, sometimes called social housing, is generally regarded as the most appropriate housing tenure for low-income families or individuals. Thus, the government intends to promote the provision of public rental housing in various ways. However, the government has been negligent in providing public housing. As a result, a very limited quantity of public rental housing, including temporary rental housing, has been provided. In South Korea, only 6 % of the total housing stock is categorized as public rental housing, in comparison to 40 % in the Netherlands, 22% in the United Kingdom, and 17 % in France (Priemus Hugo and Peter Boelhouwer, 1999). In this respect, it could be said that South Korea is a not a welfare society, as it provides very little assistance to the poor.

Table 15 - Distribution of Public Rental Housing Units in 2000 (Unit: 1000, %)

Total housing	Public Rental Housing				
11,493	Subtotal	Permanent Rental Housing	50-year Public Housing	5-year Public Housing	Rentals for Employees
	688(6.0%)	190(1.7)	65(0.7)	384(3.3)	35(0.3)

Source: MOCT (2001.4)

The term ‘public rental housing’ was first used in 1971 when KNHC constructed housing on the condition that there would be a one-to two year mandatory rental period before the housing could be sold to the occupants. Between 1971 and 1980, about 64,947 apartments were constructed under such conditions. This accounted for 3.5 % of the total

houses constructed in the same period.

During the 1980s, the government began to expand public rental housing. Between 1982 and 2000, all of the 1,265,298 apartments constructed, some 15.1 % were provided for 5- year public rental housing. At this point, the term 'public rental housing' should be clarified in the context of the South Korean housing market. In South Korea, public rental housing means housing whose construction costs and rents are subsidized by the NHF or public expenditure. However, one peculiar characteristic of public rental housing in Korea is that the period of public rental differs according to the type of funding.

Currently, there are five different types of public rental housing in Korea: 5-year public rental housing; 50-year public rental housing; permanent rental housing; employees' rental housing; and 10-year and 20-year citizen's rental housing.

Five-year public rental housing is rented for a 5-year mandatory rental period, as required by the preferential NHF loans. It is then sold to the tenant, who is a housing subscription depositor. This is based on the necessity of obtaining a fast turnover of housing funds and of continuously supporting the mass-construction of housing. The average size of these housing units is almost 60 m². The government has been encouraging private companies to construct this type of unit by providing NHF loans and tax incentives. The measure has had limited success, largely because of the absence of true rental dwelling investors and the tenant's financial difficulty in buying the dwelling (Joseph Chung, 1995: 327).

Fifty-year public rental housing units, less than 40 m² in size have been built instead of permanent public rental housing units since 1992. These units are built with government financial support, and they will thus remain as rental units in the long term. Eligibility for these units was provided to housing subscription depositors and was

recently provided to tenants of squatter areas that began to be developed. However, the 50-year public housing unit's share of the total housing market was only 0.6 % in 2000.

Permanent public rental housing, as housing in the true sense of the word, was provided from 1989 to 1993. Unfortunately, this dwelling type was not popular among the intended beneficiaries, even though they were larger and better equipped than their current residences. There are at least three reasons for the weak demand. First, the space was very small, less than 30 m² in size. Second, the housing units were located in high-rise apartments. Third, the units were generally located far from where the intended residents lived. In addition, many poorer households felt that they could not afford the monthly rent, even though the rent amounted to no more than their present living expenses. For these reasons, some selected beneficiaries who were social welfare recipients cancelled their applications. The government then gave eligibility to housing subscription depositors and finally decided not to supply them at all in 1992. The total stock of permanent rental housing at the time of writing is 190,070 units.

Employees' rental housing has been built through one of the programs for the Two Million Housing Construction Plan. It is sold to an employer who employs at least five persons. The employer then rents those houses to its employees, and sells the houses to the occupants after the 5- year mandatory rental period. The system works in the same way as the 5-year public rental housing scheme. This type of housing is unpopular, because employers are not interested in supplying company housing.

Ten-year and 20-year citizen's rental housing began to be built after President Kim Dae-Jung came into power in 1998. Financial assistance with 30% of construction cost is provided, and the living space in each housing unit is less than 50 m². In September 2001, the first citizen's rental housing estates was completed. The government placed special

emphasis on the construction of citizen's rental housing, and declared that 200,000 units of these housing units would be completed in 2003. Eligibility for the10-year type rental units is limited to housing subscription depositors whose income is less than 70 % of the average urban household income. Eligibility for the 20-year type units is limited to low-income families whose income is less than 50 % of the average urban household income. The rent for these type units is cheaper than that of private housing.

There are four peculiarities in the provision of public rental housing. First, its provision ignores some households who cannot afford even minimum housing. Second, 5- year public rental housing has mainly been provided through private companies that are entitled to make a profit. Third, the central government is significantly involved in the direct supply of public rental housing. Local governments own and manage only 0.8 % of the total housing stock as public housing. The KNHC, which is supervised by the central government, owns and manages 2.1 % of the total public rental housing stock. Fourth, the eligibility and provision of public rental housing can easily be changed, and government subsidies are given without any legal articles. As a result, the provision of public rental housing has been used as a tool for contemporary political manipulation or economic revitalization.

4. Conclusion

Housing stock has increased dramatically and housing conditions have significantly improved in the last few decades. South Koreans are better housed than ever before. Nevertheless, the housing strategy, conditioned by the policy of putting industrial development first, has brought about a wide disparity between rich and poor families. For example, a regulated pricing system to maintain the selling prices of new houses far

below the market prices resulted in capital gains to purchasers. As a consequence, much of the improvement has been favorable to the middle and upper middle classes of South Korean society. In contrast, low-income families cannot afford to buy the new housing because of low LTV. Worse still, public rental housing, which is targeted at low-income people, is often occupied by middle-income households as a result of the contractual savings scheme. In addition, public rental housing still comprises only a very small quantity of the total housing stock. The housing conditions of low-income people have not improved greatly. Many low-income people still live in overcrowded and dilapidated housing. Thus, it can be said that the South Korean housing policy has strongly favored higher-income housing over lower-income housing.

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Chapter Six

Developing the Real Estate Market in Shanghai

Zheng-Min GE and Ling-Hin LI

1. Introduction

Shanghai is known as dragon's head at the mouth of the Yangtze River Delta. It is also one of the four directly administered cities in China with a high level of political autonomy without constraints from a higher-level provincial government. With the exception of the period between 1949 and the mid-1970s, Shanghai has always been China's principal gateway to the world.

The total area of Shanghai is 6340.5 km². The population of Shanghai at the end of 2002 was 13.3 million with 76.4% of the population classed as non-agricultural and the population density of 2104 inhabitants per square kilometer, which is one of highest in China.

Following the major trends of the open-door policy and economic reforms in the late 1970s, Shanghai was designated by the central government in 1984 as an open port city to serve as a recipient point for capital investment and technology transfer from developed nations. Due to the Shanghai's position in the Yangtze River Delta, it was hoped that the success of economic development in Shanghai would travel down to the entire Yangtze Delta and eventually to the lower and middle Yangtze Basin.

Until the late 1980s, foreign investment and economic developments concentrated mainly on the existing urban core of Puxi. However, in April 1990, the Shanghai

government announced that Pudong (the eastern part of Shanghai) would be the new development zone, as part of a more structured plan to obtain investment for infrastructure and economic growth. The new area is similar to the size of the urban area in Puxi, and was the focus of China's reform and open-door policy in the 1990s.

The recovery of economic growth in Shanghai started with the economic reforms in China in early 1980s. The opening up of the economies of selected coastal cities led to prosperity in these areas, and Shanghai is one of the members of this privileged club. The performance of the economy can be observed from the following table.

Table 1 : Major Economic Indicators in Shanghai

Year	GDP/capita (in yuan)	Tertiary Industry added value (in 100 million yuan)	Real Estate Sector added value (in 100 million yuan)	Government revenue (in 100 million yuan)
1970	1446	28.43	0.08	99.9
1985	3855	121.59	0.58	184.23
1990	5910	241.17	3.75	170.03
1995	18942	991.04	91.29	227.3
1996	22275	1248.12	124.26	288.49
1997	25750	1530.02	147.51	352.33
1998	28240	1762.5	185.4	392.22
1999	30805	2000.98	210.53	431.85
2000	34547	2304.27	251.7	497.96
2001	37382	2509.81	316.85	553.86
2002	40646	2755.83	328.86	719.79

Source : Statistical Yearbook of Shanghai, 2003

Note : since early 1990's , the official foreign exchange rate between US$ and Yuan is around 1: 8

The popularity of the Shanghai real estate market brought about by the urban land reform has not only produced substantial income for the local government, but has also caused a geographical change in the city landscape and living conditions in the city.

Table 2 shows that slum housing has been dramatically displaced in urban Shanghai, and has been replaced mainly by more commercially viable types of property such as office and retail units. Although most non-domestic land use types have undergone an increase in area, industrial land use has certainly be outpaced by retail and office use. Moreover, the displacement of industrial floor space in the central business district (CBD) has not been matched by any corresponding increase in industrial units in other districts. This implies that there was indeed an over-use of industrial land in the city centre due to the inefficient administrative allocation of land, and that the rationalization of land use is well under way (Li, 2003).

Table 2 : Changes in Building Types in Urban Shanghai

(in gross floor areas -10,000 sq. meters)

	1978	1980	1990	1995	2000	2002
Total	**8653**	**9134**	**17256**	**22094**	**34206**	**43432**
Domestic housings	4117	4403	8901	11906	20865	26906
Villas	128	134	158	179	250	580
Apartments	90	92	118	111	206	223
Staff quarters	1140	1402	4884	7998	17939	23777
Residential blocks	2210	2256	3541	3458	2324	2213
Simple housings	464	437	123	85	84	52
Others	85	82	77	75	62	61
Non-Domestic buildings	4536	4731	8355	10188	13341	16526
Office	228	337	599	955	2416	2932
Retails	228	243	403	562	1191	1780
Industrial	2543	2646	4822	5573	5739	6570
Others	1537	1505	2531	3098	3995	5244

Source : Shanghai Statistical Yearbook 2003

2. The Reform of Land-use Right

The current interest in the real estate market in China from both local and international investors was sparked by the launch of the urban land-use rights reforms in 1988 (Walker and Li,1994). In April 1987, the State Council proposed a new policy for the transferability of land-use rights in the free market, and the Special Economic Zones Office under the State Council was delegated to test such an idea in the nation's four open cities of Tianjin, Shanghai, Guangzhou and Shenzhen.

On 12th April 1988, Clause 4 of Article 10 of the Constitution of the People's Republic of China was amended such that:

" *No organization or individual may appropriate, buy, sell, or unlawfully transfer land in other ways. The right of land use can be transferred in accordance with the law*"

The last sentence makes possible the operation of a real estate market mechanism similar to that of Hong Kong. The land still belongs to the State (on behalf of the people) in line with socialist doctrines. Moreover, in December 1988, the Land Management Law of the People's Republic of China was also amended so that in Chapter Two of the Ordinance the original statement " no enterprises or individuals can possess, sale or rent or buy any illegal means transfer land "is now amended into "no enterprises or individuals can possess, sale or buy any illegal means transfer land".

As such, the basis for the conveyance of land (or land-use rights, to be exact) in China's legal and ideological framework is the concept of "land lease". This means that

the reform of the real estate market in China is basically a reform to release the leasehold value of real estate, not to allow real freehold ownership (Li,1996).

Under the Provisional Law on the Conveyance, Grant and Transfer of the Land Use Rights over the State-owned Land in Cities and Towns 1990, which was enacted by the State Council's Order 55 decreed on 19th may 1990, land use rights are separated from ownership right and become tradable on the market by private treaty, negotiation and auction. Land-use rights are rights with time limits, the length of which depends on the different kinds of land use to which they refer (normally residential use has a time limit of 70 years and commercial use 50 years etc, but it varies according to local government policies). Land-use rights can also be mortgaged and transferred.

Table 3 outlines the sale of land in different districts and for various uses in the built-up areas in Shanghai since 1995. Most of the development sites sold in Shanghai in the last eight years are urban sites, implying substantial urban renewal activities. Moreover, most of the sites have incorporated retail and commercial elements such that the completed floor space for retail arising form the market land sale program has made a quantum jump since 1995 compared to other uses. This also reflects the importance of the improvement in the economy of retail property.

3. The Market Structure:

China's property market comprises three levels. The primary level is the market between the State, through the Ministry of Land and Natural Resources, and real estate development companies. The State grants virgin land to the real estate development companies for a definite period (under the Provisional Law on the Conveyance, Grant and

Transfer of the Land Use Rights over the State-owned Land in Cities and Towns 1990) subject to the payment of a premium (land-use conveyance fee). The ownership and the land-use rights of the same piece of land then become separated, with the state still holding the ultimate land ownership but the rights to use land being transferred.

Table 3 LEASE OF LAND PLOT TENURE IN MAIN YEARS

Indicators	1995	2000	2001	2002
Leased Plot (piece)	**499**	**1 325**	**1 981**	**1 621**
Leased Area (10000 sq.m)	**1 245.42**	**2 183.22**	**5 228.34**	**6 729.94**
Urban Districts	875.11	1 259.94	2 937.69	5 670.70
Pudong New Area	646.76	534.29	1 351.21	991.11
Rural Counties	370.31	923.28	2 290.65	1 059.24
In terms of floor area completed (10000 sq.m)	**1 343.99**	**3 502.73**	**5 877.60**	**5 977.73**
Residential	720.58	1 868.18	3 728.89	3 393.05
Office Buildings	167.02	44.13	673.60	497.35
Commercial	1.27	92.96	202.80	276.89
Industrial	424.46	1 417.67	1 127.15	1 717.08
Others	30.66	79.79	145.16	93.36

Note: The figures before have been collected from the plots leased to foreigners in 1995, and after 2000, the plots leased to domestic leases have been included.

The transfer of land use rights can be carried out by three methods: private negotiation, tender and auction. Upon expiration of the lease term, the land-use rights and the superstructure thereon will revert to the State without compensation, unless there is a renewal of the grants contract (which is normally assumed to be the case).

The secondary level concerns real estate development companies and property or and users. The development companies, after acquiring the land-use rights from the State, have to develop basic infrastructure and facilities on the land, in accordance with the contract terms. Usually, this is the ‘seven utility connections and one formation’, as the

government calls it. In other words, development companies are normally responsible for the connection of public utilities such as gas, water and telephone lines.

After satisfying all the obligations, these companies can, if they wish, then transfer the remaining period of land-use rights to property or land users. The State has the right to withdraw the grant, however, if the companies fail to comply with the regulations stated in the contract of assignment.

The tertiary level provided for the transaction of land-use rights amongst the property or land users, that is, the secondary market. The type of transfer may be assignment, subletting, mortgage, inheritance, or grant as gift. The first two types are the most common. However, this market still remains in its primitive stage in China. The details of the system are illustrated in Table 4.

Table 4 . The Basic Structure of The Property Market

	First level	Second level	Third level
Market player	State or Municipal Land Administration Authorities	Local real estate development companies	Investors and other local land users
Type of Market	Monopoly	Competitive	Basically open
Scope of business	Master planning, land use design, resumption of land, relocation and demolition	Comprehensive development of large tracts of land (virgin land)	Laterally transferring the interest of land with a lease period
Mode of business	Disposal of land by auction, tender or negotiation with compensation (progressively adopting the policy of transfer of land-use rights for value)	Assignment or let of the developed land (with or without buildings on the ground)	Further assignment or sublet of the developed land (with or without building on the ground)
Land price	Monopolistic price (land rent)	Fair price	Remaining value of the fair price

Adapted from Shanghai Land, 1993, vol.3

4. The Housing Market in Shanghai – recent developments

Until very recently, there were basically two parallel levels of housing market in Shanghai. The first level (we can call this the socialist level) was the housing developed

by the work units, which used to be part of worker's remuneration package. However, according to the central government's housing reform objectives, the work units are to sell the housing flats to the workers to detach themselves from being housing developers. Hence, in some way, this was a precursor to the introduction and implementation of housing reform all over the country. Shanghai's plan for a comprehensive reform of the housing system was formally introduced on May 1, 1991, with the approval of the State Council.

At market level, which is expanding, housing units are being 'commodified' so that they become free market products provided by private companies under the price mechanism, and are determined by the rules of demand and supply. To boost demand for residential housing, the Shanghai authorities simplified the process of purchasing residential commodity housing since mid-1990s. In 1999, different types of residential housing such as normal housing for the internal market[1], resettlement housing, employee purchase of public houses, staff quarters, and other types of housing were combined into a single category of Residential Commodity Housing for Internal Market. In 2001, this category was further extended to combine residential housing for the internal market and houses for the external market into one category entitled Residential Commodity Housing.

Moreover, due to the obvious disparity in affluence between real estate investors (especially from overseas Chinese communities) and local users, most of the cities at the beginning of housing reform process opted to fabricate a dual-market structure to cater for the demands of investors (the External Sale Market, or Overseas Sale) and the housing

needs of local inhabitants (the Internal Sale Market, or Domestic Sale). Shanghai, being one of the forerunners in real estate market reform, also chose this dual structure. Such measure was essential in the beginning to attract foreign currencies into the market, as real estate investment is also a good hedge against inflation, which was running high in the early 1990s. Moreover, if the local market had been completely and freely open to foreign investors, then a substantial upsurge in might have occurred due to strong interest from overseas Chinese investors (either for investment purpose or owner-occupation for their relatives in China) leading to a lack of affordable housing for local people. By separating the two markets, the government actually divided the housing market into investment-oriented and need-oriented sub-markets.

Given that the current registration system of property rights protection in China does not require the registration of the transaction price of housing (unlike the system in Hong Kong, see other chapters on the Hong Kong market), data on the market price levels of the protected domestic sector are very scarce. Wang (1993), however, provides a useful insight into the price differential between the two sectors. He compares the price ranges in Shanghai from 1987 to 1990 between the domestic sale commodity housing and the Overseas Chinese Sale (*Qiao Hui Fang*), which is a kind of overseas sale commodity housing especially designed for and sold to Chinese purchasers from overseas.

[1] For the various kinds of commodity housing products introduced in Shanghai at the beginning of the housing reform era, please refer to Wu (2001), "Housing provision under globalization : A case study of

Table 5 The Dual Housing Market in Shanghai

	Domestic sale		Overseas Chinese Sale	
Year	Area sold (m²)	Average unit price	Area sold (m².)	Average unit price
1987	147,757	940	24,501	1,381
1988	272,551	1,155	4,189	1,586
1989	325,703	1,381	25,161	2,000
1990	408,279	1,364	8,627	2,817

Note :

1) This comparison is based on multi-storey housing flats from the two sectors in the urban areas that have undergone renewal schemes

2) The average prices represent average prices per square meters and are indicative prices from the authority.

Source : Wang, Y. (ed.) (1993) , *Shanghai Real Estate Market Manual*, (p.84-87), Shanghai : Tongji University Press

However, as the market mechanism has developed in these two sub-markets over the last decade the domestic market has gradually picked up (in terms of price level and transaction volume), but the overseas sector has slowed down. This is due to a number of factors. Given the improving quality in the domestic sector, some overseas investors or purchasers who have relatives in China are now switching to the domestic sector by asking their relatives, who have a legitimate household account, to purchase on their behalf. Moreover, after 1997, the outbreak of the Asian Financial crisis eroded a substantial amount of overseas investment and speculative demand for real estate assets in China. This is evident from Table 6, from which can be observed that the number of land leases channeled through the overseas sale market dropped substantially after 1995, while those channeled through the domestic market rose. The price differential between the two sub-markets was at one time once more than 40%, but dropped to only 10% before the merger of the two submarkets in 2001.

Shanghai", *Environment and Planning A* , Vol. 33, issue 10 p.1741

Table 6 The Segmented Land Market in Shanghai before 2000

	Leasing of land for Overseas Sale Property Projects		Leasing of land for Domestic Sale Property Projects by overseas investors		Leasing of land for Domestic Sale by domestic investors (excluding the Pudong Area)		Leasing of land for Domestic Sale by domestic investors in the Pudong Area	
	Sites leased	Areas leased*	Sites leased	Areas leased*	Sites leased	Areas leased*	Sites leased	Areas leased*
1988-1991	12	980.36						
1992	205	2071.55						
1993	244	4914.89						
1994	455	1568.02	5	9.42			10	46.18
1995	258	640.3	18	78.69	87	69.97	134	414.55
1996	207	378.66	19	66.82	301	246.16	113	206.64
1997	220	461.36	39	82.59	651	522.81	114	363.99
1998	262	421.05	23	35.06	872	538.1	169	69.46

Source : *Shanghai Real Estate Market* 1999 , p. 17 Shanghai : China Statistical Publishing House

Note : Area in hectare

Due to this gradual tapering of the differential in the two markets, the authority began the merger in 1999 by first tidying up the internal structure of the domestic market first. According to a regulation initiated by the Shanghai City Government in November 1999, the government-subsidized public housing units (*Jingji Shi Yong Zhu Fang*) would be directly converted into freely marketable commodity housing units in the domestic sector without the need of compensation if these housing developments had already obtained government approval for sale on or before the end of November 1999. For those projects that had not obtained such approval by that date, a premium equal to 20% of the standard land transfer fee for domestic sale projects needed to be paid before the units be converted into freely marketable commodity housing units in the market. The standard

land transfer fee represents the government estimation of minimum land value, taking into account the differentials in location and other basic factors, and is similar to the Benchmark Price of land that was computed in various cities at the beginning of urban land reform.

Moreover, housing projects built by the co-operatives of employees and by the resettled residents in urban renewal also had the opportunity for conversion to freely marketable units, provided that the permission to commence work had been obtained on or before the end of November 1999, and the payment of a premium equal to 20% of the standard land transfer fee for domestic sale projects had been made. For those projects obtaining a permit after the above deadline, a premium of full standard land transfer fee has to be paid.

What is interesting in this regulation is the automatic upgrade of the property rights certificate for ordinary domestic sale commodity housing units; government-subsidized economy housing units (*Jingji Shi Yong Zhu Fang*); public housing units purchased by employees under preferential scheme, and other housing units built on land allocated administratively from a Yellow Certificate to Green Certificate. In doing so, the government has allowed the property rights of these units to be freely transferable, with adequate protection.

In August 2001, all subdivisions in the housing market were removed, and the domestic sale and foreign sub-markets disappeared. The levels of the two markets were balanced, and a single commodity housing market was formed. By March 2003, all types of real estate and property had come under one single market, ending the history of the dual market system in the real estate economy of Shanghai.

5. Housing Finance in Shanghai

In Shanghai, an experimental scheme was set up to establish provident funds modeled on Singapore experience. Under the scheme, everyone is obliged to deposit a certain rate of contribution into the fund. The work units and the government also supply about the same amount to the banks. The percentage of wage to be paid into the provident fund will be adjusted according to economic growth and changes in workers' income in the future. The banks act as agencies for the fund, and the banks' saving rates are used as reference for the rate of return on the fund.

Tenants can use the provident fund to pay for the down payment of the flat they want to purchase in the future. If the tenants resells the flat that was purchased using the provident fund, then the same amount of money must be deposited back into the account of the fund. The provident funds can only be used to purchase, construct, and rebuild houses, and to undertake major repair work. Decoration, daily maintenance, and rental payments cannot be paid for out of the provident funds. Employees of the state enterprises could mobilize their own and their family's provident fund for the purchase. If the money drawn is still not enough, then they can borrow additional money from the fund.

Apart from paying for provident funds, citizens in Shanghai also have to buy housing development bonds (HDBs) to contribute to housing development funds. The amount of HDBs that must be purchased is based on the area of living space and other characteristics of the house resided in by a household. Work units can use their workers' HDBs to construct new residential buildings for their workers.

Cong (1998) notes that the housing provident fund has been a major housing finance

vehicle in Shanghai. According to Cong's analysis, between 1992 and 1997, the number of provident fund borrowers increased by 90.8% and the annual mortgage amount financed by the fund increased by 184.5% (Cong, 1998, p.39). This explains the sustained demand for new housing in the city. The substantial growth in the mortgages also induced a number of other innovative housing vehicles, such as securitization.

Noticing the growing importance of the housing provident fund as a means to fuel the demand for real estate in the local market, the Shanghai authority further required that, from July 1997 onward, both the employers' and employees' contribution to the fund be increased to 6%, making a total of 12% of the monthly wage. In addition, a new "supplementary housing provident fund" was implemented, under which employers and employees can opt to increase their total contribution to 18% of the monthly wage (Cong, 1998, p.41). This is a step toward the enhancement of the employees' capability to purchase from the private market. Cong (1998) estimates that by the end of 1997, about 1000 enterprises, mostly foreign firms, had participated in this new scheme.

6. Market movements :

We have seen from the above that the development of the real estate market in Shanghai has followed a relatively long but steady road. This market did not suffer as much as other Asian markets during the 1997 financial crisis, mainly because the market had been highly segregated and protected. As a result, market speculation did not spiral down to the internal sector, and the disastrous impact of the crash was not felt the same way as in other markets in Asia. Market recovery was therefore relatively easy and

prompt in Shanghai, and followed the continuous growth of the internal economy.

Chart 1 records this picture by plotting the trend of real estate indices in Shanghai. The China Real Estate Index is by far the most authoritative property price index composed in the private sector[2]. It can be observed from the figures that the price trend for office real estate reached the peak in 1994-95, when the overheating of the economy, coupled with an extreme under-supply of desirable office space, pushed the value of office real estate to an unimaginable level. After this peak, the central government began a number of cooling measures to avoid possible inflation. These measures, together with an excessive supply of land for office use (see Li, 1999), burst the bubble. The bursting of this bubble was also partly due to immature government land management measures such as a lack of openness in the market mechanism for the sale of land. Until the end of 1999, most of the land in Shanghai was sold by private negotiation, rather than by public tender or auction. Moreover, there was no proper set of town planning mechanism to direct proper market information for such decisions as where and how much urban should be supplied. Fortunately, the learning curve was relatively steep and the Shanghai authorities have become more attentive to market changes.

More interestingly, the overall real estate price index and the housing price index, while both started to decline at the same time as the office market crashed after 1995, they enjoyed steady growth in the aftermath of the 1997 Asian Financial Crisis. In fact, since the beginning of 2002, housing prices in Shanghai have been on a steady and obvious growth trend, while the office sector, although picking up, is still under-performing compared to its peak in 1994-1995. This illustrates that to sustain an emerging real estate

market such as that of Shanghai, local demand (in particular for housing), as opposed to investment demand, counts for more. Table 7 shows the transaction activities of the second-hand real estate market in Shanghai. The figures illustrate very clearly that among the three types of commodity real estate[3], office properties have received the least interest in the market.

Table 7 . Exchange of Second-Hand Properties (1988−2002)

Year	Properties Traded	Areas Traded (10 000 sq.m)	of which (in terms of floor area - 10 000 sq.m)		
			Residential	Office	Commercial
1988	3 960	11.17	9.72		
1989	3740	10.56	9.20		
1990	3536	11.30	8.80		
1991	3419	14.06	9.00		
1992	6545	27.23	20.14		
1993	5290	42.07	16.61		
1994	2821	31.76	10.59		
1995	4176	60.87	19.70		
1996	4689	82.29	25.09		
1997	9180	162.40	87.68	23.95	14.95
1998	24501	315.23	197.56	21.49	18.28
1999	44234	510.84	336.69	37.63	14.61
2000	96348	778.52	648.23	39.48	21.65
2001	164598	1 422.43	1 031.48	56.99	57.24
2002	204239	1 790.50	1 341.60	65.70	91.80

Source : Shanghai Statistical Yearbook 2003

[2] The China Real Estate Index is compiled by a joint venture of the China Real Estate Association; Development Research Centre under the State Council in the Central Government; and the China Real Estate Development Group.

[3] Commodity real estate means properties that are allowed to be freely traded in the market, just like other commercial commodities. Most commercial properties are commodity real estate, but there are still a large amount of housing properties that are not freely tradable in the market such as housings built by the state enterprises or the military.

Although there is a registration requirement in China for title changes in real estate transactions, there is no requirement to record transaction prices. As a result, even the government may not be able to keep track of market price changes. Table 8 details real estate price changes from an official perspective. It can be seen here that the trends in various sectors follow a similar pattern to those of the private sector indices, although to a quite different magnitude. What are more interesting are the rental indices. For the office sector, it can be seen that rentals had been on the downward trend between 1998 and 2000 before it more or less stabilizing. This signifies an oversupply situation, especially in the Pudong area. Nevertheless, residential rentals have been growing, although the pace slowed down after 2001. When the price indices and the rental indices are compared, it is obvious that in the Shanghai market the rental sector is not yet a mature and popular sector, with more people buying and selling than renting. This also implies that market analysis using data from the two sectors, such as the analysis of market yields, would be very difficult in this market. Furthermore, the land price indices also indicate a downward trend in residential demand before 2002, which clearly contradicts the property price index of residential prices. This implies two possibilities. The first is the lack of transparency in market information provision so that the land market and property market are highly insulated from each other. The second is the extremely complicated development process that produces a lag in the production of properties. In any case, this highlights a very undesirable mismatch in market information on demand and supply, which may contribute to future property cycles.

Finally, Tables 9 and 10 illustrate the macro-picture of the Shanghai market. Both the land and property markets have experienced substantial growth in recent years, especially after 2000. This has provided the authorities and developers with a healthy

financial input. Table 10 also shows that more and more investment in this market is coming from domestic loans and self-raised capital. The market has therefore developed into a much more broadly-based market, with the number and variety of participants increasing substantially. This brings Shanghai a step closer to achieving a full market system.

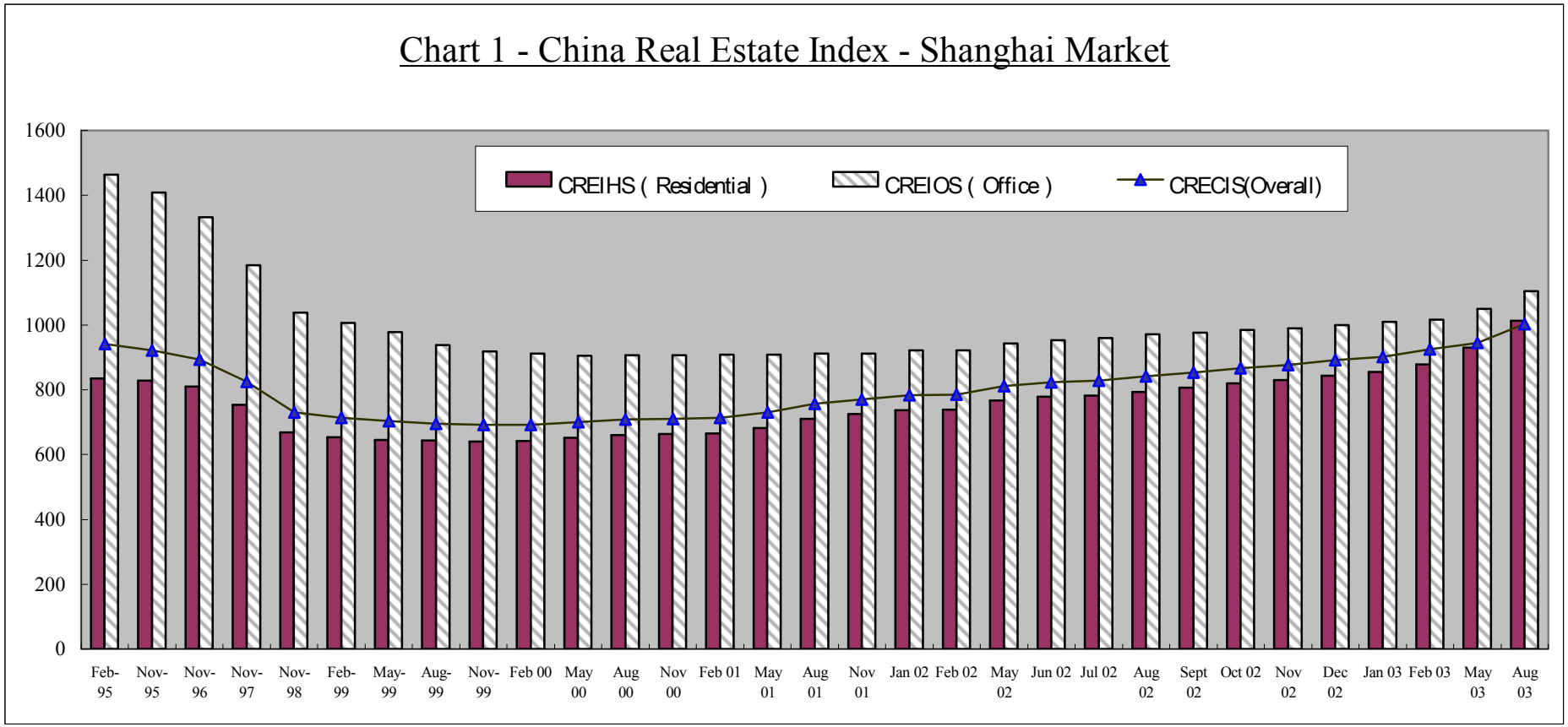
Table 8 : Change in Property Price Indices in Urban Shanghai

(proceeding year = 100)

	1998	1999	2000	2001	2002
Overall Property Price Index	**95.7**	**96.2**	**98.6**	**104.4**	**107.3**
Commodity properties Index	**95.7**	**96.0**	**98.5**	**101.8**	**108.2**
Residential	134	158	179	250	280
Non-residential	92	118	111	206	223
Overall Rental Index	**92.2**	**89.9**	**95.8**	**104.9**	**99.0**
Residential	151.9	131.7	104.1	107.4	100
Office	88.1	78.9	87.6	98.6	99.3
Commercial properties	107.5	110.9	103.6	107.2	97.0
Industrial/warehouse	107.7	98.0	92.3	118.8	102.0
Overall Land Price Index	**95.5**	**93.3**	**91.9**	**97.2**	**106.3**
Residential	93.4	91.3	86.3	92.2	111.0
Industrial	109.5	93.6	93.3	91.6	90.3

Source : Shanghai Statistical Yearbook 2003

Chart 1 - China Real Estate Index - Shanghai Market



Source : China Real Estate Index (Shanghai)
Notes :
CREIHS – China Real Estate Index for Housing (residential) in Shanghai
CREIOS - China Real Estate Index for Office in Shanghai
CRECIS - China Real Estate Composite Index in Shanghai

Table 9 : Developments in the Urban Land Market in Shanghai

Source : Department of Construction Management , Tongji University, Shanghai

Indicator	88-91	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Leased plot （pieces）	12	205	254	623	497	640	1029	1326	1119	1325	1981	1621
Area leased （10000 m²）	980.36	2071.55	4961.07	1894.36	1245.24	898.29	1430.75	1614.52	1649.96	2183.22	5228.34	6729.64
District）					875.11	507.84	839.99	740.43	971.88	1259.94	3937.69	5607.70
(Pudong Area)					646.76	214.47	398.09	233.93	255.19	534.29	1351.21	991.11
County					370.31	390.45	590.76	874.09	674.68	923.28	2290.65	1059.24
Floor area to be built （10000 m²）					1343.99	1469.65	1966.80	2269.94	1973.82	3502.73	5877.60	5977.75
Residential					720.58	869.17	1308.20	1449.49	1549.47	1868.18	3728.89	3393.05
Commercial-office building					167.02	199.85	190.28	322.10	78.90	44.13	673.60	497.35
Retail/commercial					1.27	12.40	66.18	42.99	75.92	92.96	202.80	276.89
Industrial					424.46	284.28	336.99	420.72	218.79	1417.67	1127.15	1717.08
Others					30.66	43.95	65.15	34.64	50.74	79.79	145.16	93.36
(income from land transfer）					40.60	45.01	33.94	30.14	15.28	22.99	59.64	61.08
income from commodity properties sale					145.92	217.24	211.89	361.66	421.06	556.63	700.94	1024.73
income from commodity (residential housing) sale					126.25	163.52	168.00	283.02	359.42	487.95	641.58	921.47
Rented income					4.06	16.19	15.25	13.84	23.14	29.68	44.05	55.25
total after-tax profit					44.39	58.50	33.52	43.00	13.42	34.30	45.29	113.37

Table 10 : **Financial Developments in the Overall Real Estate Market in Shanghai**

Unit: 100 million yuan

Indicators	1995	2000	2001	2002
Total Investment	**466.20**	**566.17**	**630.73**	**748.89**
Investment in Commodity Housing	286.45	476.32	535.25	656.57
Investment in Land Development	53.19	25.91	27.65	33.93
Of Total Investment :				
Residential	280.38	408.82	439.17	567.76
Villas and Flats	31.75	40.72	41.82	79.73
Office Building	81.74	57.47	26.22	33.52
Commercial Building	32.39	51.51	62.70	62.49
Others	71.69	48.38	102.64	85.12
Newly increased Fixed Assets	**151.06**	**477.39**	**519.20**	**536.22**
Total Capital Source	**670.83**	**778.16**	**991.91**	**1 224.61**
Balance at End of Previous Year	112.00	113.48	159.93	216.38
Sub-total Capital Source of the Year	558.83	664.68	831.98	1 008.23
Capital Within the State Budget	12.55	1.79		
Domestic Loans	122.63	155.37	179.49	227.57
Bond	1.11	0.11		
Foreign Capital Absorbed	51.81	28.11	25.48	32.49
Direct Overseas Investment	34.87	16.24	15.88	21.47
Foreign Loans	13.75	11.50	7.42	10.94
Self-raised Capital	214.53	211.86	259.66	268.28
Other Capital	156.20	267.44	367.35	479.89
Total Operation Incomes	**297.57**	**783.69**	**970.89**	**1 330.77**
Income from Land Transfer	40.60	22.99	59.46	61.08
Income from Commodity Property Sales	145.92	556.63	700.94	1 024.73
Income from Residential Housing Sales	126.25	487.95	641.58	923.47
Housing Rental Income	4.06	29.68	44.05	55.25
Others	106.99	174.39	166.44	189.71
Total After-Tax Profits	**44.39**	**34.30**	**45.29**	**113.37**

Source : Shanghai Statistical Yearbook 2003

7. Conclusion

Shanghai has been one of the most intriguing real estate markets in Asia in the last decade. It started as a highly controlled experiment in the economics of an emerging market. The political environment dominated market development and with the economic reforms being pushed by the leaders, market development made quantum leap in the early 1990s. When overheating in the economy was sensed, the brakes were applied to the market. With its closed currency system, Shanghai managed to escape the Asia financial crisis that brought down other major property markets in the region, and that escape paved the way for further growth in the late 1990s and beyond

Although critics would argue that market reforms in China are too slow, the Shanghai experience illustrates that, given the socio-political background of the nation, it is worth taking time. The slow process of reform has allowed the government to merge the various segregated sectors of the market, which were legacies of the socialist economic system, into a single layer that will allow a true market mechanism to develop. The developments in recent years further illustrates that the number of individual participants in the market has increased, and proper housing markets, both first-hand and second-hand, are taking shape. What are needed now to accommodate for all these changes in the market are synchronized reforms in state enterprises, in the banking sector, and above all in the protection of property rights, all of which are now receiving attention from the central government as China enters the WTO.

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Chapter Seven

The Land Market of Taiwan--Yesterday, Today and Tomorrow

Chien HAN, Andrew LIU and Shu-Yun HUANG

1. Introduction

This paper provides an analysis of Taiwan's land market beginning with a brief description of the historical development of its real estate transaction systems. The second part of the paper presents how the market was influenced by the changing political-economic conditions. The third part of this paper is devoted to an analysis of the land market over time. It includes the commercial property market, agricultural land market and industrial land development. The last part of the paper analyzes the housing policies and housing markets over time. Then, a brief conclusion is followed.

2. The Historical Development

Historically, the transaction of real estate assets was a private and person- to-person activity in Taiwan until the establishment of several American-type brokerage firms in the late 1970s. In addition, many building and construction companies became involved in property transactions as part of their business due to the market boom in the real estate sector in the 1980s.

Another feature of Taiwan's real estate market is the *pre-sale system.* Under the

pre-sale system, the developers start selling the uncompleted housing units selling right after they obtain the development permit (even it is still in the planning and designing stages). The developers pool the purchasers' down payment as part of their initial investment capital. Thus, it greatly reduces the burden of loans from financial institutions and the interest to be paid. The buyers, then, pay the balance of the price by installment to the banks where they borrow the money. However, the consumers have to take the risk of the compromised quality of the product which is initially promised by the builders.

Another problem in the early years was that the purchasers could get only 50 to 60 percent mortgage loan of the purchasing price from the financial institutions and usually with a loan period no more than ten years. This would give the buyers tremendous financial pressure when buying a house, especially during the period between mid-1980s to mid-1990s while the housing prices were soaring. In the 1990s, with the housing glut caused by over supply, the mortgage loan gradually increased to 70 or sometimes even 80 or 90 percent of the housing price. What is more interesting is that in times of high vacancy in the housing market in the recent years, the government, on the one hand, poured in great amount of mortgage fund to the banking system. The developers, on the other hand, tried to sell their newly built houses as quickly as possible to reduce the burden of interest payment and other uncertainty costs.

The government, recently responded to the needs of the business sector and the people in general, is formally pushing to implement the real estate securitization system although this mechanism does not always work well in other economies. The *Real Estate Securitization Act* passed the legislation in July, 2003. An estimated 2 to 3 billion US Dollars business in Taiwan's real estate market was forecasted for the immediate future once the system is implemented. The system is expected to improve the flow of fund,

reduce transaction costs and offer people with another channel to real estate investment, especially for the small and foreign investors.[1]

3. The Economy and the Land Market

Generally speaking, Taiwan's economic development in the land market began in the 1950s after the government carried out a successful *land-to-the-tiller* agricultural land reform program. The program peacefully transferred the land ownership from the hands of a few landlords to the majority of farmers. With their own land, farmers could harvest and benefit from most of what they grew. It gave them great incentives to invest money and effort in their land. Thus, the agricultural production increased along with the development of modern farming and breeding techniques. On the other hand, the development of secondary and service industries absorbed the labor force which was released from the farms to the urban areas. The agricultural population was about 55 percent of Taiwan's total population in the 1950s. But it reduced to only about 16.5 percent of the total in the year 2000. On the other hand, the non-agricultural population increased from about 45 percent to 83.5 percent between the 1950s to 2000.[2] With the majority of population moved to the urban areas, the demand for houses, shops, factories and offices increased rapidly and made the land market prosper.

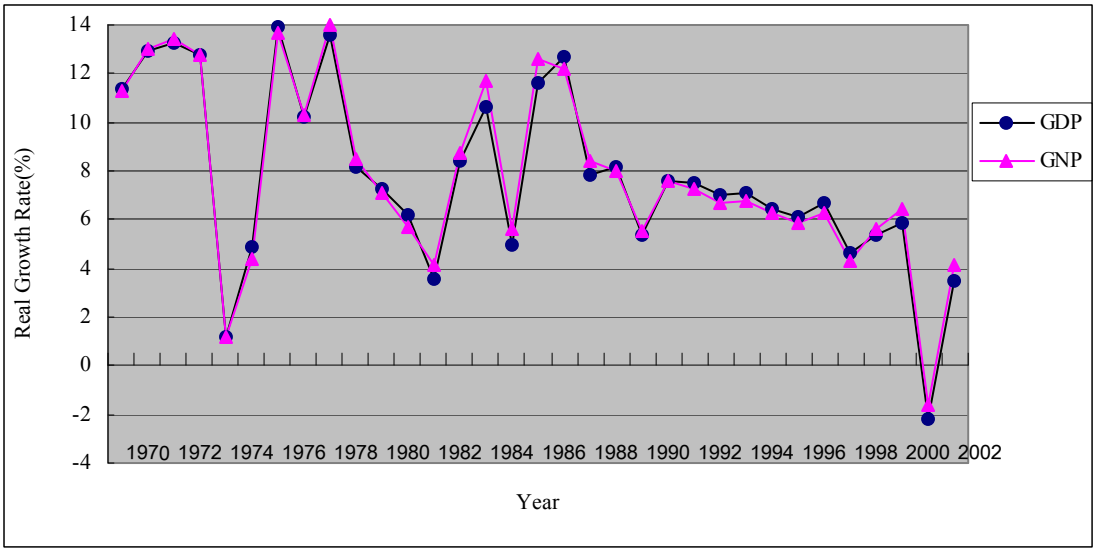
Except for a few ups and downs, Taiwan enjoyed successful double-digit economic growth throughout the forty some years from the early 1960s to the late 1990s. The more

[1] Shen, Da-Bai, *The Past and Future of Real Estate Securitization in Taiwan*, Paper presented at the 6th Asia-Pacific Real Estate Congress, September 27th, 2003,Taichung, Taiwan.

serious downturns were in the early 1970s and early 1980s. The world-wide energy crisis and a number of other important factors influenced the fluctuation of Taiwan's economy as well as the real estate market (see Figure **1**).

From 1975-85, some exogenous factors caused the fluctuation of the economy and the market. Several events, such as the sever of Taiwan-American Tie, the second energy crisis, the death of late president Chiang Kai-Shek, shocked the people's confidence and caused serious downturns of the economy and market.

Figure **1** The Gross Domestic Product and Gross National Product—1970-2002



Source: Council for Economic Planning and Development, Taiwan

The next stage of economic growth and real estate market boom started from 1985 and continued to 1995. Average land prices increased almost three times from 1985 to 1992. From 1987, the New Taiwan Dollar began to appreciate and reached its historical high of NT$25.00 to US$1.00 in 1995 and the so called "hot money" poured into Taiwan's stock market, pushing the stock market index to its all time high above 12,000

[2] Council for Economic Planning and Development, *Taiwan Statistical Data Book*, 2002.

points. The money, then, flew into the real estate market and made land and building prices skyrocket to their historical high levels for almost ten years from that point on. In 1987, the National Property Bureau auctioned a piece of land of about 5,800 square meters in Taipei's financial quarter with a price tag of US$272,727.3 per square meter which marked the highest point of the property cycle. This auction was then blamed for triggering subsequent land prices soaring and land speculation for years. It was difficult to say for sure if the auction of public land caused the land price increase. However, it was fair to say that the auction of public land was one of the major moving factors or even a gauging thermometer of Taiwan's land market. It can be seen quite obviously from the fact that several auctions were aborted for the last several years when the market was in recession and the auction successfully revived in late 2003 when the economy was in its early recovery stage.

In the early 1980s, the political movement of the Democratic Progressive Party (DPP) mixed with the environmental protection movement caused the government to reject the DuPont Company's investment plan of a chemical factory project in 1984. The Taiwanese independent movement aroused continuous social unrest and its impact remains until even to the 2004 presidential election. After this, several key events took place that affected the economy as well as the real estate market. In 1998, Taichung County rejected an investment plan of Bayer Company at Taichung Harbor area on a superficially environmental protection ground and *not-in-my- backyard* (NIBY) sentiment. At the same time, an investment plan proposed by Walt Disney Corporation to build a Disneyland in Taiwan was also rejected by the government because a local business group with good relations with high level governmental officials wanted the same piece of land for their own investment plan.

In the year 2000, the DPP was in power. The government, with its anti-nuclear sentiment, decided abruptly to halt the construction of the fourth nuclear power plant which had been under construction for several years when the KMT Party was in power. Following the announcement of the decision in October, 2000, the stock market index responded by dropping from 8,000 points to below 5,000 points in a couple of weeks. After these series of events, plus the uncertainty of the political and social situations, foreign investment to Taiwan shrank substantially. Foreign investment has always played an important role in Taiwan's economic development since the 1950s.

The 1997 Asian Financial Crisis surprisingly didn't affect Taiwan's economy as serious as it has done to other Asian countries. However, Taiwan's economy and the real estate market were both hard hit by the following two events. The first was the September earthquake in 1999 and the second was the 9-11 terrorist attack on the World Trade Center in New York in 2001 which resulted the worldwide economic recession. Taiwan couldn't avoid the impact this time.

Because of these, economic growth dropped from 5.9% in 2000 to -2.2% in 2001 and recovered a little to 3.5% in 2002. The unemployment rate reached 4.57% in 2001 and 5.17% in 2002 respectively and recovered to 5.08% from January to September in 2003. The growth rates of the construction industry were in double digits through 1987, 1988, and 1989. It even reached 17.9% and 15.2% in 1992 and 1993 respectively. Then, it dropped to the minus territory from 1996 and reached the all time low to -12.6% in 2001 and recovered to -2.9 for 2002.[3] Hundreds of the smaller construction companies were driven out of business during that time period.

A recent (2003) study done by the Ministry of Economic Affairs revealed that 77.7

[3] Council for Economic Planning and Development, *Taiwan Statistical Data Book*, 2003.

percent of Taiwan's overseas investors have invested in Mainland China, an increase of 5% from a year ago, reaching a new peak over the years. This indicated that following China's WTO entry, a widespread and prevailing westward investment trend had taken place in Taiwan. Among those investments in China, about 38% are making profit, indicating a stabilized investment and operation of Taiwanese business in China. Figures in Table **1** show that from 1999 to 2003, Taiwan's overseas investment in China has increased, while investment in the U.S. has decreased each year. The investment in the ASEAN countries (including Thailand, Indonesia, Malaysia, the Philippines and Singapore) has decreased even more. The investments from Taiwanese businesses in China include not only manufacturing and service industries, but also building and real estate industries as well. If this trend continues, it will undoubtedly hurt Taiwan's economy in general and the land market in particular.

Table **1** The Distribution of Taiwan's Overseas Investment—1999-2003 (%)

	China	U.S.	Southeast Countries
1999	69.1	19.8	25.7
2000	73.6	17.6	22.9
2001	74.7	16.5	21.6
2002	72.9	17.1	18.7
2003	77.7	15.9	16.2

Source: Ministry of Economic Affairs, Manufacture Overseas Investment Survey Report.

The General Accounting Office's May, 2003 report estimated that both the international economic downturn and the SARS crisis lowered the rate of economic growth from 3.68% to 2.62%. The stock market index dropped below 4,500 points to an

all time low of 4,100 points. However, the expansion of public investment and the special fund for *SARS Relief Program* improved the growth rate to 2.89%. Businesses that were affected most were air travel, tourism, hospitality, and entertainment industries. For example, the hotel booking rate dropped more than 30% in April, 2003 compared to the same period last year. The impact on real estate market was rather indirect but still could be felt.

Following the worldwide economic recovery, Taiwan has since left the three consecutive years of negative growth behind. The growth rates of Q1, Q2 and Q3 in the year 2002 were 1.2%, 3.98% and 4.77% respectively. The capital investment in private sector increased by 16.8% from Q2 to Q3 and consumption in the private sector also increased. Major contributors to the growth included the progress of the High Speed Rail construction and the replacement of equipment by industries. However, the most important factor was the growth of overseas demand, especially for products of information and communication industries.[4]

4. Taipei's Commercial Property Market

As early as the 1970's, a large part of Taipei's land was primarily for agricultural use. The historical business center of the city was in the vicinity of the Taipei Rail-Station with some government office buildings nearby. It was on the west side of the metropolitan area if viewed from today's city development pattern. The economic take-off in the 1960s, its expansion in the 1970s and the development of manufacturing

[4] Cheng Chi University, Hsin Yi Real Estate Research Center, *Taiwan Real Estate Almanac, 2003,* p.32.

and service industries in the 1980s and 1990s placed enormous pressure on urban land development. As the old CBD in the west side of the city became saturated and obsolete, new buildings mushroomed eastward and formed a new business center.

Financial corporations, department stores, commercial businesses, and other services opened new branches or relocated their headquarters to these areas. Especially when foreign multi-national corporations set up operations in this area and occupied the newest and best specified buildings. This area was then recognized as the new CBD of Taipei. The land prices and rentals have since increased steadily.

The year 1967 was a watershed for Taipei's development. The area of the city expanded through the annexation of five suburban districts around the city. In the same year, the status of the city was designated as a *Special Municipality.* It became the social-economic, industrial, business and political center of Taiwan. The area of the city expanded from only 67 square kilometers before to 272 square kilometers in 1967. The registered residential population was about 2.63 million by the end of 2001, with a current daytime population of about 3.5 million.

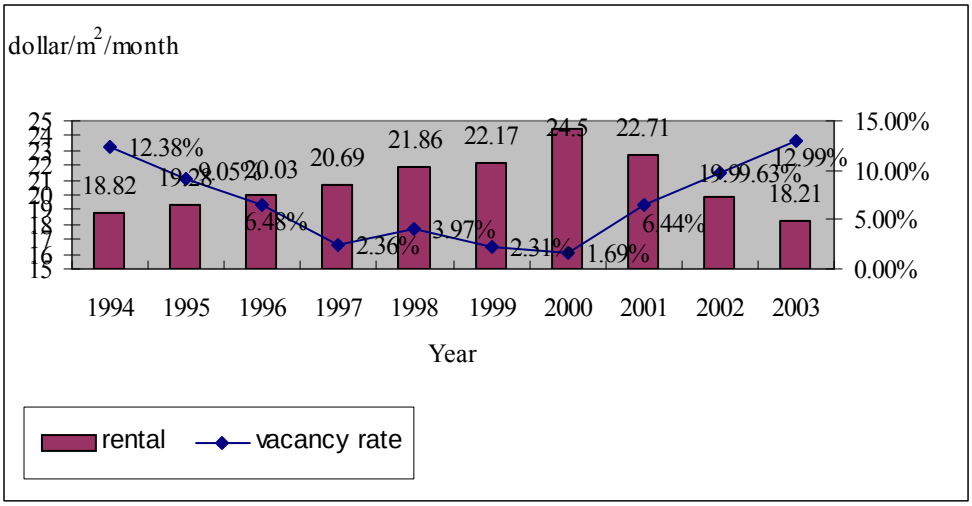
With the enlargement of city size and increase in population, the demand for housing and office buildings have increased rapidly. At the same time, because of the first energy crisis in the early 1970s, purchasing of houses and other type of buildings became an investment tool as well as a hedge of inflation. At that time, the volume of transactions of housing and office buildings increased dramatically. The prices reached another peak following the cycle in 1979.

The Hsin Yi Planned District development, which is about 151 hectares in area, was constructed in response to the demand for more modern business offices. The land for the district was acquired in 1996/1997 through public auctions conducted by the

National Property Bureau and Taipei City. At that time, prices of these sites reached some of the highest levels recorded in Taipei's history. The buyer (the President Group) paid US$35,467.00 per square meter for freehold. The most recent (October, 2003) auction price was US$36,765.00 per square meter for only leasehold. The Taipei World Trade Center, SOGO Department Store, Warner Village, and many multi-national businesses such as GUCCI, YSL, BURBERRY, and hotel like Hyatt Regency are currently all located in this district. Recently, the 101 Financial Building which is slated to become the tallest building in the world is also in this district. The building will house numerous corporation headquarters and department stores, thereby creating new businesses, shopping, as well as venues for entertainment in Taipei. Through developments such as the Hsin Yi District, the auction of public land was one of the major factors affecting the land market.

Contrary to the Hsin Yi District project, however, the recovery of overall business or office building market in Taipei is still lagging behind in recent months. This could partially be attributed to the slow economic recovery after the SARS crisis. As a result, rental rate is still going downward while the vacancy rate is still rising. The average rental for A-class office building was about US$18 per square meter per month for 3Q, 2003, a decrease of 6.4% from the same quarter a year before. It was also the first time it fell below US$20 since 1999. Vacancy rate rose from 1.7% in 2000 to 13.0% due to the new supplies. It is expected that the over-supply would make it difficult for the market to digest the stock in a short period of time. In other words, the market would not be able to recover in a short time to come (see Figure **2**).

Figure 2 Rental and Vacancy Rate of Taipei's A-Class Office Market



Source: CB Richard Ellis, Taiwan

Other large cities in Taiwan followed the similar general pattern of development. Taichung (the third largest city of Taiwan) for instance, has also expanded its area by annexation of several suburban districts around the city, totaling 1,808.2 hectares. Much of the land was on the northern, western and southern fringes of the city. Following the annexation, the city government carried out a series of twelve land consolidation programs in the suburban areas and changed their use from agricultural to urban construction purposes. The change in zoning increased the land prices several fold in recent years.

5. WTO Entry and the Release of Agricultural Land

Taiwan became the 144th member of the World Trade Organization (WTO) on January 1, 2002. WTO entry would inevitably bring a certain impact on Taiwan's economy as a whole and agricultural land market in particular. It also caused the

acceleration of the progress of the *Agricultural Land Release Program* which began in 1995 to release agricultural land for non-agricultural uses and thus increased the supply of urban land. Basically, preservation of prime agricultural land is still the government's policy. Therefore, an agricultural land management mechanism through "total volume control and development permission" system has been implemented. Under this system, only land that is not suitable for agricultural use could be converted to non-agricultural use. Based on the Council of Agriculture's estimate, some 48,000 hectares of agricultural land will be released by the year 2011. In the long-run, total agricultural land to be released was estimated to be about 160,000 hectares. It can be seen from the data in Table **2** that the trend of total area of cultivated land has been decreasing, including rice paddy fields. On the contrary, the area of dry land has been increasing. Eventually, the released land would be converted for urban development or construction uses.

Table 2 Cultivated Land Area 1990-2001 Unit: hectare

Year	Total	Paddy field (%)	Dry land (%)
1990	890090	476997 (53.6)	413093 (46.4)
1991	883544	472580 (53.5)	410964 (46.5)
1992	875951	465016 (53.1)	410935 (46.9)
1993	874535	463560 (53.0)	410975 (47.0)
1994	872307	461226 (52.9)	411081 (47.1)
1995	873378	459335 (52.6)	414043 (47.4)
1996	872159	456167 (52.3)	415992 (47.7)
1997	864817	454865 (52.6)	409952 (47.4)
!998	858756	460798 (53.7)	397958(46.3)
1999	855072	444456 (52.0)	410616(48.0)
2000	851495	442005 (51.9)	409489(48.1)
2001	848743	438974 (51.7)	409769 (48.3)

Source: Council of Agriculture, *Taiwan Agriculture Yearbook*, 2002.

It is important and also interesting to note that the agricultural land released was of lower grade and unsuitable for agricultural purposes. The prices of the land were much lower than the prime farm land thirty to forty years ago. Therefore, people were reluctant to purchase them because of their diminished quality. However, once the land was released from agricultural use and converted into urban and construction purposes, price increased several times overnight. It, then, caused speculative buying and selling in the market. Such transactions resulted in the worst case scenarios where farmers or the land owners purposefully irrigated the paddy field with polluted water discharged from factories in order to poison the soil with heavy metals such as cadmium (Cd) so that their land could become eligible for conversion into non-agricultural uses.

According to the *Land-to-the-Tiller Act,* only farmers were qualified to buy agricultural land and rigidly restricted for agricultural use. However, with the *Agricultural Land Release Program,* the government relaxed the restrictions in 2000 and any natural-persons or agribusiness-linked corporations were eligible to buy agricultural land. Thus, many large businesses took the advantage of this opportunity to become large holders of agricultural land and waiting for the price of their land to raise once the land is converted to non-agricultural use in the not-too-far future. In addition, under the *Agricultural Land Release Program*, farmers can use up to 2,500 square meters of their farm land to build farm-houses on site. It has resulted in a great rise in the value of agricultural land. Consequently, small farms (the average size of Taiwan's farm is about 0.5 hectares or smaller) become even smaller in size and rendering uneconomic in operation.

6. Industrial Land Development

Taiwan's industrial districts can be classified by two different systems based on the *Regional Planning Act*. The first category of industrial land locates in the urban planning areas as well as non-urban areas. The industrial districts in the urban areas are classified through the zoning process and for the purpose of urban industrial development. The industrial districts in non-urban area are classified based on the current land use patterns. They are usually designated as Type-D construction land in rural areas.

The second category is the industrial development land. Industrial development land in this category is proposed by the public and private sector developers with their own land based on the *Investment Assistance Act* and the *Industrial Advancement Act.* The proposal of development is reviewed by the Bureau of Industry in the Ministry of Economic Affairs and then permission of development is granted if conditions set by the Ministry are met. Land in this category is the major source of industrial land supply.

In addition to the two industrial land development systems mentioned above, there are also the *Export Processing Districts* and the *Science Based Industrial Park* systems. The development of *Export Processing Districts* began in the 1960s. The purpose was to improve export investment, international trade and earn foreign exchange reserves. The total area of *Export Processing Districts* is 885.2 hectares.

The *Science Based Industrial Parks* were developed by the National Science Council. Its purpose was to attract overseas scientists and technologies to promote Taiwan's high-tech industries. Total area of *Science Based Industrial Parks* is 3,069.45 hectares as of 2003.

The development of Hsin Chu *Science Based Industrial Park* (605 hectares) started

in 1978. It was the first of its kind and has been well developed up to the present. Most of the reputable high-tech industrial companies such as Taiwan Semiconductor Manufacture (TSM), United Manufacture Company (UMC) and many others are located in this park. The immediate impact of the industrial park is to drive up land prices in the vicinity. The other newly developed ones are Tainan *Science Based Industrial Park* (638 hectares) and Mid-Taiwan *Science Based Industrial Park* (429.1 hectares). Land and housing prices in the vicinities of all these industrial parks have been increasing and become the target of investment.

The total area of industrial land in Taiwan is 79,182.94 hectares. It includes 21,841.94 hectares in urban planning areas; 17,796.35 hectares Type-D construction land in non-urban area and 35,590.00 hectares developed by public and private developers. In terms of total area of industrial land in each county or city, Yuan Lin County has 22.75% of Taiwan's total, because it has the largest offshore industrial district (13,980 hectares). The next largest is Tao Yuan County (13.14% of Taiwan's total) while the third is Chang Hwa County (11.59%). Others by size of area are Tainan County (8.22%), and Kao Shuing County (5.31%). The counties with the least industrial land are Peng Hu and Taitung, each has a total of 48.97 hectares and 200.10 hectares respectively.

By far, the area of the industrial land developed by the public and private enterprises is the largest. The total number of industrial districts was 165 and the total area was 40,768 hectares based on the Bureau of Industry's 2000 statistics. Among them, 81 were developed by government totaling 34,413 hectares (85%). The other 84 were developed by private sectors, which totaled 6,337 hectares (15%). Businessmen intend to choose the location they think would have potentials for value increase or the land they own. Once the land is developed, the value increases and they capture the incremental

profit. On the other hand, industrial districts designated and planned by the government are under-used even if the land prices or rentals are relatively low. The occupation rate is about only 47% per Bureau of Industry's most recent record. Therefore, the government recently planned to release about 6,000 hectares of this type of industrial land for other purposes rather than letting them remain idle.

Another problem of the industrial land development is the use of coastal land which involves the dredging and filling of wetland areas. The reason is that the land in coastal areas is mostly public owned, easier to acquire, and less expensive. Once the industrial district is developed, businessmen obtain the ownership of the land. The value increases tremendously and results in great windfall profit. However, the ecological and environmental values have been damaged or even lost forever.

The general economic slowdown has decreased the demand for industrial land and its office buildings in the recent years. Landlords are willing to lower their expected rental rates to speed up the absorption and enlarge the margin for negotiation. Average monthly rental of industrial space in Taipei stood at US$10.8 per square meter. It was a 16.7% decrease compared with that at the end of 2000, according to CB Richard Ellis's Taipei Office. A huge supply of around 85,800 square-meters of industrial office space is now waiting to be leased with limited demand.

Because of the expansion of urban development and environmental concerns, land use has gradually altered. Industrial districts that used to be in urban areas are now finding locations in the outskirts of the cities. As a matter of fact, with the difference in land prices, people can usually buy a much larger piece of land financed by selling their old sites. Others have changed land zoning to residential or commercial-industrial complex zones for the development of apartment buildings, shopping centers or

distribution centers.

Type-D construction land can be used for factory buildings or related industrial facilities. By the end of 2001, 75,939 pieces of land (about 17,867.2597 hectares) were classified as Type-D construction land in rural areas for factory use. Although the accessibility and provision of infrastructure and services (e.g. road, water and sewage etc.) are generally not as good as those in the privately developed industrial districts or the science based industrial parks, these sites tend to be the next best option for potential users. Often this leaves land in industrial districts untapped.

7. Government Housing Policies and the Housing Market

The development of Taiwan's housing policies can be divided into five stages. The first stage was from 1953 to 1957. In 1953, a huge typhoon destroyed thousands of residential houses and apartments and made tens of thousands people homeless. The government initiated an emergency housing program with the U.S. aid money. Taiwan, like all the other third world countries in the 1950s, had difficulties of solving its own housing problems. The housing problems were not caused by economic development and urbanization but by the Nationalist Government and refugees who fled to Taiwan from Mainland China in such a short time period. The number of people in Taiwan increased more than two million in a few years and amounted to approximately one-third of Taiwan's population. There were 8,500 housing units of various types built from 1955 to 1957. In addition, thousands of illegal housing units and other buildings were built at that time which sowed the seeds of many urban problems in the years to come.

The second stage of the housing policy development was from 1957 to 1975. It

was called the Public Housing Credit Act Period. In 1957, the Public Housing Credit Act was passed by the legislature and the government provided long term low interest rate loans to low income families which included labor-workers, farmers, fishermen, government employees, teachers as well as the general public. Under this Act, the term of the loan could not be shorter than 10 years with the interest rate not exceeding 0.06%. However, this legislation was only a temporary remedy before a basic *Public Housing Act* passed the legislature. Because of the lack of funds in the Central Government, the responsibility of providing public housing was shifted to the Taiwan Provincial Government and shared by the county and city governments. Under this Act, a total of 125,534 units would be built in 18 years. However, the building standards of these housing units were far below the normal requirement of the average family. The per person living space ranged from 4.53 to 7.76 square meters. The minimum legal standard for the public housing was 13.2 square meters per person.[5]

Of the 125,534 units built, only half of them (56,171 units) could be taken as new supplies to the housing market. The other half was only enough to be used as replacements for the former illegally built and deteriorated old housing units. During the 1970s, the economy was taking off and the increased urbanization made the price of land rise quickly. The *Public Housing Credit Act* was ineffective to cope with the housing shortage problem. From 1969 and thereafter, the building of public housing under this Act decreased tremendously. At this time, the government realized that private sectors should be the major source of housing supply. However, housing units supplied in the market place usually carried a much higher price tag. It did little in helping to reduce the pressure of the housing demand. The filtering down process would take much longer

[5] Board of Housing and Urban Development, Council for Economic Planning and Development, Taiwan, 1975.

time to be realized.

Additionally, there were other factors influencing the housing market during the 1970s. The urban land tenure and urban land use systems were not well planned and controlled. The financial market systems were not well established at that time either. High housing prices caused by land speculation made it extremely difficult for people moving into the cities to afford buying or even renting their shelters. The energy crisis, inflation, and the world-wide economic downturn made the situation even worse.

The third period of the housing policy and its implementation was from 1975 to 1982. It was also called the *Public Housing Act* period. During this period, the Public Housing Act was passed by the legislature. The central government was directly involved in the low-income public housing construction. Starting from 1976, the public housing policy was integrated into the *National Six-year Economic Development Plan.* It was projected that 106,931 units would be built in the next six years. In 1979, the country took a step further to integrate the public housing project into the *Twelve Major Construction Projects.* It expanded the original plan into a *Ten-year Public Housing Program* which plans to build 600,000 units in ten years. The building standards were much higher than before and public facilities as well as services were better provided. People could now purchase their dwellings of different sizes based on the number of people in the household.[6]

In order to facilitate the implementation of this program, the Taiwan government re-designated the agencies responsible for the program in each level of the government. Then, the central government was solely responsible for the drafting of policies and legislations. The Bureau of Construction and Planning was created in the Ministry of

[6] The Bureau of Construction and Planning, Ministry of Interior, Taiwan, 1982.

Interior for the implementation of this program. The provincial government established the Bureau of Housing and Urban Development in the Council of Economic Planning and Development for the actual construction projects. The city and county governments each established their own agencies in line with the central government to implement these programs.

Capital and land acquisition were two key problems the public housing program was facing. In terms of capital, the central government drew the fund from the national fiscal budget. However, it accounted for only 5% of the total needed. The funds of the provincial and county/municipal governments came from land-value-incremental-tax revenue. It accounted for 15% of the property tax revenue in 1978; and increased to 20% in 1979 and thereafter. The rest of the fund was taken out from banks as loans. However, the interest to be paid was a heavy burden.

Land acquisition was a difficult task for public housing programs as well. The price of land was the primary concern of building affordable housing for low-income families. Usually in other countries, such as the U.S., the actual value of land accounts for about 30% of the entire house. In Taiwan, however, the value of land accounts for more than 60% of the total cost. For this very reason, public land was considered first. The availability of public land, however, was limited because the government sold large pieces of them in support of the national financial needs in the 1950s and 1960s and even in the 1970s. Compulsory purchase was another way to acquire land but the process would take years. In addition to the lack of land, the government's strained financial capability was also a great problem. The difficulties of acquiring land and capital caused the program to lag behind schedule.

A relatively easier way of acquiring land was to redevelop the *veteran villages*

which were built for the families of military people who fled to Taiwan from China mainland in 1949. The villages occupied large areas of urban land and some of them located close to urban centers when the cities expand. The houses were low-rise and built with primitive method. They are deteriorated and obsolete over forty to fifty years of occupation. Some of them have become slums in most cities. Compared with the current value, the land is economically used.

Based on the Ministry of Defense's statistics, the total area of all these villages were 1,552 hectares. Of the total area, 995 hectares are located in the four large metropolitan areas of Taipei, Taichung, Tainan and Koashung. Each occupied 275, 200, 114 and 406 hectares respectively. According to the Ministry of Defense's plan, 533 hectares would be used for public housing and 547 hectares would be used for public facilities such as schools and parks. The remaining 472 hectares would be used for other purposes. It was further planned that the smaller villages would be consolidated into large villages for more economic use of the land. A total of 155 communities with high-rise apartment buildings would be built. It would provide 93,130 household units after the completion of the project.

There were several advantages in renewing the veteran villages. First, the land was publicly owned, thus the price of the land was much lower than the market price and much easier to acquire. Secondly, it was a good opportunity to clear out the illegal houses and slums in many parts of city's urban area. This would also improve the living environment. In other words, it is also an urban renew program. Thirdly, the newly built housing units would be in the form of high-rise apartments and making more efficient use of the land. Lastly, it would speed-up the public housing program which would supply about 56% of the planned public housing units. Since the scale of the projects was large

enough, average unit cost could be reduced due to economies of scale. The government also hoped to improve building standards and enhance the growth of construction and other related industries. The drawback was that it distorted the responsibility and function of government agencies, since the task of redevelopment of the *veteran villages* was undertaken by the Ministry of Defense but not the government agency in charge of housing policies and programs.

Although the selling prices of the government-built housing units were lower than that of the market, the capability of low-income families to purchase these housing units was even lower. According to the 1974 per capita income used in figuring out the repayment capability, only 40% of the people would be able to afford a government-built unit with the repayment plans. It did not account for inflation or the increase in public housing costs from year to year. Between 1980 and 1981, the average selling price per public housing unit in urban areas was close to $30,000 US Dollars. At the same time, the loan amounts only about 30% of the total selling price. The average price of an apartment (flat) was about 3.5 times of a person's average annual income in the mid-to-late 1980s. The loan repayment in Taiwan was much higher than the generally affordable standard as 25% of people's discretionary family income.[7]

The fourth period of the housing policy evolution was from 1982 to 1989. The *Public Housing Act* was amended in 1982 with provisions to encourage the private sector to invest in housing business. Since the government found that it alone could not achieve the task of providing affordable housing. The basic guidelines were to let the private sector build mid-to-high-income houses and let the government build the low-income houses. The government provided loans to people and raised the loan amount to 70% of

[7] Board of Housing and Urban Development, Council for Economic Planning and Development, 1986.

the selling price. The government realized two things: (1) The private sector was more efficient and should play a greater role in providing housing to the people; and (2) The design of public housing could not meet the needs of the people. The government, therefore, tried to build a housing market through the improvement of the financial systems. In the mean time (1986), the government sponsored large, public owned banks to establish the so-called *Building Management Companies* and let them play an intermediate collateral role among investors, creditors and buyers. The government's intention was to try to correct and possibly eliminate the problems that occurred from the "pre-sale system" in the traditional private housing market. It was designed to protect the consumers in the process of housing transactions. Gradually, the primary housing suppliers quietly shifted from government to the markets. For instance, the goal set for fiscal year 1987 to 1989 was to build 30,000 units per year. Among them, the government built only 5,000 units and the rest 25,000 were built by private businesses through various incentive programs.

The fifth period of housing policy evolution was from 1989 to the present. The government policy was to supply housing through the market mechanism since 1989, therefore increasing the amount of loan and subsidized the interests to the general public, thereby providing aid to them for purchasing their own houses. Thus, there were four types of housing policies currently existing: (1) government directly involved in building public housing; (2) government provides incentives to encourage private businesses to build houses; (3) government provides loans and subsidies to people who purchase their own houses; and (4) government provides loans and let the people build their own houses or apartments.

Government's direct involvement means that the government was directly

participating in the entire process from acquiring land through the design, construction, distribution and management of the houses they built. In this case, the price was set much lower than on the market. The amount of loans was about 85 percent of the sale price and the interest rate was also lower than the market rate. However, the purchasers must be qualified as low-income or homeless families.

With government providing incentives to private businesses, the land should be acquired by building companies. If the company can build 50 units or more on a piece of large enough land, he would be exempted from the tax on deed. The qualified purchasers would also enjoy the preferential terms on loan. With the government providing loan and subsidies to people who purchase their own houses, the government would subsidize the interest of the loan. The interest repayment allowed for income tax deduction by each family was increased from the previous amount about US$6,000 to US$9,000 in 1989. The other type of incentive was to let people build their own houses. The qualified people who have their own land but lack of funds could apply for government loans with preferential terms. These qualified individuals include farmers, fishermen and labor-workers of mines and salt fields.

In addition to the categories mentioned above, there were also *labor-worker housing* funded by the Council of Labor; *government officials and teachers housing* was funded by the Taiwan Provincial Government; *farmers and fishermen housing* was funded by the Council of Agricultural; *low cost public housing* was funded by the county and city governments; *housing for military and veteran families* was funded by the Ministry of Defense; and *housing for the aborigines* was funded by the Council of Aborigines. Each agency has their own incentive ways and terms but the overall

characteristics were similar.[8] Again, the fragmentation of functions and responsibilities of housing policies and programs were resulted.

8. The Current Housing Market Characteristics

Currently, in order to stimulate the housing market after more than ten years of recession, the government provided US$45 billion mortgage fund with preferential terms for low income and first time house-buyers in 1999. The government again provided US$36 billion and US$60 billion in the year 2000 and then US$ 60 billion each subsequent year in 2001, 2002 and 2003 plus another US$84 billion in 2003 (See Table **3**). With also the mortgage interest rate continuing to decline, the

Table **3** Government preferential mortgage funds: 1999-2003

Date	Amount (US$ Billion)	Interest Subsidy (%)	Interest Rate (%)	Households
1999	45	0.85	1.7	
2000	36	0.85	1.7	38,754
2000	60	0.85	1.7	217,956
2001	60	0.85	1.7	
2002	60	0.425	2.125	108,309
2003	60	0.25	2.3	69,644
2003	84	0.25	2.3	154,000 (estimated)
Total	405			588,663(estimated)

Source: The Central Bank of Taiwan.

loans on house purchase had increased steadily. Based on Taiwan Central Bank's statistics and, households benefited from the program were 256,710 in 2000; 108,309 in 2002 and 223,644 in 2003 respectively. The derived demand was estimated

[8] The Ministry of Interior, *Comprehensive Housing Policy* (draft), 2001, Chapter 2, pp. 11-48.

approximately in the neighborhood of 15 billion, 9 billion, 21.5 billion and 30.5 billion US Dollars for each of these years.

Housing Ownership

Based on the General Accounting Office's *Household Income and Expenditure Survey,* the housing ownership in Taiwan was 84.91% of the total number of households in 1999 and 85.64% in 2000. The percentage figure was 71.62% in 1979, marking an increase of more than 14% over twenty years. The survey further indicates that housing ownership for the lowest 20% income group was close to 80%. The housing ownership in Taiwan for the highest 20% income group reached 91.5%, much higher than the average of other countries. The high percentage, however, was not contributed by the public housing policies but caused by economic development during the past forty years. Public housing amounts to less than 5% of the total housing supply. The reason why the housing ownership is so high is because of a deeply rooted concept that "people who own land own the wealth". Therefore, many individuals or families take housing ownership as their ultimate goal in their lifetime. It is especially true in Taiwan with an area of 36,000 square kilometers, and a population of 23 million living on western plains where the area is about one-third of the entire island. The population density is more than 600 people per square kilometer.

Housing Stock and the Supply and Demand

Based on the information compiled by the Council of Construction and Planning in the Ministry of Interior, there was a surplus of 310,755 units of dwelling at the end of 2000. The surpluses of housing stock compared with the number of households at the end

of 2001 and 2002 were 242,867 and 182,258 units respectively. With the government providing preferential mortgage funds plus the decrease of interest rates in recent years, surplus of housing stock has been digested each year from 2000, but slowly. Unless the economy recovers quickly, the pressure of housing surplus will still remains.

There were three primary factors that caused the housing stock surplus. First, there was the real estate market boom that started in 1987; along with the economic boom which lasted for more than ten years. It brought about enormous growth in the building and construction industries. As the prices of land and buildings skyrocketed, it induced builders and businessmen to rush in and take advantage of this opportunity to make huge profit by supplying the market with large number of houses and various other types of buildings.

The second factor contributing to the housing surplus was the implementation of *vacant land development within limited-time* program and the enforcement of zoning ordinances with *FAR* control by the government. The former accelerated the supply of buildings and houses. The latter made the builders rush to apply and register the building permits before the enforcement in order to apply the old building standards to get more space to build and sell. Thus, it increased the total supply of buildings and houses.

Thirdly, businessmen and their families have been moving to Mainland China for their business development. Based on an unofficial estimate (there is no way to get accurate figures), there are currently about 50 to 60 thousand Taiwanese businesses in China at present. The total number of Taiwanese people in China is over a million. The investment amounts to roughly over US$150 billion.[9] Problem more critical than this is

[9] Chuang, Ming-Han, *Feature of the Real Estate Market in Taiwan and the Future Development of Real Estate Securitization*, Paper presented at the 6th APREC Conference, Taichung, Taiwan, Sept. 27th, 2003.

the out-migration of people from Taiwan that causes negative growth of population. More importantly, in the 1980s, those moving to China were high-income people and real estate investors. They sold their properties in Taiwan, which, again contributed to the over-supply of housing and other types of buildings.

Additionally, in the mid-1990s, the economic downturn caused a tremendous decrease in housing demand. The over-supply of housing has not yet been alleviated even today. It was estimated by the Housing Research Center at Cheng Chi University that the stock of idle homes in Taiwan amounted to about 1,250,000 by the end of 2001. This estimate was based on the data of "the base degree of electricity used" provided by Taiwan Power Company. In other words, if household usage of electricity is below the base amount, that housing unit would be deemed vacant. However, the relationship between electricity used and the vacancy of a house has not been well established. The one-to-one relationship between these two variables has been questioned by various research institutions.

The changing social and market conditions

Taiwan's social conditions have changed drastically in recent years. For instance, Taiwan has slowly become an aging society since 1993; the number of single-parent family has also increased dramatically from 3.9% in 1979 to 9.63% in 1998. The actual increase in number was more than 460,000 households over a twenty-year span. The housing and related expenditures of families in these two categories were much higher than that of average households. The ratios were 24% and 17% respectively. Thus, the financial burdens of these families were extremely heavy.[10] The government, however,

[10] Ministry of Interior, *The Comprehensive Housing Policy* (Draft), July 2001, Chapter 3, pp.6-7.

did not make appropriate changes or improvements to cope with the problems stemming from the public housing policies.

As Taiwan transformed from traditional agricultural society to secondary or even tertiary industrial society, the concept of financial management has changed. With various employment opportunities in cities, people may not like to live in the same old town for his or her lifetime. Buying land and houses, thus, becomes another way of living and investment.

Quality of the living conditions

The health, safety and welfare of the people's living environments have long been concerns of the government. According to a 1995 survey, the number of houses older than 35 years was 9.9% of the total in urban areas. In rural areas, the percentage was as high as 17.1%. The conditions of these houses are not only old but also deteriorating and negatively affect the landscape appearance and the surrounding environment. An *Urban Renewal Act* has been passed by the legislature in 1998, but the practical progress is in question. For quite a few years, only a scattered number of reconstruction projects carried out in the name of urban renew(in order to take the advantage of government subsidies) have been underway to rebuild houses and buildings destroyed by the September 21st, 1999 strong earthquake.

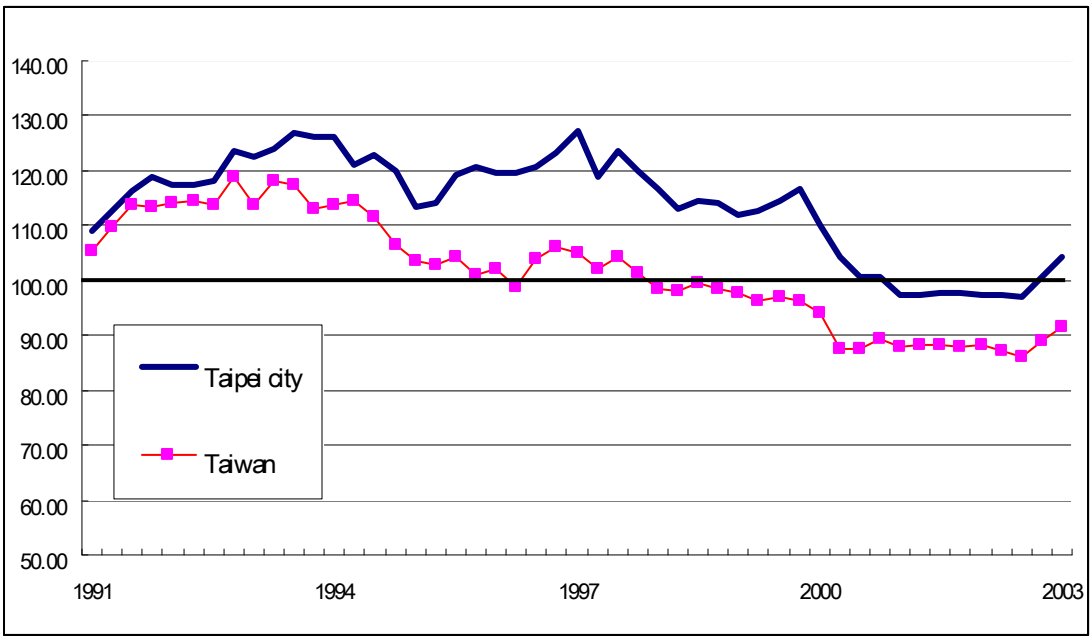
Urban renewal programs are difficult to implement. It involves a long and tedious planning process including design, relocation of the residents, redistribution of properties and compensations. However, if it is successfully carried out, it will not only provide more housing but will also improve the quality of people's living and working environment. The city's image will be improved as well.

Based on a *Citizen Living Condition Survey* conducted by the General Accounting Office in 1993 and 1994, the average living space per person increased yearly. The living space in 1983 was 17.49 square meters. It increased to 26.73 square meters in 1995. The average number of rooms per person increased from 0.9 in 1980 to 1.15 in 1993. For newly built houses and apartment buildings, open space ; public service and amenity facilities have been improved. The products are theme-oriented, each with a unique character, emphasizing high quality, leisure, and suburbanization.

Housing prices were too high

Land prices have skyrocketed several times since 1987. As the cost of land is about more than 60 percent of the total housing price, it subsequently caused housing prices to increase at a startling rate, which makes the housing price too high to be affordable by the low-income people, especially for the last decade of 20th century (see Figure **3**).

Figure 3: Housing Price Indices of Taipei City and Taiwan: 1991-2003



Source: Sinyi Housing Co.

Moreover, business people taking advantage of the real estate boom made greater windfall profit with big profit margin than they should, thus, pushing up the housing prices. Because of the inefficiency of the taxation system, no increase of the windfall profit has been collected by the government and fed back to the society.

The quality of construction work

Providing good quality housing and services is the key to the success of the construction industries. However, a good number of business people are speculative-oriented towards short-term profit. It seems that businessmen lack long-term modern operating concept as well as business ethics in establishing their credibility in order to sustain a long-term operation of their business. Much litigation involve the disputes over quality of design and construction of the houses bought by the consumers. It was found that some houses were built by using coastal sand as well as radioactive steels. In addition, the quality of after-sale management and services need to be greatly improved as well.

9. Problems of Public Housing Programs

First, the public housing policies and programs were indeed helpful in relieving housing crises in the 1950s when millions of refugees moved to Taiwan from Mainland China. However, the public housing policies and programs in Taiwan could not be considered very successful in its subsequent development. The public sector's activities

were usually restricted by various obsolete laws and regulations. The government budget systems and the administrative processes were also static and not efficient and flexible enough to cope with the ever-changing market conditions.

Secondly, in the early years, it seemed that the government first attempted to solve the entire housing shortage problem by providing public housing. Until the early 1980s, the government gradually shifted the burden to the private sectors and let the market do the job. Theoretically, the allocation of resources by the government is usually not as efficient as the market. Government production of public goods and services involves transaction costs and tedious administrative processes among governmental agencies vertically and horizontally. Additionally, the abundant productive resources of private sectors have not been used productively.

Thirdly, the agencies responsible for providing public housing were fragmented even until now. The governmental agencies lack an overall coordination among themselves. Each agency does its own work and dealings with people of their own concern. It not only causes confusion and difficulties for people in the housing and loan applications but also wastes government resources as well. Moreover, the various programs from each agency deals with people's occupational identity rather than their actual income and affordability. In addition, funding resources were not used efficiently or economically. Therefore, it is important to integrate all the agencies in each level of government into one overall coordinating agency to improve the efficiency of their administrative process and the allocation of resources, but politically it is easier said than done.

Lastly, there was a lack of sufficient housing market information. In the past, most information provided by government was on public housing and their administrative

activities. The information in private sectors concerning housing investment, development, supply and demand and consumption was insufficient. Furthermore, the insufficiency of information was also caused by the businesses' reluctance to release their operational information to the public. Each business kept the information in secret for its own benefits. The lack of information would often end up causing people to make inappropriate investments decisions and waste of resources.

Only in recent years, the Board of Housing and Urban Development in the Council of Economic Development and Planning, the Bureau of Planning and Construction in the Ministry of Interior and Cheng Chi University in corporation with Hsin Yi Real Estate Institute have started to accumulate some information and research results. Additionally, some foreign corporations such CB Richard Ellis, Jones Lang LaSalle and others have followed the commercial real estate activities in big urban areas. Hopefully, a nation-wide housing data bank should be established by the government to provide accurate and adequate housing information to the housing market. This will benefit investors, developers, bankers, builders and the people in general.

Lack of comprehensive planning

The lack of comprehensive planning in the housing programs in central, provincial and local levels of government is a great problem. The problem is more serious especially at the county and city levels. One of the major factors is the lack of expertise in the local government level.

Furthermore, the design of housing was not adequate for the utilization by the residents. The exterior design was not compatible with the surrounding environment as well as with the neighboring buildings. Another problem is the insufficient supply of

public amenity facilities and services such as open space, sewage, roads and parking facilities.

10. Conclusion

From the brief review and discussion of Taiwan's land market, many problem areas can be observed. Taiwan's land market is still in its developing stage. Sound institutional framework must be established as soon as possible. It includes a fair transaction system and the consumers' welfare must be protected. In the mean time, reasonable profit for the businesses should be allowed. To achieve this, related laws and regulations should be established through legislature. As land is scare resource, its use may cause externalities. Therefore appropriate government planning and control is necessary. However, government intervention should be kept to the minimum and let the price system function by itself to the maximum extent possible.

Taiwan's land market is a highly speculative market. The most serious problem lies in the valuation and taxation systems. Land price for taxation purpose is artificially determined and the true transaction prices have not been honestly reported to avoid taxes. Improvement of the valuation and taxation system is a great task and cannot be achieved in a rather short time. However, it must be started by the government and legislature as soon as possible.

Housing problems have great concerns to the welfare of the people. Providing adequate housing for its people should be the basic responsibility of the government. Especially, government housing policies and programs must give good care to the low-income, minority group, elderly and disabled people. The financial and subsidy

systems must be improved to facilitate the activities of the real property market to help those people to get appropriate shelters. Public housing programs should be adequately designed and effectively implemented to meet people's needs.

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Chapter Eight

Real Estate Cycle and Government Behaviour in Hong Kong

Ling-Hin LI

1. Introduction

Real estate cycles occur in a lot of economies of different scales and systems. Different theories have been applied to the occurrence and pattern of real estate cycles under different environments. As a relatively small but very active real estate market which also accounts for an important role in the economy, the case of Hong Kong provides another angle to examine the ways market sentiment, which attribute substantially to the features of the cycles, can be shaped by the changing government behavior to a very large extent.

1. 2. History of the Land Tenure System in Hong Kong

Once a small fishing village at the far south of China, Hong Kong Island was ceded to the British in 1842 under the Treaty of Nanking because of its strategic position in the South China Sea. The British wanted Hong Kong as a foothold since their trade (as well as military) action was constantly constrained in the then more prosperous Canton city (or now called Guangzhou). The Hong Kong island itself was regarded as a permanent concession for the safety of their trade- and war-ships. The importance of Hong Kong

grew with the territories being expanded (on a lease basis, though) to Kowloon and the New Territories by the First and Second Treaties of Beijing, in 1860 and 1898 respectively.

1.3. Hong Kong land tenure system - its evolution

The total area of land in Hong Kong is 1,095 km^2, almost twice as large as Singapore. Despite of this relative figure, the topography renders most area unusable. Due to the hilly landscape, about only 16% (175 km^2) of the total land area has been developed. Nevertheless, it does not mean that the city of area for urban land development is to be contained within this limited area forever. The area of the usable land has been expanded ever since the British took over Hong Kong by means of reclamation from the harbor. The reclamation speed in Hong Kong has been phenomenal. Since the Second World War, Hong Kong has gained from sea an area of 3,600 hectares, almost the combined size of Kowloon and New Kowloon. In number terms, it means every year the area of land increases by 70 hectares on average[1].

Originally, the British allowed selling the lands under freehold rights provided prior approval had been obtained from the British Government in London. In Charles Elliot's Public Notification 1841, it was said,*"…it is engaged,…,that person taking land …shall have the privilege of purchasing in freehold..."*[2] However, in 1843 when the Treaty of Nanking was ratified, the British changed her mind. In the Despatch from the

[1] World Wide Web-site of Planning and Lands Bureau.

[2] Great Britain. Parliament. House of Commons. Select Committee on commercial relations with China. *Minutes of Evidence [Hong Kong ... land and related matter]*.

Earl Aberdeen to Sir Henry Pottinger[3], it was said, *"…Her Majesty's Government would …caution you against the permanent alienation of any portion of the land, and they would prefer that parties should hold land under leases from the Crown…"*[4]

Later, under the First Treaty of Peking in 1860, Kowloon (south of Boundary Street) and Stonecutters Island were entered into cession at well. From 1st July 1898, British acquired a 99-year lease over New Territories under the Second Treaty of Peking.

From the very beginning, the British Hong Kong Government, on behalf of the Queen retained its freehold interest[5] over all the lands in Hong Kong[6] under the above three unfair treaties. Selling of land for public and commercial purposes since then has not been conducted on a freehold basis, and hence the purchasers are buying the development and various occupation rights of the lands in Hong Kong only with a specific term of years (which are called Crown Leases until June, 1997 renamed as Government Leases).

Since the takeover of Hong Kong, the British administration treated the land tenure system on Hong Kong Island differently from that on Kowloon and New Territories. For lands on Hong Kong Island and Kowloon Peninsula, Crown Leases were granted for 75 years without the option of renewal. In 1849, the term of leases was extended to 999 years and most of valuable sites in the city centre had been granted for that term. The practice of

[3] The Frst Governor of Hong Kong.

[4] Great Britain. Parliament. House of Commons. Select Committee on commercial relations with China. *Minutes of Evidence [Hong Kong ... land and related matter]*.

[5] Reversionary interest in New Territories.

[6] Except St. John's Cathedral, which is owned by the church itself completely on freehold rights.

999-years leasing was discontinued in 1898, instead, leases of 75-year renewable were granted since then.

For the lands in the New Territories (which in Chinese means the New Boundary) where the inhabitants were still holding titles from the Qing Dynasty, the colonial Government adopted a 'Block Crown Lease' system[7] in order to replace their existing titles. On 1st August 1905, the New Territories Land Ordinances was enacted, by which all land leases, including the Block Crown Leases, were set for running 75 years from 1st July 1898, renewable at a reassessed Crown rent for a further period of 24 years less the last three days[8]. After late 1959, all the leases were granted for 99 years from 1st July 1898 less last three days. The reason for this three day short was mainly political as the British government did not want leases to run right the end of the occupation period for the leased part of Hong Kong under the Second Treaty of Peking mentioned above.

The system was kept more or less unchanged until the Sino-British Joint Declaration came into force on 27th May 1985. In early 1984, the British Government announced that the sovereignty of the whole of Hong Kong would be given up in July 1997. Annex III of the Declaration was drafted to solve the disputes arisen from land lease. Under the Declaration, the existing leasehold system will continue after the reunification. All non-renewable leases (except those short-term tenancies and leases for special purposes) which expire before 30th June 1997 will be extended to 2047 at no extra payment, with the exception of an annual land rent payable at 3% of the ratable (of

[7] The details of the lots and the original Crown lessee of each of the lots are set out in a schedule to the block Crown lease together with details of the rental and use of the land.

[8] It is a psychological arrangement that Hong Kong's sovereignty is to be returned to China on 1st. July 1997 and it was thought that administratively it would be disastrous if all land leases were to end on the same day.

government-assessed) value of the property at the time of extension. For those leases expiring after 30th June 1997, they will be dealt with under the law of new Hong Kong Special Administrative Region (HKSAR) government. The term 'Crown Lease' would then be renamed as 'Government Lease' after the Declaration came into force for obvious political reasons.

1.4. Land Tenure System in Hong Kong – operation

The present land tenure system used in Hong Kong is closely related to her history. *Leasehold system,* which allows for absolute perpetual title of land to be vested in the Government as owner of all land, was used as a method of disposing Government land soon after Hong Kong became a British Colony in 1842. Except the site of St. John Cathedral, all land in Hong Kong is held under formal Crown leases for a term of years absolute.

1.4.1. Mode of Conveyance of public land

Public auction, tender, and private treaty grant are the three basic methods of disposal of land in most economies. The Hong Kong Government's basic policy is to sell government land leases to the highest bidder at the public auction. And the successful bidder becomes the lessee of government land. The terms of the auction are contained in

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So these land leases had to expire three days before the return of the sovereignty to give enough "buffer" for the administration. But what actually happened was, all leases were extended after 1997.

the "Particulars and Conditions of Sale" which is regarded as an agreement for lease. In this document, there are basically two major parts. The first part is general conditions, which include conditions on reserve price; completion of sale; payment of premium; disclosure of principal and ratable value. The second part of this document contains more specific conditions on the development of land. These include building covenant; use of land; master layout plan and landscape proposals; building regulations; town planning regulation, total floor area allowed on site and maximum site coverage; conditions on design, disposition and height; car park layout as well as vehicular access. In addition, there is always a survey sheet showing the location of the site. Upon compliance with the terms and conditions as set out in the Conditions of Sale, the relevant District Land Officer conferring upon the Crown lease will issue a Certificate of Compliance. Some land is not sold by public auction but by tender. These sites are mainly land where the user is strictly defined and the sale is unlikely to attract general interest, or where Government wishes to examine in advance detailed proposals for the development of a particular lot. Land for community purposes such as public housing, Home Ownership Scheme, public utilities, schools, churches, clinics, welfare, and certain charitable purposes is usually granted by private treaty grant.

The sales of leases either by public auction or tender are generally referred to as land sales in Hong Kong which is different from the selling of land under a freehold system. It is the sale of the land lease but not the land. Therefore, an owner of a piece of land in Hong Kong does not actually own it but has the exclusive right to possess the same for a definite period of time.

There is another way of conveying land in Hong Kong, which is locally referred to as *Letter 'A' and Letter 'B'*. Letter 'A' and Letter 'B' are those land exchange

entitlements issued by the Hong Kong Government from 1960 to 1983 as a large-scale rural redevelopment plan. This system arose, as indigenous villagers in the New Territories would not likely agree to deprive their entire holdings of ancestral land merely by the award of cash compensation. They would desire to be compensated in terms of an alternative piece of land. Therefore, when the government began to acquire land in the New Territories, Letters 'A' and 'B' system was introduced to give promises to provide land for development in return for the surrender of the land prior to its reversion under the Crown Lands Resumption Ordinance.

Until March 1983, no more Letters 'A' and 'B' for land resumption were issued and the monetarisation of the Letter 'A' and 'B' was introduced. Many real estate developers obtain land from the indigenous landowners by purchasing their exchange documents. To site an example, the four developers in Hong Kong, namely Sun Hung Kai Properties, Nan Fung Development, Henderson Land Development and Chinachem Group hold the certificates that could exchange for a total of about 1.3 million square feet of agricultural land. However, after July 1997, no more Letters A or B can exist legally as they are not recognized by the Chinese government. Hence, all the developers holding these certificates redeemed them before 30 June 1997. The colonial government's resort to this substantial redemption pressure was to allow most part of a new town to be tendered on the basis of the values of all Letters A &B available in the market.

1.4.2. Term of land leases

As the overall Hong Kong was ceded and leased in different periods in her history,

the land tenure system, particularly the leasing period and renewal conditions of the lease, vary slightly among Hong Kong Island, Kowloon and the New Territories. The term of the leases varies from 999 years; 99 year, to 75 years and the lease can be renewable or non-renewable. Attached to each lease is a set of lease conditions, which stipulated the time period, renewal conditions and permitted development of the land.

The return of Hong Kong to Chinese rule in 1997 heralds a new phase in Hong Kong's history, but the intentions are for its system of land holding to remain largely unchanged. The Sino-British Joint Declaration sets out in Annex III that the present leasehold system will be continued and arrangements for the leasing of land will resemble the current practice in Hong Kong (as explained above).

The present Hong Kong Government can issue new leases with terms lasting as late as 2047 through the existing land disposal system of public auction, tender or private treaty grant. However, in order to prevent the Hong Kong Government from selling off all the land, leaving Hong Kong's future Special Administrative Region (SAR) government without a major source of revenue, it is stipulated that no more than fifty hectares of land (excluding land to be granted to Hong Kong Housing Authority for public rental housing) can be leased by the Hong Kong Government in a single year during the transition period, although this limit has always been exceeded due to strong demand for residential units.

1.4.3. Payment for Land

There are two main types of payments for land.

1. Premium: In order to obtain a Crown Lease, the lessee pays a premium in a

lump sum on the date of the lease. This in actual fact is the market land price.

2. Crown Rent: Normally a nominal sum and bears little or no relationship to the actual value of the land, it is only a legal symbol to maintain the lessor and the lessee relationship. (this is called Government Land Rent after 1997)

1.5. Land Resumption

The Hong Kong Government is empowered by certain statutes to resume land for public purposes. But in such cases, the Government lessee has a right to claim compensation for the dispossession of land. "Public purposes" is widely defined in the Lands Resumption Ordinance to include any purpose that the government may decide to be a public purpose, and the Land Development Corporation (which is replaced by a more high-power urban Renewal Authority in late 2001) is entrusted with the task of facilitating renewal of urban areas and to advise the government as to the exercise of its power to resume land under the ordinance when an agreement to acquire the same redevelopment purpose has failed.

2. Land and Real Estate Market Structure in Hong Kong - Data and Information

Most analysts will come to a consensus when conducting research in the real estate market that availability and reliability of market information are two major determinants

in the quality of their analysis. Real estate market being an inefficient market, as defined in the Efficient Market Hypothesis, suffers from the lack of a central market similar to the stock market structure. Hence, market performance in the real estate economy will also be dependent, to a certain extent, on the estimation of demand and supply in the medium to long run based on market data.

In the HKSAR, the market has earned its reputation with the provision of very up-to-date and reliable market data for all sorts of analyses. This is mainly due to the advantage of having a leasehold land tenure system. As all land comes from the government, land transaction records are relatively complete. We can examine the role, availability and reliability of market data concerning the real estate economy by looking at the various stages of land development in this city.

2.1. Planning stage

Because of the leasehold land system, government, in the role of the ultimate landlord, has absolute power in establishing a contractual relationship with a developer in setting the maximum amount of floor space and type of use for every piece of land in Hong Kong. Hence, it is not difficult to estimate the potential supply in terms of gross floor area from land sale and urban redevelopment.

Before the Asian financial crisis in 1997, the colonial government gave limited amount of information in terms of potential supply of land, mainly due to political reasons (see below). However, with the crush of the market, the Lands Department in the SAR government began to increase the degree of transparency of the government land

supply channel by setting out a 5-year land supply plan (for information, click the relevant website listed in the reference part). This gives the market a clear picture of the availability of sites at various stage in the coming five years and details such as use type allowed and site areas are also given on the government website.

On the other hand, where the market is not interested in vacant land supplied by the public sector channel, the Land Registry of the HKSAR government also keeps records of legal ownership of all properties and land in the city (for information, click the relevant website listed in the reference part). This title registration is compulsory and every time there is change of ownership due to normal transaction or transfer as gift, the change in ownership details, including the sale price, will have to be recorded in the government record. To this extent, it is easy for developers to trace and confirm legal owners of any site in their target for redevelopment purposes. Such records are publicly accessible and can be downloaded with payment of certain user fees.

This registration system is a very effective and efficient mechanism allowing real estate agents to confirm legal title and to alarm purchasers of any legal claims on the property when concluding property transaction for clients. However when it comes to facilitating researchers to analyze such issues as loan amount in the property sector, or to allowing prospective purchaser to ascertain the exact amount of loan the owner of the respective property still owes the bank, the system contains no such information.

In addition, the Census and Statistics Department also keeps record of total land transaction, including both government land sale and private transfer in case of urban renewal, in addition to such information as transaction volume of real estate in terms of number of units and value of transfer (for information, click the relevant website listed in the reference part).

2.2. Construction stage

Once a developer starts to develop, construction floor plans of various degrees need to be submitted and approved by the Buildings Department. A builder cannot start construction work without an approved Consent to Commence Work. With each Consent to Commence Work given, the government will have a clear idea of the supply of new properties in the future as this implies the production pipeline. Once again, the government is obliged to release such information from time to time. By the same token, any change of building plans leading to change in floor area will require prior approval. Market can therefore estimate potential supply from this end.

2.3. Occupation stage

Once the development is sold and ready for occupation, the government continues its monitoring of the market but the shift has gone to the other government department. The Rating and Valuation Department (R&V) is responsible for the assessment of a kind of property tax in the HKSAR called the rates. Rates are a legacy from the British system based on property value assessed by the government. The assessment unit is called ratable value. As mentioned before, the Hong Kong government keeps record of all property and land transaction in the city; it therefore has the most complete database on property price levels for all sub-sectors. The R&V Department publishes annual report on the property

market with such data as property price indices for all sectors and size classes (for information, click the relevant website listed in the reference part). It also produces database for such information as vacancy rates, take-up ratio as well as market yields. Such reports become the most reliable and comprehensive official market analysis, especially in the analysis of market trend and performance.

2.4. Private sector

While the past paragraphs outline the role and source of market data affecting real estate cycle in Hong Kong from the public sector's point of view, there are a number of agents acting as providers of market information and analyses. First of all, because of historical background, a special breed of professionals called surveyors has been dominating the provision of property-related services in the HKSAR. A number of international and local surveyors firms have been actively providing market data and analyses in terms of price indices and market reports on demand and supply. In the recently years, due to the fact that major developers are also listed companies in the local stock market, large securities house such as Nomura and Morgan Stanley also participate in the analysis of the real estate market. In most cases, they rely the government as the base for their own framework of analysis.

3. Real estate cycles in Hong Kong

A major reason for examining the real estate cycles in Hong Kong is the interesting trends and features. First of all, the overall real estate market had been on a relatively long upward trend since 1984 with only minor adjustments in 1989 and in 1992, until 1997. Since 1992, relative cyclical movements were becoming more obvious, but each time after the trough, the new peak climbed to higher level as compared to the last peak while the trough did not fall below the level of the last trough. This pattern continued until the burst of the big bubble after the Asian financial crisis in 1997 when a massive downward adjustment was made with the trough bottomed down to the 1992 level (Chart 1[9]).

When we narrow the scale of examination into sub-sectors, we will find another picture compared to this macro situation. From the sectoral trend analysis (Chart 2), it can be observed that both the residential and retail sectors are moving in a very similar momentum with peaks and troughs occurring at very close proximity. On the other hand, the office sector seems to need a relatively longer recovery period after each downturn, as observed in 1989-1991 and 1994-1997 periods. This is mainly because the demand for residential units, even in the downturn of the market, remained fairly steady before 1997 due to various reasons to be explained later. On the other hand, most of the investors in the office sector are institutional investors who tend take a more cautious approach when meeting the signal of approaching bottom of the cycle. Hence, as the office market tends to respond to the macro economic and investment environments more actively than the residential market before 1997, the land market reacted with a much sever fluctuation in

land price movements in the commercial land than the residential land (Chart 3[10]). Nevertheless, there does not seem to have a substantial lag in the sequence of peaks and troughs in the different sub-sectors.

In addition, the industrial market performs independently even at the height of the real estate market history in Hong Kong. Due to the restructuring of the manufacturing sector in the economic system in Hong Kong and the exodus of production factories to the Southern part of mainland China because of cheaper rents and labor costs, values of industrial premises have been depreciating due to shrinking of both investment and user demand. This leads to the relative under-performance since late 80's in this sub-sector.

Since over 90% of monthly transaction in the Hong Kong real estate market comes from the residential sub-sector, it is worth focusing in this particular section of the market. Within the residential market, all the classes (categorized by unit size, with Class A being the smallest type of flats and Class D/E being the luxurious type) move in the very same behavior with the same timing of peaks and troughs. However, the smaller residential flats seemed to out-perform the luxurious class from 1984 to approximately 1992, but since then the reverse happened (Chart 4).

What seems to have contributed to this phenomenon is the fact that when market started to regain some confidence after the final arrangement for the handover of Hong Kong had finally been settled with the signing of the Sino-British Joint Declaration in 1984, small investors/users started to enter the market and take up small to medium size

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[9] Most of the charts in this chapter illustrate real estate market movements in Hong Kong from early 1980's to 2000. This is the period where highly fluctuating trends are observed. After 1998, basically the market went down continuously and transaction volume shrank to historical low level, until the very end of 2003.

[10] Land sale suspended in Hong Kong twice after 2000 and number of plots put to the market was also substantially reduced, see Table 1.

units as this group of purchasers are the least mobile. On the other hand, investors/users aiming at luxurious end of the property market would tend to wait and see due to the relatively large amount of capital involved. In this way, the upward cycle started first with the small-to-medium size units.

The growing demand was matched by a corresponding attention in the land market in the sites available for small to medium size projects. With more sites put out to the market for this category of development and a steady demand, the opportunity cost of investing in this class of residential properties became smaller at that time. Nevertheless, the fact that more sites available for small unit projects were put to the market was not a strategy, but incidental to some political developments after the Sino-British Joint Declaration in 1984. According to such agreement, a maximum land supply was limited such that :

'The total amount of new land to be granted… shall be limited to 50 hectares a year (excluding land to granted to the Hong Kong Housing Authority for public rental housing), from the entry into force of the Joint Declaration until 30 June 1997.[11]

What is even more interesting is that this political limitation did not actually impose a cap on the actual amount of land disposed each year after 1984. As a result, the land market, which is dominated by the government as the sole supplier, has been highly unpredictable and fluctuating, administratively and politically (Table 1).

While such flexibility given by the Land Commission (set up under the Sino-British Joint Declaration in 1984) to the Hong Kong government on the supply of

[11] Annex III, Sino-British Joint Declaration on the Future of Hong Kong

urban land for development was allowed, the constraint set by the Land Commission remained a political barrier for the colonial government such that in the land sale program before the hand-over, the government tried to dispose land, especially residential land, with higher development intensity (Table 2).

Table 2 shows that during the 12 years since the establishment flexible quota of land supply set by the Land Commission, the colonial government tried to maximise the supply of residential properties by pushing the land with higher development intensity allowed (R1 and R2) while the supply of land for lower density residential development (R3 and R4), normally the luxurious type of housing, was kept at a minimum. This land supply policy affected the market supply of residential properties at the luxurious end of the market causing a substantial upsurge of price in this sector at the latter part of this exceptionally long booming property market in Hong Kong between 1986 to mid-1997, when the institutional investors (both international and from mainland China) started to sense the upward signal and the small investors/users had multiplied their wealth from their investment in the small units flats.

The only exceptions to this unusual long booming period in the real estate economy were the political event in Beijing in the second half of 1989 and in 1994, the colonial government established an interdepartmental “Task Force” to examine the solution of upsoaring housing price with a number of anti-speculation policy options. These included proposals for speeding up land supply and measures to curb speculation such as reduction of forward sale to not more than none months before the completion date and to increase initial deposit from 5% to 10% of purchase price. Both of these two events however only caused temporarily upsets in the market and demand from investors and users soon pushed the market to a higher level, as seen in the chart.

Table 1 - Annual amount of land disposed by the HKSAR between 1985-2000

Financial Year	Actual amount of land disposed by HKSAR Gov't (sq.m.)
1985-86	191,444
1986-87	272,043
1987-88	271,169
1988-89	593,734
1989-90	265,992
1990-91	276,889
1991-92	315,764
1992-93	296,817
1993-94	197,207
1994-95	265,901
1995-96	925,139
1996-97	156,648
1997-98	341,212
1998-99	194,969
1999-2000	276,315.8
2000-2001	235,259.8
2001/2002*	85,694.8
2002/2003*	53,909.6

Source: Hong Kong Annual Reports, various years; Lands Department, HKSAR Government

*Note : There were periodic suspension of land sale in these years leading to substantial reduction in land area sold

Consequently, we can state that the government's attitude in the land policy has been instrumental in the overall supply of housing flats, which becomes a major contributing factor in the market performance. With this relative fluctuating land supply, the production resembles the same pattern, with a certain time lag (Table 3).

When examining the real estate cycles in Hong Kong in the context of the overall

financial market, some observations can be made. First of all, the performance of the real estate market has been highly correlated to that of the stock market, at lease before the big bubble burst in 1997 (Chart 5). There are some reasons to it. First of all, the overall capital and investment market in Hong Kong has been very limited. There is a very limited and inactive bond market in the city and there is a lack of other investment vehicles. Most people, especially average investor, would only invest in either the property or stock markets.

In addition, most of the blue-chip companies listed in the Hong Kong Stock Exchange are either property developers or property-related conglomerates. The total capitalization value of these property-related companies in the overall stock market capitalization value has been estimated to account for more than 30% (Walker, *et al.* 1995). This makes the cycles of the two markets going almost hand-in-hand in the last two decades, until 1997 when the Asian financial crisis out broke and property asset values devaluated for more than 50%. However, while the stock market suffered the similar blow in 1997, it climbed back miraculously in 1998-99 period, as opposed to the property market in the same period, when the so called "dot-com" fever started to give hopes to the investors and a lot of property-related companies began to dissociate themselves from the property field and "transformed" into high-tech companies, but plummeted again when even this high-tech bubble cannot sustain for that long in the market.

The other issue relating the financial market to the real estate cycle is the role of interest rate in the Hong Kong economy. One of the major special characteristics of financial system in Hong Kong is the pegged exchange rate with the US dollars. Because of this linkage, interest rate in Hong Kong has been set to follow the tend of the US

pattern, leading to the role of interest rate in the monetary policy in Hong Kong being relatively inactive. Because of this foreign exchange policy, the HK interest rate, on which the mortgage rate bases, cannot always reflect the actual the macro economic situation such as changes in the GDP in the city and sometimes is forced to keep at a lower level, such as the period 1992-1994 (Chart 6). Since property investment has always been regarded as good inflation-hedge tool, demand for real estate will soar under an artificially-low interest rate period leading to rising prices in the market for that period, especially when there are not too many investment channels as explained above (Chart 7).

Table 2 - Major Land Disposal Pattern (Urban Area) 1985-1997

Year	**Urban Area**							
	C	C/R	R1	R2	R3	R4	I	CP
1985-86		3	2	3	1			2
1986-78		11		4			4	
1987-88	1	2		3	1		2	
1988-89	4	1	1	2			3	
1989-90	4	1		1			1	
1990-91	3	1	1				1	
1991-92	1	2	1	6	2		1	
1992-93	1	3	1	2			1	
1993-94	2			2				
1994-95	2		4	2			1	
1995-96	2	3	1	1	1			
1996-97	2	2	1		2	1		
Total	**22**	**29**	**12**	**26**	**7**	**1**	**14**	**2**

Source **:** Data compiled from Government Land Sales Record, Lands Department, Hong Kong Government.

Note **:**

R1 to R4 residential land for different degrees of development intensity. R1 is the most intensive type and so on.

C commercial land

C/R residential land with commercial elements allowed

I industrial land

CP land for car-parking use

The above gives a general examination of the features and trends of the real estate

cycles in Hong Kong. Basically, we can see that in a leasehold land tenure system, the activities in the land market have a major impact on the development of trends of real estate cycles in that economy. This is especially the case where political factor affects the land supply decision substantially. The case of Hong Kong shows this interesting feature that policies adopted for completely different objectives work towards limited land supply in Hong Kong before and after the handover in 1997. Before the signing of the Joint Sino-British Agreement on the future of Hong Kong in 1984, the long-standing "conspiracy theory" of the adoption of highland price policy[12] by the colonial government suggests that the authority tried to keep the land supply to stimulate prolonged housing demand for maximum government revenue in this channel (see Table 4 below). Ironically, this was combined with the political decision to limit land supply after 1984 for an opposite reason of stopping substantial land revenue from being available for the colonial government before the handover. The joint effect created a belief in the market that housing was almost in shortage in Hong Kong. With this cultivated belief, and to a certain extent a culture, property investment became the prime anti-inflation tool to tap into the unearned capital growth.

Because of this culture, prolonged price appreciation could not generate enough a warning sign to average investors that the bubble may burst anytime because of substantial asset over-pricing. This speculative/investment demand even sustained various government anti-speculation actions in 1992 and in 1994 with only minor upsets when the policy was being implemented at that stage. This is also illustrated by the

[12] The term 'High Land Price Policy' originated in 1970s. when the stock and oil crises boosted the property market in Hong Kong. This property boom persisted until early 1980s. During that period, both property prices or rentals rocketed rapidly. General public started to criticize the Hong Kong Government for pursuing a 'Three High Policy', namely 'high property price, high rental and high land price'.

so-called “small spring” occurred in the first quarter of 1998 when the residential market price level started to pick up mildly again and demand rose, a similar pattern in the previous upsets, only this time is very different in the end result. Hence, the role of the government has been the signal provider for the positive market sentiment that demand will be kept at high level with sufficient but not abundant supply. All anti-speculation policies were therefore taken as lip service only by the investors.

Table 3 - Housing Supply Pattern 1985-2000 in Hong Kong

Year	**Housing Supply (in units)**			
	Public Rental	Public Sale	Private	**TOTAL**
1985	29598	20206	34613	**84417**
1986	28432	6480	33013	**67925**
1987	24976	8974	33629	**67579**
1988	31701	8802	30122	**70625**
1989	46393	18776	30621	**95790**
1990	32885	17518	31483	**81886**
1991	25486	16726	33380	**75592**
1992	11039	5740	26222	**43001**
1993	34295	33109	27673	**95077**
1994	17098	4594	34173	**55865**
1995	17349	16672	22621	**56642**
1996	18358	10725	19875	**48958**
1997	16046	21535	18202	**55783**
1998	14123	21093	22278	**57494**
1999	29382	22493	35322	**87197**
2000*	40944	21170	25790	**87904**

Source : Rating and Valuation Annual Reports

*Note: since 2000, the Rating and Valuation reports do not show the public housing figures and the Housing Authority annual reports show public housing supply on the financial year basis, ie. from March to April next year.

This was changed when the new government structure emerged with the disappearance of the colonial government in Hong Kong. Once the first Chief Executive, a local Hong Kong citizen with the blessing from the Beijing central government, for the HKSAR government was elected in early 1997, he made a pledge that he would seriously

look into the problem of rising property prices and shortage housing supply. Without any substantial measures spelled out in his first policy address in October 1997, the Chief Executive mentioned nothing except a promise to achieve a supply of 85,000 units of housing flats and a target of home ownership increased to 70% in the long run. The market showed no sign of cooling down, then it came the Asian Financial Crisis.

This promise represents a substantial increase in housing supply in Hong Kong given the previous total supply of housing flats from 1992-1997 was at an average of 50,000 units with an exceptional high productivity in 1993. Even the new SAR government set out to start a "socialist" style of land management system in Hong Kong with production indication, the effectiveness of such target is still questionable even assuming the government would try to sell land at a much greater speed. This is because housing supply in the private sector from the newly sold government land can normally contribute to not more than 30% of annual supply of new housing units (Table 5). The majority of housing supply comes from urban renewal by the private sector.

Table 4 - Government revenues generated by land sales 1985-1997

Financial Year	Revenue from land sales to Government (HK$ million)	Total revenue (HK$ million)	Share of land revenue to total revenue (HK$ million)
1985-86	423	41,240	1.0%
1986-87	1,863	43,869	4.2%
1987-88	2,920	55,641	5.2%
1988-89	5,681	65,780	8.6%
1989-90	6,354	74,365	8.5%
1990-91	2,761	82,674	3.3%
1991-92	7,394	101,456	7.2%
1992-93	7,459	120,780	6.1%
1993-94	16,804	143,899	11.6%
1994-95	16,150	151,052	10.7%
1995-96	16,838	153,194	11.0%
1996-97	23,468	173,857	13.5%

Average		**7.6%**

Source : Hong Kong. Treasury Department. *Annual report of the director of accounting services and the accounts of Hong Kong*

The main difference between these two sectors is that government land sold in public auction for residential development will carry a condition for the development to be finished within a certain period after the auction, while there is no time limit on completion of the project in private redevelopment of urban land. In times of a sluggish economy, the developer tends to slower or even stop construction work on sites. This was what happened in late 1997 to mid-1998 when the Asian economy was seriously devastated by the financial turmoil in some of the countries in the region. A lot of large real estate developers slowed down or stopped some of their project leading to substantial decrease in supply (for instance, a major property developer announced openly in August 1998 that they would stop the phase III development of a once very popular luxurious housing project in a new town called Shatin).

Nevertheless, the public at large, including developers who were once the close allies of the government, put the blame on the government for the burst of the bubble and the term “85,000” became a political taboo. This illustrates that the role of the government in an open real estate economy, even with monopolistic power over land supply, as a main contributor to the market sentiment more than anything. The expectation of the general public on the attitude of the government becomes more important in influencing market behavior than the actual policy action when the media started to correlate government actions and market trend (see figure 1).

This market expectation, when faced with a market failure, started to search for explanations in the government policies for the burst of the bubble. One of these being the

over-production of government-subsidized housing, or the Home Ownership Scheme (HOS)[13], for sale in the market. This theory however would not stand when the production of HOS as well as that of the private sector housing is matched with the property price trends. What people tend to forget is that the creation of the privatized public housing sector with strict controls on re-selling within the first five years should not affect the private sector market as the affordability level is completely different. This is evidenced from the creation of the Home Ownership Scheme (HOS) in early 1980's by the government to build and sell housing units to the lower sandwich class people who is not qualified to be allocated a public housing unit but also cannot afford private sector housing at a 40% discount of the market price. The HOS has never been a hurdle to the prosperity of the private housing market in the 80's and 90's, and neither would the privatized public housing sector (Chart 10). It can be observed from the chart that the market did experience period where there were both high property price and HOS production levels, and vice versa.

Table 5 : Contribution of Housing Supply Via Government Land Auction Channel

Year	Annual new completion of housing floor space (1,000 sq.m.)	Floor area available for housing development via government land auctions (1,000 sq.m.)	% of supply from auctioned land on total supply
1991	1831	365.64	20%
1992	947	316.64	33.4%

[13] HOS housing projects are government-subsidized housings first built for sale in the 70's when there was a group of citizens who could not afford private housing, yet not financially poor enough to enjoy government public rental housings. These HOS flats are sold at a discount from comparable private housing flats and only households below a certain income range can be qualified to purchase these flats. In September2003, the government announced that they would not build any HOS flats anymore due to private housing prices have fallen over 50% since 1997. This marked the end of this scheme.

1993	1514	400.47	26.5%
1994	1255	222.18	17.7%
1995	1089	370.16	34%
1996	769	219	28.5%
		Average :	26.68%

Source: L.H. Li, (1996), *Development Appraisal of Land in Hong Kong,* Hong Kong: Chinese University Press

Figure 1

Source: South China Morning Post

Apart from market culture of a time-honored expectation of long term capital growth in asset value, partly cultivated unintentionally maybe, by the government, the bank sector's behavior also plays an important role in the formation of the special features in the real estate cycles in Hong Kong.

Unlike popular theories stated at the beginning of the paper that deregulation in the financial sector has led to competitive behavior in the banks in granting loans to real estate project, the bank sector in Hong Kong has been under rather strict scrutiny by the

quasi-central bank, the Hong Kong Monetary Authority (HKMA)[14]. There has never been a major deregulation as such. However, as mentioned earlier, the economic structure in Hong Kong in the past decades before 1997 had been so geared to a real-estate-base that most of the investment loans would have been related to property development. It can be observed from Chart 8 that the proportion loans to property investment outweighed that to individual for purchasing private housing flats in the mid-80's, but the situation got reversed since late 80's until after the burst of bubble in 1997. The keen attitude in banks in trying channel their funds into mortgage loans can be seen from the fact that after the crash of the market, banks are actually pushing the demand by reducing the mortgage rate level. Before 1997, the normal practice in the setting of market mortgage rate had been the so-called P+1.5 or P+2, meaning the prime rate plus 1.5% to 2%. Starting from later part of 1998, banks started to offer mortgage at prime rate, then P-1, followed by P-2 and P-2.5 and at some stage even P-3 when the Monetary Authority started to give out warning signal.

Hence, the banks have been pushing relatively easy financing in the market for investors/purchasers on one hand, but on the other hand, when the market goes down, they are almost the first party to press for forfeiture. After the burst of the bubble, because the downward adjustment has been to severe (up to 50% in some districts), a lot of purchasers cannot afford the mortgage interest and the properties got forfeited by the banks. Such properties, because of the growing number in the market since 1998 (at some stage, it has been estimated to be more than 4000 units per year), become a special sector

[14] For instance, the HKMA has set a 40% upper limit on the amount loan dedicated to property filed offered by commercial banks. Once this upper limit is being approached by most banks, as monitored regularly by the HKMA, warning guidelines will be issued. For details of HKMA guidelines, please visit their website : http://www.info.gov.hk/hkma/index.htm

of "discount corner". These properties, or commonly known as the bank list properties are normally sold at 5%-10% lower than the going market level because of the forced sale nature, causing the collapse of property prices in some over-speculated district such as the sub-urban North East part of the city to go down even further and faster.

Moreover, due to the rapid downward adjustment of property values between 1998-2000, a lot of properties purchased before September 1997 suddenly become negative asset (meaning the current market value in say 2001 is much lower than the mortgaged value). This increases the difficulties for the owners to get out of the troubles, as even if they can find a buyer, they still need to make up the huge difference between the market value at the point of re-sale and the mortgaged value. To exacerbate this problem, most banks would refuse to grant the special P-2 mortgage rate to the owners of negative asset while all other owners can almost successfully negotiate this special term with the banks for their properties. This means there exists a discrepancy of almost 4% in mortgage rate between those who buy properties after the burst of the bubble and those before, representing a difference of as high as HK$10,000 per month for a HK$5 million property in terms of monthly mortgage repayment. Hence, more people are forced into bankruptcy with their properties forfeited leading to more supply in the bank list category and eventually stronger pressure on existing market price level, creating a vicious circle.

4. Aftermath of the 'bubble'

The Asian Financial Crisis, which started in the currency markets, began the spiral effects on other sectors of the economy. As assets were substantially over-priced due to

expected high demand before the Crisis, the property sector got hard hit when suddenly property and mortgage loans were being called back by the once very friendly and supportive banks and demand seemed to be a remote element in the market. When investors found that their huge portfolio could not attract buyers any more, they faced with financial difficulties in affording the mortgage loan repayment. This triggered continuous and growing overdue of mortgage loans, which was unprecedented before 1997. Measurement of mortgage default rate is based on Loan Delinquency Ratio[15]. This ratio for example in 1994 was 0.43% but jumped above 1.2 after 1999(see Chart 11). Banks began to forfeit properties because of growing loan delinquency ratio, although not at a worrying level, and forced sales were found at a great discount in the market. The adjustment process in property price level ironically matched the social objective of the SAR government to create affordable housing (as stated in the first Policy Address by the Chief Executive in 1997), but the magnitude of adjustment started to go beyond control. This kind of market adjustment was in fact not new to the market in the history of Hong Kong, or at least in the past 15 years before the Asian Financial Crisis. What was different from the past was the reaction of the government in handling this medium term fluctuations.

Market sentiment has always been a dominant factor in the property market due to the inefficient nature of the property market. Because property market tends to exhibit weak form of market efficiency, investors and purchasers do not find it easy to have comprehensive information to rely on, except market sentiment. Market sentiment, especially in a market where government has a monopoly power in supply of land, would

[15] The loan delinquency ratio (measured by the ratio of mortgage loans overdue for more than 3 months to total outstanding mortgage loans).

be subject more to the attitude and expected policy of the government.

4.1. Confusing housing policy

The "command-economy" objective of the 85,000 units of supply each year has always been regarded by the public as a principle maintained in the government senior level, although not mentioned and upheld in public anymore due to the substantial downward adjustment of property prices since late 1997. This is why it has drawn so many criticisms. Surprisingly to the market, the Chief Executive openly announced that this policy target had been dropped in 1998 due to reality. When this came out, everybody was shocked that the government was not in any position to clarify its policy to the market. While the market was hard hit by the financial crisis, the government did not even seem to try to resurrect market confidence and sentiment. This represents a very obvious change of policy formulation from the previous colonial government. With a weak market confidence and a set of relatively fragile macro economic variables, the last thing the market wants is unclear government signals of its attitude in supporting or controlling the regeneration of market activities. This is further evident from the swinging land policy.

4.2. Swinging land policy

In terms of land policy, the SAR government takes a much more positive approach to change the land administration mechanism from a private domain to a public one. The

first measure they choose is to announce the land supply program up to 1999. The tentative land sale program is put on the government web site for public information and is regarded as a positive step to increase the transparency of the land supply mechanism within the government.

However, such a major improvement in government efficiency did not last long. While maintaining that keeping property prices at an affordable level is their main task, in face with the drastic downturn of the property market, the government announced in late 1997 that they would be more flexible in the land sale timetable. This gives a signal to the market that the government will be prepared to intervene the annual land supply plan. When the developers were getting more and more cautious in their bidding behavior in public land auction, land price began to fall which sent out an even more damping effect to the much weakened property market. By now the whole social sentiment changed completely from hoping the property price level to fall in early 1997 to demanding the government to support a 'soft landing' of the market.

The government then switched the land sale mode to tendering for some pieces of land rather than public auction so that the effect of negative market sentiment can be minimized. The switch to tendering in the supply channel of urban land is not a new tactic for the government of Hong Kong.

However, the switch to tendering of urban land does not always provide the diluting effect on market sentiment. Sometimes, if the system is not operated properly, the result is even more devastating. This was what happened in March 1998, when a site for hotel use in Ma On Shan, a new town in the SAR, was sold at a price of HK$200 per square foot accommodation value (ie. unit land price on the basis of floor area) by tender. Similar hotel sites in the urban district were sold earlier at a level of HK$1,700/sq.ft. The sale of

this site caused a lot of criticism to the SAR government by the property market professionals as a wrong move to plummet the market further. The use of the tendering system was put on public trial and received skepticism when another prime site for residential use in the urban area was sold at a lower than expected price by the tender one week later. Coincidentally, this residential site was sold to the same developer who snared the hotel site.

The SAR government, burdened with this social duty of attaining the optimal urban land policy of providing adequate land at affordable price level, continued to fine-tune the market step by step. For instance, a piece of prime office site at the heart of the CBD of Hong Kong with spectacular view of the harbor was taken back to be used as the government headquarters. This kind of site would have been worth billions twelve months ago, but the lack of confidence in the overall economy and the danger of over-supply of prime office space caused the government to rethink the possibility of withdrawal. Such a move was regarded as over-sensitive as all the government needed to do was postpone the selling of this site. Besides, the use of a prime site in the CBD for public purposes is a direct contradiction of land economic principles, which the Hong Kong government had been very good at.

The SAR government further sold a number of government staff quarters at a 10% to 30% from the existing property price level. This caused a widespread drop of the already battered property prices and rentals in the district where these quarters locate.

The continuous shrinking property market came to a further bottom when a major developer under-cut their competitors by setting a lower-than-expected price level for their prime location residential project. This triggered a ‘cut-throat’ price war. This caused substantial financial losses to some of the developers. An example can be seen

from a prime residential project in an old urban neighborhood. The site was obtained through government land auction in March 1994 where the accommodation value was $5599 per sq. ft. The development was completed and ready for sale in February 1998, when the market had already been downward adjusted substantially. The new flats in the neighborhood were sold at that time at $5000 to $6000 per sq. ft., while the developer of this project set the price at $6338 per sq. ft. By estimation, the construction cost was about $1000 per sq. ft. and the cost of interest was about $1464 per sq. ft.[16], the total development cost was $8063, which was far beyond the selling price. However, the developer could not wait for the market to pick up, as they needed this cash flow for their debt liabilities, which in February 1998 had already accumulated to HK $100 billion[17]. In the environment of high interest rate, such debt ratio was very sensitive.

At the end of 1998 the government, subject to tremendous pressure from private sector, announced the temporary halt of the land sale program for six months to try to retain market confidence, but then it was too late and property prices continued to fall. The government maintained their "non-intervention" attitude while in April, 2001 they announced a new land sale program in the coming five years such that most of the sites are now put on a reserve list available only on demand from the developers. The number of sites put onto the market by the government in the normal land sale timetable is therefore reduced substantially. While this is a more market-oriented move by the government, the market regards this as a supportive action to please the developers to limit market supply, a move similar to the much-criticized high land price policy in the colonial times.

[16] Based on 3 years construction period and interest rate 8% per annum.

[17] *Oriental Daily News,* 17th Feb 1998.

4.3. Recent Developments

In 1999, after 9 months moratorium on land sale, the selling of government land leases resumed with a brand new system introduced. This system provided an alternative for developer in acquiring their land. This system is called the Land Application System.

The procedures of the land sales under land application system are as follows. At the start of the land sales year, the Lands Department may publish the Application List, which listed the land to be sold in the coming year. The details of the land lots, included lot number, location, usage, site area, plot ratio, the earliest available date, and the deposit needed in order to bid/tender. Then, the interested parties may submit her application in a specified format which indicated the minimum price. Within two weeks, the Lands Department may advise the applicants whether the application is accepted or not. If the price is acceptable, auction or tender would be held within 2 months from the date of notification. Upon the receipt of the notification, the applicants will be required to sign an agreement within 14 days to bid/tender for the lot at the minimum amount offered, and to pay a deposit as specified. After the agreement is signed, and the deposit is paid, the Lands department may arrange advertisement or gazettal, and distribute the land sales document. The Lands Department has the right to decide whether the land should be sold by auction or by tender. If the auction method is used, the auction will be held within 2 months. If the applicant is successful, the deposit will be used to off-set the price. If the applicant is not successful, the deposit will be returned without interest on the next

working date after the auction. If the tender method is used, the deposit will be directly used for the deposit which is required to be submitted with the form of tender. Similarly, if the applicant is successful, the deposit will be used to off-set the balance, and if she is unsuccessful, the deposit will be returned within on week. For both cases, if the minimum price, which is suggested by the applicant, is not reached, the deposit will be forfeited.

The Land Application system was introduced with the hope to achieve two goals. Firstly, the government can seal or control market sentiment, thus minimizing the negative effect of the public land auction. Secondly, the government would like to give more choices in land sale models so as to enhance the flexibility in land supply.

Since the introduction of the land application system, there is a total of 860000 sq.m. of land sold to the developers. But in the first two years, the usage of this system was low as the land placed in the land application list was mainly the land with low development potential, especially industrial land. Most of the lands were sold by the routine land sales which followed the 5-year land sales plan. As the low usage was concerned, more premium land was introduced. Since 2004, the land application system has become the sole method of selling government land for commercial purposes. This is widely believed to be a positive measure to allow the market decide how much is to be supplied as the Application List system is a demand-driven mechanism of supplying land.

Conclusion

The experience of observing real estate cycles in Hong Kong illustrates the importance of the roles of two major actors in the market, namely the government and the banking sector.

The long time practice of the socialist framework of land system within this capitalist economy in the small city worked to the advantages of the colonial government. It brought in huge revenue for the colonial government to support a low tax environment for businesses, for the price of the charge of adopting the "high land price policy". The constant shortage of housing in the past made investment (and to some extent speculation) in housing and properties the ideal hedge against market risks. This system worked well in the sense that the government retained high degree of control of land use in an invisible way while property and landowners enjoyed continuous capital gains. So long as the status quo remained, the government's action against speculation was seen more as a lip service.

The return of Hong Kong to China signified the period of high degree of autonomous and the era of "Hong Kong People Ruling Hong Kong". There is an important social implication as the government now must be responsible for the people of Hong Kong. The transition of the Hong Kong sovereignty from a colonial government to the SAR met the unfortunate event of the Asian currency crisis. The implications of this incidence went far beyond the estimation of the SAR government. Property prices plummeted and dragged the economy down. Within a period of ten months, property prices in Hong Kong, especially the residential sector, dropped by 30% to 50%. The irony

is, the loss of control in the market forces a tightening of control from the SAR government. Land issues are more than economic and social issues. The unprecedented sluggish market in so many years, together with the downsizing economy and the burden of the new government to distinguish herself as a responsible government to house the homelessness forced the SAR government to take matters into her own hands into the finest details. The socialist framework of land system is now turned into a socialist (if not planned) policy on land and housing.

The target supply of housing of 85,000 units per years was originally claimed as a policy. The degree of flexibility of this target being a long-term objective is being widened as the negative effects of the planned intervention in the market surfaced.

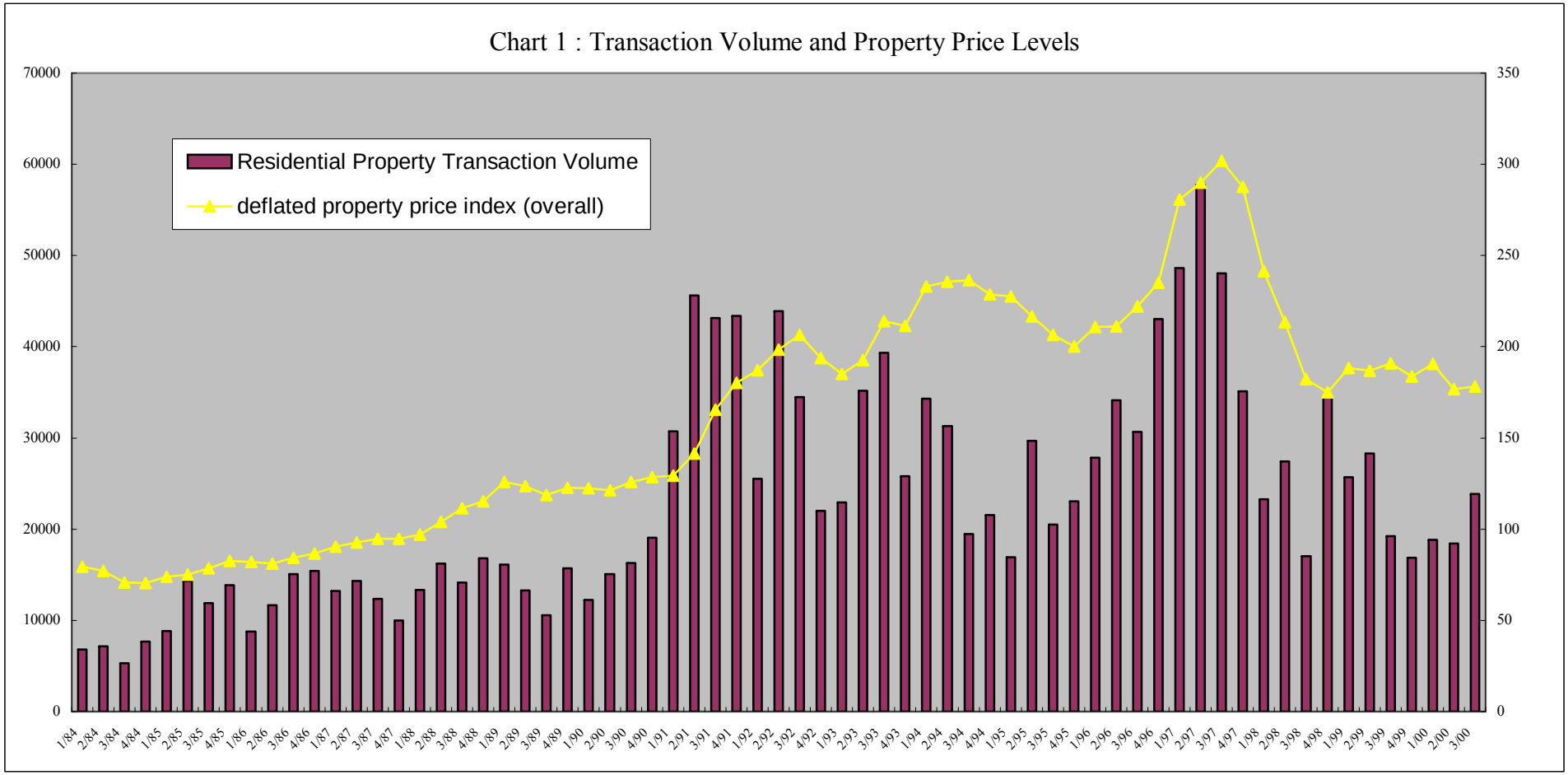
The government is trapped in the dilemma that it is burdened with the political pressures to create an affordable housing market caused by over-pricing in the past while facing the task of keeping a soft landing for the property market battered by the economic turmoil. The mechanism of non-intervention (or more appropriate, invisible intervention) created in the past is facing a severe challenge that something must be done to keep the property price low enough to be affordable without damaging the overall economy and the wealth of those with a vested interest in the market. This is a major political burden, unfortunately, for the SAR government on land and housing issues that the era of "Hong Kong People Ruling Hong Kong" must itself manifest a fair and rational land and housing market to distinguish the "conspiracy theory" behind the alleged high land price policy under the British rule.

What the government forgets, is their own role in the formation of the real estate cycles. In small but relatively open real estate economy such as Hong Kong where relatively fewer investment channels are available, the behavior of the government is

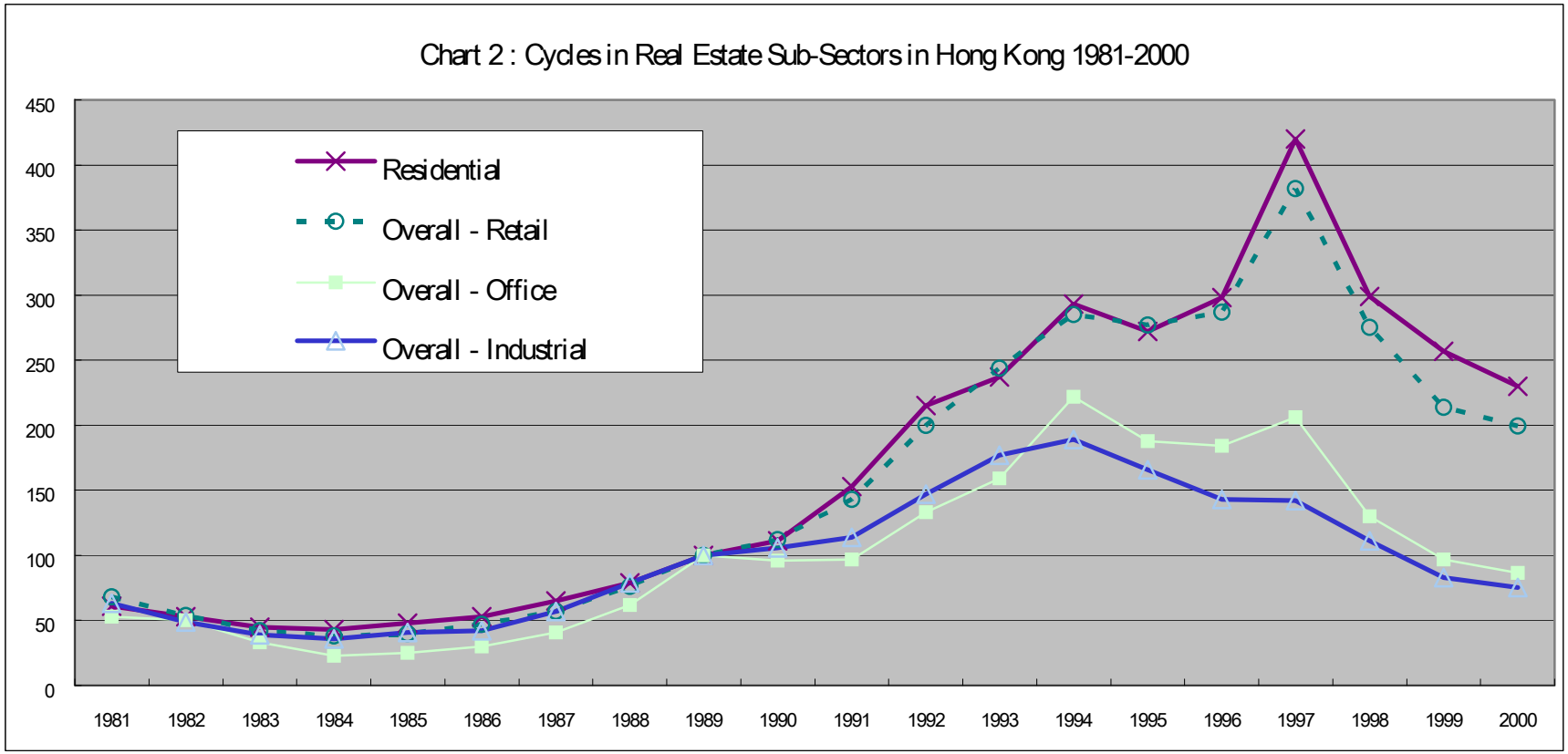
often translated into public expectation of the market trend. Market sentiment tends to be fostered by a belief of a certain government behavior in their attitude towards such issues as price level, market supply and land use policy. Where there is an ascertained pattern of such government behavior, minor economic and even political adjustments (such as the June 4th. Event in 1989) might not dampen the real estate market with very long term effect.

The banking sector contributes a lot to the availability of property finance in the market which fuels the investment demand from small investors. When faced with the downturn of the market, even without imminent risk in the overall financial system, the banks are creating unnecessary barrier for those in trouble to recover from the crisis while still opening door of easy finance for those who are not negative-asset owners. This has not only contributed to a further downward spiral effect on the price level, but also created unnecessary social discontent.

Given that the property market in Hong Kong has been dominated by transaction in the residential sector, which is more internal-demand-oriented, the roles of these two actors become more instrumental in smoothing the effect of real estate cycles in the economy.



Source: Census and Statistics Department, and Rating and Valuation Department



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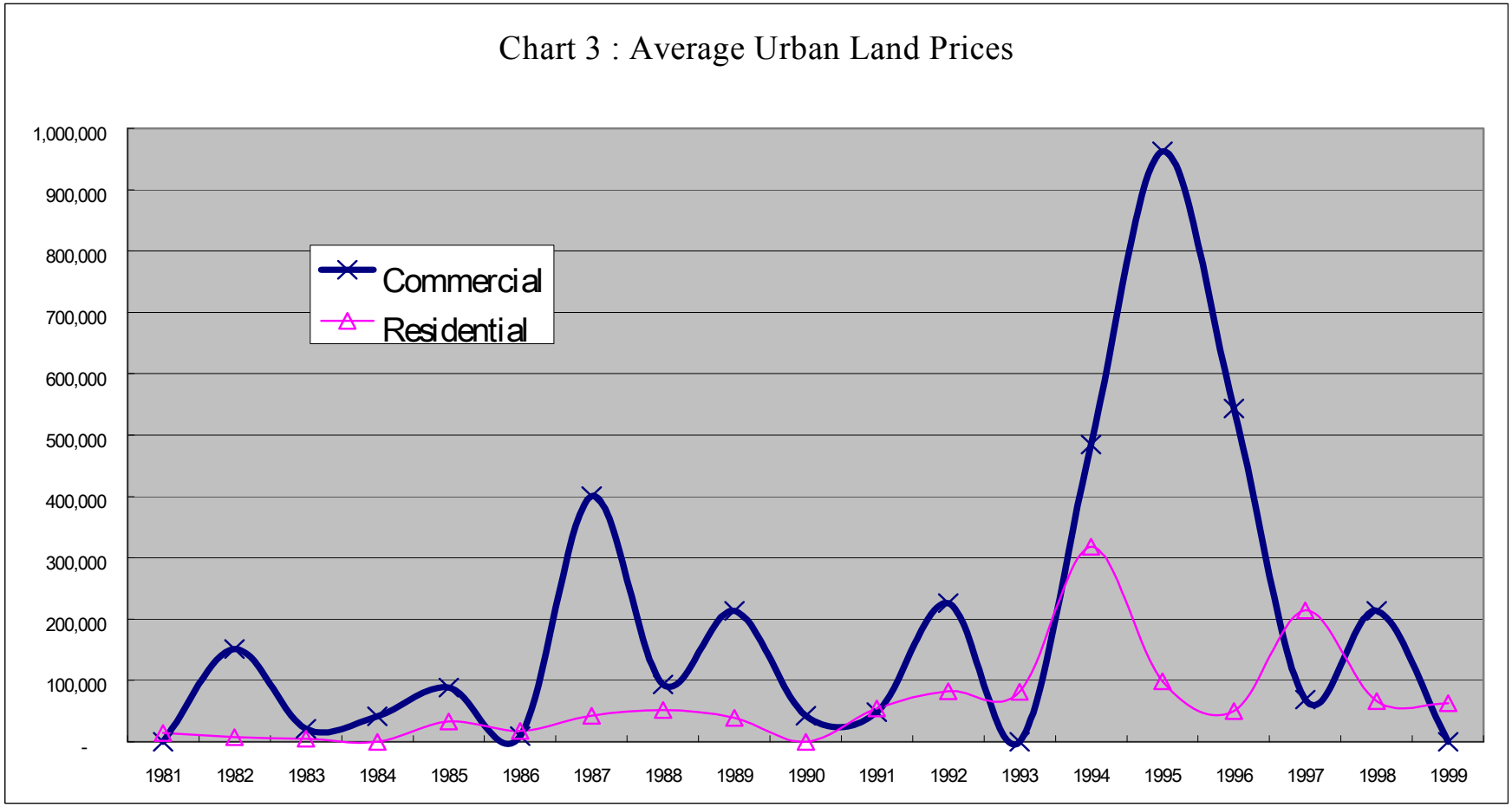

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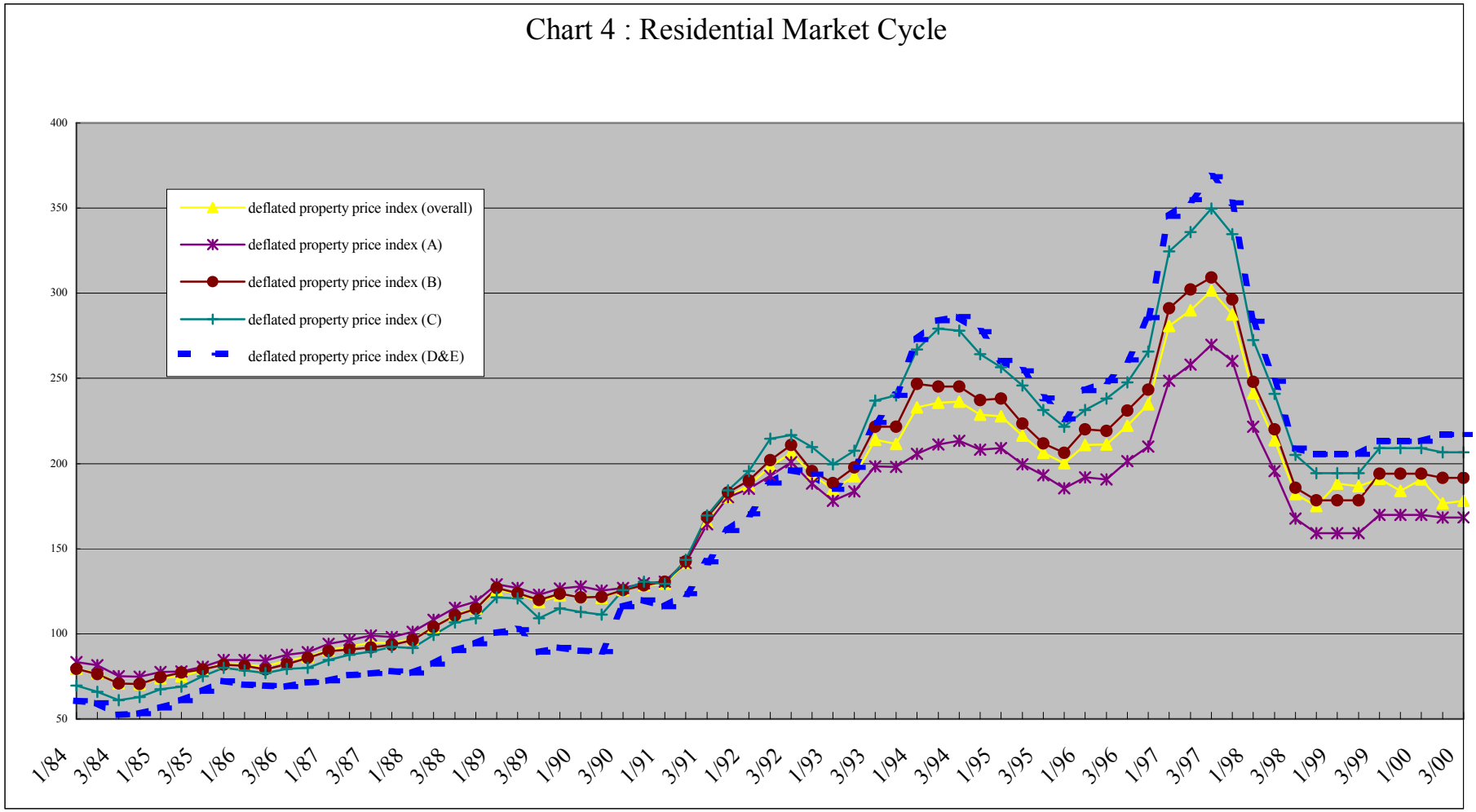
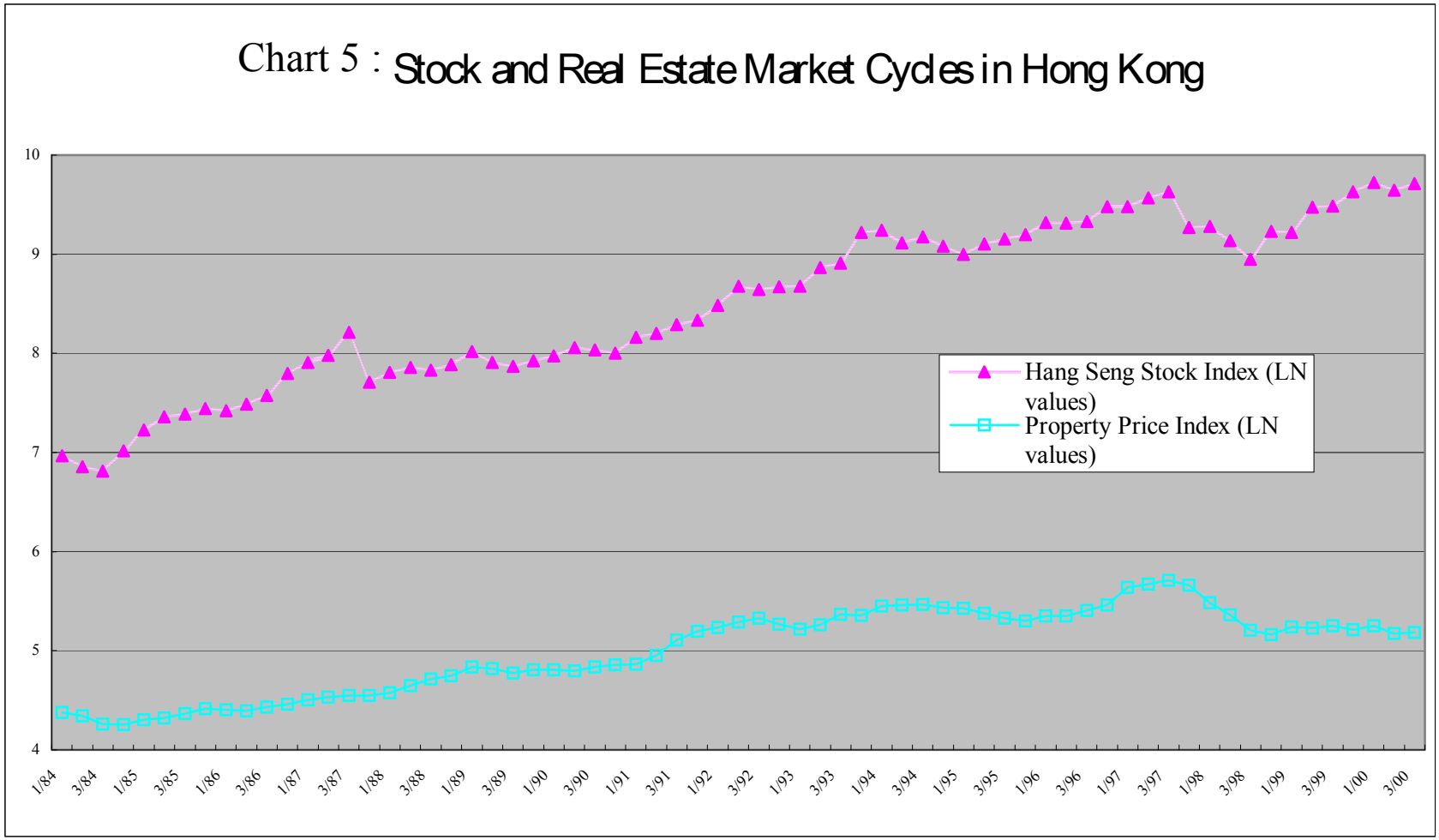
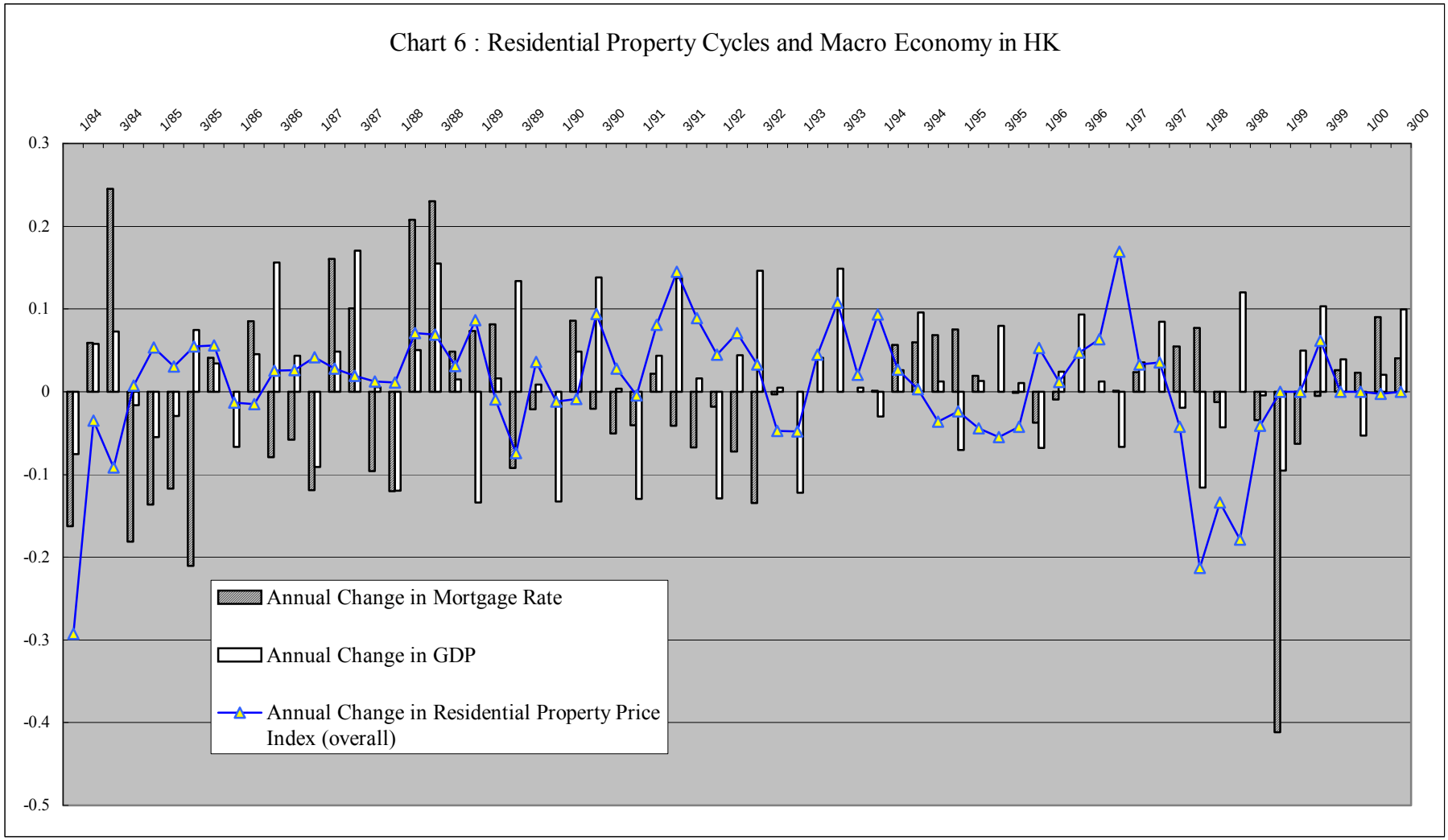


Source: Census and Statistics Department, and Rating and Valuation Department



Source: Census and Statistics Department, and Rating and Valuation Department

Chart 6 : Residential Property Cycles and Macro Economy in HK



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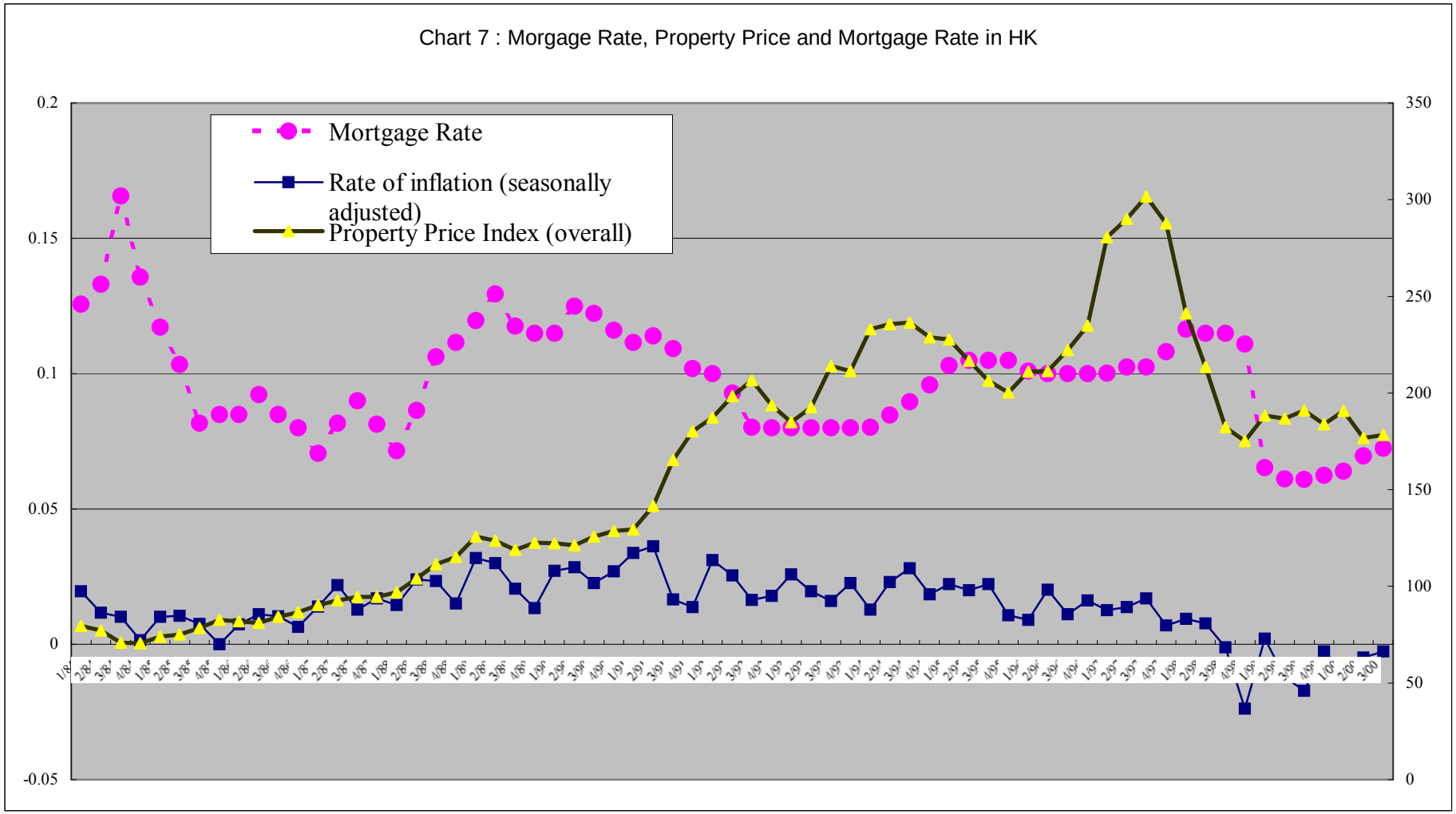

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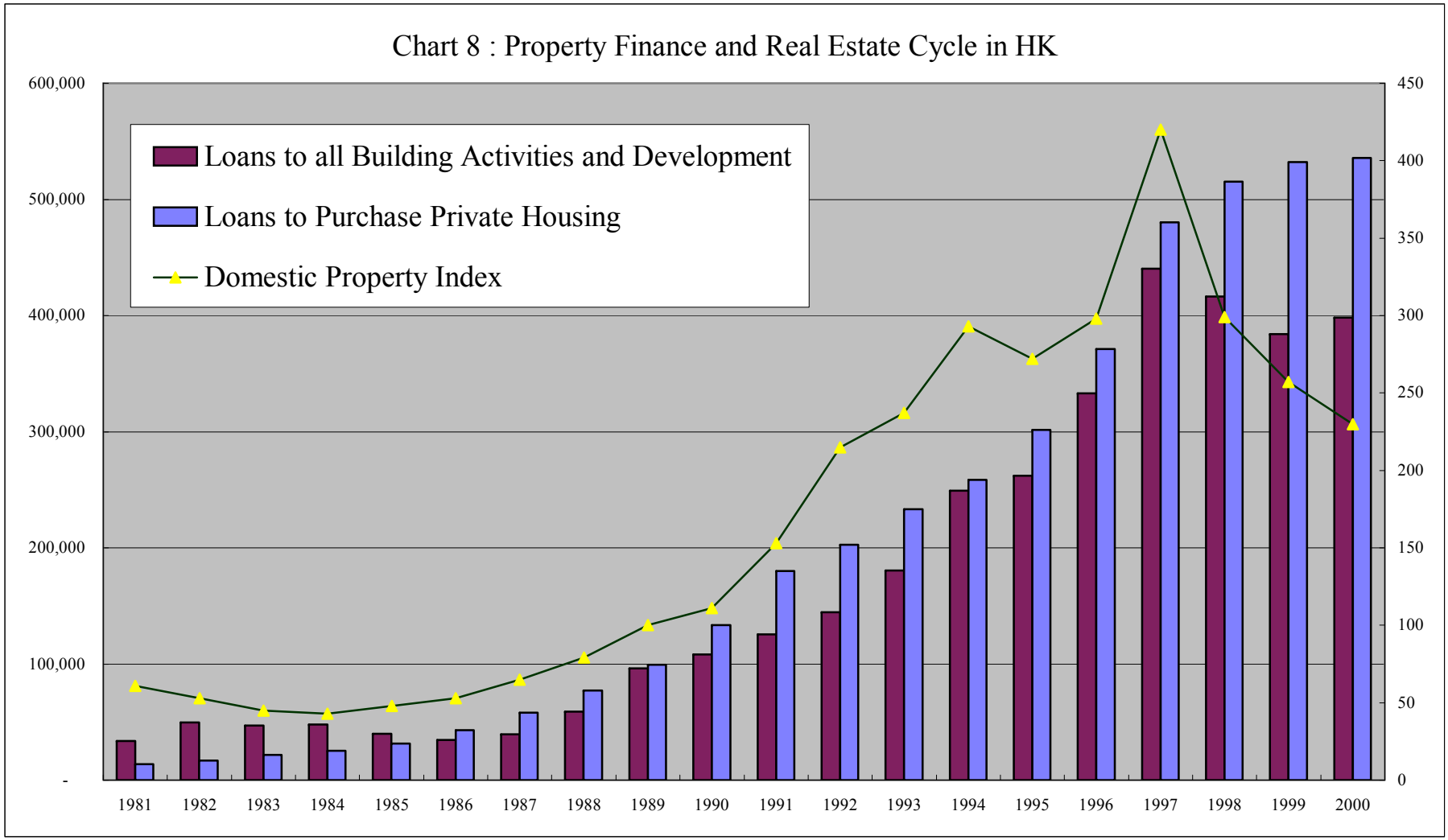

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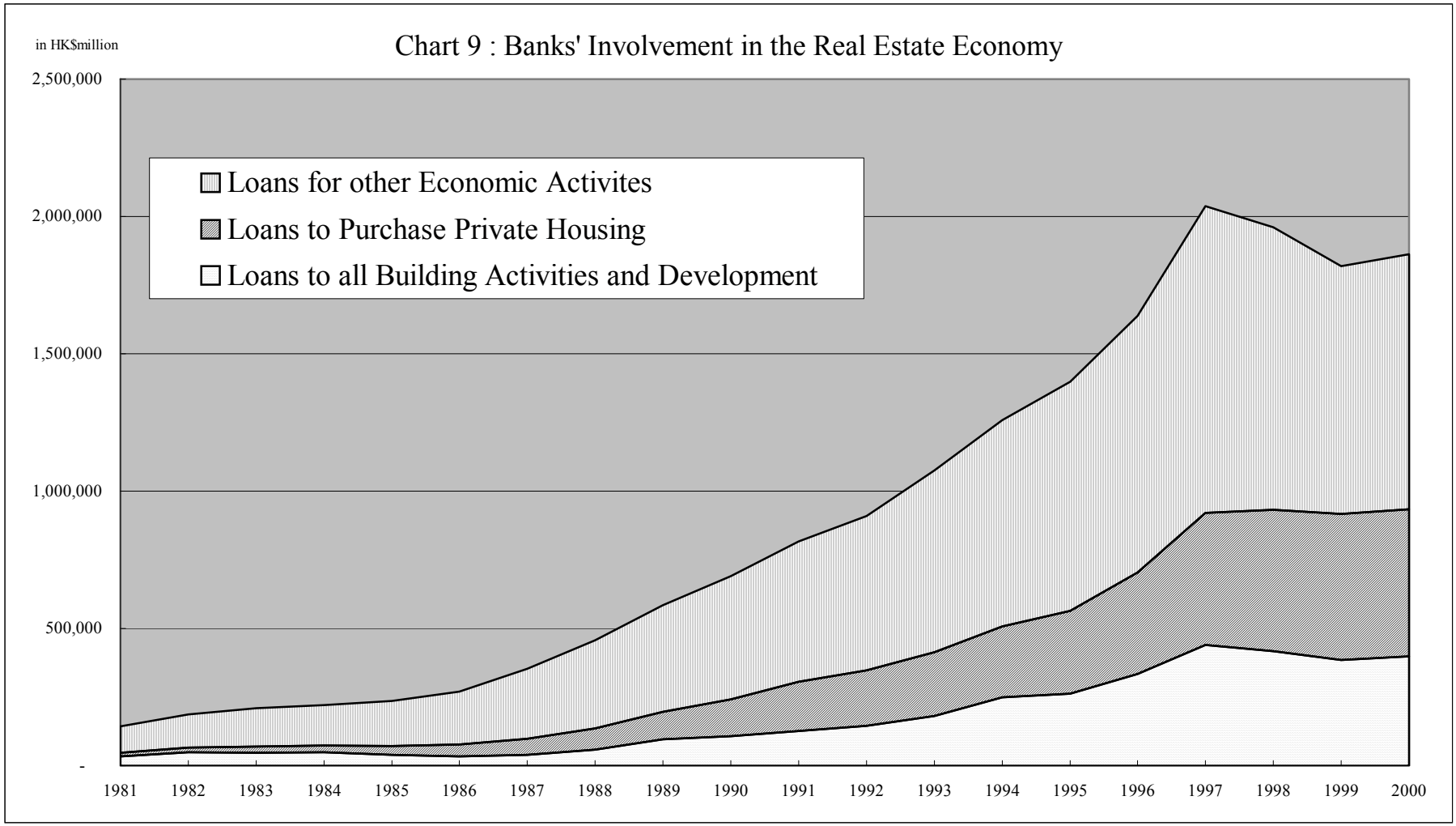

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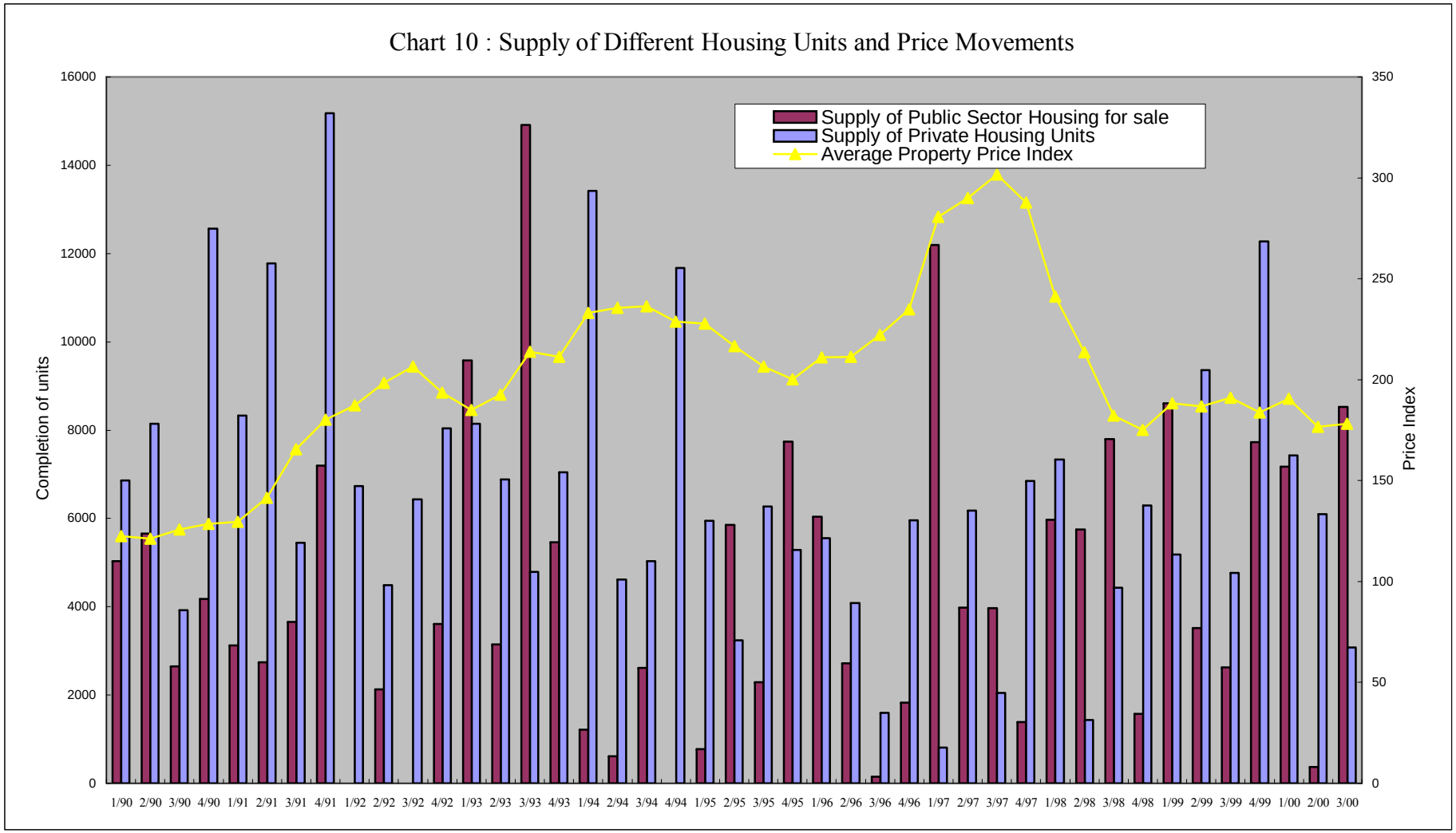

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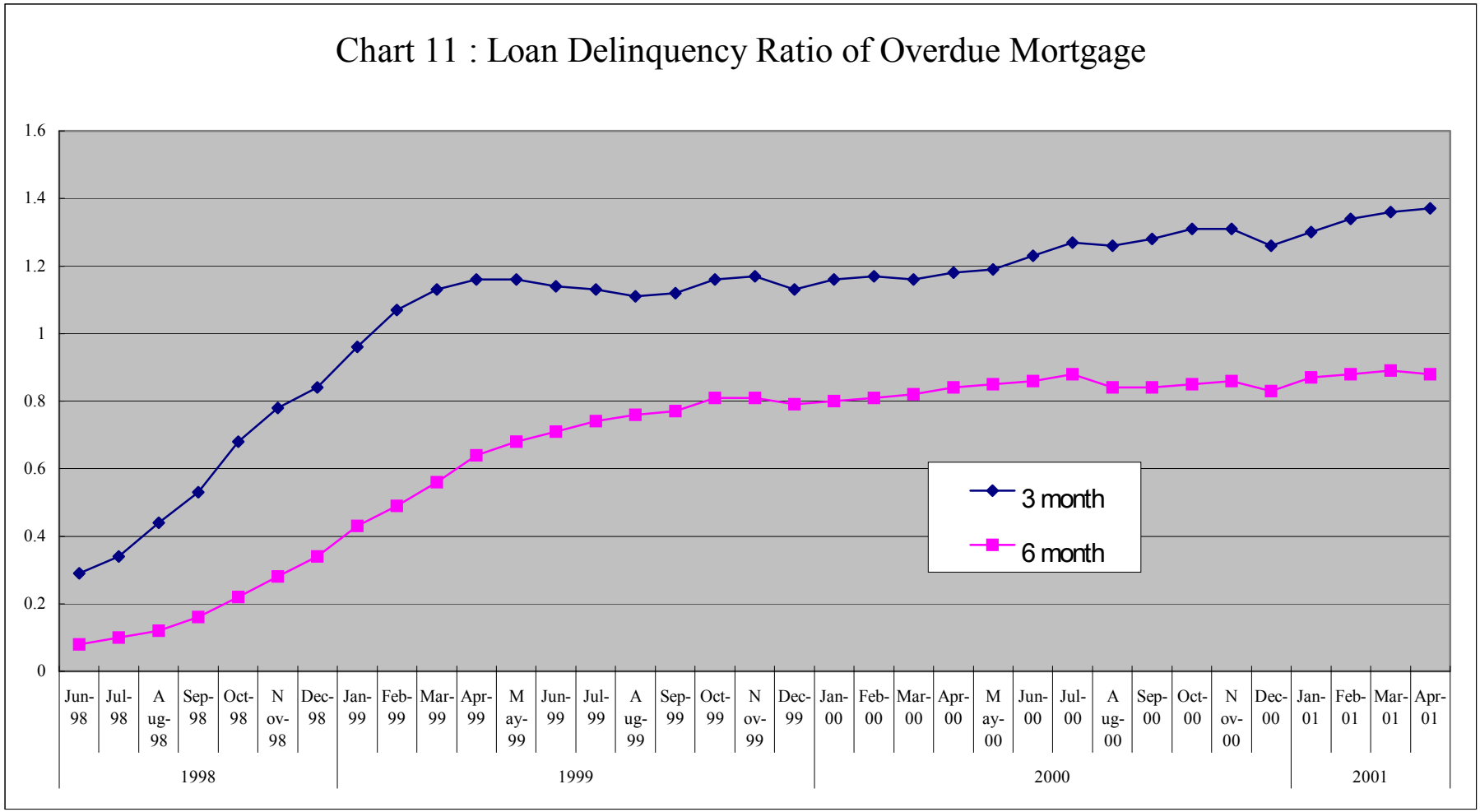

Source: Hong Kong Monetary Authority

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http://www.info.gov.hk/landreg/

http://www.info.gov.hk/rvd/content/index.htm

http://www.info.gov.hk/censtatd/home.html

Chapter Nine Conclusion:

Reconsidering Land Policies in Asia

Natacha AVELINE and Ling-Hin LI

The discussions in the forgoing chapters reflect the fact that land and property markets are managed differently from city to city in East Asia, and that the effectiveness of different land and property policies therefore varies. Clearly, public land and housing policies in most cities have not only failed to adequately allow for the negative effects of property booms on low-income groups, but have contributed in some instances to the exacerbation of the downward adjustment in the wider economy. In this conclusion, we shall review what we consider to be the main weak points of the land policies in the cities feature in this book, namely, the poor monitoring of property markets, the inconsistency of anti-speculation policies, excessive public intervention, the erroneous presumptions of massive land supply measures, and the dangerous deregulation of regulatory frameworks that is currently under process in several of the cities.

Poorly monitored property markets

The Asian financial crisis has highlighted the need for transparency in a range of sectors to prevent shortsightedness in the future macroeconomic performance of emerging economies. Such a need is particularly acute in asset management, and the crisis has empathized the dangers of the mistaken estimation of asset inflation when other

macroeconomic indicators are positively assessed (balanced budgets, low inflation rates, and high saving rates in the case of the East Asian economies). The monitoring of asset value, especially real estate assets, is also needed to improve lending practices across Asia. Banks are now being encouraged to pay greater attention to customer cash flow than to collateral in their credit assessments. Land and real estate value needs to be properly appraised, as a significant part of the credit will remain underwritten by property assets.

Despite the significant move towards disclosure in the banking sector throughout East Asia, there has been no significant improvement in the availability of information on the property markets of most of the East Asian cities and countries since 199, with the exception of Hong Kong. Domestic and international public institutions now provide timely data on a range of macroeconomic, monetary and financial issues on their home pages, but statistics on property assets are scattered across various sources, making international comparisons difficult.

Accurate data on land are particularly hard to find due to the extreme fragmentation of land markets and the composite urban-planning rules (especially floor-to-area ratios) applied to land parcels. A more important reason is the high sensitivity of banking portfolios to changes in land value through the collateralization of loans. Official land values are usually used as benchmark for the assessment of various tax bases (property tax, inheritance tax, capital-gain tax) in many countries, and therefore, public information on land is often bound up in the taxation system, rather than being available from the usual sources of secure market intelligence. In 1974, Japan introduced a land valuing system that was based on the appraisal of a sample of parcels nationwide. Certified real estate appraisers estimate land prices, but their assessments could be revised by local

public committees, enabling price adjustments at will. In South Korea and Taiwan, official data compilation methods were modeled on the Japanese system, but the models have been overhauled, and South Korean official land prices are now closer to real market values than their Japanese counterparts. The methods used to assess official land prices in Taiwan are currently being significantly improved. The key problem with a panel-based system of appraisal, whatever its level of sophistication, is that it ignores real land transaction values and hinges on the information that is recorded in the process of the registration of land titles. To enhance the monitoring of property markets, it is necessary to record of all land and real estate transactions regularly and accurately.

In countries such as South Korea and Taiwan, the weak efficiency of the land markets is mirrored by the low level of professionalism in the real estate sector. The worst example of this can be observed in South Korea, where real estate agents and property developers were discredited by their unscrupulous behavior during the property boom of the late 1980s. In addition, banks were not allowed to finance large private construction projects until 1998, since their resources were mostly allocated to the manufacturing sector.

By contrast, Hong Kong is well endowed with timely and accurate information on the housing and land markets, and boasts highly professional real estate operators who use sophisticated market analysis methods. Three major legacies of the British colonization have led to this situation, which is unique within Asia. First, the principle of transparency in real estate transactions has facilitated the compilation of reliable data. Second, the skilled British certified appraisers, known as Chartered Surveyors, contributed to the development of sound professional behavior and sophisticated analytical methods. Third, the leasehold land tenure system enabled the compilation of

accurate information on real estate by the public sector. As the ultimate landlord of all land in the city and keeper of a well-established system of property rights registration, the Hong Kong government is able to keep complete records of land and property transactions. It also has absolute power in setting land-use regulations on leasehold parcels (subject to applications for change by individual users), and can consequently estimate the potential supply of gross floor area put on the market (although not always as efficiently as the market would hope).

Yet the existence of such comprehensive information does not necessary entail widespread public access to the data. Public authorities have to decide whether they will adopt a transparent policy. As pointed out by Li in chapter 8, even in a highly open property market such as that of Hong Kong, information about the land market can be temporarily kept secret. Market transparency in Hong Kong may have increased significantly since the Asian Financial crisis, but information on land in Shanghai is still very opaque, despite the fact that local government exerts full control over land property and development. Moreover, by contrast to the sound banking practices in Hong Kong, credit is poorly supervised in mainland China and public banks are weighed down with a large amount of bad debt. However, this situation is set to change with the accession to the World Trade Organization (WTO). The Chinese banking system will have to be deregulated to meet international standards.

In Taiwan and South Korea, efforts are currently underway to improve the accuracy of public data on land values. In Japan, official information on land value is likely to remain unchanged in the near future, given the high exposure of the overall economy to land collateral. To help monitor the markets, indices based on hedonic methods, such as that of Hidano and Yamamura (see chapter 3), have been developed in several Japanese

cities, but transparency and immediacy in market intelligence cannot be secured without the collection of actual transaction data.

The availability of information should also be improved to enhance the development of research into the property markets, and to enhance the professionalization of the real estate sector. Full transparency will be required to develop new vehicles for property finance, such as the securitization of real estate, which is currently being developed in many Asian countries.

The inconsistency of anti-speculation policies

In most of the cities examined in this book, public policies that have addressed severe rises in land and real estate prices have taken the form of so-called anti-speculation packages. Such policies were implemented in Taiwan, South Korea, and Japan in the early 1990s, and in Hong Kong in the late 1990s.

Anti-speculation policies are generally enforced with a significant delay, and are often implemented too late. The reasons of this time lag are twofold. First, booming property values are often seen in the beginning as an evidence of good macroeconomic performance. The ill effects of such a boom do not crop up until a few years later. Dramatic increases in land and real estate prices not only threaten to cause rapid inflation and weaken the competitiveness of the economy by making a city too expensive for international firms, but also alter household consumption and saving patterns, reduce available capital for future investment, decrease housing affordability, and contribute to the deterioration of the urban environment. Because they operate outside the market and

are often hindered by bureaucratic red-tape, governments normally realize these problems only when property values are about to reach a peak. At this point, a full-scale market adjustment is imminent even without government action. By the time governments start to impose measures to curb the rising trend, they only serve to exacerbate the downward adjustment that has been initiated within the price mechanism.

The second factor that causes the time lag in the implementation of public policies is the large income windfall received by a wide range of market participants, including central and local governments, from the rising real estate value. Public authorities benefit greatly from the rising incomes generated by booming property markets, either directly from land leases, as in the case of public landlords in places such as Shanghai or Hong Kong, or indirectly from land and real estate taxation. When property prices climb, public authorities face a conflict between taking advantage of the rising income from land property or taxation on the one hand, and solving social issues to maintain their legitimacy on the other hand. Anti-speculation measures are thus primarily aimed at maintaining political stability when growing social discontent challenges the government's legitimacy. This is why reforms generally transfer the blame for the mismanagement of speculation onto scapegoats such as individual owners of large amount of residential land (South Korea), owners who enjoy excessive land inflation (Taiwan and South Korea), owners of vacant land (Japan, South Korea, and Taiwan), and even public-subsidized housing projects (Hong Kong).

Whatever their target may be, anti-speculation measures put the limits of private property prerogatives into question. In Taiwan and South Korea, the state was given a strong prerogative over land ownership. Taiwan has a long tradition of public intervention in the land market, which goes back to the Equalization of Land Rights

(EOLR) policy. One of the major ideas of the EOLR policy was that the normal value of land belongs to the landowner, whereas the excessive part of the value should be regarded as public property. Hence, the introduction of the Land Value Increment Tax, launched in 1956 and fully enforced in 1977, was supposed to take the speculative part of land value away from landowners. A very similar concept gained political favour in South Korea in the late 1980s, following the boom in the property market. This was named the Public Concept of Land (*gong-gae nyom*, chapter 2), under which excessive capital gains, large private land portfolios, and idle property were heavily taxed. Given their strong emphasis on the limitation of private ownership for the sake of social welfare, most of the anti-speculative measures in Taiwan and South Korea have been conceived as long-term measures and maintained over a rather long period. By contrast, anti-speculation policies in Japan and Hong Kong have tended to be short-lived. These policies have generally been removed in the declining phase of the property boom cycles, and tend to vary with the prevailing political climate, although they have been regularly enforced in Japan.

Anti-speculation measures have taken various forms, but a particular emphasis has been put on taxation. The punishment of speculators through the imposition of a heavy tax burden on property transactions or ownership has traditionally been considered in Northeast Asia to be the best way to alleviate social discontent, especially in Japan, South Korea, and Taiwan. Typical anti-speculation devices have been the taxation of capital gains for short-term transactions and the idle land tax. Such measures may be an effective way to curb speculation in an emergency, but cannot easily be maintained on a long-term basis, as they also penalize non-speculative transactions, and hence discourage the consumption of real estate assets and urban regeneration. Exemptions or deductions must be granted to households to spare 'innocent' landowners from excessive and undue tax

burdens. The difficulty in ascertaining the borderline between speculative and non-speculative purposes often produces a complicated set of criteria that merely clouds the principles of taxation and encourages tax evasion. Furthermore, when large tax exemptions suddenly apply, for whatever reason, they severely distort the markets, as is shown by the undesirable effects of the *kaikae tokurei* system in Japan (Chapter 2). Similar remarks can be made about the tax on idle or underused land. As this tax also penalizes individual owners of residential lots who cannot afford to build a house, tax bases are kept much lower than the market value (allowing very low effective taxation rates), and taxation can be easily avoided through a range of exemptions or reductions.

In parallel with land taxation, regulatory frameworks related to land use and construction have been regularly strengthened to prevent speculative transactions. Land-use regulations are particularly restrictive in Seoul, in spite of the dramatic population inflow to the South Korean capital city over the past few decades. This strong control may have affected land prices by restricting land supply, as stated by Son, but by contrast, land-use restrictions, combined with a public monopoly of large-scale social housing development projects and the underdevelopment of real estate credit, seem to have rather efficiently contained land price inflation, despite the intense demographic pressure. As is shown by the charts that compare land and housing prices in the selected cities in chapter 5, Seoul figures are amongst the cheapest cities, despite its high macroeconomic performance and its possession of a population density similar to that of Tokyo.

The taxation of the increase of land value due to resulting from a change of use can be carried out in a positive way, such as with the land premium system in Hong Kong. By allowing developers to upgrade land to higher order use in line with changes in the

socio-economic environment, the Hong Kong government is able to recoup some of the additional land value by requiring developers to pay a premium for the change based on the difference in land value between the old use and the proposed new use. Shanghai has adopted a similar system. Obviously, a complete leasehold tenure system needs to be in place as a pre-requisite for the successful functioning of this system.

Although restrictive land-use regulations may be efficient in containing land value inflation in the long run, a short-term strengthening of the regulatory frameworks is of little use, as is shown by the Japanese experience. Urban planning regulatory frameworks in Tokyo have been regularly strengthened to limit the scope of speculation and prevent further urban sprawl, but the removal of these reforms in the declining phases of the cycles has caused market participants to expect further deregulation, thereby supporting a continuous rise in land values.

Another means to curb speculation has been the regulation of land prices through the public control of land transactions. Measures of this kind were adopted in Japan and South Korea, but did not prove to be very successful. As highlighted by Aveline (Chapter 2), the land transaction control procedure did not prevent the general rise in land prices in the Tokyo metropolitan area, although it mitigated excessive overheating in the western suburbs. In South Korea, the transaction-permit procedure created a gap between market prices and controlled prices, and not only failed to regulate the markets, but also encouraged the market participants to declare underestimated values. These experiences provide evidence that public interference on transactions has numerous ill effects. It hampers the fluidity of the markets, creates more uncertainty, discourages land supply, and may, in some instances, encourage illegal transactions.

The anti-speculative measures mentioned above display several major weaknesses. In addition to the fact that they generally fail to efficiently curb speculation, they tend to be inconsistent in the long run, put too much emphasis on taxation regardless of the subsequent side-effects, and produce an accumulation of complicated rules that may be contradictory. The lack of consistency in these policies and the way they are interpreted and applied provides too much scope not only for corruption, but also for uneven standards.

The monopolistic power of the government over land supply

In a society where the government is the sole landlord and the controlling authority on land development, such as in Hong Kong and Shanghai, market's perception of government policy counts as much as the policy itself. When the Hong Kong government announced at the end of 2002 that they would not sell any more land by auction, and would suspend land sales by application until 2004, it was not a step toward letting the market do its job, as the authority claimed, but quite the opposite. Market perception of government policy, whether fully implemented or not, creates a large impact on the market, and the reaction to the '85,000 policy' in Hong Kong is a classic example. In a television interview in early 2001, the Chief Executive openly stated that this policy target had come a halt as early as 1998, when in fact after 1998 and even after this interview there took place government officials and politicians of different ranks were forcefully defending this policy as the right choice for the society.

What we are trying to argue here is that the interlinking relationship between urban land and other aspects of urban developments is not to be underestimated. A government that is in a position similar to the authorities in Hong Kong, ie. One that is gifted with a monopolistic power over land supply and land use, should always bear in mind that whatever policy is imposed on land urban will have serious repercussions in the society as a whole. It is therefore imperative that care be exercised when weighing the costs and benefits of the various options available when formulating urban land policies. Social cost-benefit-analysis, for example, can be employed so that the policies can be examined in a more thorough manner, as every sector can claim to be a stakeholder in the urban land system.

Market sentiment has been dominant in most of the East Asian property markets due to the inefficient nature of those markets. Because the property market tends to exhibit weak market efficiency, investors and purchasers find it difficult to obtain comprehensive information that they can rely on, except for market sentiment. Market sentiment, especially in a market where the government has a monopoly on the supply of land, is often formed by attitudes toward government policy.

The case of Hong Kong reveals that the political economy of urban land policy is an extremely delicate issue. Urban land is so interlocked with the urban and social systems that any minor change may cause a chain reaction across society. This is especially so when the urban land system is being modified, either moving from the straight socialist system found in most planned economies to a pure market system, or the reverse. To attain the urban land objectives, ‘parental guidance’ may be necessary only to the extent of providing the medium for a long-term framework. Urban land development

is a timely process. Detailed land-supply and land-use control schemes, and a constantly monitored and changing urban land supply policy will only create a more confusing market. The case of Hong Kong shows that social discontent will surface both when urban land prices are rocketing and when they are plummeting.

In Shanghai, we have also seen that government action and policies have a much more profound effect on the market, because the government has such a close relationship with most of the players in the market, and any inconsistency in government action will either leave the market with confusion, or make more room for irregularities.

Erroneous presumptions of 'massive land supply' measures

In addition to measures targeting speculative transactions or land holding, public authorities can be tempted to lower land prices or at lest to limit their further rise by intervening in the balance of supply and demand. Such a policy, referred to here as 'massive land supply policy', has often been adopted in Japan.

The basic idea is simple (perhaps *too* simple). It considers the rise in land prices as being the result of an imbalance between land supply and demand. The notion of a lack of available land sounds convincing, given the very high population density in an urban area such as Tokyo's center and nearby suburbs (ignoring the very large area covered by the Kanto plain). The argument proceeds as follows. If land-use regulations are revised to allocate more land for development purposes, either by the designation of new urban development zones or by allowing the building of more floor surface in existing urban development zones, then the supply of housing or available business space will inevitably

increase, and will consequently provoke a drop in land prices. The argument seems logical *a priori*, but no policy formulated on the basis of this argument has ever lowered land prices or even prevented prices from soaring.

The problems that derive from this argument are twofold. First, an increase in land prices may not be caused by an unbalance between the supply and demand, but maybe a result of the highly speculative expectations of market participants who overestimate the real need for land. If that is the case, then any land policy that puts forward the argument of a shortage in land supply and subsequently liberalizes land-use regulations is very likely to provoke adverse effects, because it breeds a self-filling myth of land scarcity. The second problem with the massive land supply argument is that it totally disregards the effects of floor area ratio (FAR) regulations on land values. When FAR rules applying to a land parcel are increased, additional floor area may be constructed. This has an inevitable effect on the value of the land parcel, even if land prices may not increase in the proportion with the FAR. It is worth noting that, despite this major flaw in the argument, Japanese authorities have kept on using it as a central pillar of their land policies for several decades.

It must also be emphasized that the massive land supply policy contradicts certain aspects of the anti-speculation policies. Although it matches well with the idle land tax, for example, it has contradictory implications in terms of planning regulations, because massive supply implies deregulation, whereas anti-speculation implies the opposite.

Given the poor relevance of both policies and their intrinsic inconsistency, the question remains of how to deal with decreasing housing affordability and the growing difficulty for firms in finding a location in major metropolitan areas when speculation increases land prices to a peak. The main problem is whether this issue should be

addressed indirectly through regulations, or whether it should be dealt with directly through the supply of affordable housing or industrial and office locations. The Japanese experience suggests that indirect policies that targets land markets through taxation or urban-planning rules are no substitute for housing or industrial policy measures. If there is a strong need for stable housing conditions, housing policies designed to meet specific needs of certain target groups, such as public rental housing programs or better housing finance, are mandatory. Similar public intervention may be also required in the industrial property sector. This does not, of course, exempt public authorities from keeping control over land use and construction, and any such measures should be consistent and conceived on a long term-basis.

Dangerous deregulation policies

Japan has a tradition of stop and go in terms of town planning policy, alternatively regulating and deregulating throughout the post-war period. By contrast, land-use and construction rules have been strictly controlled in the other regions featured in this book. Even in the highly open market of Hong Kong, regulations related to land development remain under the full control of the HKSAR government. However, town-planning issues have tended to be regarded differently since the mid-1990s. Among the various factors involved in this change, the widening of the democratization process throughout East Asia (with the exception of a few cities) and the growing influence of the open market approach have played a significant part.

In South Korea, the government recently moved toward the elimination unwarranted market intervention measures and the diversification of land supply

channels. The town-planning system was deregulated to allocate more land for development purposes, and steps were taken to counter the disappearance of the greenbelts. Rules restricting real estate credit and foreign real estate investment were removed. The government suspended land transaction permit requirements, abolished the limits on residential land ownership, temporarily stopped imposing development gains charge, and removed excess profits tax on land. New legal frameworks were established for issuing asset-backed securities, mortgage-backed securities, and real estate investment trusts. The price regulation on new houses was dismantled, and developers were no longer required to build specified a specified percentage of small houses for low-income households. Finally, the very peculiar and old-fashioned Korean lease system of *chosei*, which has been used as an expedient or the lack of credit available to finance real estate, is progressively disappearing.

Taken one by one, each of these measures may be considered highly desirable to improve the efficiency of the property market in Seoul. However, the combination of a rapid opening of real estate to the global financial markets with a sudden deregulation of land-use and construction rules can have a strong destabilizing effect on a property market, especially when commercial banks are eagerly competing to expand their loans in the real estate sector. The experiences of European countries and Japan in the late 1980s suggest that it is very risky to undertake rapid deregulation in more than one field related land policies at once.

In the forecasting and management of risk, Tokyo seems to be falling behind. The large amount of new office and condominium units in Tokyo currently under construction is not the result of an unexpected increase in demand, but is a product of a the sudden

release of sizeable parcels no land (including fallow land previously owned by the Japanese National Railways) and of the deregulation of floor-area-ratio regulations in central locations. In other words, real estate developers operating in Tokyo are taking advantage of the new and unexpected opportunities to build regardless of real demand. Although housing demand is steady in the new large new development projects, largely because of their convenient location near the main central railway stations and the very low interest rates offered by the banks, there is much concern about the prospects of the office market. Companies involved in new development projects are expecting a massive migration of tenants from of the older office buildings to their new, large, prime-location office buildings, but it is questionable whether the office rental market will adjust so smoothly. According to Grenadier's theory, owners of older buildings may grant better conditions to their tenants and by so doing succeed in holding on to them. However, regardless of who finally wins the game, the forthcoming oversupply in Tokyo's office market is likely to hurt the real estate industry, but the erroneous faith in the efficiency of the property market in Japan has apparently not been challenged by the financial turmoil caused by the land bubble.

To summarize, what should be advocated to improve public policies on land and planning issues? There is no single formula that can be applied across East Asia. Policymakers, especially those with considerable power over the market mechanism, must consider the legacy of each local regulatory framework that was formulated from distinct conceptions of the property and public welfare. The findings from all the chapters in this book allow us to make some general remarks about the reconsideration of current policies. First, land speculation should be acknowledged as an ordinary phenomenon, in

the same way as speculation in the financial and monetary markets. Emphasis should be put on reducing the room for speculation as much as possible, rather than punishing scapegoats. This may be achieved with the following three measures: the increase of transparency, the implementation of long-lasting measures, and the improvement of consistency and efficiency. There is still much to do to improve transparency in the property markets in East Asia. Short-termed land policies, along with volatile land-use plans and frequent taxation reforms, have allowed market participants to continue to believe, erroneously, in the structural unbalances of the property market, and to speculate on the further deregulation of regulatory frameworks. In Japan, South Korea and Taiwan, too much emphasis has been put on taxation measures, regardless of the side effects. A better balance and more consistency in planning regulations should be sought in these countries.