

DOCTORATE DISSERTATION

**The Empirical Study Of
The Price Mechanism
In The Chinese Housing Market**

Gu Guowei

**Department of Architecture,
Urban Planning, Landscape Planning
University of Kassel, Germany**

Supervised by: Prof. Detlev Ipsen & Prof. Ulla Terlinden

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Introduction

Chinese real estate market is said to be one of the most exciting and interesting one around the world. Thanks to the rapid national economic growth in the past twenty years, the real estate industry has experienced such a splendid change that it nowadays plays a pivotal role in the national and local economy. Thanks also to the short history and big change of the industry, under the glorious ring, it is awash with serious problems. It should be acknowledged that the development of real estate have contributed a lot to the economy and the welfare of the society. The same heeds should be paid to the problems existed too. Without proper and quick solutions to the problems, the real estate market would be in deep trouble and this might result in disastrous consequences to the economy and others.

In fact, real estate could be classed into several specific areas. Residential real estate, i.e. housing, is one part of it. In Chinese real estate market, may be the same in other countries, housing market is always the heavyweight in the whole real estate market. So it deserves the particular attention. This paper directly deals with one essential factor of the Chinese housing development---the housing price mechanism of the first-hand private housing.

One of the outstanding features of housing market is its locality. Every city has its own conspicuous characteristics. Thus this research concentrated on two richest cities in China, Shanghai and Shenzhen, whereby the housing market is relatively highly developed and advanced.

Actually there are many problems in the housing market in these two cities, such as the price problem, the normalization problem, the structural problem, the vacancy problem. This thesis is only targeted at the price problem. The questions posed are: (1) if the housing price in general is too high? (2) if so, why it is too high? (3) What are the solutions to reduce the irrational high price? By undertaking the preliminary empirical research, this paper will deliver the answers to these three questions, particularly the first two.

Constrained by the resources and availability of information, the methodology of the research is mainly based on data analysis. The data resources are primarily from the official statistic reports, the government regulations, the professional magazines, newspapers, the internet websites concerned and so on. It is worth to point out that the information about Chinese housing market is quite lack of authority and accuracy. Thus it somewhat causes severe trouble to the analysis and research. And, worse, due to the fugacious nature and the complicity of the housing market, it is heavily under-researched by all people. This is to say that, to some extents, the research in Chinese housing market is somewhat very difficult to conduct.

In order to answer the research questions, some hypothesis are put forward. The most important ones are: (1) the standards can be set up to judge the level of housing price; (2) these standards are effective and precise enough to do the job; (3) the price of housing is closely related with its inward and outward natures, its development process and government management policies; (4) the housing price is influenced by many factors and pushed up through a complicated mechanism; (5) in a rapidly developing

housing market, the market forces are always not functioned properly, therefore government interference is sometimes necessary.

The paper is divided into eight chapters. Each chapter begins with an abstract and ends with a summary. The first chapter is the introduction of how the Chinese real estate market, especially the housing market, looks like. Chinese real estate market is now phenomenally big and it plays a very important role in the national and local economy, as well as in many aspects of the society. So it enjoys a bright future. But it also faces stern problems. One of them which the paper deals with is the price problem. The housing price is too high and in recent years it increases too fast. Several indexes are put forward to prove that the housing price had become dangerously high.

From chapter two to the first part of chapter seven, the paper tries to explore why the housing price could be pushed up to such a high level and whether such high level is reasonable by digging deep into the nature of the housing property, the development process and the government management. Chapter two explains the intrinsic and extrinsic characteristics of Chinese housing commodity under the circumstance that it was reformed from a welfare product to a private commodity. Housing becomes one sort of merchandise, an industrial product, so it is meaningful to see how it is manufactured. In chapter three the main factors related with the manufacture are investigated, i.e. the manufacturer, the manufacturing process and other participants. Now that the product has been produced, it can be sold. So price setting must be done. Housing price is quite complicated. Chapter four explains how the structure of the Chinese housing price is, and it puts emphasize on the details of the cost. The micro and macro factors which directly influence the housing price are illustrated in chapter five. Generally speaking, it aims to answer which factors have a strong hold in price setting. In this section, the detailed information about the price setting methods which are practiced in the field are also brought in. Considering that the government influence is so profound in managing the housing market, the issue of what the government does must be discussed. Chapter six talks about which government departments are involved in the job and lists the relevant policies regarding the specific works. Actually chapter seven is consisted with two parts. The first part analyses how the housing price is increased to such a lofty point, based on the investigations from chapter two to six. The second part of the chapter discusses, preliminarily, the possible solutions to solve the price problem. Among them, the government intervention is strongly recommended.

Chapter eight is the conclusion of the paper. It summarizes all the findings and results of the research and points out the directions of further study.

Here I want very sincerely to thank Professor Detlev Ipsen and Professor Ulla Terlinden for supervising this research. I also want to thank others in helping me finishing this work.

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Chapter one: The Chinese housing market and its problems

□Abstract. In this chapter, the general situation of the Chinese housing market will be introduced. In doing so, the brief history of real estate development, the three-tier structure in real estate market, the housing types, the huge scale of the housing market and the great contributions the real estate and housing industry made to the economy are exhibited. It is true that the future is shining. It is also true that there are big problems existed.□

1.1 The general picture of the Chinese housing market

1.1.1 Housing market introduction and the present market scale

1.1.1.1 Housing market introduction

In the national meeting of the Chinese communist party in 1978, the reform policy was officially made into the state policy. From then on, the Chinese society experienced a fundamental change. The economic system had been turned from absolutely central planned economy to the mixed planned and market-oriented one. That market economy was banned and illegal had been turned to be encouraged and protected, which was still put into the recently amended constitution. Thanks to the policy-change, the Chinese economy and the society as a whole therefore made a great step-forward and the living standard and the image of the country had been gorgeously improved.

Real estate was completely a new concept to the generations of the “new China”. It began to take form in the very early of 1980s. Due to its vigor, attractiveness and contribution to the society, it grew breathtakingly in a short history of little more than twenty years and quickly became so important that it stood out to be one of the mainstays of the Chinese economy. With regard of housing, it also experienced a top-down change. Housing, like other goods, was a complete welfare product of the state before 1978. With the reform progress and the development of real estate industry, it was transformed into the commodity and became more and more important to all sides. In the last twenty years, public housing has been withering, whereas private housing blooming. Now the proportion of the former in the housing market is much less than the latter. Housing is within the scope of real estate and encompasses the large share of it. The big market scale and the considerable contributions of real estate to the nation and the people are represented by that of housing.

In China, all the housings were belonged to the state before 1978. So we could call that the housing were 100% public housing. With the advance of the economic reform, from 1978 to 1996, the market share of public housing got smaller and smaller. Pushed by a series of policies enacted, like the government’s encouragement for the urban citizens to buy the house rather than continuing to rent the public house, and by the market growth, private housing gradually took over the public housing, especially in the economically active cities like Shanghai and Shenzhen. Since 1996, in which year the government stopped the practice of distributing the housing freely to the civil servants, private housing had been in a dominant position in these two cities.

There is a three-tier structure in Chinese real estate market. The first-grade real estate market is defined as land market. The second-grade real estate market is defined as new building market (in housing, it is called first-grade housing market). The third-grade real estate market is defined as old building market (in housing, it is called second-grade housing market, namely second hand housing market). Given that all the lands are the property of the state and the state does not sell the lands to the parties who need them, the land market is actually a lease market. The methods of land-letting were in the past mainly “agreement transfer”. But in recent years, the method of auction was more

and more adopted in most big cities. In the housing market, generally speaking, the first hand housing sector is more active and rule-abiding and the transaction volumes are bigger than that of the second hand one. So the first hand housing sub-market is paid more attention by the people concerned than the latter one.

As to the supply side of the housing market, the dominant role is played by the developer, namely real estate company (in China, there is very small proportion of real estate companies which do not engage in housing development). The developer is responsible for everything the development process requires. It secures the finance and acquires land through various means and then organizes, manages and cooperates all the participants like the design company, the construction company, the materials supplier and others to conduct the process of housing development, and finally sells the product. Housing is divided into many types like commodity housing, economical housing, low-profit housing, facility housing, etc. Of course, commodity housing is the most eminent one, which can be further divided into the types of low storey housing, multi-storey housing, low high-rise housing, high-rise housing, townhouse, villa and so on. In demand side, housing is purchased mainly for living although the investment purchasing has become more and more popular, and most of the housings purchased are accomplished through mortgage. Among the age group of the housing consumers, the one below 35 years old is the main force, which is due to the change of the social conception. There is another noteworthy phenomenon in the housing consuming. Quite a lot of housings are bought by the people who are not the local residents of the city and who are from the surrounding cities and regions. They usually have a strong desire to purchase and possess a strong capability in term of finance. This phenomenon will be discussed in later chapter.

1.1.1.2 The big scale of the Chinese housing market:

(1) In national level in 2001(from national statistics)

- Housing investment: 58.3 billion US Dollar (including economical housing. The same below).
- Newly housing construction: 378 million square meters.
- Housing selling areas: 199 million square meters.
- Housing income: 49 billion US Dollar.
- Real estate company number: 29552.
- Real estate employment: 1.06 million.

(2) In Shanghai in 2002 (from municipal statistics)

- Housing investment: 7 billion US Dollar.
- Finished housing construction: 18.8 million square meters.
- Housing selling areas: 18.5 million square meters.
- Housing income: 11.2 billion US Dollar.
- The rate of individual housing purchase: 98%.
- Home ownership: 75%.
- Land transfer for housing: 13.9 million square meters.
- Housing pre-selling approved: 24.8 million square meters.

(3) In Shenzhen in 2002 (from municipal statistics)

- Finished housing construction: 8.9 million square meters.
- Housing selling areas: 7.4 million square meters (including pre-selling).
- Housing income: 5.4 billion US Dollar.
- Housing selling areas: 8.1 million square meters.

--- Housing pre-selling approved: 6.9 million square meters.

1.1.2 The important position of real estate and housing industry in the economy

1.1.2.1 The rapid economic growth in the last decades

Ever since the adoption of the so called“open-door”policy in 1978□ the Chinese society has experienced a dramatic transformation. From isolation to openness, from highly centralized economy to mixed economic system, from a neglected country to playing an active role in the world stage, China emerged from the disastrous situation of chaos, collapse, self-destruction to become the world sixth largest economic entity (the GDP figure of year 2003). Of all the achievements, the rapid economic growth in the recent years is one of the most ostensible one. The GDP growth rate (Table 1-1), from 1993 to 2003 has been well over the world’s average rate. It is not totally over-exaggerated to say that, while the main developed countries being in recession since this early decade, China to some extent plays the role of the locomotive in the economic development of Asia and even the globe.

Table 1-1 National GDP from 1993 to 2003

YEAR	GDP□UNIT□100MY/BUSD#□	GROWTH RATE□COMPARABLE PRICE□
2003	116694/1413	9.1%
2002	102398/1240	8%
2001	95933/1161	7.3%
2000	89442/1083	8%
1999	82067/ 994	7.1%
1998	78345/948	7.8%
1997	74772/905	8.8%
1996	67795/821	9.7%
1995	57733/699	10.2%
1994	43800/530	11.8%
1993	31380/380	13.4%

Source□The annual statistics report from the National Bureau of Statistics of China.

The exchange rate□1 USD = 8.26 Chinese □. And BUSD stands for billion US dollar. All the figures in this paper will be exchanged at this rate.

1.1.2.2 The economic problems and the contributions of real estate industry

The Chinese economy has been in well progress thanks to the reform campaign launched more than twenty years ago. But the great results were not achieved without the price and sacrifices. Now when the reform process enters its new stage, there are five big problems which the Chinese government faces. They are (1) the enormous bad assets in the state-owned banks; (2) severely distorted structure in the stock market; (3) unemployment and redundant labor force in the countryside; (4) the state deficit and weak domestic demand; (5) the shrinking income of peasants.

The potential damages of these big problems are huge. They will result in not only economic crisis, but also social troubles, or even social unrest. The weak domestic demand and over-capacity of the industry production have been sustained for several years. The deflation caused by them has made the market in the doldrums and the consumer price index has been in the negative territory for

some years. The unemployment situation is even bleak. The official unemployment rate in the urban areas is 3.6% in 2001. This figure is seriously fraudulent, because it excludes “off-position workers”. If these are accounted, the unemployment rate will rise to 6.3%. Actually there are a lot of people who are semi-unemployed or stealth-unemployment. In the countryside, the unemployment rate is estimated at 20%, which means nearly two hundred million are searching for job somewhere, mainly in cities ¹. And there are about one million newly graduated students annually who will also join the workforce.

To some extent, the feeble market and tremendous unemployment pressure are intensively crying for a high growth economy. We learn from the Table 1-1 that the average GDP growth rate in these 11 years is 9.2%. Such a high growth rate is necessary for the economical development itself, and is also vital to alleviate the pressure of the social reality.

The monetary situation report of the third season of 2002 published by the People’s Bank of China (China’s central bank) said that in 2001, the direct contribution of real estate industry to nation GDP is 1.3%. Indirect contribution is 0.6%-1.2%. Adding up the figures, the total contribution is 1.9%-2.5%. In year 2001, the national GDP is 7.3%, so the real estate industry alone donates about 30% of the GDP. This is astonishing.

Since 1994 ², the growth rates of real estate industry have been far more above the GDP rates (Table 1-2). The average growth rate in the recent five or six years is around 20%. From 1998 to 2002, the real estate investment accounts for 12.6%,13.4%,15%,16.9%,17.9% and 30.1%,32.8%,37.1%,42.9%,44.8% in the fixed asset investment and capital construction investment ³ of the nation, respectively.

By virtue of production, circulation and consumption, the development of real estate industry touches thousands of products from outside sources. It established the close relationship with hundreds of industries like construction materials, metallurgy, chemistry, textiles, mechanics, public utility, finance, insurance, electronics industry, etc. Along with the rapid progress of the real estate industry, these sectors will be strongly pushed ahead. It was estimated by the National Statistics Bureau that every one hundred dollars of real estate investment will result in totally two hundred and eighty six dollars of production from other industries concerned. The “pulling-coefficient” reaches to 1: 2.68.

Table 1-2 The real estate investment from 1994 to 2003.

YEAR	REREAL ESTATE INVESTMENT □ BUSD □	GROWTH RATE □ COMPARABLE PRICE □
2003	122	29.7%
2002	94	21.9%
2001	76	25.3%
2000	59	19.5%
1999	49	11%
1998	43	12.6%
1997	38	-3.4%
1996	46	21.5%
1995	34	21.4%

1994	22	41.3%
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Source □ The annual statistics report from the National Bureau of Statistics of China

1.1.2.3 Housing industry in the real estate industry

In China, real estate industry is concentrated in urban areas. In city, the real estate industry is mainly composed of residential real estate, commercial real estate, office real estate and industrial real estate. The industrial real estate is a new concept and it occupies a very small share of the industry. Commercial and office real estate is high volatile and still embraces a petty proportion of the whole market. Of the four types, the residential one has been in a predominant position. "... the Chinese property market is virtually a housing market." (Zhang, 2002) This can be verified by the percentage of housing investment in the real estate investment in Table 1-3. It has been showed that the real estate industry plays an important role in the national economy. Given the bulk share of the housing industry in the real estate industry, we can thus confidently say that this role is strongly supported by the housing sector.

Table 1-3 the percentage of housing investment in the real estate investment

YEAR	REAL ESTATE INVESTMENT(BUSD)	HOUSING INVESTMENT [#] (BUSD)	PERCENTAGE(%)
2001	76.8	58.3	76
2000	60.3	46.7	77
1999	49.7	37.2	75
1998	43.8	28.5	65
1997	385	292	76
1996	393	283	72

Source: The figures of 1996 and 1997 are from the Real Estate Bureau, Construction Department of China. The figures of 1998-2001 are from the annual report of the National Bureau of Statistics.

Housing investment includes fully commercialized housing and semi-commercialized one called economical housing.

1.1.2.4 The importance of housing development

The real estate industry in which the housing sector is acted as the representative has firmly underpinned the economy of the nation. In the carrying-out of the state strategy of enlarging the domestic demand, residential housing consumption and real estate investment had played an important role. The constant improvement of the living condition also brings a new development of the residents' dwelling pursuit and pushes the overall stepping-forward of the society. That the citizens become the main body of the housing consumption and housing turns out to be the fortune of the household raises the residents' consciousness of property and the concept of property right and. Thus it promotes the community development, benefiting the employment and cultivates the awareness of self-management and democratic management of the residents. Accompanying the residents' changing consciousness of living from satisfying the subsistence to aspiring to living quality, living comfort, the functions and the environment of the newly built housing have got better. This therefore brought up the increase of the level of the public utility facilities and the services. Housing construction contributes a lot to the improvement of the urban function and the urban appearance. ⁴ "Good housing may contribute in many other ways to a productive economy. ... Housing and environmental investment in local areas may lead to a reduction in crime and better community pride." (David, 1996)

1.1.2.5 Real estate industry, housing industry in Shanghai

Located in the east coast of China and at the mouth of the world's third largest river---River Changjiang, Shanghai is the largest city in China, with a permanent resident population of 133.4

million, and is the economic, financial, trade centre and one of the most advanced and wealthiest cities in China. In national level, the per capita GDP reached USD1090 in 2003⁵. But as early as in 1993, the per capita GDP in Shanghai passed over USD2000, over USD3000 in 1997 and approached USD5000 in 2002. Shanghai is proud of its relatively rich population, its rapid economic growth and being one of the most successful domestic and international investment place in China⁶.

In 1980s, in terms of development in China, the biggest event is the development of the “special development zones”. In 1990s, however, the biggest event is the development of Pudong in Shanghai. The central government paid a lot of attention to the development of Shanghai, especially to the area called Pudong which is on the other side of River Huangpu which is the old part of the city and where it was highly developed in the past decades. On top of the focus of the central government and the favorable policies rendered thereafter, the success of the application of the world’s exhibition of 2010 also gives a massive boost to the development of the city.

With a very favorable environment, the economic growth rate of Shanghai had been keeping at two digits in the last ten years. At the same time the image of the city was also changed dramatically. High rise buildings are everywhere. The whole city is dubbed as a huge construction site. The city becomes more advanced and the living conditions of the citizens become more palatable. Real estate industry is one of the pillars of the local economy and also enjoys a fast growth in the past years (Figure 1-1). Real estate contributed 5.2% to the city’s GDP and it increased to 8.4% in 2004. (Niu, 2005) And being the same picture as in the national level, the housing industry in Shanghai plays a major role in the real estate industry (Table 1-4).

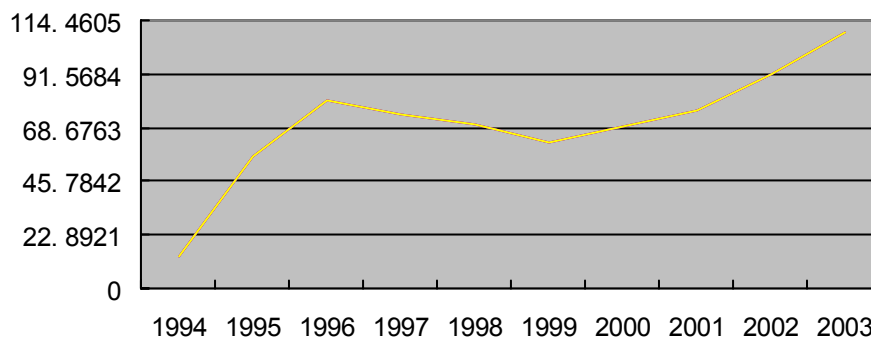


Figure 1-1 Real estate investment of Shanghai from 1994 to 2003

Source: Annual statistics report of Shanghai and Construction Department of Shanghai.

1.1.2.6 Real estate industry, housing industry in Shenzhen

Located in the south of Guangdong Province and faced with the South Sea, Shenzhen benefits a lot from its geological location, particularly from the vicinity of the powerful economic entity of region---Hong Kong. It is not inappropriate to claim that the breathtaking growth of Shenzhen definitely was initiated and maintained by the massive transportation of capital, equipment, investment, technology and management from Hong Kong. The economic influence from HK can be felt everywhere in Shenzhen⁷.

Table 1-4 The percentages of real estate investment to the fixed asset investment and housing investment to the real estate investment in Shanghai

YEAR	FIXED ASSET INV.	REAL ESTATE INV.	(3) =	HOUSING INV.(BUSD)	(5) =
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	(BUSD) (1)	(BUSD) (2)	(2)/(1)	(4)	(4)/(2)
2003	30	11	37%	9	82%
2002	27	9	34%	7	78%
2001	24	8	31%	6	75%
2000	23	7	31%	5	71%
1999	23	6	28%	5	83%
1998	24	7	29%	5	71%
1997	24	7	31%	6	86%
1996	24	8	34%	6	75%
1995	19	6	29%	5	83%

Source: Statistics Bureau of Shanghai

Compared with the other ancient cities in China, Shanghai is a very young city with a short urban history of less than two hundred years. After one hundred years of development, it became the largest city in China. The history of the city of Shenzhen is still much shorter compared with Shanghai. Shenzhen was established as a city almost in a night at the beginning of 1980s and ever since has been growing like a balloon. A very small fish town with a population of just several thousand before 1970s, now it boasts a population of more than six million at the end of 2002. As the most successful of the four special economic zones, this young city dares to challenge the positions of the more mature and bigger major cities in China, in economic, technological terms. In 2002, its GDP ranked fourth in all the cities and per capita GDP is USD 5561.

The Chinese real estate industry was actually originated and took shape in Shenzhen, which was imported from HK, and in the following twenty years, it had been growing steadily and leading the way of the industry development in China. Real estate industry had been one of the pillars of the city economy, especially in the last century. In many means, the dramatic change from a fish village to a famous metropolitan city, it is not hard to imagine this industry did its job well. Like the situation in the nation and in Shanghai, housing industry also play its critical role in the real estate industry. (May be the share is bigger. In 2002, housing investment is 84% of the real estate investment⁸.) Its job was not bad done either. At the beginning of 1980s, the average housing areas of per person is 3 m². In 2002, it was 21.8 m².

1.1.3 The bright future of the industry development

1.1.3.1 People's ability and desire for the better life

Before the implementation of reform policy at the end of 1970s, China was a very poor and backward country, judged in terms the figures like of national GDP or management, technology, information. In fact, Chinese economy was teetering at the edge of collapse at that time. Thanks to the good policy and the intelligence and the hard works of the people and others, China now is brand-new compared with that of the past, prominently in the big cities.

Along with the rapid economic growth, the people also get richer. On January 21, 2004, the official Xinhua News agency announced that for the first time, in China, the per capita GDP of 2003 was over USD1000. This is not just another ordinary figure. Per capita GDP of USD1000 is claimed a threshold in the development process of one country, and based on the proved world experience it invokes the fundamental change of the consumer structure of the society. The old structure will be upgraded to the development type, hedonic type. The luxury goods of the past will be regarded as a necessity.

Of the most essential elements of ones life, housing is obviously the one which people pay

great attention to. It certainly has a tremendous impact on the living quality of the people. Now that people are getting richer and richer like the citizens in Shanghai and in Shenzhen where the per capita GDP is around USD5000 or above, people will pursue a better living condition. This usually means they want to improve their living conditions and dwell in a more spacious, higher quality and more favorable environment. The desire for better housing is endless. (Bian, 2004) This combination of ability and desire creates the great opportunity and sustained impetus for the development of the housing industry.

1.1.3.2 Government policies

It is estimated that in the past twenty years, from 1980 to 2000, the development of the real estate industry has been keeping a fast rate and 20.3 billion square meters of housing had been built during this period. In order to further the development, the government made a clear policy towards the housing construction. To the year 2010, housing development, in urban areas, should reach the target of “one apartment one household, one room one person” and increasing the construction areas per person from 20.4 square meters (2001) to 35 square meters, the construction areas per family from about 70 square meters to 90-120⁹ square meters (Shi. Yang, 2001).

In year 2001, the Chinese population was above 1.3 billion, of which the urban population is around 5 hundred million (G. t. Wang, 2002). So if the government target is to be met, in the 9 years, the total construction areas which need to be finished are 7.3 billion square meters. Each year is 0.81 billion.

$$(35- 20.4) \times 500,000,000 = 73,000,000,000 \text{ m}^2$$

In China, the average construction areas of one household, which are popularly considered acceptable for a family to live at present and in the near future, are around 100 square meters (net floor areas are around 80 square meters, a little bit lower in high rise buildings). So every year there are more than 8 million units of new housing need to be built.

This calculation just indicates the newly increased areas which are needed to meet the target of 35m² per person. It makes the premise that the status of the existed housings built previously does not change. But in reality this is to most extent not true, because quite a lot of them were in poor conditions and incomparable with the high demands of the present society. They will be upgraded and demolished. This is another part of the new buildings which will be accrued in the near future instead of the 7.3 billion square meters.

In 2003, there were about 260 million square meters of housing in Shanghai, 20 square meters per person. The municipal government pursued the policy of “one apartment one household, one room one person” too and set a target of 26-27 m² per person in 2007. So in 4 years of time, 90 million square meters of new housing will be built. In Shenzhen, the average living space of one person is 21.8 square meters in 2002 and every year the newly built housing areas have been over 10 million m². The government pursues the policy of increasing the quantity, as well as the quality.

1.1.3.3 The urbanization drive

It has been verified that urbanization is the natural result of the modernization of a country. With the development of economy, technology and the society, city becomes more and more important and attracts more and more resources. More people enter into the city to search the opportunities and the cities just get bigger and bigger. While the old towns and cities swell, the new ones are emerged. Thus the country becomes more and more urbanized.

This phenomenon is the usual process of industrialization and it occurred every where in the world, and time and again. In the situation of globalization trend nowadays, the process is

accelerated. No exception in China. And urbanization is also the official policy the government promotes. In the future planning of the Department of Construction of China, in mainland China, there will be 1000 cities in 2010 or a little later, 20-25 thousand towns. The yearly urban population growth rate will be about 4%-5% and each year there will be 16-17 million newly increased urban population. The urbanization rate will reach 45% and the urban population will be 600 million in around 2010. In other words, in the 8 years from 2003-2010, there will be additional 100 million urban populations. If the government target of 35 m² per person is accomplished, another 3.5 billion square meters of housing are required.

Up to 2002, it is estimated that the urbanization rate of China is 39% (G.T. Wang, 2003). But in 1970, most of the developed countries had reached a high level of urbanization. The urbanization rate of Japan is 83.2%, 79.1% in UK, 75.2% in USA, 88.5% in Australia, 67.9% in France (W.F. Smith, 1975). The Xinhua news agency reported on 21/05/2001 that China's urbanization rate will increase to 60 percent within the next 20 years. If China is to become a developed country, there is another 20% increase to come. Urbanism always means the demand for housing. So faced with such a huge potential, Chinese housing industry has a bright future.

1.1.3.4 The urban re-generalization

Unlike many big cities in the western world, Chinese big cities had been long time in the bad shape. The upgrading and construction of urban infrastructure and facility had been neglected by the various governments. Between 1949 and 1978, the country was dominated by central planned economy and constantly involved in severe political fights. There was no private market. The housing was a welfare product of the state. Thus the quality of the housing and the living conditions of the people were miserable. These large amounts of housing are still occupied by the city dwellers, yet most of them are in decaying and considered not suitable for the citizens in the future. The campaign to change the situation is called “old city re-generation” and this is also the official policy the government supported vehemently. The re-generation campaign will require new housing construction as well ¹⁰.

1.2 The main problems in the housing market

1.2.1 The price problem

1.2.1.1 The arguments

Housing price is certainly always in the spotlight when we talk about the housing market. No exception at all in Chinese housing market. Given the pivotal role housing price plays in the market, it attracts the attention of many people in and out of the field and was discussed and argued time and again. There is no absolute consensus in whether the Chinese housing price level is appropriate or not. Some plainly denied the claims of high housing price (Bao, 2003, Gu, 2003). Some used more tactful terms like “the present housing price could be recognized as the somewhat disharmony resulted from the rapid economic development and transformation of economic model” (Liu, 2003). But the majority of people in the society, no matter the professions or the consumers, think the housing price in China, particularly in the prosperous costal cities, is not reasonable and too high. They appealed in various cases for the government to take measures to curb the price level.

The arguments are derived from the difficulty that it is hard to judge the housing price level properly. If there was a standard and it was accepted and the calculation was agreed by all, the arguments would be easy to deliver the results. Unfortunately it is not the case. There is actually a possible criterion and it is also broadly acknowledged, i.e., the ratio of housing price to household

income. But the problem is that the calculation of the ratio is not so easy. It will be further discussed later.

1.2.1.2 Housing affordability in Shanghai ¹¹

As mentioned above, Shanghai is the largest city in China and is one of the most modernized and richest Chinese cities. In 2002, the populations in Shanghai were 133.4 million. In the 2002 statistics report from Shanghai Bureau of Statistics, the average yearly income per person was Chinese ¥19452 and disposable income per person ¥13250. The average family populations are 2.9. The Construction Bureau of Shanghai revealed that the average housing price in Shanghai in 2002 was 4007 ¥/m². The average floor areas of one typical new housing apartment are estimated 100 square meters ¹².

(1) The ratio of housing price to household income (R-HP/HI) in 2002 in Shanghai ¹³:

$$R\text{-HP}/HI_{sh} (1) = 4007 \times 100 / 19452 \times 2.9 = 7.1$$

Here the household income is calculated as ¥56411 (19452 × 2.9). This means that all the family members are counted as income-earner. Actually, this is not the case. So we should change the household income. Considering the factor of unemployment, the average number of income-earners in the family is 1.52 ¹⁴.

$$R\text{-HP}/HI_{sh} (2) = 4007 \times 100 / 19452 \times 1.52 = 13.6$$

In reality, the salary is the chief source of income in Shanghai (in China as a whole as well) and psychologically people rely on this part of income to judge their ability to buy house. In 2002, the total sum of salary in the city is ¥73.31 billion and the total employment population is 5.76 million. So the average salary per person is ¥12731.

$$R\text{-HP}/HI_{sh} (3) = 4007 \times 100 / 12731 \times 1.52 = 20.7$$

Based on the author's knowledge of working in the housing industry for more than a decade and numerous market research reports, more than half of the housing purchasers are below 45 years old. Under this circumstance, the child is still young. Thus the income-earners in the family are parents. And if the employment is involved, the ratio may even be higher.

Now let's turn the attention to the housing price. Many people know that in the field of real estate the three golden roles are location, location and location. The place of living is concerned not only with the people's living convenience and living quality, but also with the social activities, child's future and many others. The golden roles are very much applicable in Shanghai nowadays and will not be abandoned in the foreseeable future. The suburbanization campaign was lunched many decades ago in western countries. But it went a very slow path in China, even in Shanghai and Shenzhen. In Shanghai, the inner ring area is still the most favorable area for people to live.

The average price of 4007 ¥/m² is the price covering all the housings of the whole municipality. There are a lot of residential quarters which are located far away from the city center and people usually do not incline to live in there. In the official city planning, there are three rings, inner ring, middle ring and outer ring, which indicate the traffic distance from the city centre and therefore rank the preferences of living places for people. The housings inside the inner ring are considered to be the most suitable for living, the middle one the second, the outer one the third. So it is better to evaluate the affordability of housing by referring to the housing prices of these areas.

Within the rings, the prices are different district by district because of the economical, social, cultural and historical differences. The inner ring area covers 10 districts, among which the prices in districts of Huangpu, Jinan, Changning and Xuhui are obviously higher than that in districts of Yangpu, Zhabei, and Puduo. We will select the prices of ordinary housing in each district and

calculate the average prices ¹⁵. (Please see Appendix 1)

The average price of inner ring area: 6287 ¥/m²

The average price of middle ring area: 5265 ¥/m²

The average price of outer ring area: 4012 ¥/m²

The average price of the whole ring areas: 5188 ¥/m²

Now lets calculate the R-HP/HI_{sh} again using the new figures.

$$\text{R-HP/HI}_{\text{sh}} (4) = 5188 \times 100 / 19452 \times 2.9 = 9.2$$

$$\text{R-HP/HI}_{\text{sh}} (5) = 5188 \times 100 / 19452 \times 1.52 = 17.5$$

$$\text{R-HP/HI}_{\text{sh}} (6) = 5188 \times 100 / 12731 \times 1.52 = 26.8$$

This figure shows that if an ordinary family wants to buy a house which is located in the appropriate area, it needs to save 26 years of ALL the family's, not one member's, accountable income.

(2) The ratio of housing price to disposable household income (R-HP/DHI) in 2002 in Shanghai.

$$\text{R-HP/DHI}_{\text{sh}} (1) = 4007 \times 100 / 13250 \times 2.9 = 10.4$$

$$\text{R-HP/DHI}_{\text{sh}} (2) = 4007 \times 100 / 13250 \times 1.52 = 19.9$$

$$\text{R-HP/DHI}_{\text{sh}} (3) = 5188 \times 100 / 13250 \times 2.9 = 13.5$$

$$\text{R-HP/DHI}_{\text{sh}} (4) = 5188 \times 100 / 13250 \times 1.52 = 25.8$$

In another word, this figure shows that if an ordinary family wants to buy a house which is located in the appropriate area, it needs to save 26 years of ALL the family's, not one member's, disposable income. In the 26 years, they cannot go to college. They cannot go to travel. They can only eat and live to survive. This is the present housing price meaning for the present people in Shanghai.

Given that the most common way of buying house is through mortgage arrangement. Let's calculate the ratio concerning the mortgage payment.

(3) The ratio of down payment to disposable household income (R-DP/DHI) in 2002.

In Shanghai (as well as in Shenzhen), the mortgage policy most people accept is the 30% the down payment and 20 or 30 years of installment payment time.

$$\text{R-DP/DHI}_{\text{sh}} = 5188 \times 100 \times 30\% / 13250 \times 1.52 = 7.7$$

The down payment of the mortgage is the money the family must prepare and must pay away when they go to buy the house they want. And the payment calculated above requires the family to live under subsist living standard for nearly 8 years. In fact, this means the family needs more than 8 years before they can consider to buying a house, and this is just the first step.

(4) The ratio of monthly installment payment to monthly disposable household income (R-MIP/MDHI) in 2002 ¹⁶.

$$\begin{aligned} \text{R-MIP/MDHI}_{\text{sh}} (1) &= 0.5188^{17} \times 100 \times 70\% \times 66.216 / 13250 \times 1.52 / 12 \\ &= 2405 / 1678 \\ &= 1.4 \end{aligned}$$

$$\begin{aligned} \text{R-MIP/MDHI}_{\text{sh}} (2) &= 0.5188 \times 100 \times 70\% \times 53.927 / 13250 \times 1.52 / 12 \\ &= 1958 / 1678 \\ &= 1.2 \end{aligned}$$

2405 ¥/m² and 1958 ¥/m² are the money of monthly installment payment of 20-year installment and 30-year installment, respectively, while 1678 ¥/m² is the money of monthly disposable household income. The above figures show that the monthly installment payment is 1.4 or 1.2 times of monthly disposable household income. This means that in order to live in a decent quality house,

the family must tighten the belt and spare further to reduce the necessities consumptions like food and cloth to save the money for buying the housing, and such belt-tightening and frugality must last for 20 or 30 years. This is definitely unacceptable.

Is the present housing price level in Shanghai reasonable? The answer is quite clear.

1.2.1.3 Housing affordability in Shenzhen

Shenzhen is a very young city and has a short history of just above twenty years. Thanks to the good policy and the support from all side and the hard works of the people in Shenzhen, the city has grown up rapidly and becomes more and more important in the in the regional or even national development. The most outstanding character of Shenzhen is that it is almost a complete immigration city. This feature exerts its influences on every aspect of the city's activities. In 2002, according to the official documents, the populations in Shenzhen were 5.04 million. In the 2002 statistics report from Shenzhen Bureau of Statistics, the average yearly income per person was Chinese ¥28087 and disposable income per person ¥24941. The average family populations are 2.63 (year 2001 Census). The average housing price in Shenzhen in 2002 was 6074 ¥/m². The average areas of one typical new housing apartment are estimated 100 square meters (F.Wang, 2003).

(1) The ratio of housing price to household income (R-HP/HI) in 2002 in Shenzhen:

$$R-HP/HI_{sz} (1) = 6074 \times 100 / 28087 \times 2.63 = 8.2$$

Here the household income is calculated as ¥73869 (28087× 2.63). This means that all the family members are counted as income-earner. Actually, this is not the case, especially in Shenzhen this immigration city in which the young population below the age of 35 is the in the majority. So we should change the household income. Considering the factor of unemployment, according to the official data, the average number of income-earners in the family in Shenzhen is 1.69¹⁸.

$$R-HP/HI_{sz} (2) = 6074 \times 100 / 28087 \times 1.69 = 12.8$$

Now let's re-calculated the practical housing price again. Shenzhen is a new city and because of the special geographic location and economic policy, an area called "inside-boundary" is created. A physical border was erected and people who want to enter the area should have a special certificate, so the inside and the outside are very different. The "inside-boundary" area is considered the most suitable area to live. Thus we calculate the housing prices¹⁹ in this area which contains three districts. (Please see Appendix 2.)

The average price is 5140 ¥/m².

The average price of the three districts is 6341 ¥/m².

Lets use this new figure to calculate the R-HP/HI.

$$R-HP/HI_{sz} (3) = 6341 \times 100 / 28087 \times 2.63 = 8.6$$

$$R-HP/HI_{sz} (4) = 6341 \times 100 / 28087 \times 1.69 = 13.4$$

Compared with the figures of 9.2 and 17.5, respectively, the situation is not so terrible in Shenzhen. But it is far from adequate.

(2) The ratio of housing price to disposable household income (R-HP/DHI) in 2002 in Shenzhen.

$$R-HP/DHI_{sz} (1) = 6074 \times 100 / 24941 \times 2.63 = 9.3$$

$$R-HP/DHI_{sz} (2) = 6074 \times 100 / 24941 \times 1.69 = 14.4$$

$$R-HP/DHI_{sz} (3) = 6341 \times 100 / 24941 \times 2.63 = 9.7$$

$$R-HP/DHI_{sz} (4) = 6341 \times 100 / 24941 \times 1.69 = 15$$

So in Shenzhen, if the family wants to buy a house in the "inside-boundary" area, the family will generally face the situation of the housing price which is 15 times its yearly disposable income. It is a tough situation. Worse, because of the city's population structure of high proportion of youth

and its immigration nature (it implies that the young men cannot rely on their parents to provide them the shelter), usually the youth alone needs to shoulder the financial burden of buying a house for many years before a family will be formed, the ratio will increase to 25.4.

(3) The ratio of down payment to disposable household income (R-DP/DHI) in 2002.

$$R-DP/DHI_{sz} = 6341 \times 100 \times 30\% / 24941 \times 1.69 = 4.5$$

In order to buy the house, the family needs to live under subsist living standard for more than 4.5 years to prepare the down payment.

(4) The ratio of monthly installment payment to monthly disposable household income (R-MIP/MDHI) in 2002.

$$\begin{aligned} R-MIP/MDHI_{sz} (1) &= 0.6341 \times 100 \times 70\% \times 66.216 / 24941 \times 1.69 / 12 \\ &= 2939 / 3512 \\ &= 0.84 \end{aligned}$$

$$\begin{aligned} R-MIP/MDHI_{sz} (2) &= 0.6341 \times 100 \times 70\% \times 53.927 / 24941 \times 1.69 / 12 \\ &= 2394 / 3512 \\ &= 0.68 \end{aligned}$$

The picture looks better than that in Shanghai. But the family regularly in a long times needs to spend 84% or 68% of the disposable family income on housing. It certainly is a heavy financial burden. Further more, there is another fee called property management fee which is usually 3¥/m² (this fee is used for security, cleaning, etc. and must be paid every month) should be counted. If this 300¥/m² are added to the housing price, the percentage will increase to 92% or 77%. And as mentioned above, many home buyers will buy the house before the marriage, so they in most cases have to deal with the payment single-handedly. Combining these two scenarios and the ratio will become 1.6 or 1.3.

Is the present housing price level in Shenzhen reasonable? The answer is no.

1.2.1.4 The judgment of housing affordability

The concept of the ratio of housing price to disposable household income so as to judge the housing affordability was claimed initially to be introduced into China more than ten years ago by the experts who were the China representatives of the World Bank. And it was said that when the ratio is between 3 and 6, the housing price would be considered reasonably. So the range of 3-6 has therefore being considered as the standard in the housing affordability. There are arguments about whether the ratio is referred to the developed countries or the world level. May be it is true that because the data from developed countries are more abundant, this index is more reflective of the developed countries.

It actually does not matter very much whether the ration is representative of the part of the world or the whole. The most important thing is that we need a standard to judge the level of the affordability of housing price. We do not expect the standard to be a mathematical formula to deliver a clear-cut result. We do however expect it to be effective, time-tested and accepted by many countries, many people. The R-HP/DHI is properly tested and widely accepted. The scope of 3-6 is well observed in many cities and nations and has been popularly regarded as an appropriate criterion in measuring the housing price level. Thanks to the scarcity of the relative information, we cannot give a detailed list of the numbers outside of China. But it was reported that the ratios in America, Britain, France and some developing countries were below 6²⁰. The author lived in Sheffield (UK), Helsinki (Finland), Kassel (Germany) for some times. In these three cities, the ratios are not above 6.

If the figure of R-HP/DHI does prove to be within the boundary of 3-6, in many cases it occurring in developed countries, it may be deprived from the fact that the housing market had been developed for many years and the market therefore had been in a stable condition. No so in China. Chinese housing market is still a young market and it is imperfect, unbalanced and growing very rapidly. One of the important features of it is the huge demand. So it is reasonable to argue that the ratio of bigger than 6 is also acceptable. But how big it should be?

Now that there is no absolute standard to measure the affordability, the adjustment is possible according to the different conditions in different countries. And actually R-HP/DHI to some extent is a figure more related with psychology. It reflects people's feeling about the price. So it is quite subjective. Housing is forever a high-valued commodity. In order to buy a house, people always need to save a lot of money and in a long time. Yet it does not mean it is definitely impossible to make a standard. We just need to put things together and consider all the factors and set up a realistic yardstick.

"Housing affordability can be defined as the ratio between household income available for housing payment and the required payment (instead of the full price) for the housing unit." (World Bank, 1992). May be this is the authentic message from the organization. It is more precise and convincing. The big problems are that it is hard to know how much the household allocates its income for buying the house and what the numbers signify the affordable or not. But this is a very good definition and it points out the right direction of judging housing affordability.

There are four types of ratios put forward in the paper. They are (1) the ratio of housing price to household income (R-HP/HI); (2) the ratio of housing price to disposable household income (R-HP/DHI); (3) the ratio of down payment to disposable household income (R-DP/DHI) and (4) the ratio of monthly installment payment to monthly disposable household income (R-MIP/MDHI). R-HP/HI is a ratio which shows the family devoted all the income in housing. This is an extreme condition and it is not practical in reality. R-HP/DHI is the ratio recommended by the World Bank and an international standard. This index is a measurement tool; R-DP/DHI reflects how the weight which the home-buyers must be ready to stand is Down payment is the first payment in buying the house. If the ratio is high, it means that the house price is too high or/and the family is in a poor position. But in fact, if this burden is very heavy, the buyers would exploit various ways to solve this problem---borrowing is obviously a solution; R-MIP/MDHI is a vital index which shows exactly the true situation of housing-buying. It is definitely unacceptable and practically impossible for the consumer if the ratio is above 1. More than 0.8 is also way too high for the family.

So, to judge the housing affordability, two ratios of R-HP/DHI and R-MIP/MDHI are recommended. Applying these two criteria on the present situation in the two cities, we can say that the housing prices in both places are unreasonably too high and generally unaffordable for the ordinary citizens.

May be it is easy to say whether the ratios are too lofty or not and difficult to tell how the appropriate ratios should be. The worldly recognized proper figure of R-HP/DHI is ranged between 3 to 6. But the situation in China is disparate and unique. Thus the question is: can we find our number? The answer is yes.

There is a new policy which will be carried out from year 2004²¹. The policy makes it clear that the monthly installment payment of individual or household must not exceed half the monthly income²². Bank will provide the mortgage in accordance with this regulation. This means that if the monthly income of the individual or household is 1000. His monthly installments cannot exceed 500.

Roughly in line with this new policy and based on the common sense, the installments occupying half the disposable income of the individual or household is agreeable. So R-MIP/MDHI should be targeted at 0.5 for the household.

Now let's calculate the exact figure of R-HP/DHI.

R-MIP/MDHI = monthly installment payment / monthly disposable household income

If we take the down payment as 30% and the mortgage payment coefficient as "c" (c = 0.0053927 and 0.0066216, 30-year and 20-year installments respectively), then we get the following results:

$$\begin{aligned} \text{R-MIP/MDHI} &= 70\% \times \text{housing price} \times c / (\text{disposable household income} / 12) \\ &= 70\% \times c \times 12 \times \text{R-HP/DHI} \end{aligned}$$

$$\begin{aligned} \text{R-HP/DHI} &= \text{R-MIP/MDHI} / (70\% \times c \times 12) \\ &= 0.5 / (0.7 \times 0.0053927 \times 12) \\ &= 11 \end{aligned}$$

and

$$\begin{aligned} \text{R-HP/DHI} &= 0.5 / (0.7 \times 0.0066216 \times 12) \\ &= 9 \end{aligned}$$

The conclusion is therefore that if the ratio of housing price to disposable household income goes around 10, it could be regarded as appropriate. This ratio could be applicable in China.

We now conduct the deduction to get some interesting outcomes. We transform the formula to establish the relationships between the ratio of the monthly installment payment (R-MIP/MDI) and the housing price, between the ratio of monthly installment payment (R-MIP/MDI) and the ratio of housing price to disposable income (R-HP/DI).²³

(1) The relationships between the ratio of the monthly installment payment and the housing price.

$$\begin{aligned} R_{IP} &= \text{monthly installment payment} / \text{monthly disposable income} \\ &= (P \times R_{DP} \times C) / DI \end{aligned}$$

Then we get:

$$P = (R_{IP} \times DI) / (C \times R_{DP})$$

P---housing price

R_{IP}---ratio of monthly installment payment to disposal income

DI---monthly disposable income

C---installment coefficient

R_{DP}---down payment rate

If the disposable income is given and the proportion of monthly installment payment is decided, as well as the mortgage policy, which is determined by the bank, the formula can be easily applied to calculate the desired housing price.

For example, in Shanghai, the monthly disposable income of a typical young white-collar is usually above ¥5,000. If he wants to spend half of it on housing, his wished housing price (20 years, 70% mortgage rate) could be around ¥540,000. Basically he can be guaranteed to live in the middle ring and possibly in some areas of the inner ring.

(2) The relationships between the ratio of monthly installment payment and the ratio of housing price to disposable income.

$$\begin{aligned} R_{IP} &= \text{monthly installment payment} / \text{monthly disposable income} \\ &= (P \times R_{DP} \times C) / DI \\ &= (P \times R_{DP} \times C \times 12) / DI' * \end{aligned}$$

$$= R_{DP} \times C \times 12 \times R$$

$$\text{So } R = R_{IP} / (R_{DP} \times C \times 12)$$

R--- ratio of housing price to disposable income

R_{IP}---ratio of monthly installment payment to disposal income

R_{DP}---down payment rate

C---installment coefficient

DI---monthly disposable income

P---housing price

DI'---yearly disposable income

* yearly disposable income is changed into monthly disposable income.

We have employed the formula to count the appropriate ratio of housing price to disposable income (*R*) under the popular mortgage condition and the figure is around 10. It is noticeably larger than the standard 6. If, under the same mortgage condition, the range of *R* (affordability rate in the society) is between 3 to 6, which is regarded as the normal rate, the percentage of installments is 17% and 33% respectively.

The two ratios of *R* and *R_{IP}* have a simple relationship. Their value is influenced actually by two variables *R_{DP}* and *C*. And both of them are concerned with mortgage policy. The mortgage bank determines the *R_{DP}* according to his capital situation and financial strategy and the state financial regulation authority. Usually it will remain the same for quite a long time. Of course the customers also in theory have the right to choose a *R_{DP}* they think is good for them. But in general it could actually be regarded as a constant. *C* is closely related with interest rate. If the interest rate increases, *C* will follow suit. The increase of *R_{DP}* and *C* will lead to the shrink of *R*. In case the two variables are fixed, this being the common situation, *R* is solely determined by *R_{IP}*. Disposable income constant, when *R_{IP}* goes up, the situation of housing affordability gets worse.

1.2.2 The normalization problem

Chinese real estate and housing market has been in the process of fast growing, fast expansion. There are, however, growing pains and the market is to some extent in severe disorder. The government is clearly aware of the situation and tries to take concrete measures to tackle the problems. The Department of Construction of China held an important meeting in 2003 and made a list which contained the problems it will strike.

There are six priority-tasks listed which would be dealt with hardly aiming at putting the market in order. They are (1) taking the real estate development and trading as the priority, to check and handle the typical cases that were complained repeatedly, opposed strongly by the people and have big influence on the society, like illegal development, contract cheating, area “under-weight”, false advertisement, illegal intermediation, etc.; (2) facilitating the construction of real estate credit system. Opening the credit file management system of the employees in real estate enterprises which is connected with the department, the provinces and the cities, to make it convenient for consumer to complain and check; (3) putting out the new policies of “delivering to usage requirements for newly built commodity housing project” and “the regulation for real estate intermediation management”, to normalize the practices of finishing-work-checking and delivering-for using of the housing project and to improve the real estate management system; (4) making the relative policies to encourage the usage of the method of counting the housing price in within-flat construction area; (5) improving the cooperation between administrative and the judiciary; (6) preventing the risk of real estate mortgage registration to reduce the occurrence of

false mortgage, repeated mortgage and over-value mortgage²².

1.2.3 The structure problem

Roughly speaking, if we divide the housing in housing price, the market can be classified as low-price housing, middle-price housing and high-price housing. In perfect condition, the classification of the market should correspond to the demands and ultimately to the levels of the income of the housing consumers. But unfortunately in reality in the housing markets of Shanghai and Shenzhen, the proportion of middle-price and high-price housing is much more than the low-price housing, whereas the low income citizens occupy the bulk share of the population. In Shanghai in 2002, there were 411 new housing projects entering into the market, the housings with price below 3000¥ were merely 1%²³, but according to the calculation of above, if the conditions are reasonable, the appropriate price is well below 3000. So the structure has serious problem.

1.2.4 The vacancy problem

The official Xinhua news agency reported on 29-11-2002 that the head of the national real estate association warned that the housing vacancy rate in China had reached 19%, 125 million square meters idle in the nation, dangerously too high and well above the internationally accepted alarm line of 10%-15%. Some reports even suggested that in the 15 biggest cities in China, the housing vacancy rate was larger than 40%, while in the 100 biggest cities, it was 33%²⁴.

Like many issues in real estate and housing market, the issue of housing vacancy rate is also a complicated one. What is vacancy rate? One definition is: the idle areas of the finished housing divided by all the areas of finished housing. It is the usual practice by calculating the sold areas first, then deducted by the all finished areas to get the idle areas. The information of sold areas is usually available in the various statistics documents. But the problem is that it is very hard, therefore very disputable, to count the all-finished-area. Should it contain all the commodity housing? How to count the large amount of welfare-changing-into-commodity housing? How to define idle-housing? Another thorny question is related with natural vacancy. What are the natural vacancy rates in the Chinese cities in the rapidly developed and imbalanced housing market?

1.2.5 The law problem

Law problem is actually the problem of the whole society. "Through the 1980s and the early 1990s, there was no formal housing legislation in China. Developments were undertaken on an experimental basis." (Wang and Alan, 1999) There were some laws which were made regarding to the management of the industry. But many of them were either out of date or invalid at all due to the fast development of the market and the changing situation. The problem is especially acute in the section of consumer protection. Derived from the nature of the real estate development, the developer already occupies an advantage position in the market. So the consumer is in particular needs to be protected by law. At present, there is only one law named "Consumer Right Protection Act" which is related with the matter. Unfortunately housing consumption is beyond the boundary of this law in that it covers only the low-value commodities whereas housing is a high-value commodity.

□Summary. In strict terms, Chinese private housing market has developed almost from scratch. In little more than twenty years, it grew up so rapidly that it plays an important role in the economy nowadays, as long as improving the living standards of the people. The big scale of the market is showed through the figures of how many new buildings are built, how many being sold, the investment, the people employed and others. The importance of it is proved via the contributions of

the real estate and housing industry to the economy, down from the national level to the defined two cities. The housing market is right on the fast track of development because (1) the Chinese people are very much desirous of improving the living condition and they are more and more financially capable of fulfilling this desire; (2) the government makes favorable policies to support them; (3) the urbanization drive is unstoppable and it will create huge demand in a long period; (4) the urban re-generalization campaign is also a big boost to the housing demand. But at present, the housing market has many serious problems. The biggest one is price problem. The housing price is too high. In order to prove this is really the case, four indexes are applied to calculate the affordability of housing to ordinary urban dwellers. The conclusion is very clear that the price is unacceptable to them. □

Note:

1. The figures and estimates are cited from the English newspaper *China Daily* of 07/02/2002.
2. Year 1994 is the first year that real estate investment was appeared in the annual national statistics report.
3. The fixed asset investment is the index to indicate the investment in the national economy, which includes capital construction investment, regeneration investment and real estate investment, whereas the capital construction investment is the index mainly concerned with the urban development investment. (Source □ The annual statistics report from the National Bureau of Statistics of China.)
4. Newspaper *Shenzhen Commence* of November 4. 2003.
5. This figure was issued by the head of the National Bureau of China at a news conference held in Beijing on 20/01/2004.
6. Except note 5, all the figures in this paragraph are from the Shanghai government website.
7. The figures in this and the next paragraphs are from the Shenzhen government website.
8. The figure is from the Shenzhen Bureau of Planning and Land resources.
9. These figures are referred to as the construction areas. Construction area is the jargon which means all the areas the buyer need to pay, which include the unit areas the dwellers use and the areas wall covers and the common areas utilized by all.
10. The re-generation housing can be added to the parts of the new buildings require by the government housing target and there will be no overlapping provided added only once because the demolished housings have to be compensated by the same amounts of areas in order to meet the target of 35m² per person and in theory the re-generation housing meters can be regarded as one part of the housing calculated in the new housing needed by the urbanization-derived population of 100 million.
11. The analysis of what the housing affordability is is conducted by using the statistic materials of Shanghai and Shenzhen because of the availability and the accuracy of the data.
12. The professional newspaper *Shanghai Real Estate Time* reported on 10-02-2003 that the main forces of the new housing in the market of 2002 are two or three bedrooms flats with the areas of 70-150m², which account for 78.6% of the market. If we choose the mean value of 70-150m², it is 110m². It is widely accepted that the average areas of one flat are 100m². So we use this conservative figure as the standard flat area, and this is a construction area, not the net usage area.
13. Because the ratio of housing price to household income is world-widely accepted as an important index in gauging the affordability of housing in the market, we make the judgment on this index.
14. This figure is from the random survey of “the household basic living conditions of urban residents” conducted by the Shanghai Bureau of Statistics in 2002.
15. There are roughly six types of housing in Shanghai housing market, the same in the nation. They are low storey

housing (below four stories), multi-storey housing (four-seven stories), low high-rise housing (eight-twenty stories), high-rise housing (above twenty-one stories), townhouse and villa. The classification and definition are not so strict, of course. But it is generally the case. In Shanghai, these three types of housing of multi-storey housing, low high-rise housing and high-rise housing are the bulk of the market and if located in the same area, the price of high-rise housing is dearer than that of low high-rise housing and the low high-rise housing is more expensive than that of multi-storey housing. And also, if located in the same area, the price of the same type of housing is not so different. This is one of the characters of the housing market.

Based on these knowledge and premises and limited by the available data, I choose 3 prices from 3 housing projects within each three rings in each district. All prices are average price or bottom price and most of the prices are the prices of raw-housing which means the housing is still in the construction or not decorated at all. The finished or decorated housing is estimated at least 10% more expensive than the raw-housing.

Another point which is worth mentioning is that the price here listed should be the price of 2002. But unfortunately the data of 2002 is hard to find. Given that the housing price of 2003 in general is increased by 20.5% compared with that of 2002, I discount all the present prices at 20.5%. And the price is ordinary commodity housing price, not high-quality housing which is at least 30% more expensive.

The source of housing prices is from the very famous website of www.soufang.com.cn, which is renowned in providing the information in real estate and the data of housing in Shanghai is from <http://sh.soufang.com> and in Shenzhen from <http://sz.soufang.com>.

16. The monthly disposable household income = yearly disposable / 12. The monthly mortgage repayment rate is decided by the central bank, so the rate is identical in every bank.

17. The mortgage repayment coefficient requires the housing price to be divided by 10,000.

18. This figure which is dated 11-2003 is from the website www.china.org.cn. Because the data of 2002 is not available and the data is not supposed to have a significant change in the time-gap, so this figure is still adopted. In this website, we also find that the family population is 3.19 which is significantly different from 2.63 the figure from the statistics report. In Shanghai the figure is 2.9. The family population in Shenzhen is bigger than that in Shanghai. Considering Shenzhen such a young-structured city, this data is not so reliable.

19. The housing price of 2002 is in most cases available. If not, the price of 2003 or 2001 will be used. In the last 5 years, the price change in Shenzhen was less than 5 % as of 2003 (F. Wang, 2003). There are only three districts in the “inside-boundary” area, we therefore select 10 prices from 10 projects.

20. The source are *China Real Estate* (18-08-2003) and *Urban Studies* (Vol.33, No7, 1086).

21. Newspaper *China Youth*, 27-02-2004.

22. When unmarried, it is referred to the individual, whereas when married, it is household.

23. Here we use the general concept of disposable income, rather than the disposable household income to include both the individual income and family income.

Chapter two: The Chinese commodity housing

□ Abstract. This chapter will discuss the reform process of private housing and its market. Then it analyses the intrinsic characteristics of Chinese housing commodity like the high-value, the immobility, the durability, the heterogeneity and so on. The extrinsic ones include housing land leasing, housing types, housing structural forms, housing unit type and housing room types. □

2.1 The evolution of the housing from the welfare product to the commodity

In the history of modern China, a big event happened in the middle of the twentieth century. In 1949, after decades of crucial struggle, the Chinese communist party eventually took power in Beijing. A so-called “New China” was then born. It was really new to China, the place producing one of the five oldest civilizations in earth. It was natural that communist party certainly would carry out communist policy. And this policy was symbolized as communism system. Under the system, everything was belonged to the state. Given that the state was actually belonged to the people, everything was therefore belonged to the people. Of course, the matter of housing was fallen within this scope. Things went on for three decades. Everything was fine? It seemed not. Something was wrong. In 1978, the campaign of overall reform was launched and accepted and carried out quickly and afterwards was very successfully progressed, housing system reform included. Thanks to the reform, China now becomes much newer and much better. Let’s have a review of the housing reform in China to illustrate how the housing was changed from the pure welfare product to the exact commercial goods.

The evolution could be illustrated from two perspectives.

2.1.1 Public housing sector reform.

As mentioned above, before 1978, there was no housing market in China. Hence all housings were public housing. “Chinese urban housing has been predominately a merit good, not a commodity.” (Chen, 1996) The public housing reform would change the nature of the housing and create the necessary space for the development of the private housing market, and at the same time it also wield a significant influence on the market operation. This reform could be roughly separated into four stages.

2.1.1.1 The first stage was from 1949 to 1978.

Chinese communist party firmly began to rule China from 1949. The socialist society model was quickly established. In the economy, the socialist system was sweepingly set in place. Under the system, the economy was operated as centralized economy and all the factors were totally controlled by the state. The economic activities of production, distribution and consuming were directed, organized and managed by the central and local governments, not by market. Market, as the enemy of socialist system, was prohibited. People did what the government told them to do.

Of course, there was no housing market. In urban areas, all the housings were state housing. When the citizen needed housing, he must lodge the application to the “work unit” in which he worked. Because the housing supply was in severe shortage, there were assorted indices-tested methods which embraced the rank, working-age, personal conditions and so on to decide the qualification of the applicant. The “work unit”, if he was lucky enough, thus distributed the housing to him freely. He moved in and paid the rent, a symbolic one, regularly to an organization named “property management bureau” which was responsible for all the maintenance works of the housing.

The socialist economic system was composed of state-owned economy and collective-owned economy, the former mainly in cities, the latter in country. In urban cities, there were two kinds of enterprises, state-owned enterprise (SOE) and collective-owned enterprise. The state-owned economy was expressed by state-owned enterprises which completely dominated the municipal economy, while the collective-owned enterprises were almost irrelevant. The state took care of everything the state-owned encountered, whereas the collective-owned survived on themselves.

According to the housing application situation, SOEs would submit the housing construction application to the government department in question. The government checked the applications and all the means available and, by magic, balanced the demand and decided how many to build in certain time period. The SOEs then would be appropriated the money and the land and conducted the process of construction and allocation. In many times, the SOEs would use their own money to build the houses for their employees. So the richer the SOEs were, the better living condition their employees were in. The housing construction money was almost thoroughly depended on the appropriation from the government for the all government departments.

The main problems resulted from this system were (1) the increase of housing construction lagged heavily behind the increase of the urban population, the housing shortage was very serious. The average living areas of each urban resident were even reduced to 3.6m² in 1978 from 5.4m² in 1949 (Bao, 2001); (2) the housing maintenance works could not been done properly, so the housings were in very poor conditions; (3) the housing distribution was done through administration means, it created widespread corruption; (4) without competition, the construction quality was bad and the design did not meet the demands of the dwellers.

2.1.1.2 From 1978 to 1998.

In 1978, a milestone change took place in China, which, time would prove, was one of the most important events in modern Chinese history. The Chinese communist party announced in a historical meeting that an overall reform would be introduced into China. The socialist economy would be changed to socialist market economy. Only one word was added into the “socialist economy”. But the meaning was huge and profound. The concept of market was filled into the body although the body was still covered with the skin of socialism. Market, from the enemy being changed to friend, was warmly and sincerely welcomed by the whole society. Now, people began to do what the government, as well as the market, told them to do.

Housing was a big social issue. It was on the track to reform too. Given the seriousness of the housing problem, something must be done to deal with the existing public housing. From year 1978 to 1988, the reform was just selectively undertaken in some cities because housing reform was such a difficult matter and it touched the benefits of so many people that the process should be considered meticulously and carried out gradually. The main tasks of this stage were to make the reform policies into shape and tested them in parts of China. The practical measures were to raise housing rent and encourage the residents to buy the housing.

During the period of twenty years, the first half was actually in the process of preparation and rehearsal. In the second, the reform was formerly launched and in widespread practice. The two important methods which the government adopted were worth mentioning. One is the set-up of the system of Providence Fund. The other is the definition of the pricing method of selling public house. By putting into effect these two methods, the public housing scale was cut dramatically and now the housings were ready to entering into the housing market.

2.1.1.3 From 1998 to date.

After the reform, many public housings were changed the status into private housings. But there were still a lot of newly finished housing flowing into the old system. With the conditions had been ripe, so the government in 1998 decided that now it was the time to cut this flow --- to stop the practice of “material distribution system” for the employee’s housing in the government departments and SOEs. (State Council notification about further strengthening urban housing system reform and facilitating housing construction, No.23,1998, State Council) The governments and the SOEs will not build or buy the housings and then allocate the housings to the employees, rather they will give money to the employees to let them to choose and buy the houses they want. This change was dubbed as from “materialized distribution” to “moneyized distribution”. It was a great up-step and it benefited the development of housing market. As of early 2003, 96.1% of the commodity housings were sold to the private hands. (Chen X, 2004)

The real contribution of public housing reform to the development of the private housing market is that it created the effective and huge demands because the most of the people who are involved in the reform have stable income and they possess the relatively sturdy purchasing power. The housing now being bought by the people can be traded in the market. However, this market is second-hand housing market, not the first-hand market. By selling the old housing and purchasing the better ones, the first-grade housing market thus gets a strong boost.

2.1.2 Private housing sector development.

The most important objective of the public housing reform is to commercialize the state housing. By stimulating the people to buy the housing allocated from the “work unit”, the public housing was shaken into private housing, and by finishing a series of procedures; the housing could

be put up in the market to trade. But before 1998, while the existing state housings were being bought into private housings, there were still a huge amount of housings that were constructed and distributed in the old framework. After the year of 1998, the situation was changed and this old-fashioned practice was stopped. So from then on, the public housing sector got significantly shrunk, whereas the space for the development of private housing market was enlarged and the favorable conditions were created.

The development of private housing market was in accordance with that of the overall economic reform and the public housing reform. The private housing industry grew from a small sector in the real estate industry to a full-fledged entity in about 20 years. In the 1980s and the first half of 1990s, it to some extent mainly served for the SOEs and the government departments. Except these government consumptions, the consumers of the market were only those who were called the persons-getting-richer-in-advance and who came from abroad, the Chinese who were foreign nationality, and these consumers occupied a small fraction of the population. So the market scale was quite undersized. After the 1998 big policy-change, the market got a real chance to fly. In a short of times, the private housing market ballooned to a huge one. Nowadays, in big Chinese cities, especially in Shanghai and Shenzhen, in the housing market, the share of private housing is much bigger than that of public housing. Private housing market plays the major role in providing housing for the people.

It is amazing to note that the development of Chinese private housing market has its own characters. One outstanding feature is that unlike the housing market in many developed or developing countries, the activities of the Chinese housing market had not been strictly controlled by the government in most of the times. There was never an effective price-control imposed on the market. So, at the later stage of the public housing reform in the middle of 1990s, compounded with other factors, the housing price became to be out of control. Yet the market relaxing of the government hand does not at all mean the government leaves it alone completely. The government intervention was such storm-like that when it came the market activities were for a while substantially reduced. After it passed, the market gradually recovered the consciousness and after a period of time it became over-heated again. A vicious circle which is harmful to the market and which has been slowly corrected by the government.

2.2 The intrinsic characteristics of the Chinese housing commodity

In a long times, housing was not a commodity in China. Thus, when the housing reform changed the housing status into one kind of commercial product and private housing market started to take to shape, people did not get accustomed to relating it to a common commodity as the bread, cloth or TV. A rethinking is needed. Housing is indeed a common commodity, but it is a special common commodity. It has unique characteristics which clearly distinguishes it from the ordinary commercial goods. And despite the features shared by the housing around the world, the Chinese housing has its own characteristics, or to put it more precisely, the Chinese commodity housing has its own meanings in the Chinese atmosphere.

□ Housing is a high-valued commodity

Housing is highly priced in everywhere around the world, irrelevant of developed or developing countries. Actually in rich countries, the housing price is much higher than that in poor countries. In America, the median housing price was 119,600 US Dollars in 2000. The housings with the prices between \$100,000 and \$149,999 occupied the biggest share of 23.7% in the whole price range¹. The

average housing prices were 368,800 Australian Dollars 161,665 British Pounds in Australia and UK respectively in 2003². In these rich and economically well developed countries, although the income is on a high level, the housing price is still several times of their yearly household earnings. More so in the developing countries, especially in the rapidly expanding economies.

In China, the newly built private housing is very expensive. In the most prosperous cities like Beijing, Shanghai, Shenzhen and Guangzhou, the price of one unit of apartment is ten times or even twenty times of the household income. The families which are in need of pursuing a better living condition must spend all their savings of the past working years, (usually still this savings are not enough, so some of it must be borrowed from some sources,) and prepare to live a quite frugal life in the next dozens of working years.

As showed early, in Shanghai in 2002, within the inner ring, the nearest place to the city centre and regarded as the most favorite place to live, the average housing price of a typical flat in a condominium was ¥628,700 (US\$ 76,114), ¥526,500 (US\$ 63,741) in the middle ring. In Shenzhen in 2002, the same kind of housing in the most beloved districts of Luofu and Futian, the housing per unit were ¥671,300 (US\$ 81,271) and ¥717,000 (US\$ 86,804), respectively. Compared with the prices of USA, Australia and UK, the numbers are much lower. But considering the way much lower income, to the minds of most of the Chinese people, the housing price is really very high. Housing is really a formidably dear commodity.

In China, given that housing is such a high-valued product and most of the people who want to buy a house need to spend quite large part of their income on the housing, and it is the matter of several decades of times and concerns all the members of the family, the housing price is the issue not only related with social consequences, but also with ethical ones.

□ Housing is an immobile commodity.

When we talk about housing, we certainly refer to the building, the physical structure on the ground. In fact, housing is consisted of the building and the land. We know that neither building nor land can be moved. So housing is immobile. This is a very unique characteristic which clearly distinguishes it from other common commodities. And just because of this characteristic that results in the most important feature of housing---location. Someone may argue that the golden principle of location in real estate has somewhat lost its luster in recent decades derived from the changes in the society and in the urban development process. It is still shining brightly in many countries, even in western nations.

The location influence was crippled mainly by the “suburbanization campaign” and the concern with the better living environment. The big improvements in traffic and public facilities enable the residents to live far away from the city centre, but at the same time still enjoy the convenience of working and commuting and a high quality of living. This is good. May be this is even the bound destiny. Nevertheless, this is not the case in China. Or just at the beginning in the cities like Shanghai and Shenzhen. At present the golden principles are still summer-sun shining.

There are many factors which influence the good-or-bad of the location. A good location usually means the vicinity to the city centre and the concept of city centre is always connected with commercial centre. Business environment plays an important role in the location condition. Other factors like historic heritage, cultural evolution, city planning, etc. have their say too. There are no documents to classify which areas are good areas, which areas bad. The labels are in the minds of the city dwellers. In Shanghai, people refer to some parts of the city as “upper corner”, some parts as “down corner”. In the “upper corner”, the housing price is really high, whereas in the “down corner”

areas, the housing price could be 60% cheaper than that of the former areas. In fact the commercial environment and traffic conditions in “upper corner” are not at all 60% better.

The forming of the two corner areas has its historic root. Shanghai had been actually colonized by western powers for nearly one hundred years. Among many other things, the colonization left a large area in the west part of the city where there are numerous grandiose, exquisite houses with a high quality living atmosphere. The area therefore is also a celebrate area. Living in this area is always associated with a high social status. So it is call “upper corner”. Imaginable, the area of “down corner” is stuffed with poor people who rank in the low end of the society. There are many who were refugees from the nearing provinces and left involuntarily their homes because of the natural and man-made disasters. They lived in the shanties and did the works like cleaning, hair-cutting, shoe-shining, etc. And in the past decades there were a lot of factories built in this area, the pollution made worse the reputation of this area. In newly developed Pudong District, except for some outstanding “island zone”, there are not obvious good or better areas.

Compared with Shanghai, It is a different story in Shenzhen. This is a brand-new city. It does not inherit the burden of historic heritage. It began from scratch. The development of the “within-boundary” area was in accordance with the development of the city, the city planning. At first, the Luofu district, then the Futian, the Nanshan the last. The first area which was developed was Luofu district and it remains the most important commercial area nowadays. Futian is the new city centre where all the important administration and civil buildings locate. These two districts are the better areas. Due to the limited space, the city expands eastward and thus the quiet Nanshan gradually became noisy. This area is geographically a good place for living. So a huge amount of residential buildings were erected in a short period of times.

To large extent, the good-or-bad of the location is man-made and it could be changed in a short or long times. This is especially true in the newly developed areas or new cities. The golden principle may be not so golden. If this is the case, we might cast doubt on the foundation of evaluating land.

Housing is a durable commodity.

When we mention durable goods, we could think of electronic appliance, furniture or even car. Of course, they are durable. They last several years, a dozen years. But compared with housing, they are really little brothers. There is no statistic information on the durability of Chinese housing. But it must be sores of years. (The national norm of construction is 50 years.) (Zhu, 2005) In British cities, the life-span of the average housing is about a hundred years. (Pritchard, 1976, p.4) Also in UK, some research even found out that “most properties would suffer no depreciation in the first twenty years of their lives and would then depreciate at a rate of 1.25 percent per annum till they reached ‘site value’ after a century”, (Cairncross, 1953) thirty years, 1.33 percent, in 105 years, respectively. (Jones and Clark, 1971) Housing is the home. Home must be very durable.

In order to guarantee the construction quality of housing, in China, there are special government departments which supervise the construction and are responsible for the checking when the buildings are finished. Only after passing all the necessary procedures could the housing be handed over to the dwellers. If the buildings can stand the tests, the quality is assured and the lifespan of one hundred years is very much possible.

Generally speaking, the quality of the housing in China is becoming better and better. The housings which were built in the 1980s were in a poor condition. But the situation has been improved rapidly in the last decade. Frankly speaking, building a house is much easy than building

a car. It does not require such a high technology. The materials are simple and old and easy to handle. The building-methods are mature and almost the same in many years. It is not a hard and delicate work to produce a high quality.

There are not serious housing construction quality problems in Shanghai thanks to the relatively strict imposing of regulation by the government and the quality consciousness which was formed in the long time and rooted in the minds of the people as one kind of culture. Yet, in Shenzhen the picture is somewhat quite different. The quality of the residential buildings built in the 1980s and the early 1990s is very poor, particularly the old residential quarters like Ludan Quarter, Nanhua Quarter, Yuanling New Quarter, etc. After merely 20 years, some buildings are reduced to such conditions that they are no longer suited for living and must be demolished. It is beyond the scope of this research to explore the reasons. But the situation is miserable.

The typical example is the regeneration of Ludan Quarter. Ludan Quarter is a large residential community built in 1989. It covers the land of 70398 square meters and has 24 7-storey buildings. The total construction areas are 110,000 square meters and 1050 households live in it. It is a large residential quarter and belonged to the government. Less than 10 years, many building were already in such a poor condition that it is quite dangerous to live in. There are materials quality problems, construction problems, as well as structural problems. After several years of appeal from the residents, in 2000, the government decided to demolish all the buildings and build a completely new quarter.

Good quality guarantees the durability of housing. Durability is therefore capable of asking for a high price. Poor quality housing is not qualified to do so.

□ Housing is a heterogeneous commodity.

Every house is different. This is another capital principle in real estate. The nature of the difference of housing is derived from the nature of the immobility. Housing cannot move. So it fixes in one place all the times. One place is one location. Different place is different location. In theory, there is no exactly the same housing in the world.

It does no good to be induced into philosophical discussion. The difference, in respect of housing location, is not so different, in reality. In most of the cases, we usually define one particular area as one location and are able to distinguish one area (location) from others. There are not so many substantial differences within this one particular location, or put it another way, the differences are sometimes very delicate and subjective. So the houses in the same location are the same? Of course not. We have other rules to measure the stuff.

Except that different location produces different housing. Each house, itself as an individual product, can show its individuality. The invisible parts like the foundation construction, the base underpinning are usually different, one building from another. The apartments in different floor are different. On the same floor, apartments facing the North are different from the ones facing the South. The areas of the apartments are different. The apartment arrangements with two-bed are different from that of three-bed. Even the same, say, three-bed apartments are in most time different due to the space limit of the land and the building. In one project, there are different housing-types. In the inner ring area in Shanghai and in Luofu and Futian Districts, the residential projects are mainly high-rise and low high-rise buildings. Outside these areas, the projects are composed of additional types like multi-storey housing, low multi-storey housing, town-house and villa. Here, we have not talked about “Fengshui”³. If this factor is involved, the matter will become more interwoven.

Unlike so many modern commodities which are in the form of mass production, housing is produced absolutely individually. So it is heterogeneous. The heterogeneity causes troubles to the price-setting of housing, as well as the difficulties of the housing research. But the nature of housing heterogeneity could also be used as a good pretense to gain unmoral profit.

□ Housing is a dualism commodity.

The dualism of the housing commodity is referred to its double nature that housing is a necessity in people's life and it is also an important investment goods.

People's normal life cannot be without house, let alone the better life. But the interesting thing is that whilst the housing plays the basic function for mankind as the shelter, it can be also acted as an effective and popular investment tool (sometimes called "inflation-proof" investment). This character exactly shows its very uniqueness. We all need food to satisfy the stomach, the cloth to fight the cold. Yet food and cloth never hook up with the investment. Stock, gold, painting are good investment commodity. But our subsistence can be perfectly maintained in the absence of them. Only the housing, among hundreds and thousands of commodities which we connect with, proudly embodies the necessity goods and investment goods in it.

The investment nature of the housing is expressed in two ways. One is the first-house⁴. People spend quite a lot of money on buying the house. They live in it and use it as a necessity. The money spent on it could also be regarded as an investment because unlike other commodities the value of the housing generally will not decrease with the time elapsing. On contrary, the value will usually increase. Therefore the owner of the house can make good use of it and gains additional benefits. So the money becomes the investment if we view it from another angle. The other is the second-house (or third-house, etc.). This is the more popular type of housing investment. The first-house is for living, whereas the second-house is in most cases for investing⁵, in the form of renting. In Shanghai and Shenzhen, this phenomenon is widespread. The rent of the second-house is based on the monthly installment payment. Thus the owner of the housing is in a very happy condition in that he lives in his own house and let another one without addition financial burden. At the same time, he owns the assets of two houses. It sounds very easy. The trick is that you must find the right second-house which can be rented out in the amount of the monthly installment payment and the market is not against you in most of the times. But one thing which must be mentioned is that there is almost no absolute failure in housing investment or speculation because if the housing cannot be sold or let to earn money, it can be consumed---lived. The value will not be evaporated and the life will be improved, whereas if the investment is failed in stock or in gold, either the value will just disappear or it cannot be enjoyed.

When we talk about investment, we cannot evade speculation. They are the twin brother and change the role without notice. There is no black-and-white standard in distinguishing the brother. Actually there is no need to do so. Housing market benefits from the activity of investment, as well as from that of speculation. The only problem is that when speculation becomes over active, the market will be out of control. In 2003, speculation in Shanghai housing market was so energetic that it was largely blamed for the astonishing 20.5% house price increase.

□ Housing is a synthetic commodity.

Housing is built on the earth, on the ground. It is composed of two things --- the structure and the land and these two cannot be separated at any time. The person who buys the housing actually buys both the building itself and the land on which the building stands. This is the case in detached family house, so is in condominium, although the flats of latter do not occupy the land directly and

have a proportional less share of the land. The nature of composition in housing helps us to better understand the secrets of the value-appreciation of housing.

When the construction of house is finished and ready to sell, the value of the house is the composite of the cost of the building and the money paid for purchasing the land. (In China, nowadays, the land value is usually 1/3 to 1/2 of the grand cost.) After the house is occupied by the dwellers, its value will change with the pass of time. Let's make the premise that the value is going up. Does the value-increase come from the building, or from the land, or from the combined entity? This is a delicate question. The building itself is made up of the materials that are common goods. The value of the construction materials will certainly decrease with the time though the decrease-time could last very long due to the durability of the materials. Given the long time devaluation, we may postulate that in certain period of time this value is maintained. But the value of the whole building can still be increased by adding new materials, especially new high quality decoration material or by regenerations. Nevertheless, this added value is very limited and subject to different conditions. How about the design, the style, the space arrangement, the house-history? Yes, they can attribute to value increase. Unfortunately the modern residential buildings have become so commercialized that they have lost all the aesthetic enjoyment of the classical buildings.

So the going up value must come from the land. Yes, this is true and this is the secret. The future value of housing is determined by the land it covers. The land value increases, and the housing value follows. And the increase of land value is indirectly expressed by the increase of housing value. The factors which influence the value of the land are various, such as the planning adjustment, environment improvement, business prosperity, public facility upgrading, etc.

In China, the private housing market is booming. Housings are built and traded in a large quantity. But people cannot buy and sell land. All the lands are belonged to the state and the trade of the land is the action of usage right transformation, not that of possession transformation. The state leases the lands to the people who want to use them and asks for the land use fees. And after one period of time, the state has the right to re-lease them or to recover (in principle, the lease time for commercial housing is 70 years).

2.3 The extrinsic characteristics of the Chinese housing commodity

2.3.1 Housing land leasing.

2.3.1.1 The land leasing period in the first-grade real estate market.

The land trade is regulated by the “The Act of Usage Right of Leasing and Transformation for State-owned Urban Land (Temporary)” which was enacted from 1990. As regard to leasing period of land for commercial purposes, it rules that the longest times are as follow:

- (1) Residential land: 70 years.
- (2) Industrial land: 50 years.
- (3) Educational, scientific, cultural, health and sports land: 50 years.
- (4) Business, tourism and entertainment land: 40 years.
- (5) Synthetic use and others: 50 years.

2.3.1.2 The methods of land leasing can be contractual, tendering and auction.

2.3.2 Housing types.

There are some ways to classify the housing type. In Cardiff, Britain, seven dwelling types were identified, i.e., terraces, semi-detached, detached, purpose-built flats, flats in concerted building, maisonettes and bungalows. (Scott, 2000) But in general, at present there are six types of

housing in Chinese housing market.

2.3.2.1 Low multi-storey housing.

This type of housing could be called Townhouse. Below 4 stories, it ranks between villa and multi-storey housing and in terms of planning, design, construction, quality, materials and other aspects, it is actually the higher grade multi-storey housing. It enjoys a low floor and area ratio and coverage ratio and usually attached with a backyard small garden shared by several dwellers. The area of each unit is much larger than the multi-storey housing. Recently, more and more low multi-storey housings are equipped with elevator ⁶. The outside appearance is not so different from multi-storey housing.

2.3.2.2 Multi-storey housing.

This is one of the most common housing type in Chinese cities and it experienced the dramatic change from the barrack-like, dull, simple and crude housing which dominated the city scenery before 1980s to the colorful, beautiful and assorted modern housing nowadays. Unfortunately, this type of housing has almost become distinct in the most prosperous areas in the big cities, like in the inner ring area in Shanghai and in Luofu and Futian districts in Shenzhen. Some local governments even ban the construction of multi-storey housing in the center areas because of the scarcity of the land. But multi-storey housing is the most welcomed housing type in housing consuming.

Multi-storey housing is between 4 to 7 stories and the elevation of the upper side of the highest eave board should be below 20 meter's high ⁷. The storey-height is 2.8 meters ⁸. In most cases, there is no elevator installed. Usually, on one floor, the staircase serves for 2-4 flats ⁹. The length of the building is usually less than 3 staircase-halls ¹⁰. The width of the building is usually less than 15 meters. The distance between the buildings should be at least 1:1 in order to guarantee the letting-in of the sun shine into the flats of the first floor (ground floor).

Unlike most of that in Britain and in Germany, in the past, a lot of multi-storey housings in Shanghai and Shenzhen were flat-roofed. Due to the problems of water leakage, heat protection, aesthetic effect and others, flat-roof was being abandoned in recent years. More and more slope-roofed buildings have been erected. In Shanghai, the government even launched the campaign of "flat-to-slope engineering" to put the additional slope roofs on the top of the old housings to improve the living conditions of the dwellers. A balcony for one flat is guaranteed in multi-storey housing. Recently, two-balcony housing was appeared in the market with the small secondary one connected to the kitchen.



Photo- 1 Multi-storey housing

2.3.2.3 Low high-rise housing.

This is a new type of housing that appeared in the early 1990s. In fact, low high-rise housing is the solution to the dilemma between city planning and the propensity of the public. People prefer living in multi-storey housing to high-rise housing whereas the city planning department cannot permit the buildings of multi-storey housing in the city center because of the effectiveness of land using. So low high-rise housing was invented. Surprisingly no sooner it was introduced into the

market, then it became very popular. People like it, and the developers are happy to produce it. In a short time, this type of housing was widely introduced into the market.

Low high-rise housing is usually 8-20 stories high¹¹. It is different from multi-storey and more precisely it is the small version of high-rise building. It looks like the high-rise building and is applied the same design principles and installed the same equipment. Yet it has fewer stories.



Photo- 2 Low high-rise housing

2.3.2.4 High-rise housing.

May be we could say that high-rise housing is the second popular housing type in Shanghai and in Shenzhen. It is easily to understand that because of the very limited space and land resource, the upward growth of building is evitable. By virtue of the efficiency in space using, high-rise housings are widely accepted and built in the city center. It helps to solve the accommodation problem very effectively.

In China, high-rise housing is defined as between 21 to 30 stories and the elevation of the upper side of the highest eave board should be below 100 meter's.



Photo- 3 High-rise housing

2.3.2.5 Super high-rise housing.

When the elevation of the upper side of the highest eave board of the housing surpasses 100 meters, it is super high-rise housing. Super high-rise housing is quite different from high-rise housing with regards to the building design and the government's building regulation codes which are mainly concerned with fire requirements.

Because of the additional requirements, the construction cost of super high-rise housing is also increased dramatically. So the price of this type of housing is very high.

Super high-rise housing is very rare in Shanghai and in Shenzhen, let alone in other Chinese cities. It is the extreme example of high-rise housing development. In Shanghai, it is said that the government has stopped the permission of the new construction of super high-rise housing.



Photo- 4 Super high-rise housing

2.3.2.6 Villa.

Villa is actually the detached, stand-alone house. This type of housing is very expensive and usually purchased by rich people. Compared with other type of housing, villa is not popularly built (1% and less than 10% in Shenzhen and shanghai housing market, respectively) (Liu C, 2005, Liu X, 2003) and the construction of it is restricted by the government.



Photo –5 Villa

2.3.3 Housing structural forms.

In term of construction structures of the residential building in Chinese housing industry, the applications of different structures are depended on the height or the storey of the building. The variety of structures of multi-storey housing and the below are small and little changed in a long time, whereas the structures of high housing are sundry and new technologies, new forms and new construction methods are invented and improved quickly. Compared with that of high-rise commercial building and various non-residential buildings, the structures of housing are the most matured and the simplest ones.

2.3.3.1 The structures for multi-storey housing.

The most common type of structure for multi-storey housing is called “brick-concrete structure”. Simply put, the structure is composed of brick and ferroconcrete. The wall is made of bricks and carries most of the vertical loading, whilst the floor slab carries the level loading. The independent beam and column are rarely applied except in some special conditions. But there is one kind of in-wall beam which bears the vertical loading alone with the wall with the width equaling to the wall, about 20 cm high and around the whole outer wall of the building consistently. The main functions of this “circle beam” are to carry the loading and to strengthen the firmness of the building.

The choosing of the structure is something to do with the earth conditions below the building. In normal circumstances, the foundation of the multi-storey housing is strip-shape foundation and the structure of the upper building is “brick-concrete structure”. If the earth conditions are not good, the “framework structure” will be adopted. This form of structure is stronger and more shake-resistant.

2.3.3.2 The structures of low high-rise housing and high-rise housing.

“Framework structure” is also adopted in many low high-rise housings, particularly the

housings under 13 or 14 stories. In this case, the adoption of the structure forms is not to do with the earth conditions, rather the requirements of the mechanics.

In recent years, “board structure” or “board building” is very popular in low high-rise housing and high-rise housing thanks to its advantages in space usage, airflow and “sunshine-picking”. The most important advantage for its popularity is that it creates more space from the building, that brings better economic benefits for the developer.

Another type of structure which is also popular is “butterfly structure”. As the name indicates, the shape of the building is butterfly-like. This sort of building is adopted largely because of the limit of the shape of the plot. It has a beautiful name and a pretty appearance and enhances the aesthetic effect of the building block. But the main disadvantage of this kind of building is that in some parts of the building, the rooms of the units are very hard to arrange.

In face, the “board structure” and “butterfly structure” are not strictly the types of mechanics structure. They are belonged to ferroconcrete structure, specifically or popularly called “structure of cutting-force wall” in which the loadings of the building are born by the slab, the beam, the column and the wall.

The issue of building structure is related with the ratio of “room-gaining”¹². Usually this ratio in “brick-concrete structure” is above 90%, where the ratio in ferroconcrete is below 80%. This is one of the main reasons why most people prefer low-rise housing.

2.3.4 Housing unit type.

As in other countries, in China the housing unit type is also classified by the number of the bedroom. In the housing market, one-bedroom, two-bedroom and three-bedroom housing are the three most popular unit types. Yet this does not mean there are no more bedrooms housing in the market. In fact it is not at all hard to find four-bedroom, or five-bedroom housings. The situation is that a housing project always contains many types of housing units. Yet the proportion of small bedroom units are much more than big ones. (By the way, there is rarely six-bedroom unit or higher in multi stories and high-rise housings.)

The sizes of the different types of units in Shanghai and Shenzhen¹³ are usually as follow.

- One-bedroom unit: 50-70 m² (construction area, not the net area).
- Two-bedroom unit: 80-100 m² (construction area, not the net area).
- Three-bedroom unit: 100-120 m² (construction area, not the net area).

In recent years, the “mini unit type” has been very successful in the housing market, beginning from the south then extending to the north. It is easy to understand “mini housing” means small housing. One bedroom unit is less than 40 m², two-bedroom 60m², three-bedroom 80m² or below. The appearance of “mini unit” in the market is the result of the high housing price. The less area means the less grand price of one unit given the same unit square meter price. This type of housing unit is really very successful in the market. It is always the first batch of housings which are sold out in a very short of time. But time will prove that this is just a transitional type of housing. It will bow out of the market in the future just because of the attractiveness now. Is it possible to guarantee the living quality of the household to live in the bedrooms which are less than 10m²? “mini-unit” is most attractive to the youngsters who are eager to find a place to spend the nights or to the persons who need a temporary house.

2.3.5 Housing room type.

There are not big differences in the room arrangement between China and other countries. The basic function rooms are exactly the same, the bedroom, the living room, the kitchen, and the toilet.

But there are some Chinese characters in the room-type development of housing.

□ The bed room.

The social trend has changed from pursuing big bedroom to small bedroom. In the past, the main activities of the household is in bedroom, so people prefer the house with the big bedroom which may have a share of 70% of the net space. Now this type of bedroom-dominated housing (big bedrooms, small all others) is considered out of date.

□ The living room.

The concept of living room was actually re-introduced into Chinese household with the development of the housing market. Most of the ordinary housing built in the 1960s and 1970s did not have living room. It was considered redundant. Nowadays, people think it is more important than bedroom. The social trend is “big living room, small bedroom”. Under this circumstance, the area of living room becomes larger and larger. In many cases, the living room is the same large or larger than the bedroom(s), in the small bedroom house like one or two-bedroom house. With the shrinking share of areas of bedroom, a big increase of living room occurs. The living room is usually divided into two parts. The front part is for dinner, while the back part is reserved for other activities. In recent years, there is a reverse trend to limit the areas of the living room.

□ The kitchen and the toilet

These two functional rooms are definitely essential parts of the household living. But they were neglected in the housing design in the past in China. The result was that these two rooms were small and no natural light. Of course this situation has been changed with the advance of the industry and the higher and higher demand of the public. Now the slogan (basic requirement) is that “bright kitchen, bright toilet”---kitchen and toilet must be bright with natural light. Certainly it is also wrong if we go the other extremely way. After all we do not spend many times in kitchen, let along toilet. Due to the Chinese living habit, the so-called open-kitchen is not adopted by most of the households. Kitchen is the closed room and usually it is less than 10 square meters. Toilet room cannot be open and a toilet of 6 m² is regarded quite spacious.

□ The balcony.

Balcony is an important element of the housing unit. There are three types of balconies, convex balcony (completely protruding out side of the outer wall), concave balcony (completely concaved inside the outer wall) and half-convex-half-concave balcony (partly out side of the outer wall). Of the three, convex balcony is the most popular one. There have been little substantial changes in the design, the material and the construction of balcony. But the size of it has been dramatically enlarged. In the past, balcony was usually about 2m². In recent years, people more and more like big balcony. Now the areas of 4m² are normal. Some are even 10m². If there are two balconied in the unit, the second one which is usually connected with kitchen is less than 2m² in most cases.

□Summary. Housing was not a commodity before 1979 in China. After that, the private housing appeared and housing market was established and developed. This transformation in face creates the foundation to raise housing price. The intrinsic features of Chinese housing are not so different from other. But extrinsic ones are unique in some aspects. All lands are owned by the state and they are prohibited by law to sell to anyone. So people who want to buy the private housing must rent the land from the government and the there is a 70-year cap for the rent-time. This is the land leasing system. In housing types, the overwhelming one is multi-family housing. □

Notes:

1. Source: Data Set, Census 2000 Summary File 3 (SF 3) - Sample Data, USA.
2. Source: <http://business.iafrica.com/news/284787.htm>. But BBC reported on 16-01-2004 that in 2003 the average housing price in UK as a whole was 139,716 Pounds.
3. “Fengshui” is one kind of Chinese traditional method in judging the auspiciousness of the building.
4. First-housing is referred to the house people buy in the first time to live. Then they will buy the second one, the third one and so on if they wish and/or can.
5. In China, in most cases the reason people buy additional house is mainly for investment purpose, or for investment and luxury when the market condition is not so favorable.
6. In China, for residential building, it is not a must to install elevator in the housing below 7 stories. Above 8 (8 included), the building must be equipped with elevator.
7. The elevation of 20 meters is referred to the height calculated from the ground surface of the first floor where the elevation is ± 0.00 , not from the outside ground surface where the elevation is usually -0.5 meter or so. The same are in other types of housing.
8. The storey-height is referred to the height from the floor surface (not the structural surface) of one floor-to-floor surface of upper floor. It includes the thickness of the floor slab. So the storey-height is not a net height. The standard of 2.8 meters of storey-height was made in the 1980s. But recently some developers were marketing the housings which were 3m height or higher to attract eyeballs of the consumers. This may be a trend which would be followed by others.
9. Before the middle of 1990s, in Shanghai and in Shenzhen, the housing with the staircase serving more than 4 flats on one floor was still built. But now this kind of housing was considered out of date.
10. It is more convenient and widely accepted to count the length by using the unit of staircase-hall. For example, if we put together three units of one-staircase-for-2-flats, the length of the building is three staircase-halls. It is not necessary the three units be exactly the same.
11. The definition of low high-rise housing is very much arguable. Some define it below 17 stories. Some are even below 13 stories. Here it is classified as 8-20 stories. It doesn't matter.
12. Ratio of “room-gaining” is referred to as the ration of the areas of all the living space to the whole areas of the building. The higher the ratio, the more net space the people can use. So the consumers like the housing with the high ratio. Because the whole construction squares are the same, for developer, he receives the same amount of money in selling the housing. He cares about it only because it affects the fondness of the consumers.
13. Because China is a vast country, the tastes are significantly different in different places. Generally speaking, the size of housing is bigger in the North than in the South.

Chapter three: The housing development process

□Abstract. In this chapter the whole process of housing development is discussed. Firstly, the real estate company, i.e. the developer. Then the development process from investment decision making, land acquisition to property marketing and facility management. Finally, the roles played by all the participants involved.□

3.1 Real estate development company

There are rarely specifically named “housing development company” in Chinese housing industry. The companies which do the business in housing development are too often called “real estate company”¹. The focus of most of the real estate companies is in housing real estate development. If it is possible, real estate company will be engaged in other types of property development like commercial real estate development because it is more profitable. But housing real estate development is all the time the core business for the real estate companies.

3.1.1 The establishment of the real estate development company

3.1.1.1 Enterprise Setting-up

In “Urban Real Estate Administration Act” which was enacted from 1 January, 1995, it defined the conditions of establishing real estate development company.

Provision 29: Real estate company is the company which is doing business for profit and which is engaged in real estate development and marketing. To set up the company, it must have or meet:

- (1) The definite name and management organization;
- (2) The fixed business premises;
- (3) The registration capital in consistent with the rules of the State Council;
- (4) Enough professionals;

(5) And other requirements required by other laws and administration regulations.

It is necessary to apply for registration at the Department of Industry and Commerce when setting up the real estate development company. The department concerned should allow the applicants to be registered and issue the license if the application is not against the conditions prescribed by this Act. The application for registration will be rejected if the conditions are not met.

To set up limited company, stock limited company and also being engaged in real estate development and marketing must follow the requirements provided by “The Company Act”.

Within one month after receiving the official business license, the real estate development company should go to put on file at the department appointed by the county level government or above where the registration occurred.

Provision 30: The ratio of the company’s registration capital to grand investment should be in line with the state regulations concerned.

3.1.1.2 Enterprise Qualification Administration

For real estate development company, in order to conduct the business, it must firstly obtain the official “enterprise qualification certificate” from the government department in question. It is illegal to develop property without the certificate. In the “Qualification Administration for Real Estate Enterprise” which was issued by the National Department of Construction and was carried out from 29 March, 2000, it made the rules on obtaining the certificate.

The qualification is classified into four grades. The requirements for each one are:

1. The first grade,

- (1) The registration capital is no less than ¥50 million.
- (2) At least five years of experience in real estate development business.
- (3) Accumulated finished construction areas at least 300,000m² or equivalent of investment in the last three years.
- (4) The passing rate of construction quality is 100% five years in a row.
- (5) Housing construction areas exceed 150,000 square metres in the year before. Or accomplishing the corresponding real estate investment.
- (6) There are no less than 40 qualified professional personnel in the fields like architecture, structure, finance, real estate and other economic majors in the company, of the forty, no less than twenty should possess middle-level qualification. At least four persons who are engaged in finance should hold the professional qualification certificate.
- (7) The persons who are in charge of the business departments as engineering technology, finance, statistics should possess relevant middle-level qualification.
- (8) A proper quality guarantee system should be established. The requirements in “Housing Quality Guarantee Certificate” and “Housing Usage Introduction” should be obeyed in housing selling.
- (9) No serious quality accidents had occurred.

2. The second grade,

- (1) The registration capital is no less than ¥20 million.
- (2) At least three years of experience in real estate development business.
- (3) Accumulated finished construction areas at least 150,000m² or equivalent of investment in the last three years.
- (4) The passing rate of construction quality is 100% three years in a row.
- (5) Housing construction areas exceed 100,000 square meters in the year before. Or accomplishing

the corresponding real estate investment.

- (6) There are no less than 20 qualified professional personnel in the fields like architecture, structure, finance, real estate and other economic majors in the company, of the twenty, no less than ten should possess middle-level qualification. At least three persons who are engaged in finance should hold the professional qualification certificate.
- (7) The persons who are in charge of the business departments as engineering technology, finance, statistics should possess relevant middle-level qualification.
- (8) A proper quality guarantee system should be established. The requirements in “Housing Quality Guarantee Certificate” and “Housing Usage Introduction” should be obeyed in housing selling.
- (9) No serious quality accidents had occurred.

3. The third grade,

- (1) The registration capital is no less than ¥8 million.
- (2) At least two years of experience in real estate development business.
- (3) Accumulated finished construction areas at least 50,000m² or equivalent of investment in the last three years.
- (4) The passing rate of construction quality is 100% two years in a row.
- (5) There are no less than 10 qualified professional personnel in the fields like architecture, structure, finance, real estate and other economic majors in the company, of the ten, no less than five should possess middle-level qualification. At least two persons who are engaged in finance should hold the professional qualification certificate.
- (6) The persons who are in charge of the departments as engineering technology, finance, should possess relevant middle-level qualification. The persons who are in charge of the business departments as statistics and others should possess relevant preliminary-level qualification.
- (7) A proper quality guarantee system should be established. The requirements in “Housing Quality Guarantee Certificate” and “Housing Usage Introduction” should be obeyed in housing selling.
- (8) No serious quality accidents had occurred.

4. The fourth grade,

- (1) The registration capital is no less than ¥1 million.
- (2) At least one year of experience in real estate development business.
- (3) The passing rate of construction quality is 100% for the finished projects.
- (4) There are no less than 5 qualified professional personnel in the fields like architecture, structure, finance, real estate and other economic majors in the company. At least two persons who are engaged in finance should hold the professional qualification certificate.
- (5) The persons who are in charge of the department of engineering technology should possess relevant middle-level qualification. The persons who are in charge of the department of finance should possess relevant preliminary-level qualification. Professionals in statistics are necessary.
- (6) A proper quality guarantee system should be established. The requirements in “Housing Quality Guarantee Certificate” and “Housing Usage Introduction” should be obeyed in housing selling.
- (7) No serious quality accidents had occurred.

3.1.2 The functional organization of the real estate company

Real estate company is for developing the property projects. Its accomplishment requires all necessary support from all sides of the company, including the organizational support. In most cases in Chinese real estate industry, the common practice for the company or companies² to develop property project is to authorize the “project company” to manage the development³. Usually the typical structure of the “project company” is organized as following⁴, figure 3-1.

As it is demonstrated above, the organization of the company is very simple. But with this terse and direct structure it fulfills the huge and complicated tasks of developing the property project.

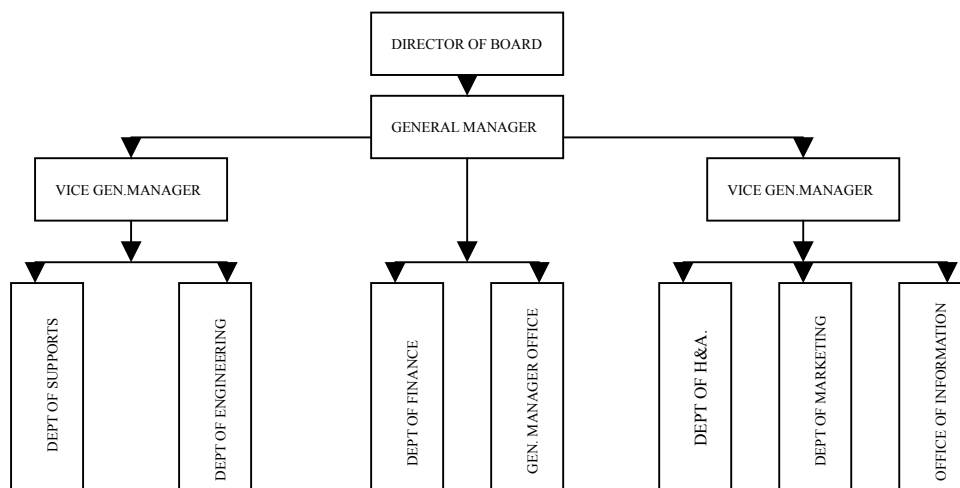


Figure 3-1, the typical organization structure of project management

The functions of each department:

□ The department of supports.

The main tasks of the department are to serve and support the construction of the project by cooperating with the related government departments and public utilities companies and others to make the project going forward and suitable for use.

- (1) To get government approval of the project by obtaining the “four certificates”⁵.
- (2) To settle the issue of public utilities by signing the necessary contracts with the utilities companies, so to get the guarantee of supply.
- (3) To settle the issues which are related with land like the factory-moving, resident-moving, old building demolishing, old utilities facilities handling and so on, if these matters have not cleared after acquiring the land, to make the land ready for construction.
- (4) To cooperate with the government departments which are not directly involved in the project, but with equal importance like the departments in charge of public security, urban sanitation, community affairs, family planning, etc.

□ The department of engineering

This is the unit which is wholeheartedly engaged in the task of constructing and completing the project. This department is the core of the company and plays all the functions the project demands and therefore always occupies the bulk of the resources of the company.

There are definite and specific divisions of tasks in the department. Each person or the group of persons is/are responsible for a specific field. Each field needs different expertise, so it is clearly defined and each works independently. The head of the department is responsible for the managing, cooperating and directing of the works of all members.

- (1) Construction work. To supervise the works of the various construction companies⁶. He is focus on three factors, construction quality, building security and time schedule. The main method of conducting his work is to hold the regular project meeting in which all participants in construction are compulsory to attend. This is a very efficient and important meeting. He is also in charge of the liaison work with the design companies and the construction supervision company⁷.
- (2) “Strong-electricity”⁸ work. To supervise the works related with electricity supply like lighting, equipment operation, etc.
- (3) “Weak-electricity” work. To supervise the works related with audio and video telecommunication like TV, internet, telephone, alarm, etc.
- (4) Water work. To supervise the works related with water supply and water conducting. Water supply is referred to providing pure and drinkable water. Water conducting is referred to draining off used water and rain water. Each has its own duct and equipment system.
- (5) Gas work. To supervise the works related with gas supply. In Shanghai, there are two gas system, coal gas system and natural gas system. These two systems to most extent are not compatible. The natural gas system will gradually replace coal gas system in households.
- (6) Air-condition work. To supervise the works related with air-condition supply. This work is more likely done in commercial office project which requires central air-condition installation.
- (7) Heavy equipment work. The small quantities of equipment in the residential buildings are handled by the persons who are engaged in their specific works like water, electricity, gas. But in commercial buildings, there are a lot of heavy and big equipment. The purchase and delivery of the equipment will be allocated to one special person. In residential project, there is few such equipment. The most important one is the lift.
- (8) Construction materials work. The construction of real estate project needs hundred and thousand of materials and semi or finished products. But most of them are in the hands of the contractors. However, the developer will often have his own material man who monopolizes in three vital materials, reinforcing bar, cement and wood because of the importance of these materials. These three will be purchased and delivered by the material-man directly.
- (9) Cost work. To supervise the works related with construction cost control. In China this man can be called cost engineer or quantity surveyor⁹. His works are embodied in three ways, general calculation, pre-calculation and finished calculation. By checking and negotiating the three-calculation which are submitted by the men from the contractors, the costs of each item of the project and therefore the whole cost can be determined.

□ The department of finance.

Every company has finance department which deals with the matter of money movement. The working contents of finance department of the “project company” in real estate industry in China are more simple than that of finance department other than it. It only conducts the basic businesses like money pay in and out, fulfilling the tasks the government required, etc. It usually does not involve in the activities as company financing, management, etc. Because of the professional nature, the cost control is not the responsibility of the financial department, rather it is done by quantity surveyor.

□ The department of human resources and administration

In China, in the minds of many people, the department of H&A is responsible for all the so called miscellaneous matters. It is certainly the misconception. The department of human resources and administration is in the strategically important position because it provides the most vital

resource the development of the company needs---personnel, and other supports. Given the high job-hopping rate and very weak human resource management in real estate company in China, this department is doing the critical works.

- (1) The employment of all the personnel the company needs.
 - (2) The management of the human resource in the company like work-result exam, salary-design, responsibility-analysis, etc.
 - (3) The making of company policy.
 - (4) The management of the company transportation facilities.
 - (5) The management of the company working appliances and equipment.
 - (6) The management of the company premises.
 - (7) The management of the stationery.
 - (8) Public relation works.
- The department of marketing.

In Chinese real estate industry, the project development company is concentrated on developing the project, on organizing and managing the building engineering works. Property marketing asks for special knowledge, experience, personnel and channels. So this works are usually outsourced to the kind of real estate marketing companies which are specialized in selling real estate property. Although in recent years the trend has been that the developers sell their products by themselves thanks to the accumulated capabilities, especially the big developing companies, in Shanghai and Shenzhen quite some are still sold by the marketing companies. Sometimes the developer and the marketing company work together to sell the property.

- (1) To get “Presale Certificate” from the government¹⁰.
 - (2) To secure a temporary or permanent selling place.
 - (3) To manage the practical selling activities.
 - (4) To cooperate with marketing company in selling the property.
 - (5) To manage the selling personnel.
 - (6) To be in charge of the promotion.
- The office of general manager.

This office is composed of the secretaries of the highest leaders of the company. The main tasks of this department are to liaison the general manager and director of board with all the departments of the company. It functions as the communication bridge.

- The office of information.

The development of the real estate project is complicated and time-consuming. It needs and will produce a lot of data which are related with the development. So there must a department to engage in the handling of all the information. This office is the information centre of the company.

- (1) To keep them in order and manage all the project’s paper materials like government documents, engineering documents, drawings, reports, files, sale materials, etc.
- (2) To provide information service to anyone in need.
- (3) To purchase the necessary books or other materials which are in need.

3.2 The introduction of the process of housing development

Due to the natures of synthesis and complexity in the housing project, the process of development is tedious. (Figure 3-2) Further more, thanks to the huge differences in the terms of geographic, economic and social conditions in China, the development process exhibits its

significant assortment. Compared with the situations in other countries, it is unique. There are several ways to classify the process, like the very simple four-stage classification (Codman and L. Austin, 1983), the eight-stage on (Mills, et al, 1991) and five-stage one (John and Michael, 1996, p200) Here, we introduce the process based on the practice in the cities of Shanghai and Shenzhen.

3.2.1 Investment decision

The investment decision is based on market research. The significance of sound market research cannot be stressed too strongly. Market research is the fundamental work in all the business activities. Before a business decision has been made, the market research must be undertaken to prove the feasibility of the decision. The ultimate aim of the business activity is to sell the product in the market. Without mastering the condition of the market in advance of the production, the product will be in great danger of been refused by the market. So is the housing commodity. Given the tremendous value of the housing product, the refusal of it will bring more damage to the producer.

In light of the characteristics of the housing market, there are two types of market research. One is the market research of investment. The other is the market research of product. The former is the general market research and it is conducted before the investment decision (in most cases

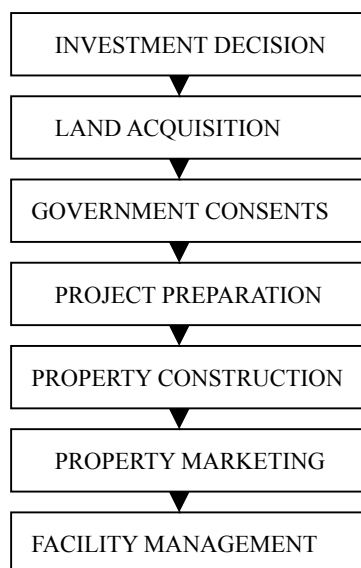


Figure 3-2 The general process of housing development

this paper deals with, it is about the land acquisition) has been made. It concerns with the overall market situation and helps the investor to judge whether to enter into the business and, if does, what are the prospects of the benefits it may deliver. After the land has been purchased, the market research of product is undertaken to decide what kinds of products to produce, which will be welcomed by the market, under the restrictions of the planning requirements for the land. The comparison of the natures of two researches is exhibited in Table 3-1.

Table 3-1 The comparison of investment and product market research

	INVESTMENT MARKET RESEARCH	PRODUCT MARKET RESEARCH
TIME OF UNDERTAKEN	BEFORE INVESTMENT DECISION	AFTER THE INVESTMENT DECISION
RESEARCH UNDERTAKER	SELF-UNDERTAKING OR SPECIAL MARKET RESEARCH COMPANY	SPECIAL MARKET RESEARCH COMPANY
FOCUS	(1) MACROECONOMIC DEVELOPMENT (2) GENERAL MARKET CONDITIONS (3) PROJECT FEASIBILITY (4) ECONOMIC INDICES	(1) INDUSTRIAL DEVELOPMENT (2) SPECIFIC AREA MARKET CONDITIONS (3) PRODUCT FEASIBILITY (4) PRODUCT DESIGN
METHOD CONDUCTED	TARGETTED ENTRUSTING	COMPETITIVE BIDDING
COST ¹¹	LOW	HIGH
USAGE	MOSTLY FOR EXTERNAL USE	MOSTLY FOR INTERNAL USE
RELATION WITH THE PROJECT	LOOSE	TIGHT
RESEARCH PERIOD	SHORT	LONG

Here, the market research for investment is the first step of the process of the housing development. Its main contents are as followings:

- (1) The analysis of the general national and municipal economic picture in recent years and the development prospects in the future.
- (2) The analysis of the general national and municipal real estate and housing industry development in recent years and the development prospects in the future.
- (3) The analysis of the impacts of the positive and negative political, economical and social events on the development of the housing market.
- (4) The analysis of the present and future city planning and its impact on housing development.
- (5) The analysis of the demand and supply of the land market in the city.
- (6) The analysis of the demand and supply of the housing market in the city.
- (7) The analysis of the demand and supply of the housing financial market in the city.
- (8) The analysis of the housing design and construction industry in the city.
- (9) The analysis of the housing marketing industry in the city.
- (10) The introduction of the proposed project.
- (11) The financial analysis of the project including cost, price, profit, return rate, sensitivity, etc.
- (12) The conclusion.

3.2.2 Land acquisition

Any housing commodity is built on the specific land and that land then becomes one of the not-separating parts of the commodity, together with the above structure. Thus land acquisition is the vital part of the development process. In China, all the lands are belonged to the state and they cannot be sold to anybody. But the land (essentially the land use right) can be leased to anybody qualified for a period of time. As for residential development, the lease time is seventy years in maximum.

There were several methods for developer to obtain the land for development in the past like

free-of-charge allocation, agreement offer, competitive bidding and public auction.

Following is the introduction of land acquisition methods in China.

(1) Free-of-charge allocation.

This was the popular method to obtain land before the market reform. The unit which was in need of land was required to lodge the application to the government department concerned. The department examined the application and allocate the land free of charge. With the further reform and the development of the land market, this way of allocating land has been slowly giving way to market-oriented methods and shrank to the very strictly limited land use purposes. In the PRC Land Management Act 1998, provision 54, it states that all the lands which are used for business activities should be transferred in the ways of payment. But, after sanctioned by the government of county or above, the land transfer for the following purposes could be conducted free of charge or in negotiated price.

- ▲ The land for the construction of government department.
- ▲ The land for the construction of military purposes.
- ▲ The land for the construction of infrastructure in the city.
- ▲ The land for the construction of public interests.
- ▲ The land for the construction of the infrastructure in energy, traffic, water conservancy projects, etc, which are supported enthusiastically by the state.
- ▲ Other lands regulated by the laws concerned.

(2) Agreement payment offer.

This is the main form of land transfer in the 1980s and in 1990s. Because of the widespread abuse of this method and the tremendous problems, particularly the corruption and flowing-away of the state-owned-asset, it causes, “agreement payment offer” had been severely re-examined and only allowed to be used in strictly limited areas. “agreement payment offer” could be described briefly as the practice as this: when the person or the company wants to develop one land he is interested in, he will negotiate with the land occupier and reach the agreement on the transfer price. Then he submits the land application to the government department concerned. After finishing the necessary procedure and paying the transfer fees, which are often far below the market price or even just symbolic, he can get the certificates and permission to develop the project.

Agreement payment offer was officially banned by the Act in 1998. Unfortunately, it had not been effectively enforced since then. In 2001, the municipal government in Shanghai and Shenzhen became serious in this matter and took real actions to carry out this law. Until then, this practice seemed indeed stopped. But the following land uses could be allowed to continue the way.

- ▲ Special industrial land like high-ten project.
- ▲ The residential land for low-profit commodity housing invested by the government.

(3) Competitive bidding.

In 2001, both governments in Shanghai and in Shenzhen made their own legislations to strengthen the enactment of the national law in land use. They clearly stated that the “agreement payment offer” would be prohibited except in certain limited circumstances and all the lands for profit purposes like commercial, residential, tourism, entertainment constructions or the lands that there are at least two bidders must be offered in the forms of competitive bidding or public auction. The official procedure of land transfer in the form of competitive bidding is listed as figure 3-3¹².

(4) Public auction.

Public auction is the common practice in selling commodity in many other industries. As the

practice as competitive bidding, public auction has been paid much attention by the government and played the conspicuous and main role in offering lands in Shanghai and Shenzhen. The huge lump-sum obtained from this letting becomes more and more important to the coffers of the two cities. Public auction in land is defined as this way: the action of acquiring the land use right by the bidder who offers the highest price via open competition in the place and time which are set by the auctioneers through auction announcement. The official procedure of land transfer in the form of public auction is listed as figure 3-4¹³.

(5) Public listing.

According to the definition from the famous Chinese real estate website, “Soufang”, public listing transferring of state-owned land use right is referred to as the practice that the transferor publishes the listing announcement and lists the land offered and its trading conditions at the specific land trade center in the time period designated by the announcement. After accepting the application of the offer price of the purchasers, the transferor then renews the list price and determines the final purchaser based on the final offer after the deadline. The method of listing comprehensively shows the advantages of bidding, auction and agreement transferring, and it is also an important way in transferring the state-owned land use right with the features of openness and fairness. It is especially apt for the present land market situation. Listing possesses the merits the bidding and the auction do not do: firstly, the listing time is long and multi-price-offering is permitted. This makes rational decision and competition possible; Secondly, it is expedient to operate; Thirdly, it favors the formation and function of the tangible land market. Listing is the critical supplement of the methods of bidding and auction in land transferring.

(6) City regeneration.

Due to the severe imbalance in the development of the country in China, the city and countryside went on their own ways. Relatively speaking the cities were prosperous

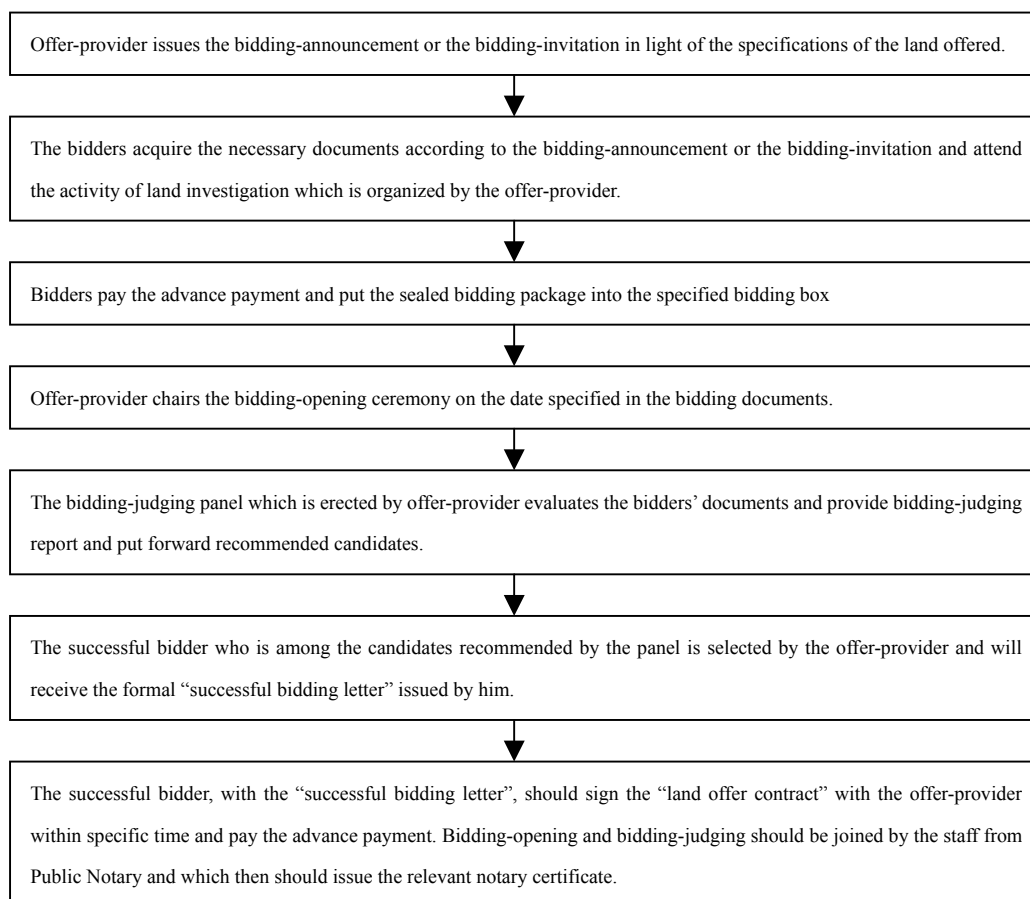


Figure 3-3 The procedure of competitive bidding

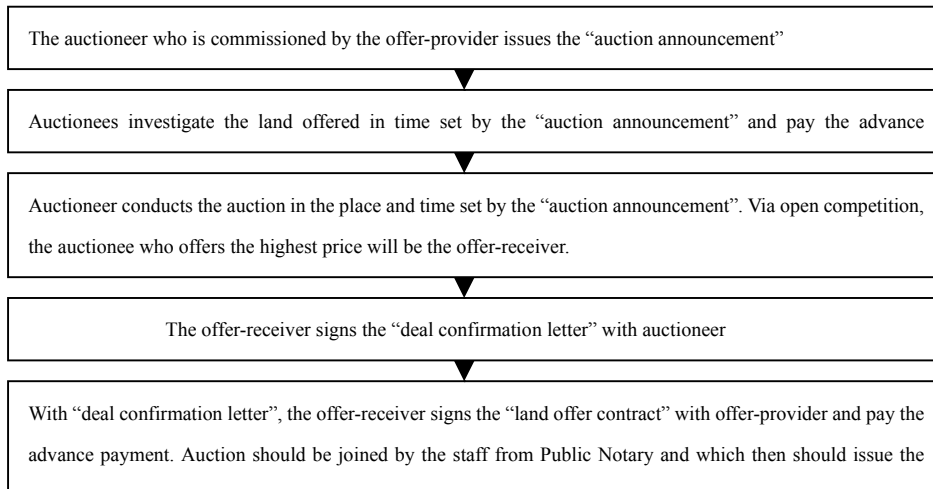


Figure 3-4 The procedure of auction

and growing fast, whereas the countryside was lagged far behind and always in a standstill. So the immigration of population from countryside to cities was constantly in the flow. The over-grown population inevitably gave rise to slums in the cities. In Shanghai, in order to improve the image and at the

same time the living condition of the slum-dweller, the urban dwellers as well as whole, the municipal government launched the campaign many years ago to deplete the shantytown and other shanty buildings in some parts of the city. For real estate developers, this city regeneration campaign also creates the opportunities to get land to develop the projects in a special way other than others.

At the early times, the city was small. The slums were mostly located at the edge of the city and scattered around the important traffic centers. With the rapid expansion of the city, these areas gradually became important business and residential districts. Thus we can say that the slums always occupy the good locations. Developer loves good location so much. So he is quite willing to be engaged in the regeneration works. The biggest problem is the cost. The slums are so densely populated, therefore the compensation price is very high. On top of that, because the shanty towns are at the good locations, the land price will be very high too if the lands are obtained at the market price. These two effects will make the project at risk financially and thwart the enthusiasm of the developer. The government does not have the financial means to make the land to be ripe land. Under this circumstance, the government made some favorite policies towards these kinds of property development, which will let the developer to acquire the land at a price below market level. But this practice had been criticized by scholars and the Shanghai government is reconsidering it.

(7) Second hand transfer.

It is totally lawful to transfer the land after one obtains the land through bidding or auction. So this is another way for the late-comer to get a foot in the local property market. After settling down all the matters related with the land with the transfer and finishing the necessary process in the government departments, the new master will have the right to develop the land legally.

3.2.3 Government consents

As foregoing mentioned, the development of any property project must been improved by the

government. The following documents are need in the process of the development of the housing project: Real Estate Property Right Certificate¹⁴, Construction Land Planning License, Construction Engineering Planning License, Construction Engineering Building License, Housing Commodity Presale License, etc.

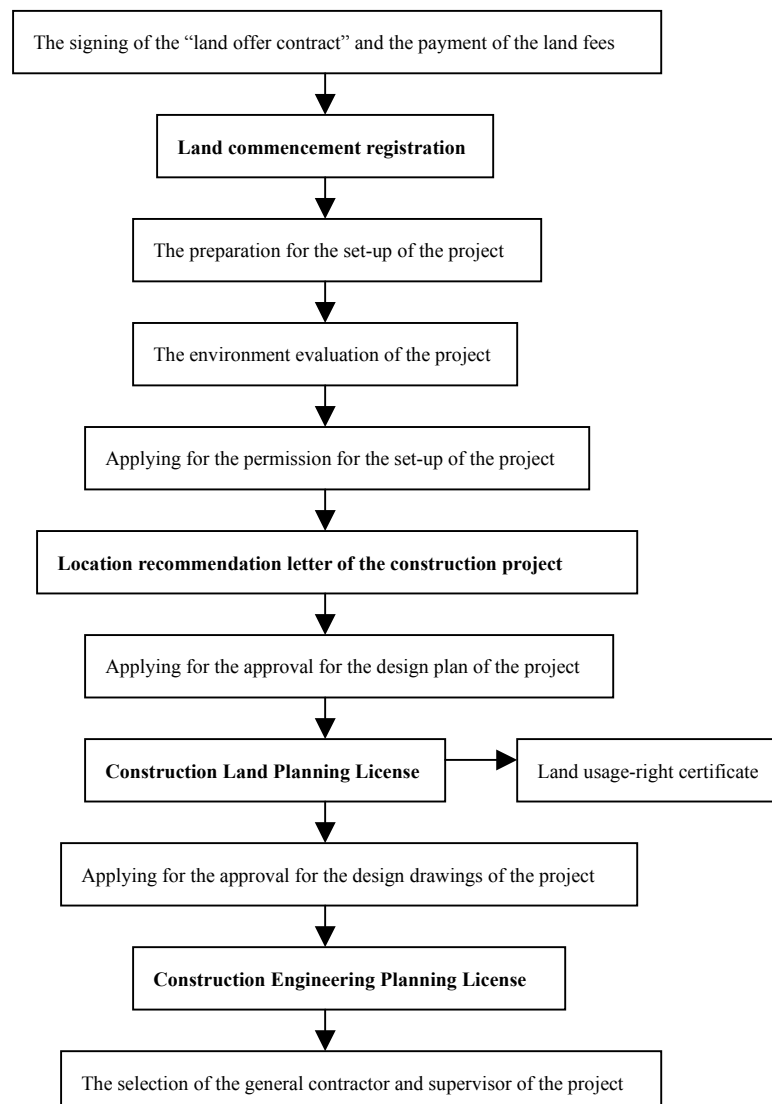
Based on the practice in Shanghai, the figure 3-5 illustrates the process of the handling of the official documents of the newly built commodity housing with the land obtained through bidding or auction.

□ The necessary documents for the **land commencement registration**

- (1) Real estate registration application form.
- (2) Applicant's identification approval.
- (3) Land survey report.
- (4) Tax documents.
- (5) Land offer contract.
- (6) Proof of the payment of the land offer fees.

□ The necessary documents for the **location recommendation letter of the construction project**

- (1) The approved planning documents.
- (2) The approved recommendation letter for the set-up of the project.
- (3) The 1/500 or 1/1000 terrain map provided by the Municipal Survey Bureau.



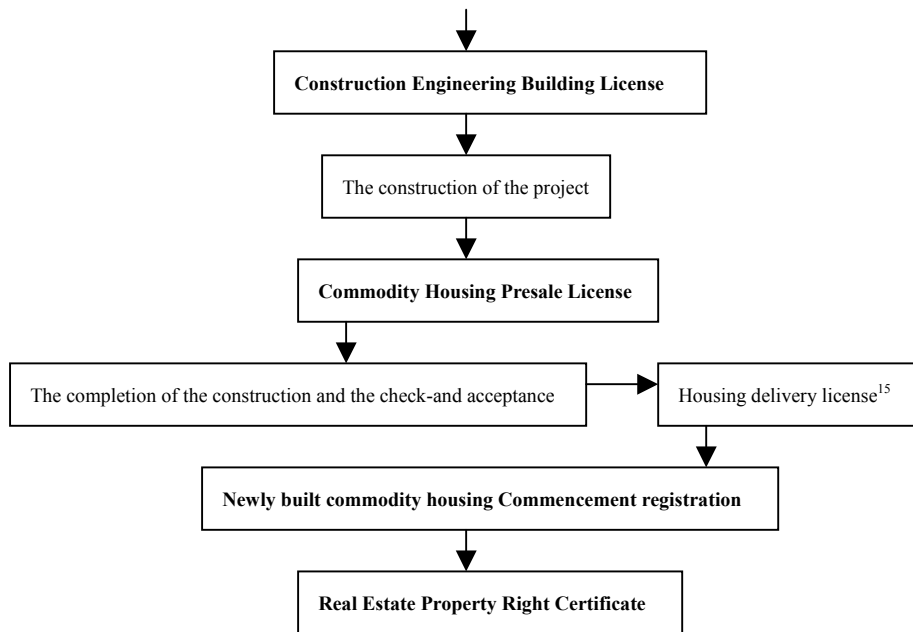


Figure 3-5 The process of government documents handling

(4) The official environment evaluation report.

The necessary documents for the **Construction Land Planning License**.

(1) The approved feasibility report of the project.

(2) The “location recommendation letter of the construction project” and its appendix drawings.

(3) The approved “construction engineering design plan” and its appendix drawings.

(4) The 1/500 or 1/1000 terrain map provided by the Municipal Survey Bureau.

(5) Land offer contract and its appendix drawings.

The necessary documents for the **Construction Engineering Planning License**.

(1) The approved preliminary design documents.

(2) The approved final design plan and general lay-out of the project from the planning authority.

(3) The land documents and the appendix drawings from the Building and Land Bureau.

(4) The 1/500 or 1/1000 terrain map provided by the Municipal Survey Bureau and stamped by the design company and signed by the chartered architect.

(5) Construction-drawing stamped by the design company and signed by the chartered architect.

(6) The drawings of square meter table, stamped by the design company and signed by the chartered architect.

(7) The drawings of foundation construction, stamped by the design company and signed by the chartered architect.

(8) Project estimating documents.

(9) The approval of the Departments of Fire, Sanitation, Traffic, etc, required by the project’s design plan final approval conducted by the planning authority.

(10) The sun light analysis report, in the case of high rise building.

(11) The approval of the payment for the air-defense.

The necessary documents for the **Construction Engineering Building License**.

(1) Application form for the permission of building of the construction project.

(2) Construction Engineering Planning License.

(3) The approval of money transfer. (25% of the yearly needed money for the construction of the

project as the advance payment for the material-purchasing must be transferred to the accounts of the relevant construction contractors.)

(4) The approvals of the in-position of the running water, electricity, road and the ready-ground.

(5) Construction contract and corruption-free agreement.

(6) Construction supervision contract.

(7) The approval of the made application for the supervision of building quality and security.

(8) Informing letters of successful prospecting and design and constructing companies.

(9) The approval of the ratified construction-drawing design documents.

□ The necessary documents for the **Commodity Housing Presale License**.

(1) The form for commodity housing presale.

(2) The certificate of development-qualification of the company.

(3) Land offer contract.

(4) Land usage-right certificate¹⁶.

(5) Construction Engineering Planning License.

(6) Construction Engineering Building License.

(7) The project schedule checking report issued by the qualified institute.

(8) Construction area mapping table.

(9) The agreement of presale money supervision signed with the relevant institute.

(10) The approval of the readiness of running water, electricity, gas and others.

(11) The “housing usage pact”, “forward property management contract” and the qualification certificate of the property management company

□ The necessary documents for the **Newly built commodity housing Commencement registration**.

(1) Application form for the real estate registration.

(2) Applicant’s identification documents.

(3) Housing survey report.

(4) Tax document.

(5) Land usage-right certificate.

(6) Construction Engineering Planning License.

(7) The approval of the completion of the construction and the finish-check.

(8) The checking informing letter of construction area.

(9) Housing delivery license.

(10) The approval of the postal number issued from public security bureau.

(11) The pre-calculation and finished-calculation of the project.

□ The necessary documents for the **Real Estate Property Right Certificate**.

After finishing the works of “land commencement registration” and “newly built commodity housing commencement registration”, the **Real Estate Property Right Certificate** will be issued readily.

In that the eight essential documents are applied for in the different departments, Table 3-2 lists the according units for each document¹⁷.

3.2.4 Project preparation

In light of the process of the project, we may classify the project preparation work into three stages. The first one is before the investment decision (i.e. land purchasing) was made. The second one is after the land purchasing and the registration and before the government consents application.

The third one is after getting some critical government consents and before the construction of the project. Of course, the government consents application is one of the preparation works. The main contents of the tasks in the three stages are listed below.

- The first stage.
 - (1) The investigation of land matters.
 - (2) The investment feasibility study.
 - (3) The organization of management team.
 - (4) The preparation of financing.
 - (5) The investigation of business partner

Table 3-2 The document and its department

DOCUMENT	DEPARTMENT
Land commencement registration	Real Estate Transaction Centre ¹⁸
Location recommendation letter of the construction project	Planning Bureau
Construction Land Planning License	Planning Bureau
Construction Engineering Planning License	Planning Bureau
Construction Engineering Building License	Construction Bureau
Commodity Housing Presale License	Real Estate Resource Bureau
Newly built commodity housing Commencement registration	Real Estate Transaction Centre
Real Estate Property Right Certificate	Real Estate Resource Bureau

- The second stage.
 - (1) The government approval of the set-up of the “project company” or the project task force.
 - (2) The preliminary organization of the “project company” or the task force.
 - (3) The liaison of the relevant government departments.
 - (4) The investigation of the relevant government regulations.
 - (5) The determination of the prospecting company.
 - (6) The determination of the planning design company¹⁹.
 - (7) The contacts of financial institute.
- The third stage.
 - (1) The formal establishment of the organization of the project management.
 - (2) The bidding for the selection of construction design company.
 - (3) The bidding for the selection of general contractor company.
 - (4) The bidding for the selection of construction supervision company.
 - (5) The bidding for the selection of property management company
 - (6) The investigation of the property marketing companies.
 - (7) The investigation of the important construction materials and equipment markets.
 - (8) The liaison with the government or semi-government departments indirectly related with the project.
 - (9) The application of temporary licenses for land, road-occupying, running water, electricity, etc.

3.2.5 Property construction

After obtaining the “four certificates” (i.e. Land Usage-right Certificate, Construction Land Planning License, Construction Engineering Planning License, Construction Engineering Building License), the developing company can officially launch the project to begin the comprehensive

construction works.

In summary, the main roles played by the chief parties involved are:

- (1) Developer: organizing and coordinating, paying the money in due time and presale.
- (2) Designer: design explanation and revising the drawing in light of the practical conditions.
- (3) Contractor: doing the works strictly according to the drawing and guaranteeing the quality.
- (4) Supervisor: quality, cost and time-schedule supervising.

The process of the housing property construction is simple in principle and can be divided into three sub-processes which are independently conducted, but the timing is interlaced.

□ The building engineering process.

The building engineering work is usually finished by the building general contractor.

(1) Main separating-section engineering.

Foundation engineering Structure engineering Roof engineering Layout engineering²⁰

(2) Main separating-item engineering.

- ▲ Earth engineering: earth flattening, earth excavating, earth transferring and earth returning.
- ▲ Concrete engineering: beam, column, board, wall.
- ▲ Brick engineering: foundation, wall.
- ▲ Steel-bar engineering: the processing of all the steel-bar used in the ferroconcrete parts.
- ▲ Carpenter engineering: the processing of the wood for door, window, mold-board, etc.
- ▲ Floor engineering: the processing of the surfaces of the ground, floor, staircase, etc.

□ The installation engineering process.

The installation engineering work is finished by special installation company. When the building construction is in progress, the installation works should cooperate with it carefully and punctually, or else, it would cause big problems to the whole process.

The installation engineering could be divided into following sub-engineering.

- ▲ Duct sub-engineering: running water duct, rain duct, sewage duct and gas duct.
- ▲ Electricity sub-engineering: electricity supply and electric appliances installation.
- ▲ “Weak-electricity” sub-engineering: the installation of telephone, TV, alarm, etc.
- ▲ Equipment engineering: elevator, water-pump, etc.

□ The decoration engineering process.

The decoration engineering work is finished by special decoration company. Because the housing decoration work is much simple and easy than that of commercial buildings, in reality this job is usually included in the general contract of the building construction and finished by the building construction company.

The decoration engineering is usually involved in the work of building exterior decoration. The interior decoration was in the past mostly done by the dwellers themselves (so called “second decoration”). But the situation is in the change. Nowadays, more and more housings are fully decorated when completed. And the “fully decorated delivery” is strongly supported by the government.

3.2.6 Property marketing

It is legal and commonly practiced by developers to sell the housing property before it is finished. Of course, there are some prerequisites set by the government to meet before the presale could be done. It will be discussed in details later. Presale plays a very important role in the capital-chain to the developer, so the developer does everything he can to make it successful. In

many cases, if the housing project is welcomed by the market and the market strategy is well designed and conducted, the property could be sold out 50% or 60% before it is finished and the money returned from the presale could easily sustain the operation of the project. The sale continues after the delivery of the property.

In Chinese housing market, except few big development companies, the housing property marketing is usually handled by special property marketing companies, or property agents and the selection of the agent is through the form of competitive bidding. They sell the property single-handedly or together with the marketing force of the developer and get the commission accordingly. The general process of housing property marketing is exhibited in Figure 3-6. (The detailed process will be discussed later.)

3.2.7 Facility management

The last process of the whole housing development process is facility management (also called “property management” in some countries). Facility management is referred to as the management behavior conducted in the specific areas, common areas within the scope of facility management and of the common affairs of the property owners, management groups and management personnel²¹. After the completion of the construction and the passing the government checking, the housing can be delivered to the customers. Then begins the facility management work. Facility management is conducted by the facility management company who is employed by the owners or Owners’ Committee. However, at the early stage, before the establishment of the Owners’ Committee, the facility management is overwhelmingly done by the facility company which is appointed by the developer and which is in most cases its “son company” or “relative company”. And it may continue to do the job after the forming of the committee.

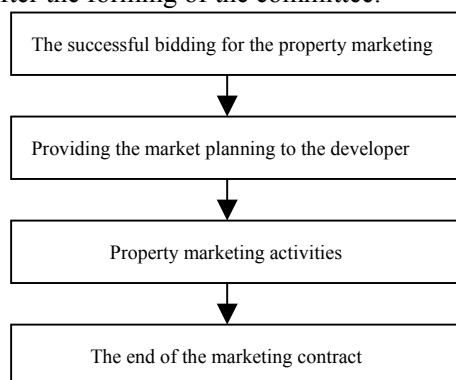
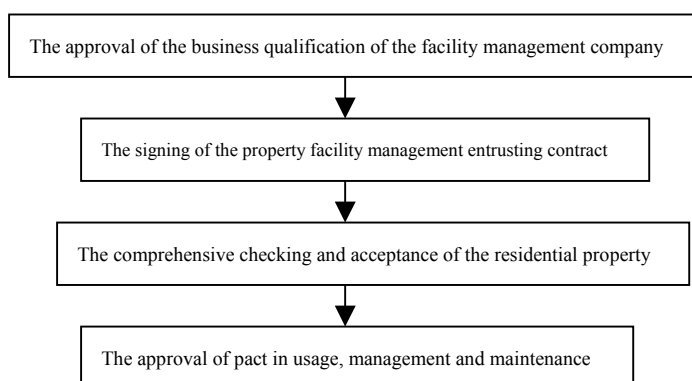


Figure 3-6 The general process of housing property marketing

□ The process of facility management. Figure 3-7.



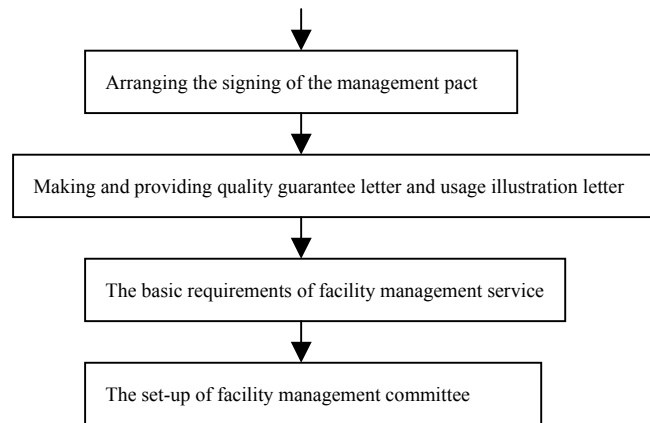


Figure 3-7 The process of facility management

□ Owners' Committee (Facility Management Committee)

According to the Shanghai Residential Property Management Ordinance 1997, the facility management work in the specially defined facility management area²² is controlled by the organization called Owners' Committee which is composed of the elected owners who are the representatives of the owners. Under any one of the following conditions, the local government real estate department should work with the developer to hold the owners' meeting to establish the Owners' Committee.

- (1) For the public housing, 30% or more of the property have been sold.
- (2) For newly built commodity housing, 50% or more of the property have been sold.
- (3) The sale period has reached two years.

The working responsibilities of the Owners' Committee are:

- (1) To hold the owners or owners' representatives meeting to report the practical property management situation.
- (2) To employ or dismiss the facility management company. To sign, change or cancel facility management service contract.
- (3) To collect, use and manage the property maintenance fund If the fund has been established according to the ordinance.
- (4) To check the property management service year-plan, financial pre-budget and final budget submitted by the facility management company.
- (5) To listen to the opinions, suggestions of the owners and tenants, and to supervise the works of the facility management company.
- (6) To supervise the use of the public buildings and facilities.
- (7) The other responsibilities assigned by the owners.

3.3 Participants in the housing development process

3.3.1 The developer

As it has been demonstrated repeatedly above, the developer plays a vital role in the process of the property development. He controls, directs and manages everything which is related with the project, from the establishment of the company to the government approval of the project, to the construction work and to delivery of the housing. Unlike most of the product manufacturers in other industries, there are no whole-sellers and retailers in housing industry (in the whole real estate industry as well). The developer in housing industry meets the customers directly and sells the

housing in the place it is produced. All these contribute to the strong position of the developer in the market and make him easy to have a strong influence on the housing price.

3.3.2 The designer

The designer is employed by the developer to make the design of the product, i.e. housing. Because of the nature of the housing development process, designer is usually the first company-employee of the developer. The prime responsibilities of him are to make the drawings in line with the requirements of the developer and the market and his works are expressed in three designs. The first one is the Preliminary Design, which is only involved in the general concept design and the main purposes of which are for the project-set-up and the initial government approvals. The second one is the Enlarged Preliminary Design, which is going much deeper into the details of the project and the main purposes of which are for further government approvals and the project financing. The third one is the Building-drawing Design, which is of course used for the actual construction of the project.

3.3.3 The Builder

The builders are the general contractors. Like in other manufacturing industries, the builders are just the workers standing beside the production line to produce the product. They do the works in strict accordance with the drawings issued by the designer and with the codes of the industry and the government. Maybe it is quite different from other countries where the small builders are in the majority in the industry, in each medium-sized and big city in China, especially in big cities, there are always hugely full scale construction companies. And there are also many trans-regional and national construction companies. They are capable of engaging in complicated and big projects. Although some of them were involved in the business of real estate development, most of them or the focus business of them are concentrated on building construction. They are generally mere the builders, not the builders plus the developers.

3.3.4 The project supervisor

The project supervision system was gradually established in line with the progress of the real estate development. And later it was formally accepted by the government. Now it is required by the regulation to have the supervising company to supervise the construction not only of the private real estate development projects, but also all other construction works. The introduction of construction supervision is the results of the more and more attention being paid to the construction quality. So the major responsibility of the project supervisor is to make sure the construction quality reaching the standard required. In some cases, the supervision company is also engaged in the activities of supervising the cost, the time-schedule and the security of the project.

3.3.5 The financier

It is very well recognized that real estate development involve huge amount of money. In China, the major form of residential building are multifamily housing, high rise housing. Thus the requirement for big money is more conspicuous. Given that more and more lands will be transferred through the ways of competitive bidding and auction, developer need to spend more time on project financing. In reality, it is claimed that about 60% of the capital the housing project needs are coming from outside sources. Due to the financial structure of the Chinese economy and the financial market development, out of those sources, the bank plays the major role and the prime form of bank financial is “real estate development loan”. Going public for real estate companies is strictly limited, as we as real estate trust.

3.3.6 The supplier

The suppliers are referred to as the various construction materials and equipment providers. They range from the sand, brick, concrete suppliers to door, window, lift suppliers. The construction of the housing project embraces thousands of materials and equipment. These huge amounts of materials and equipment are always space-consuming. Unlike other manufacture industry, the storage space in the construction site is all the time very tight. Thus the transportation, storage, usage and management are quite import in the organization of the project.

3.3.7 The agent

Here the agent is referred to as the housing marketing company which is solely engaged in the business of selling the residential real estate. In Shanghai and Shenzhen, except for some experienced and big real estate developers, most of the housing developers will commissioned the housing sale task to these special companies because they lack of necessary personnel, skill, knowledge, customer resource, etc. The marketing company is very familiar with the market and possesses exactly what developer does not have. The development of housing agent is the result of the improvement of the market and it also benefits the public significantly. In China, the housing marketing company is not the retailer or the whole-seller. It is only responsible to sell the housing and then get the commission based on how many it sells. The commission rate is usually between 1% to 3% of the housing value sold. (Su, 2004)

3.3.8 The government supervising institutions and utility companies

In Shanghai, the government departments which are chiefly responsible for the management of real estate development are Real Estate and Land Resources Management Bureau, Planning Bureau. Others which are also directly involved in the management are Construction Bureau, Planning and Development Commission, Industrial and Business Administration Bureau, Price Bureau, Trade Development Bureau, and so on. In Shenzhen, due to historic reasons, the functions played by the Real Estate and Land Resources Management Bureau, Planning Bureau are embodied in one department call Planning and Land Resources management. Others are the same as in Shanghai. From year 2004, this heavy burden department will be broken up into two departments, just like that in Shanghai. Up to 2004, in China, the utility companies have not been privatized. So they are state-owned companies. These companies are essential in the property development. Without their good cooperation, the project cannot be put into use. They include running-water company, electricity company, sewage conducting company, gas company, telephone company, etc.

3.3.9 The others

Real estate development is a huge and intricate project. There are many participants involved in the process. Except the ones mentioned above, there are two which are worth mentioning here. One is the real estate law firm. The other is the real estate evaluation firm.

China is not a country which has a rich history and strong tradition in respect of law and order. But the market economy cannot operate without of law. The situation has improved greatly in recent decade although the road is bumpy and remote. In real estate industry, the law was drawn up almost from scratch. That is one of the reasons why there were so many people who became tremendously rich in the real estate industry. The laws are being made and the situation is getting better. This creates a golden opportunity for the real estate lawyers to do their business.

Real estate evaluation was also a brand-new concept to the industry in the early times. Now it has been accepted by almost all parties. The development of property evaluation is in step with the development of the whole economy. With the economic activities becoming more and more active and widespread, the demand for asset valuating is becoming more and more urgent and necessary.

Given that real estate, housing are the main forms of the asset, real estate evaluation certainly is been paid more and more attention. From the financial institutions to the law courts, real estate evaluators are welcomed by many sides. It is a usual phenomenon that real estate evaluation is one of the businesses of the property marketing company. Very few companies are survived solely on real estate evaluation business alone.

□Summary. Housing is developed by real estate company, which is in most cases called project company. It is set up by the property investors and dissolved when the project is finished. The establishment of the company should meet the requirements made by the government and its organization is purely served for the project. The development process can be divided into seven phases which are roughly in order in line with the procession of the project. Among all the participants in the process, the developer plays the most important role. Others are actually employed by the developer to finish one part of the works. The developer is in tight control of all parties and makes decision on all the major works concerned.□

Notes:

1. In some cities like Shanghai, Beijing, there are companies which are definitely named “housing development company”. However, they are state-owned construction companies, not mainly acted as the developer.
2. Here the company or companies is/are referred to the so called investment (mother) company or companies who initiate(s) the property project. But they usually do not involved in the daily operation of the project for which is the responsibility of the so called “project company” that is set up by the investment company or companies.
3. “project company” is a kind of special company which is solely established for the development of the project(s). When the project(s) is/are finished, the company is finished too. Its life is depended on the project(s). But it must be stressed that not all property projects are handled by this type of temporary company. Many, and more and more in recent years, are managed by permanent real estate company. The practice of setting up “project company” is no longer the rage nowadays.
4. The purpose of introducing the organization structure of the “project company” is to show how the property project is managed. If the project is not operated by “project company”, the company will build a task force to handle the project with the same structure as that of the “project company”.
5. The construction of any real estate project must be approved by the government. The four certificates are law-binding and issued by the local government and are the necessary documents to prove the legality of the project. The four certificates are (1) State-owned Land Usage-right Certificate; (2) Construction Land Planning License; (3) Construction Engineering Planning License; (4) Construction Engineering Building License.
6. The construction of the real estate project is always a huge task. It is rarely happened that one construction gorges up all the works of the whole project. It is common that several general contractors work together, or one after another, to finish all the works. Usually, there are general contractors who are in building construction work, equipment installation work and decoration work.
7. It is required by the regulations to have construction supervision company to supervise the works of project construction. This kind of company is specialized in many sides of building construction and they help developer to make sure the project is going properly. They could be responsible for the works of quality, cost and time schedule of the project. But in most cases in Shanghai and in Shenzhen, they mostly are given the responsibility to exam the construction materials and equipment, and to control the construction quality.
8. As regard to electricity, it could be divided into two classes, “strong-electricity” and “weak-electricity”. If we use more precise method to define it, the former is the electrical work which is, in China, above 220 volt and the latter

below 220 volt.

9. Quantity surveyor is an English name. The Chinese quantity surveyor is somewhat different from the English one. The former involves calculating not only quantity standard, but also price standard. And the cost calculating principles and methods are not the same.

10. In Chinese real estate market, It is absolutely legal to sell property before it is finished under some conditions. But it must apply and get the paper---Presale Certificate---from the government first. If the property is sold by the marketing company, the developer needs to provide this certificate to the company as the legal base for it to do the selling. In the later section, the practice of presale will be discussed in details.

11. The market research is in most cases undertaken by professional market research firms. They possess extensive knowledge, skills and means in the field of housing market. The costs of conducting the two researches are quite different at present. Investment market research is often done without charge because usually the market research firm wants to get the more profitable business of product market research by delivering the free service of the investment market research.

12. The procedure is cited from The Method of the Land Usage-Right Offer in Shanghai 2001.

13. The same source as note 12.

14. In recent years, the State-owned Land Usage-right Certificate and Housing Usage-right Certificate were combined into one unified certificate which is called Real Estate Property Right Certificate.

15. The detailed information about this license is not available.

16. This certificate is a provisional document to prove the legality of the land. It can be obtained after the “land commencement registration” and it will be integrated into one certificate, i.e. “real estate property certificate”, after finishing the “newly built commodity housing commencement registration”.

17. There are some difference in Shanghai and Shenzhen. But after the adjustment of the government department in Shenzhen in early 2004, there will be little difference.

18. Real Estate Transaction Centre is a subunit of the Real Estate Resource Bureau.

19. From the nature of the works, we can define design company into planning design company and construction design company. Obviously, the former is served for planning works, whereas the later is for technical construction work. Although almost all design companies can do both works, the development company usually selects the design company only to do planning design and decide the construction design later. This could be the tactic played by the developer. In most cases eventually the design company that did planning design will continue its work, out of the consideration of consistency.

20. It is referred to the works done outside of the building like the enclosing wall, road, sewage, etc.

21. Quoted from “Chongqing Facility Management Ordinance”.

22. This area will be defined by the government department.

Chapter four: The housing price structure

□ Housing price consists of four parts---development costs, period fees, taxes and profit. Amid these items, development costs have a larger share than others and are the fundamental factor in the price structure. So they are worth further explored. In this section, two cost cases are picked up to show what the real situation is. □

4.1 The composition of housing price

4.1.1 Development costs

4.1.1.1 Cost concept and cost classification

With regards to the cost concept, in manufacturing industries, to manufacturer, cost is usually defined as the resource sacrificed or foregone to achieve the specific objective. In another word, cost is the price of the necessary resource-consumption in order to produce the product. Cost is one of the basic concepts in accounting and it is more and more involved in the production management.

There are many cost classifications in the fields of accounting, economics and management. In accounting, classifications could be made on the basis of:

(1) Business function

- a. Research and development
- b. Design of products, services and processes
- c. Production
- d. Marketing
- e. Distribution
- f. Customer service

(2) Assignment to a cost object¹

- a. Direct costs. Direct costs are the costs that are directly related with the particular cost object and that can be easily traced to it in an economically feasible (cost-effective) way. For example, to take a book as a cost object, the costs of the paper used to form the book are the direct cost. So direct costs can be readily recognized and traced and they can also be accurately accounted.
- b. Indirect costs. Indirect costs are the costs that are directly or indirectly related with the particular cost object and that cannot be easily traced to it in an economically feasible (cost-effective) way. Indirect costs are usually allocated to the cost object using the cost allocation method. For example, the management fees occurred in the production activities in the printing factory are the indirect costs. They are the costs but they are not directly showed in the book and they will be accounted and allocated into the costs of the book.

(3) Behavior pattern in relation to changes in the level of a cost driver²

- a. Variable costs. Variable costs are the costs that change in total in proportion to changes in the cost driver. For example, the costs of the materials are the variable costs because they change in accordance with the changes of the production quantity.
- b. Fixed costs. Fixed costs are the costs that are, in a given time or being reasonably considered, unchanged in total over a designated range of the cost driver during a given time span. It is not hard to understand that fixed costs become progressively smaller on a per unit basis as the cost driver increases. For example, generally speaking, the factory buildings' costs will not change with the decrease or increase of the quantity of the product.

(4) Aggregate or average

- a. Total costs. Total costs are the costs that sum up all the individual costs.
- b. Unit costs. Unit costs are the costs of each individual unit product.

(5) Costs in financial statements

- a. Capitalized costs. Capitalized costs are the costs of obtaining the asset (capitalized) which is presumed to provide future benefits to the company, like the costs to acquire computer equipment and motor vehicles. These costs are written off to those periods assumed to benefit from their incurrence. For example, the cost of acquiring motor vehicles is written off as a depreciation expense that occurs each year of the expected useful life of the vehicles.
 - . Capitalized inventoriable costs. Capitalized inventoriable costs (also called inventoriable costs) are those capitalized costs associated with the acquisition and convention of materials and all other manufacturing inputs into goods for sale.
 - . Capitalized noninventoriable costs. Capitalized noninventoriable costs are those capitalized costs associated with any aspect of business other than inventory.
- b. Noncapitalized costs. Noncapitalized costs are recorded as expenses of the accounting period when they are incurred. Examples are salaries paid to marketing personnel and monthly rent paid for administrative offices.

4.1.1.2 Cost classification in Chinese housing industry

Cost classification on the basis of business functions:

a. Research and development

In manufacturing industry, the department of research and development plays the critical role in the future development of the company. In the modern commodity market, the competition is so acute that every company devotes quite a proportion of the revenue to R&D so as to gain competitive advantage in the market. To survive and succeed in the competition, the most important thing for the company is to put forward new products, to improve the old products in a economical way. This can only be achieved by developing new technologies, new materials, new methods, new functions, etc. And these are the exact works the R&D is engaged in.

Real estate industry is claimed the manufacturing industry. But many things are different in this industry. In Chinese real estate industry, R&D is a toothless stuff. The functions played by the R&D department in other industries are almost irrelevant in Chinese real estate industry, especially in housing sector. New technology? The housing building technology is several hundreds years old, if not thousands years old. There have been new technologies invented and applied in the industry. But the basic technologies have not been changed for very long. And housing building does not require and pursue cut-edge new technologies. New materials? God. In China nowadays, the “Qin Brick” and “Han Tile” are still widespread. They are two thousands years old. Concrete is vital in the buildings. Yet the modern concrete was created more than one hundred years ago. The design, the function of the housing are also little changed.

Microsoft spends 10% of its revenue on R&D. It has its good reasons. Others spend 3% or 5%. In Chinese real estate companies, this spending is well below 0.01%, if any. There are many companies which set up the unit called R&D department. But actually it is market research department. Not meaningful R&D.

b. Design of products, services and processes

In housing industry, the work of design is mostly finished by design company. The developer will involve in the design process only for the purpose of property marketing. Based on the experience and knowledge of the market, the design company will consult with developer in determining the matters that are related with marketing such as the housing type, the room size, the vertical side design, the greens design, etc. Except for very few large real estate companies which establish their own design department or even design company, most of developers do not have design personnel. The developer selects the design company usually through the means of competitive bidding and pays the fees on the base of “engineering costs” of the construction³. Because there are too many design companies in the market, the competition is keen. Thus the design fees are getting slimmer and slimmer.

c. Production

The production costs are the prime costs the developer bears and they could be divided into direct production costs and indirect production costs. The direct production costs are made up of land costs and engineering construction costs. Land costs are the costs to obtain the land for the property building. It usually occupies 1/3 of the whole costs if through the means of competitive bidding or public auction. As mentioned above, the real estate engineering construction is composed of building construction, equipment installation and decoration. In housing, usually the decoration costs are put into the building construction costs. The indirect production costs are the costs incurred in the development management and in other areas. These costs will surely be counted into the whole costs of the project. But they are calculated in a special way.

The calculation of the direct production costs is conducted through a special method called “quote system” which is made, modified and supervised by a specific government institution. The “quote system” is carried out in the following way: firstly, calculate the engineering quantities of each item in light of the construction drawings and practically occurred. The items are listed in the “quote book” which is the official book and must be obeyed. Each item is actually the detailed work of the construction. In the “quote book”, the unit quantities of the materials, the labors and the machinery consumptions, which are needed to finish the work, are standardized. Over or below use of quantities will be not counted. Multiply the unit quantities by the engineering quantities, and we get the total consuming sums of the materials, the labors and the machinery. Secondly, multiply the calculated total consuming quantities of materials, labors and machinery by the government specified prices accordingly, and we get the engineering costs called direct engineering fees. Thirdly, multiply the direct engineering fees by several fee rates like management fees, profit, tax, etc, which are expressed in the forms of percents, and we get the total engineering costs. Finally, plus all the price differences between the government specified prices in materials, labors and machinery, and we get the grand engineering costs.

The cost calculation is divided into three stages which are closely related with the design stages, i.e. general calculation, pre-calculation and final calculation. When the preliminary design and the enlarged preliminary design are ready, the general calculation can be done. This calculation will deliver the total engineering costs of the construction in the form of big items. After the detailed construction design has been finished, the pre-calculation can be conducted according to the minute construction drawings. The building costs can listed through small and standard items and can be used for various purposes like engineering schedule payments,

materials preparation, work arrangement, advance payments for equipments, etc. The final calculation will decide the real costs of the works finished, thus it is the most important calculation. This one is done by reviewing the pre-calculation and modify it if the actual works are different, and by adding the new works which are not included in the pre-calculation. After these three calculations, the final costs will be formally determined and the financial department of the developer will clear all the payments to the party concerned.

Usually, the design company will make general calculation and precalculation. The main purpose for it to make pre-calculation is to let it be cost-conscious and therefore to control the costs. The construction contractors will surely make their own pre-calculation and final calculation and submit them to developer. Developer will check them and settle down the final versions.

d. Marketing

Due to the natures of the housing commodity, the sale model of housing is very different from other commodities in other manufacturing industries. There are no retailing and wholesale sectors to act as the bridge between the manufacturer and the consumer. The commodity is there clearly and openly. The buyer can have direct contact with the seller and negotiate and settle the price fairly. So, in essence, housing market is one kind of direct marketing.

In Chinese housing industry, housing marketing is mostly (may be as many as 70% in Shanghai and Shenzhen) undertaken by specific real estate marketing firms which play the role as property agents. Armed with the rich intellectual capital and necessary resources, they sell the property for the developer and earn the commission in light of how many the housings are sold. In many cases, property marketing companies are just like the independent marketing department of the development companies because the developers provide the working place, build the show-apartment⁴, pay the marketing promotions, etc.

In the relatively highly developed real estate markets in Shanghai and Shenzhen, thousands of property marketing companies are set up. Thus the business is in very keen competition. Generally speaking, in the last decade, the commission rate for the business is around 3-5% of the property value sold. Nowadays, it is usually 1-3%. It is not surprisingly to hear the rate of zero point something if the project is big. The commission will be paid by the developer after the sale money comes into the developer's account.

For the most part, the selling price of the housing is controlled by the developer, not the agent. The agent will suggest the price-tags he thinks are appropriate based on the sales situation and other considerations. In some cases, the developer will set a bottom price and let the agent to decide the sales price. Therefore the agent can get not only the commission based on the bottom price but also the price-difference if the actual sales price is higher than the bottom price. In the later scenario, the commission could not be considered the marketing costs. So, to developer, the main marketing costs include sales commission, building costs of sales office and sample-apartment and sales promotion fees the bulk of which are advertisement fees.

e. Distribution

Housing as a final product is a sort of fixed placed commodity. It cannot be moved, so it does not incur distribution costs. No package fees, no transportation fees, no loading and unloading fees, no damage fees, no storage fees, etc.

f. Customer service

Customer service or after-sale service is unique in housing industry. The main contents of after-sale service are the property maintenance. So the customer service costs are mostly the maintenance service costs. There are two separate cost items in the housing maintenance service costs. One is guaranteed time cost. The other is property maintenance fund.

According to the government policies concerned, the developer must be responsible for the quality of the building for a period of time called guaranteed time. This period of time is specified in the contract between developer and the builder. For the building structure above the ground it is usually spanned from 2 years to 5 years depending on the specific items of the building (such as the ducts are 2 years and the water-leaking protecting is 5 years). During the guaranteed time, if the maintenance occurred, the costs incurred are theoretically born by developer. But actually the costs are burdened by the builder in the means of construction contract. In normal circumstance, the maintenance costs in the guaranteed period are quite small.

Property maintenance fund is more important to the dweller and to the developer although the meanings for each of them are different. After the guaranteed time expires, the costs occurred for building and facilities maintenance and renewal which are belonged to the whole dwellers will be paid by this fund. In Shanghai, the initial property maintenance fund is collectively contributed by the developer and the dwellers (afterwards the fund will be only devoted by dwellers) and deposited into the designated account in the designated bank. From December 1, 1999, for newly built commodity housing, the methods of fund contribution could be decided by the contract between developer and buyers, or developer donates 4% or 3% of the costs of per construction square metre for the building with or without elevator respectively, and dwellers donate 3% or 2% of the costs of per construction square metre for the building with or without elevator respectively.

4.1.1.3 Development costs

Defined according to housing development features, the housing costs are popularly named “development costs” in the industry and in the official documents. With the changes of the government policies, the contents of the development costs are changed accordingly. But the chief ones are almost remained the same. Development costs are very intricate. They are:⁵

- a. Land-use right fees. Land-use right fees are the fees for acquiring the development land. They include land offering fees, cultivated land occupying tax, cultivated land plough fees, land value evaluating fees, land compensation fees, above-ground-building compensation fees, tomb-moving fees, compensation fees for settlement after building-demolishing, compensation fees for labor settlement, building-demolishing management fees, site clearance fees, etc.
- b. Forward engineering fees. Forward engineering fees are the fees for the preparation engineering works which are necessary for the later comprehensive building construction. They include project’s forward-work consulting fees, reconnoiter fees, design fees, bidding service fees, environment evaluation fees, temporary water, electricity, road and site-flattening fees, etc.
- c. Building construction and installation engineering fees (as mentioned in the above section, the calculation of the fees must be conducted in the official ways the government sets.) Building construction and installation engineering fees are the fees for the building construction engineering (including pile foundation), installation engineering and decoration

engineering of the building bulk. They include building construction & installation engineering fees, construction engineering license fees, temporary road occupying license fees, temporary land use and temporary construction engineering fees, construction energy saving and new wall materials special fund, construction supervision fees, construction quality supervision fees, etc.

- d. Infrastructure construction fees. Infrastructure construction fees are the fees for the construction and supply of the utilities and facilities like road, water, electricity, gas, telecommunication, lighting, gardening, greening, sanitation, etc., within the “red-line”⁶ of the site. They include infrastructure engineering fees, electricity construction management fees, street lighting maintenance fees, underground water resource fees, air-protection facility construction fees, green compensation fees, etc.
- e. Development indirect fees. Development indirect fees are the fees for the organization and management of the project development. They include salary, employee welfare fees, depreciation fees, repairing fees, business administration fees, work-protection fees, water and electricity fees, housing and equipment amortization fees, etc.

4.1.2 Period fees

Period fees are the fees for the activities of management, financing, marketing and others which are related with the housing development and which are occurred during the period of housing development process. (Fang, 2004)

- (1) Management fees are the fees for managing and organizing all the business activities by the administration departments of the company. They are calculated according to the accounting system for the real estate development company and listed as development in the real occurrence.
- (2) Financial fees are the fees for financing the project. They include net outlays of interest during development period, net profit (loss) in money-exchange, commission for exchanging foreign currencies, commission in financial institutions and other fees relating with financing activities. The net value between loan interests and deposit interests incurred from the developer’s presale money enters into the housing costs. Other financing fees are listed in real occurrence.
- (3) Marketing fees are the fees incurred in the developing period for selling products or providing labor and the fees specifically for setting up marketing institutions. Marketing fees are listed in the costs in real occurrence.

4.1.3 Taxes

In China, the housing development company should pay the taxes in conducting property development business. They include business tax, city maintenance construction tax and education fees added. The taxes could reach as high as 27% of the housing price. (Zhong, 2003)

4.1.4 Profit

Profit is the difference between income from selling the housing and other business activities and all the costs related with the housing development. The housing development is different from time to time and from company to company. In media, there are fierce debates on the issue of profit rate in the housing industry. But every one agrees that the industry’s profit rate is high compared with many industries in China. “It is usually 5% in America and other developed countries. But it is averaged 15-20% in China, or even 50%.” (Zhu D. L., 2005)

4.2 The introduction of major items in housing development costs

Development costs are composed of five parts. They are Land-use right fees, Forward engineering fees, Building construction and installation engineering fees, Infrastructure construction fees and Development indirect fees. Among them, three item-fees are worth particular attention due to their importance and big shares in the costs. We explain further these three in details.

4.2.1 The land acquisition fees

With the normalization of the land market management, land acquisition through competitive bidding and open auction will gradually become the main form for the real estate development. In Shanghai and Shenzhen, land market is relatively competitive and transparent. For the property development companies, if the land is obtained via bidding and auction, the land cost is usually the major part of the housing price. It ranges between 30% to 50% of the whole housing price.

4.2.1.1 Land offer scoring system

In Shanghai, the land bidding is conducted according to a set method called “land offer scoring system”. The bidders will be evaluated in light of the method and gotten a comprehensive score. This score will be the most important factor in deciding the result of the bidding (K. Q. Shen, 2004).

The score = 70 (tendering price) + 14 (technical weight) + 16 (business weight)

----- The scoring of the tendering price is determined by the special software called “tendering scoring software” provided by the municipal bidding office. For all the valid biddings which are above the bottom price (of course, the tendering prices which are below the bottom are invalid biddings), the simple mean bidding price will be calculated. There will be 9 grades between the lowest prices, highest prices and the mean price separately, and each grade gets the scores from 30 to 70. The bidding price which is equal to the mean price scores 70. The farther away the bidding prices are from the mean price, the lower scores the bidding prices will get.

----- The technical weight (14 scores) = planning design proposal (8 scores) + feasibility report (6 scores).

----- The business weight (16 scores) = development company qualification (6 scores) + development achievements (5 scores) + bank credit reputation (5 scores).

4.2.1.2 Land bottom price

In land bidding and auction, a bottom price will be set up. Bottom price is the lowest control and acceptable price. If the bidding or auction prices are lower than this price, the bidding or auction will be abandoned. Land bottom price is decided by the factors like the land offering period, usage, land market condition, government industrial policy, tender’s situation, etc., and is the most important reference price in land competitive bidding and public auction for the government. Land bottom price is made by the government and secretly kept. Given its vitality in the bidding and the auction, it should be properly determined. In China, the land bottom price possesses these features:

- (1) Land bottom price is fixed by the government. In China, all lands are belonged to state. By controlling the quantity and speed of land transferring, government can make the land market operating properly and effectively.
- (2) Land bottom price is set in light of land evaluation price. Land is a high value commodity, so land price is always very high. Because of the special characteristics of land and land market, land value is quite hard to set. In order to avoid the situation that government suffers the loss from the inappropriate land transaction, this work must be done by professional land evaluator.

Land bottom price is set in this way: firstly, the government department in charge of the land bidding and auction commissions the land evaluation work to qualified professional land evaluation

institution and the institution then provides the report after finishing its task. Secondly, the government erects a specific panel to check the report. The panel should carefully analyze the report and pay particular attention to evaluation results, premise conditions and usage limited conditions, and communicate with the evaluators, and consider the factors such as market situation in the bidding or auction, the land status in question, the demand of the potential investors, the government industry policy and land policy, etc. Finally, to fix the land bottom price.⁷

4.2.1.3 Basic land price

There must be a land bottom price in land bidding or auction. It is true that the setting of this bottom price should be based on the sound land evaluation which is undertaken by professional land evaluator. In setting up the specific land price, evaluator must refer to the basic land price which is officially issued by the government. Basic land price is the land-use area mean price of specific time period at one specific time point, which is defined by proper evaluation in light of the classification of business, residential, industrial and other purposes for the lands of different grades or the areas with similar land conditions under the conditions of present-situation-use and planning-use in the city planning regions⁸. Thus we can see that there is a close relationship between land bottom price and land basic price. However, it is worth pointing out that these two prices have significant differences in some aspects. The former is the specific site price, i.e. the price of a very limited space, whereas the latter is a somewhat general area or block price. The former is used for competitive land acquisition, whereas the latter is a reference price functioned as the directing of the basic value of the land in uses. And fundamentally the former is higher than the latter because the former must include other costs or value if the specific land is put into specific uses.

Land price is determined by many factors. It will swing from time to time. Thus basic land price should have adjustment along with the changing situations. In principle, basic land price should be adjusted regularly. There are two methods to modify the price. One way is to recalculate the prices and make them public the new prices. The other is to publish the modifying coefficients.

4.2.1.4 The composition of land price

Land price is a quite intricate issue in China. Except for the general principles which are set up by the national government, every city makes its own practical policy according to its local conditions. There are no unified policies regarding the detailed regulations. Based on the various policies, the following formulas are applicable as of 2004.

Land price = basic land price + land development fees + emigration settlement fees + “three positioning and one flattening” fees

Basic land price = land obtaining price + infrastructure facility fees

Land development fees = land collection fees + seedling compensation fees

Emigration settlement fees = emigration compensation fees + house-demolition compensation fees

----- Land obtaining price is actually the compensation fee for compensating the losses, which is tantamount to the sum the land would gain in the previous uses, derived from the change of the land-use.

----- Infrastructure facility fees are the fees collected by the government for the construction of public infrastructure facilities like hospital, school, post office and so forth from which the project dwellers will benefit directly.

----- Land collection fees are mainly used for the settlement of the labor. If the cultivated land will be used for the purpose of real estate development, the peasants will have no land to work on. They need to be settled.

- Seedling compensation fees are the fees for compensating the losses of the seedling of crops, if the land is previously the cultivated land, derived from the change of the land-use.
- Emigration compensation fees are for compensating the fees incurred from the place-moving of labor, equipment, materials, etc., derived from the change of the land-use.
- House-demolition compensation fees are for compensating the destroy of old houses.
- “three positioning and one flattening” fees are for letting the water, electricity and road ready and the site flattened for the construction of the project.

4.2.2 The construction fees

The construction cost is another important part of the housing price. It is usually comprised of about 30% of the price, the high-rise housing being a little bit higher than that proportion and multi-storey building a little lower. So it is quite meaningful to study the details of the cost.

In the competitive market of the market economy, the real costs of developing the building are not open to every one. Actually only the builder knows the exact number and he will keep it as a business secret to all outsiders. In the Chinese situation, the real estate development model is that the developer does not do the construction work by himself and outsources it to general contractor, therefore even the developer does not know the precise costs of the building. In fact he does not need to know the real costs. He only need to know the standard costs. This is because the developer does not pay the general contractor the exact costs the contractor spends on the construction. If he did, it would be a disaster for him and for the market as well in that the contractor could waste as many materials and labors as he wishes. This is not acceptable.

So what is standard cost and how to calculate it? The developer does not pay the contractor the real costs incurred on the construction, rather he pays the building costs which is calculated according to a special method---the cost thereafter obtained is standard cost. In China, we have a unique way named “quota system” to calculate the standard cost (building costs). Generally speaking, this system is processed in two steps. The first step is to calculate the direct engineering fees. The second one is to calculate the total engineering cost. They are in strict order. The detailed calculation methods are exhibited as followed.⁹

□ The direct engineering fees.

The direct fees are referred to as the fees for direct consumption of the construction of the building. We get the fees by multiplying the quantities by the prices. There are three basic elements in the quantity, i.e. material, labor and machinery¹⁰. Knowing the exact consumption quantities and prices of these three, and we can calculate the fees readily.

(1) Quantity.

The quantity of the consumption of the construction is fixed by the government in the form of “quota” which is in fact a special book. It may appropriate to call the quantity the quota quantity or standard quantity. The quota book lists all the works related with all kinds of constructions. The quota quantities of each works, i.e., material, labor and machinery, are clearly illustrated. The quantities are the standard quantities. The developer will pay the contractor only these standard amounts no matter how many quantities are practically consumed. It is therefore easy to understand that if the contractor consumes more amounts than the standard ones, he will lose money. In contrary, he will earn money. This will spur him to save the quantities and/or to increase the working efficiency.

There are different kinds of quota books which are specified in particular areas like building construction, installation, infrastructure, gardening, etc. In the quota book of building construction,

there are about 10 part-engineering, earth engineering, foundation engineering, wall engineering, flooring engineering, door and window engineering and so on. In each part-engineering, there are numerous item-engineering. For example, in foundation engineering, there are brick foundation, reinforced concrete foundation, pile foundation, etc. In reinforced concrete foundation, there are strip-shaped foundation, cup-shaped foundation, box-shaped foundation, etc. Under the smallest items or quota items, the quantities of materials, labors and machinery consumption will be listed. The quantities are set by a government institute, which are in the middle level of the major construction companies in the city under normal working conditions and equipment usage. It must be stressed that the quota item is the synthetic item which synthesizes many small items. For example, the quota item of strip-shaped ferroconcrete foundation is consisted of the items (works) ditch digging, earth transportation, cushion construction, molding, steel bar tying up, concrete pouring, etc.

The standard quantities gotten from the quota book are unit quantities. The real quantities needed for the construction are obtained by multiplying the unit quantities by the engineering quantities which are calculated in the vast majority according to the construction drawings in the standard forms.

(2) Price.

We now have the total quantities of materials, labors and machinery. So we need to find out the unit prices. Multiplying these two, and we get the direct fees. Now we deal with the material price, labor fee and machinery unit-shift fee separately. According to the official “Price Calculating Norm for the Construction Engineering Quantity, 2003”, the price of material or labor or machinery must be the synthetic unit-price which is defined as the fees embracing labor fees, material prices, machinery unit-shift fees, management fees and expected profit needed for finishing one specific measuring unit in the engineering list.

- a. Labor fees include: total sum of salary, employee welfare fees, work protection fees, social insurance fund, accidental hurting insurance in dangerous work, housing providential fund, trade union fees, employee education fees, etc.
- b. Materials prices include: original material price (supply price), in-city transportation fees, wear and damage, etc.
- c. Machinery usage fees include: depreciation fees, “big-repair” fees, daily repair fees, installing, disassembling and in-site transportation fees, labor fees, fuel costs, etc.
- d. Management fees include: total sum of salary, employee welfare fees, work protection fees, social insurance fund, housing providential fund, trade union fees, employee education fees, administration fees, traveling fees, business activity fees, non-production fixed-asset usage fees, low-value and easy-consumption stuff amortization (including those like tool usage fees that are not belonged to fixed-asset), taxes (land tax, property tax, vehicle and vessel tax, stamp tax, etc.), checking and trial fees, engineering positioning, re-surveying, point-transferring, site clearance fees, etc.

The management fees of the Building construction engineering, the decoration engineering, the infrastructure engineering (public ductwork), the gardening construction and so like are calculated based on total sum of labor fees, material fees and machinery usage fees, whereas that of the installation engineering, the infrastructure engineering (road traffic management facilities, sewage building equipment installation), the greening engineering are based on the total sum of only labor fees.

e. Profit.

The profit of the Building construction engineering, the decoration engineering, the infrastructure engineering (public ductwork), the gardening construction and so like are calculated based on total sum of labor fees, material fees and machinery usage fees, whereas that of the installation engineering, the infrastructure engineering (road traffic management facilities, sewage building equipment installation), the greening engineering are based on the total sum of only labor fees.

All the fees are set by the construction contractors according to the market price and the enterprise's own conditions. So now we have the direct fees.

□ The total engineering costs.

The calculation process of total engineering costs is followed by the below table (Table 4-1).

Table 4-1 Engineering quantity list pricing order

ORDER	NAME	CALCULATION METHOD
(1)	DIRECT ENGINEERING FEES	$\Sigma(\text{LIST ENGINEERING QUANTITY} \times \text{SYNTHETIC UNIT PRICE})$
(2)	MEASURE-PROJECTS FEES	CALCULATED ACCORDING TO SPECIFIC METHODS
(3)	OTHER PROJECTS FEES	CALCULATED ACCORDING TO SPECIFIC METHODS
(4)	SPECIFIC FEES	CALCULATED ACCORDING TO SPECIFIC METHODS
(5)	COSTS BEFORE TAX	(1)+(2)+(3)+(4)
(6)	TAX	CALCULATED ACCORDING TO SPECIFIC METHODS
(7)	TOTAL ENGINEERING COSTS	(5) + (6)

In competitive bidding, the rates of the above fees are set by contractors themselves and written into the contracts signed with the developer, so as to encourage competition. But the contents of the fees are specified by the government, so as to make the competition normalized. The composition of the fees are listed as following.

- a. Measure-projects fees include: the protection, road-changing, transferring, etc., for the existing public structures, trees, roads, bridges, facilities of ducts, electricity, telecommunication, etc., engineering surveying, the research, checking, trying, technology patents for new materials, new crafts and new technologies, plant quarantining, special package, soil detecting, special products protection, construction measures for excellent projects of nation department and city, construction measures under special conditions, insurance, porter supervision and traffic order maintenance, etc.
- b. The other projects in the other projects fees should be listed in light of the specific situations of the would-be project and referred to as the following: temporarily set sum project, designated sum project, general contract service fees, sporadic work projects, etc. Usually, the other projects are fixed according to what are required in the bidding documents.
- c. Special fees.
Special fees include quota making management fees and engineering quality supervision fees. The former is for making the quota, whereas the latter is for construction quality supervision and checking which are done by the official institutions.

The quota making management fees of the Building construction engineering, the decoration

engineering, the installation engineering, the infrastructure engineering (public ductwork), are calculated based on the total sum of labor fees, material fees and machinery usage fees, whereas that of the gardening engineering are based on the total sum of only labor fees. The engineering quality supervision fees are calculated based on the total sum of direct engineering fees, measure-projects fees and the other project fees.

d. Taxes.

Taxes include business tax, city maintenance construction fees and education fees added. Taxes are calculated based on the total sum of direct engineering fees, measure-projects fees, the other project fees and special fees.

□ The reform of “quota system”.

The building construction costs are determined by the “quota system”. Above we introduce the detailed information about this system. But this quota is the 2000 version, the newest one. The “quota system” has experienced progressive reform along with the overall economic reform occurred in China. The change of the economic reform also brings the transformation of the system from the tool of the planned economy to the standard for serving the business activities. From 1980s, there were three versions of quotas, i.e., 1985 version, 1993 version and 2000 version. They had been in reform.

In Shanghai, in the long time under the central planned economy system, the pricing of construction products was carried out in the “quota system” which was in accordance with the economic system. In 1980s, with the comprehensive reform in the cities, it punched the traditional quota well with the situation that the prices of most of the industrial products were opened (decided by the market). So the “85 quota” was finally forced to introduce the method of material-price-difference compensation which allowed the contractor to be paid the market prices of few major construction materials (not all materials). In “93 quota”, many reforms were made to cope with the new market situation. One important one is to set up “administration fees” which was intended to express the individuality of each project and to increase the weight of market-deciding-cost. In decoration quota, a new method of “separating quantity from price” was tried in order to solve the problem of disconnect between quota and the market. The practice of setting the fees according to the ownership nature of the enterprise was replaced by the one that the comprehensive management fees and profit rate were decided according to the grades of the projects, so as to create the atmosphere of level competition. Another reform method is pre-calculation price dynamic management for material. Government published the material market information regularly to direct the material price.

Although improvements were made in the two quotas (85 quota and 93 quota), they still possessed significant drawbacks.

(1) Market conditions could not be fully reflected in the construction costs. Quantity and price were unified in the quota. Labor costs, machinery unit-shift price and fee rates were unilaterally fixed by government and their adjustments were not in right steps with the market. So the costs were not real, immediate and precise market costs.

(2) In the two quotas, the synthesis degree was too high. Construction wear-and-damage should be decided by contractors themselves in the premise that the contract was carried out properly, rather than by the quota, thus the benefits of competition could be showed.

(3) The two quotas in essence were the products of planned economy. They bore the natures of law-abiding and coercing. Government is in charge of the engineering pricing, whereas the

developer and contractor are in the subordinate position.

(4) In the two quotas, the calculation methods of fee-rates were strenuous and the rates were pre-fixed. So the prices of each engineering contents could not be clearly exposed. This practice also showed the differences with that of international pricing.

The “2000 quota” made an important step forward compared with the previous two. It established the fundamental principles in making the quota system and managing the engineering costs, i.e., rules unified, consumption quantity abided, price opened, costs set in contract. The “2000 quota” shows its substantial differences with the past two in the following aspects:

(1) The complete separation of quantity and price. The quota items had been re-examed thoroughly and they only indicate the standard consumption quantities of the materials, labors and machinery needed for completing the engineering items. No price is involved. All the prices, as well as the fee rates, will be exhibited in other appropriate means and through specific software the unit prices or synthetic prices will be formed to calculate the engineering costs.

(2) The realization of the relative unification and level-balance between all kinds of quotas. “2000 quota” puts great emphasis on the unification of all different specific quotas. The basic requirements are that for all professional quotas they should be unifies in concepts, technical terms, signs and codes, bar codes, measuring units and the levels of the quotas. But at the same time this does not ask for the oblivion of the unique features of each quota. In so doing, the quota can engender the satisfactory engineering cost pricing system which incarnates the average construction standard in Shanghai.

(3) The setting of items is more close to design and practices in works. In preparing for the revising of “2000 quota”, one of the focuses was put on analyzing the quota-item setting. Combined the practicing situations of the past with the new analysis, the item setting had experienced a big scale adjustment. New construction technologies, innovations and improvements were added or replaced the old and obsolete ones and the consumption quantities were also adapted in line with the new contents. Some were changed to pursue the “rail-connecting” with the world conventions. The new quota could be better suited with the present construction market conditions and is also helpful in improving the technology and management of the construction industry.

(4) The quota-level of “2000 quota” was a little higher than that of “93 quota” and the engineering price-level was almost the same or a minute increase compared with that of “93 quota”. This is to say that consumption quantity went somewhat down and engineering cost flattened or somewhat downward.

(5) The fee-rate setting was reformed and simplified. “2000 quota” modified the “pre-calculation quota fees standard” of the old quotas into the “construction fees calculation roles”. It no longer fixed the exact fees rates, profit rate, price compensation rates and price compensation value. Rather it only specified what the fees contain and how to calculate them. Some fees were fixed by the two parties of the contracts and government will publish reference market information regularly. The fees calculation order had been simplified from 12 units to merely 6.

(6) The 2000 quota was more practicable thanks to the new backup software. The smooth combination of the pricing system of quantity-and-price-separation with the dynamic market information system of labor, material, machinery and fee can only be accomplished with the adoption of potent software. At the same time this specific software can also be used throughout the whole quota family, helped by the unified coding system. Therefore the new quota is more consolidated and practicable.

4.2.3 The utilities fees

The development of the city and the life of the city dwellers cannot be progressed without adequate public utilities. In China, the construction, operation and management of utilities are totally completed and controlled by the government. The money for the utilities construction and usage is collected and designated through various sources and methods by the government. Generally speaking, the utilities finished are served for the whole city, or for one area. When the developer does his business in developing the real estate project, he must pay utilities fees and pays them to the government. It must be pointed out that the developer pays the utilities fees for merely obtaining the rights to use the utilities when the buyers move in. Additionally he still needs to bear all the costs of constructing all the utilities facilities within the boundary of the red-line.

Utilities facilities fees are defined as the fees for the construction of the basic urban utilities facilities such as road, bridge, sewerage, sewage disposal, flood protection, gardening, greening, public transportation, water supply, electricity, gas, telecommunication, fire protection, etc., which are served for the city dwellers as a whole and which are controlled by the city general planning. All newly built housings must submit the application for the using of the utilities facilities and pay the fees required.

Utilities facilities fees are also one of the important components of the housing price. In Shanghai, it's proportion estimated about 20-30% of the price. Given the vital functions the utilities facilities play to the living quality of the dwellers, developer pays every attention to this matter and usually set up a special department to deal with this job. As the above definition indicates that the utilities facilities are involved with dozens of government departments. Each one is the same importance and each one must be approved by the department concerned. One missing means the project cannot be delivered. So it is a tough and very complicated job and a job of time, energy and money-consuming.

4.3 Example cost cases

4.3.1 The Shanghai case.

One article listed the practical costs of housing development in Shanghai¹¹:

(1) Land costs.

The land price around the areas of inner ring and outer ring is 1 million ¥/mu¹². If the plot ratio is 1.2, the "floor land price"¹³ is about 1250 ¥/m². In city centre areas, the land price of renewal lands is about 8 million ¥/mu. The floor land price is 4000 ¥/m² if the plot ratio is 3. The land price of the old-west-gate area (a hot spot within inner ring area) has risen from 7 million ¥/mu to 10 million ¥/mu, so the floor land price will go up from 3500 ¥/m² to 5000 ¥/m² if the plot ratio is 3.

(2) Building construction and installation costs.

Building construction and installation costs are closely related with the market prices of material, labor and machinery. In recent years, the Chinese economy has been in slightly deflation, these prices have been in relative stable condition. On top of that, the calculation skill of building construction and installation costs is very mature and transparent. Hence the costs have been remained the same in years. Under the ordinary design standard, the costs of multi-storey housing is around 900-1000 ¥/m², low high-rise housing 1300-1400 ¥/m², high-rise housing 1600-1800 ¥/m². And the construction of enclosing wall, road, greening, etc, will cost another 100 ¥/m².

(3) Various fees.

In the housing development, there are so many fees to pay. The following fees are relatively

outstanding. a. Facilities fees, 320 ¥/m² (based on construction square metres, the same below); b. Community duct engineering fees, 17.5 ¥/m²; c. Community gas engineering fees, 21 ¥/m² (for coal-gas), 24.5 ¥/m² (for natural gas); d. Electricity utility fees, 145 ¥/m² (for cable engineering), 130 ¥/m² (for cable and overhead mixed); e. Telecommunication engineering fees, 600-700 ¥/m². (4) Period fees, taxes and fees added.

Period fees are estimated at about 10% of the turnover. Taxes and fees added are 5.65% of the turnover.

Now we use an example to establish the price structure of an ordinary high-rise housing newly built in the old-west-gate area, Table 4-2 and Table 4-3. The mean sales price for this kind of housing at the end of 2003 is supposed to be 8500 ¥/m².

Table 4-2 The typical housing cost details of one housing project in old-west-gate area

	ITEM	COSTS (¥/m ²)
(1)	Land price	4000 ¹⁴
(2)	Building construction and installation costs	1700
(3)	Facilities fees	320
(4)	Community duct engineering fees	17.5
(5)	Community gas engineering fees	21
(6)	Electricity utility fees	145
(7)	Telecommunication engineering fees	600
(8)	Period fees	850 ¹⁵
(9)	Others	100
(10)	Taxes and fees added	480 ¹⁶
(11)	Total costs	8233.5

Table 4-3 The price structure

	ITEM	COSTS (¥/m ²)	PROPOSITION
(1)	Land price	4000	47%
(2)	Building construction and installation costs	1700	20%
(3)	Fees	2053.5 ¹⁷	24%
(4)	Taxes and fees added	480	6%
(5)	Profit	266.5 ¹⁸	3%
(6)	Sales price	8500	100%

This table is telling a good story.

4.3.2 The Shenzhen case.

In an article published in the newspaper *The Business Weekly of China* in the later half of 2001, the costs and sales price of one high-rise housing in the Sweet Lake area (also a hot spot in Futian District) are listed in the following Table 4-4.

Table 4-4 The cost and price structure of one housing project in Sweet Lake area.

	ITEM	COSTS (¥/m ²)	PROPOSITION
(1)	Land price	1600	26%
(2)	Forward period fees	260	4%
(3)	Building construction and installation costs	2000	32%
(4)	Facilities fees	200	3%

(5)	Period fees	500	8%
(6)	Total costs	4560	---
(7)	Profit	1640	35%
(8)	Sales price	6200	100%

This table obviously misses the item of “tax and fees added” which should be the same rate as that in Shanghai. This costs are 350 ¥/m^2 ($5.65\% \times 6200 \text{ ¥/m}^2$). Therefore the profit should be reduced to 1290 ¥/m^2 and the profit rate should be 21%.

In contrast with the situation in Shanghai, there are many differences existed. The various government fees in Shenzhen are lower than that in Shanghai. And the construction costs in Shenzhen are a little higher than that in Shanghai. But the most prominent distinguish is in land price. The probable explanation is the mad land price increase recently in some parts of the city centre areas in Shanghai.

□Summary. Given the significance of the development costs, this section pays special attention to analyze them. There are several ways to classify the product cost. In term of housing product, classification based on business function is most applicable. Looking into the price structure of the Chinese housing, we could find out that there are almost no R&D and distribution fees. This is one noticeable phenomenon. Others are generally in accordance with the textbook. The development costs are composed of land fees, construction fees and utility fees. The latter two are relatively fixed in a period of time. The first one, however, is becoming more and more weighty.□

Notes

1. Cost object is referred to as the thing which is the object of the production process and which is in the form of a new product, a machine, a service, or a process, etc.
2. A cost driver (also called a cost generator or cost determinant) is any factor that affects total costs. That is, a change in the level of the cost driver will cause a change in the level of the total costs of a related cost object.. Simply put, cost driver is any thing that has the influence on the cost.
3. Engineering costs of the construction are the direct costs which are needed to erect the building. Simply put, it could be regarded that the costs are equal to the values of the works the design company designs.
4. In order to attract the home buyers, in the marketing period the developer will often build the sample apartments to show how the apartments can be in use. These show-flats of course are very carefully designed and constructed and stuffed with the high level furniture, electric appliances and decorations. Understandably, the costs for the building of show-apartments are quite high.
5. The cost classification is from “The Composition of Sales Price of Commodity Housing in Beijing 2002”.
6. Red-line is referred to as the line which defines the boundary of the site. It’s name is coming from the practice that the line is always embodied in red in the drawing. Red-line can only been set up by the government planning authority.
7. This section is cited from China Land Evaluator Association.
8. The definition is coming from Urban Land Price Investigation Result Introduction of Nantong, 2001.
9. The calculation methods are in principle the same around the country. But the details are different from place to place due to the diversification of such a vast nation. Here we use Shanghai “2000 Quota” as the example.
10. It is very easy to understand the consumption of materials. The materials form the physical part of the building.

They are calculated in the units of kg, m³, and so on. The material quantity consumed includes direct consumption and the wear and damage occurred in construction, storage, etc. The labors consumed are calculated in the unit of labor fees, while the machinery consumed is in the unit of unit-shift fees which include all the costs of one unit of machine working in one 8-hour shift.

11. The article was published in *Jiefang Daily* newspaper on 5 February, 2004, written by Keqiao, Sheng.

12. Mu is a popular Chinese measure unit used in area measuring. One “mu” is roughly equal to 666 sq m².

13. For the convenience of calculating the unit cost, the land price is customarily expressed in the form of “floor land price”. The formula is as followed:

$$\text{floor land price} = \text{the total land price} / \text{the total square meters of the building floors}$$

because the total land price = unit land price × site area

and the total square meters of the building floors = plot ratio × site area

we get floor land price = unit land price / plot ratio

If the unit land price is one million ¥/mu, and the plot ratio is 1.2,

$$\text{floor land price} = (1,000,000 / 666) / 1.2 = 1251 \text{ ¥/m}^2$$

the results of others can be gotten by applying for the same method.

14. Land price is estimated 8 million ¥/mu and the plot ratio is 3.

15. The sales price is estimated at 8500 ¥/m². $8500 \text{ ¥/m}^2 \times 10\% = 850 \text{ ¥/m}^2$.

16. The rate of tax and fees added combined is 5.65%. $8500 \text{ ¥/m}^2 \times 5.65\% = 480.25 \text{ ¥/m}^2$.

17. The result of Table 4-3 item (3) is coming from putting together Table 4-2 Item (3) to (9).

18. (5) = (6) □ (1) □ (2) □ (3) □ (4). Profit rate is referred to the cost profit rate.

Chapter five: The setting-up of housing price

□ Abstract. The factors which influence the second-grade housing price-setting are macro ones like housing supply, demand, investment, government policy and third-grade housing, and micro ones like property itself, project profit and project scale. At the same time, project financing is also pretty influential. In this chapter, the price-setting methods in the real operation are introduced. □

5.1 The macro-factors which influence the housing price

5.1.1 The supply-side influence

In housing industry, there are two elements in referring to supply-side influence. One is land supply. The other is housing supply.

5.1.1.1 Land supply

Probably no one will argue the fact that in housing market land supply has an influence on housing price. This is a common knowledge. The influence is indirect and time-deferred. The increase of the supply of land will result in the increase of housing construction and the increase of finished housing will lead to the change of housing market, and finally the market movement will induce the price change. Because the housing project production is quite time-consuming, the impact of land supply on the housing price would be exhibited much later. Moreover, due to the extensive land speculation, the land obtained from various channels would stay idle for sometime.¹ This makes the relationship between land supply and the construction of the housing project even harder to establish. But eventually the influence will be felt. The housing price is set up, in a period of time, according to the market conditions partly brought upon by land supply.

Unfortunately the official statistics data on land supply of real estate development is not available in Shanghai and Shenzhen, let alone the data of housing land supply. So the quantitative work cannot be done. In recent years, in trying to strengthen the management of real estate market,

the government began to establish the land reserve system which will have fundamental impact on land supply. Hence it is meaningful to introduce the system.

□ The introduction of land reserve system.²

Land reserve is referred to as the complete process of land purchase, land development and land supply. Land reserve system is one kind of special business management mechanism and system for the supply and control for various city construction-land demands, which is conducted by the institutions commissioned by the government. The designated institutions will, following the specific legal procedure, applying with the market mechanism and in accordance with the land-use general plan and city plan, collect the lands from multifarious land owners through the means of requisition, purchase, land exchange, recollection, etc., and then undertake the land development. After finishing the necessary works of moving-away of the structures, the flattening of the plots, the lands will be put into the market in a planned way and within the scope of annual land offer plan of the city.

The establishment of the city land reserve system is a big innovation. It is also the basic requirement of the city land system reform. In China, the practice of city land reserve started quite late. The cities like Shanghai, Hangzhou, Sense, are running at the front. In an ordinance, “The Notification on Strengthening the State-owned Land Asset Management”, issued in April, 2001, by the State Council, it read that “in order to strengthen the ability for the government to regulate the land market, the qualified local governments should try to adopt the purchase reserve policy”. In correspondence with this ordinance, the national Land Resource Department published the corresponding documents and stipulated that, from 1 July, 2002, for all the for-profit land-uses in the nation, the transfer of state-owned land-use-right must be conducted through the means such as competitive bidding, public auction and listing. From then on, a revolution in land supply system occurred in the country.

□ The operation process of the system.

Looking from the practices of the land reserve system around the nation, in the cities where the system was erected, usually one designated institute is created to be in charge of the operation of the reserve system. The operation system could be generally divided into three stages.

The first stage is to purchase the land. In this stage the land reserve management institute obtains the lands. The acquirement of the lands is mainly from two sources. One is the requisition of the lands for the expansion of the city. The other is the purchase, exchange and recollection of the existing city lands.

The second stage is to reserve the land. The land reserve management institute does the development and re-development works on the lands already collected like moving-out, demolishing, flattening, repairing and setting-up basic infrastructure and facilities, etc., so as to make the lands becoming so called “ripe”, ready to be sold or rented. Then, the institute puts the developed “ripe lands” into reserve and waits for the right time to offer the lands.

The last stage is to supply the land. The land reserve institute will, according to the social development plan, city planning and land supply plan, put the reserved lands into the market for sale or rent in a measured way by the means of market accepted methods like bidding, auction or listing.

□ The influence of land reserve system on the real estate market.

The establishment and executing of the land reserve system and its related systems have fundamentally changed the land supply channel and method in the real estate development, thus result in the big change in the development procedure. Inevitably this new land use system exerts

huge influence on the real estate market.

- (1) To monopolize the first-grade land market, the government could be easier to regulate the real estate market. The establishment of the land reserve system makes it possible for the government to completely monopolize the first-grade land market, in that only the designated institute has the right to collect the lands, to store the lands and then to offer the lands through the only “slot” for sale or let. The total control of the first-grade land market will eliminate the “gray” first-grade land market and lay the foundation for the creation of formalized land market. The operation of the land reserve system will make it sure that all the business land use will be offered via bidding, auction and listing. This will to great extent reduce the personal interferences on the first-grade land market trade, and guarantee the fairness and justice of the trade. By possessing in hand the lands and monopolizing the first-grade market, the government therefore controls the origin of the real estate development--the land resource. This greatly improves the government’s capacity of regulating the real estate market. The macro-regulating ability shows the leading role played by the government in the land supply control. When abnormal fluctuating happened in the market, the government could have the means to take necessary measures to stabilize the market.
- (2) It is salutary to the normalization of the Chinese real estate market. Land is the scarce and non-reproducible resource. With the rapid urbanization drive and the expansion of the city, the value increase of the land asset is the trend. Before the land reserve system, due to the market problem, land trade was in a mess. Land speculation and other illegal land activities were rampant. The increased value of the land went into the wallets of the developers, not the government coffer. The real estate development was out of control and the market order was broken. By establishing the land reserve system, the land offer will be conducted in the forms of bidding, auction and listing. Allocating the land resource through the market force will not only normalize the market behavior, create equal and fair competition environment,, but also wipe out “favor-land” and reduce corruption.
- (3) The system will give rise to the re-shuffle of the real estate development enterprises. It is estimated that there are about 30,000 real estate development enterprises in China, of which the first-grade qualification firms are only 200. Less than 1% of the total. So we may conclude that in general level, the real estate enterprises are not well qualified and lack of strength. This situation will mean that the industry will not meet the requirements in the acute competition environment derived from the joining into the WTO. The erection of the land reserve system and the practice of competitive ways to get land will lead to the re-organization of the real estate enterprise. In the keen competitive market, only the stronger will survive. The weak one will die out.
- (4) It is also good to improve the investment environment and makes the real estate market healthier. The land reserve system creates a more favorable environment for the development of real estate market. At the same time it also strengthens the serving consciousness of the government departments. With the first-grade market information more plentiful, the land use checking and proving procedure more simplified, the investment atmosphere will be significant improved. The more investors come, the faster the city economy will grow. The land reserve system by nature can adjust the supply of the lands appropriately. So it can prevent the land price from increasing too fast and thereafter avoid “bubble”. This will stabilize the real estate market.

□ The influence of land reserve system on the housing price

The prime intention or the meaning of the establishment and operation of the land reserve system is to better manage the first-grade land market. By controlling the quantity and quality of the land supply, it would help to tip the balance of property supply in the market, therefore to influence the market price. If we confine it to the housing sector, it is expected to exert its influence on the housing market balance and the housing price-setting. In theory, the system will determine how many lands to put on the market for residential building construction and what the paces are according to the set economic goal and the market situations. By increasing or decreasing the land supply and the housing supply, the government could make the housing price not going out of control.

However, the intentions are severely hampered by many difficulties. We could list the major ones we might face when this research is undertaken as of 2004:

- (1) The test time is not sufficient. Land reserve system was initially set up in 2001 in few cities in China. Before 2000, the land transfer was usually conducted in the forms of “agreement transfer” or “free-of-charge executive assignment”. In fact, the system was established in Shanghai just in 2002. The time for collecting the data, if anything, is too limited.
- (2) The land supply channel is still far from unified. It is the government intention to unified the land supply channels by introducing the land reserve system. But the reality is that there are still many “slots” existed and they are quite big actually. The lands the government can collect and put them into land bank are very small in quantity at the beginning. A lot of lands are in the hands of a lot of land owners (mainly the state-owned enterprises and institutions). These various land owners have the right to deal with the lands at their will. In most cases they prefer not to join in the system. And the other problem is that there are a lot of lands which are collective-owned, not state-owned, so these lands are beyond the scope of the land reserve system, although most of these lands are located at the skirt of the city. For example in Shanghai it was required to offer the for-profit lands through bidding or auction from 1 July, 2001. Yet from 1 July, 2001 to 30 May, 2003, only 57 plots of lands were transferred via the required way out of the 479 land-transferences. It is less than 12%. Still a long way to go to implement the policy.³ It is very hard to trace the land-transference not within the official land reserve system.
- (3) Land supply to the housing market has the influence on the housing price. It is safe to say that the two have concrete relationships. But the relationship is indirect, not direct. Land cost covers a large part of the total housing cost and the bulk share of the housing price. It is still the cost. Land price-setting is not made entirely according to the cost. On top of that, land supply must pass through the housing construction to exert its influence on the housing price changes. Although the government land policy stipulates that all transferred for-business lands must be developed in two years after acquisition, in fact there are still a lot of lands which are left idle for more than two years. The government policies do not stringently make them clear what exactly the development means. So it is not difficult for the developers to conceive some small tricks to avoid the punishment. On the other hand, for real estate development companies, in order to make sustainable and strategic development, they also need to establish their own land reserve, especially for the public companies. It is quite necessary to keep the lands bought in the market stored for some times.

If the things go on the track the government wishes in the future, the land reserve system will play more and more important role in influencing the housing price. The connection of the two will

get more and more closer. In the short run, the influence will mainly be expressed in the form as the indication of the market price.

5.1.1.2 Housing supply

As in other commodity market, product supply will have a direct influence on the commodity market price. In the housing market, the quantity of the housing supply is to be closely related with the change of the housing price. In theory, when the supply meets the demand, the equilibrium will reach. It will be broken and reach again in the new situations. Because the Chinese housing market is an emerging market and it is still in an early stage of development, the market behaved not as a mature one.

In Shanghai, the housing supply generally has been in the increase in recent years (Table 5-1), and in some years the growth rates were significantly high. This is one of the characteristics of the rapid developing market. Because the housing market is not well-developed and is not in sustained balance, the relationship between supply and price is hard to describe. The constantly augmented supply does not necessarily evoke the price decrease. Rather, it is claimed, in most of the time, that the housing price in recent years has been in slight increase. We do not have reliable data to prove what the situation really is.⁵ We can only say that the relationship between the two may be quite weak, eerie and unpredictable. Table 5-2 lists the figures of housing price from 1998 to 2003, which was issued by Shanghai Statistics Bureau. From the two tables, we could see that there is almost no connection between housing supply and housing price in the observed years. The supply had been in the increase, though not in the same rates, while the price had been going down in the first three years and rising in the second three years. All data indicates that the year 2003 witnessed an enormous swell, more than 20%, in housing supply. At the same period, the price growth rate in 2003 was 20.5% (Shanghai Statistics Bulletin, 2003. The index increase is 121.4.). Clearly it is dangerous to get the conclusion that the more supply, the more price increase, because the big increase in price might be largely due to policy factor and housing speculation. It, however, could be safe to say that the relationship is far from rational.

As discussed above, the present housing market seems not behave according to the economic theory predicts. The supply-side influence on the housing price is pretty feeble. In another word, boosting housing supply does not necessarily give rise to housing price reduction. If this is really the case, we may cast some doubt on the single-handed practices by the government to intentionally increase the offer of lands and to encourage the supply of housing in an effort to reduce the housing price. A fresh thought might be needed to reconsider the measures.

5.1.2 The demand-side influence

Some scholar thinks that the “demand factors in the housing market include demographic conditions, the macroeconomic environment, access to housing finance and fiscal policies such as taxation and subsidies.” (Ben, 2000) It is not possible to

Table 5-1 Housing supply from 1997 to 2003 in Shanghai⁴

YEAR	FINISHED CONSTRUCTION AREAS (M. M ²)	CHANGES (%)
1997	11.76	+15.6
1998	12.42	+5.6
1999	12.29	-1
2000	13.88	+12.9
2001	15.24	+9.8

2002	17.08	+12.1
2003	21.40	+25.3

Source: Shanghai Statistics Yearbook.

Table 5-2 Housing price indexes from 1998 to 2003, Shanghai.

YEAR	INDEX BASED IN 1997	INDEX BASED ON LAST YEAR
1997	100	100
1998	95.7	95.7
1999	92.2	96.3
2000	90.8	98.5
2001	92.7	102.1
2002	100.7	108.7
2003	122.2	121.4

Source: Shanghai Statistics Yearbook.

discuss all of them in the paper. Here we just simple probe the influence of housing sale and housing consumer group in Shanghai.

Learning from the past track, in the housing market in Shanghai, the increase in housing supply did not result in the decrease in housing price. The relationship between the two is hard to discern. One of the possible explanations of this phenomenon is that, while the supply was increasing, the demand was increasing even faster and the total supply did not meet the total demand. Let's see what happened in the past six years concerning housing supply and housing demand in Shanghai (Table 5-3).

Table 5-3 Housing supply and demand in Shanghai from 1998 to 2003

YEAR	FINISHED CONSTRUCTION AREAS (M. M ²)	CHANGES (%)	SALE AREAS (M. M ²)	CHANGES (%)	SUPPLY AND DEMAND RATE
1998	12.42	+5.6	10.57	+71.3	1.17
1999	12.29	-1	12.43	+17.6	0.99
2000	13.88	+12.9	14.46	+16.3	0.96
2001	15.24	+9.8	16.81	+16.3	0.91
2002	17.08	+12.1	18.46	+9.8	0.93
2003	21.40	+25.3	22.24	+20.5	0.96

Source: Shanghai Statistics Yearbook

From the above graph, we can see that in general the increase of demand was faster than that of supply. In the six years, the average growth rate of supply is 10.8%, whereas the average growth rate of demand is 25.3%. (Between 2000 and 2003, the average growth rate of supply is 15%, the average growth rate of demand 15.7%.) In the latest four years, the growth rates of supply were a little higher than that of demand. On top of that, in this period, the supply and demand rates were almost at the same level. The average rate from 2000 to 2003 was 0.94. So this means that in recent times, the supply was not enough to meet the demand. But the difference is pretty small.

Given that the market situation is that the supply has been a little short of demand, the market should relatively remain stable and the price should be on a slight hike. But the statistic information

indicates the otherwise. The price was at first down and then up, notwithstanding the increase or decrease rates were moderate and in control, except in 2003. In that year, the housing supply and demand rate was 0.96, a normal figure, though in this year the supply and demand rates both had an unusual jump, 25.3% and 20.5% respectively. The strange thing is that the housing price in 2003 increased by 20.5%⁵ compared with 2002. The preciseness of the number could be argued, the inarguable phenomenon is that the housing increase seemed out of control in 2003. It caused such a roar from many sides of the society that the government openly admitted the fact and vowed to take necessary measures to curb the situation. Why the price had such a big increase under the circumstance that the market balance at the times was not noticeably broken? The answer may lie in the market speculation.

Real estate market, as well as housing market, has its strong area characteristics. Each locality has its own features. So is the Shanghai housing market. Actually the uniqueness of the local market is more conspicuous in demand side than in supply one. If we analyze the housing market structure in Shanghai, we could distinguish three demanding forces (Figure 5-1). The first one is of course the local consuming force. Local residents are the leading force in housing demand and they occupy the lion share of the market. The second force is from the areas around Shanghai. Thanks to the rapid economic development in the last two decades, the economies in the surrounding cities and counties have been booming. A lot of people get very rich in these areas. They have such a strong consuming power and they also have the desire to buy houses in Shanghai for themselves and for their children. It is an old tradition for the rich people in these places to purchase housing in Shanghai, and this tradition is well kept to date. The third force is from abroad. Those people are overseas Chinese, especially from Hong Kong and Taiwan, who want to purchase residential property for their own convenience and other purposes. They are attracted by the prosperity and bright future of Shanghai and are willing to reside and invest in the city. Table

5.1.3 The influence of market investment and speculation

Market investment and speculation are common terms in the field of economics, and finance. Investment is usually occurred in the commodities that possess investment value. In another word, only the commodities whose value would be expected to increase in the future would be considered worth purchasing, i.e., investment. So the motivation of purchase is essentially or initially not for use, not for satisfying personal amenities, rather for profit. When investment goes to the extreme side, it becomes speculation. Speculation activities exist in many commodity markets, especially in the markets whereby the investment activities are active. Investment 5-4 illustrates the features of the three forces.

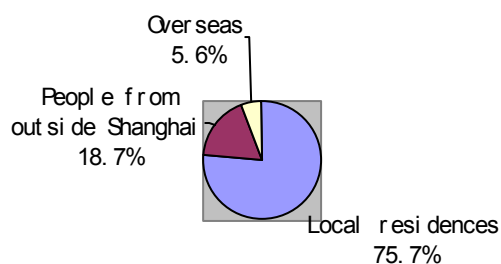


Figure 5-1 Consumer-group structures in Shanghai housing market, 2002 ⁶

Table 5-4 The features of the three consumer-groups in Shanghai housing market

GROUP	ORIGINATION	MAIN MOTIVATIONS	FEATURES
Local Shanghai residents	Shanghai	Dwelling. But the second home is usually for investment.	1. The decisive force in the market. 2. Favoring middle and low priced housing. 3. Fastidious in purchasing behavior.
People from surrounding areas	Jiangsu and Zhejiang provinces	Dwelling and investment	1. High purchasing power. 2. Specific products and residential areas. 3. Collective purchasing.
Overseas	HK, Taiwan, Singapore and other places	Investment and speculation	1. High-end products and good location. 2. Good information and professional knowledge.

and speculation are the twin brother. In quite sometimes, they are hard to separate. Economists pay a lot of attention to purchasing behavior, investment behavior and speculation behavior in the market. The purchasing behavior is sometimes easy to distinguish from speculation one. But the investment behavior is usually not viewed to be standing alone. In some cases, it joins with purchase. Other times, it braces speculation. Investment and speculation are very interesting economic phenomenon in many markets and it leaves deep dents on the commodity price.

In Shanghai housing market, the activities of purchasing, investment and speculation had been in co-existence in all the years, and in combined effects they contributed to the fluctuation of the housing price.

It is easy to explain the activity of purchasing. House is a necessity for sheltering. Buying a house is for living. Given that one of the natures of the housing is that the value of the housing would be kept or, better, increased with the passing of the time, even though the housing has been continually consumed --- dwelled, housing is widely regarded as a good inflation-proof commodity. Thus housing becomes a good investment commodity. When Shanghai people have accumulated enough money and seek the investment opportunities, housing is one of the favorite choices. One thing that is noticeable is that housing investment is occurred only under the circumstance that the investor has solved his own dwelling problem. Therefore, housing investment probably unexceptionally means the investors buy the second, or third home, or further. ⁷ The first house must meet the requirements as the living place. Additional considerations will be added for the second house or the third. Housing investment is aimed at maintaining or increasing the money value the investor owns. He will pay great attention to the houses which have a good chance to be value-keeping. The houses, which are popularly accepted by the market, are the legitimate targets. Nowadays in many local markets, the mini-type housing is all the rage. For housing investors, mini-apartment ⁸ is certainly not suitable for their living, but wonderful for investment. They will let the house and calculate the monthly rent by the monthly mortgage installment payment if the market condition is favorable. In doing so, they meet the end in money matter and at the same time they possess the fixed asset.

The people in Shanghai are very conscious of seeking investment opportunities in every market. Housing investment is one of the popular options. Due to the fact that housing investment involves huge sum of money, the proportion of the people who are capable of engaging in this kind of business is small among the whole population. One estimate predicts that between 2003 and 2007, the housing demand in Shanghai would be 850-930 million square meters (yearly demand 185-200 million square meters). Among the demands, the rate of investment is 8%.⁹ So the influence of housing investment on the housing price is slight.

The situation is quite different with regard to the housing speculation. The eye-popping housing price increase in 2003 attracts such attention that people eagerly look for the culprit. The fingers point to housing speculation and spotted out is the one claimed perpetrator who are the people from Wenzhou, a booming city in Zhejiang Province, and who are blamed to undertake mad housing speculation in Shanghai housing market and thus push the price to a high place. We do not have “smoking gun” to prove whether the rapid increase is due to such speculation and how exactly it does, if this is indeed the case. Let’s have a look at the possible functions the housing speculation play on driving the housing price.

The official Shanghai Real Estate Association conducted a sample survey at the end of 2003. The survey covers 11 districts and 23694 flats, a comprehensive survey. The result is that there are 3885 flats, out of the total sample flats, which are belonged to investment purchasing. Therefore the survey deduces that the proportion of investment purchasing in the whole market in Shanghai is about 16.6%. The survey does not states that these are all speculation. Actually it cannot do so in that no one can tell how many are investment and how many speculation activities. But we can assume that the majority is speculation, for the survey shows that there are a lot of short-term transactions occurred and the speculation atmosphere is tangible. Many people think this proportion is too low. In some hot areas and well-located districts the percentage is well above 20%, (Liang, 2004) the internationally recognized alarming line. It could reach 50% in high-end market (Yuan, 2004). The fraction of one fifth or higher is not a neglect proportion in the market. It will have a significant impact.

The above survey also points out that the investment purchasing is concentrated on high-end housing section. In the housing segment of more than 7000 ¥/m², the proportion of investment purchasing is 39%. That is to say that the motive of more than one third of the buying in this part may be strongly related with speculation.

Let’s conservatively suppose 35%¹⁰ of the buying are for speculation and see how this speculation action influences the average housing price of the market. Since the more reliable data on housing prices of every ring area are not available, we use the 2002 prices in Chapter One as the reference.¹¹

The average 2002 housing prices in ring areas:

The average price of inner ring area: 6287 ¥/m²

The average price of middle ring area: 5265 ¥/m²

The average price of outer ring area: 4012 ¥/m²

The average price of the whole ring areas: 5188 ¥/m²

The prime motivation for housing speculators to buy houses is for profit. So they will do everything they can to push the housing price up. If we premise that the yearly target profit rate the speculators pursue is 10% and there are 100 purchases, among them 35 being speculation purchasing, the increase rate of the whole ring areas, which is purely elicited from the speculation,

the prices of other two ring areas being unchanged, is:

$$(65 \times 6287 + 35 \times 6916) / 100 = 6507 \text{ ¥/m}^2$$

$$(6507 + 5265 + 4012) / 3 = 5261 \text{ ¥/m}^2$$

$$(5261 - 5188) / 5188 = 1.4\%$$

The official figure of the housing price increase rate in 2003 is 20.5%, so the speculation influence is only 6.8% (1.4% / 20.5%) if the target profit rate is 10%. Table 5-5 to Table 5-8 list the speculation influence at various speculation rates and target profit rates.

Table 5-5 The speculation influence on the entire market at 35% speculation rate in the inner ring area at various target profit rates

TARGET PROFIT RATE (%)	SPECULATION INFLUENCE (+%)	PERCENTAGE IN 20.5% (%)
10	1.4	6.8
20	2.8	13.6
30	4.2	20.5
40	5.6	27.3
50	7	34.1
100	14	68.3
150	21	102.4

Table 5-6 The speculation influence on the entire market at 40% speculation rate in the inner ring area at various target profit rates

TARGET PROFIT RATE (%)	SPECULATION INFLUENCE (+%)	PERCENTAGE IN 20.5% (%)
10	1.6	7.8
20	3.2	15.6
30	4.8	23.4
40	6.4	31.2
50	8	39
100	16	78
130	20.8	101.5

Table 5-7 The speculation influence on the entire market at 45% speculation rate in the inner ring area at various target profit rates

TARGET PROFIT RATE (%)	SPECULATION INFLUENCE (+%)	PERCENTAGE IN 20.5% (%)
10	1.8	8.8
20	3.6	17.6
30	5.4	26.3
40	7.2	35.1

50	9	43.9
100	18	87.8
115	20.7	100.1

Table 5-8 The speculation influence on the entire market at 50% speculation rate in the inner ring area at various target profit rates

TARGET PROFIT RATE (%)	SPECULATION INFLUENCE (+%)	PERCENTAGE IN 20.5% (%)
10	2	9.8
20	4	19.5
30	6	29.3
40	8	39
50	10	49
100	20	97.6

The influence of speculation on the housing market is a hot topic in housing profession, particularly in cities like Shanghai, Hangzhou, which experienced worryingly high housing price increase rate in recent years. There are fierce debates about the impacts of housing speculation on the housing price. One supposedly authority states that the impact is huge. Another claims that the impact of speculation has been greatly exaggerated. It seems that this is a tough question to answer. Well, may be not. The above charts seem leading us to the conclusion.

Actually, in deciding the result, we need to fix the two chief variables. One is the proportion of speculation. The other is the target profit rate. It might be commonly acceptable to say that the former is around 40% in the price scale above 7000 ¥/m² (below 7000 ¥/m², speculation activity is negligible). As for the target profit rate, 20% is quite realistic. Nowadays, in China the bank deposit rate for one year is below 2%. 20% in a year is extraordinarily good for investment return.

So we can find from Table 5-7 that the speculation influence is 3.6%. It means that, everything else keeping unchanged, the price increase rate which is solely caused by speculation is only 3.6%. If we compare it with the 20.5% increase rate,¹² it is 17.6%. This is to say less than 1/5 of price increase is coming from speculation. Now we may conclude that speculation is a market force capable of driving the price up. However, the strength of the force is limited.

5.1.4 The influence of government's urban development policies

Someone claimed that housing price is really decided by two: developer and government. (Liu, 2004) The claim may be exaggerated, but it shows that the government influence is huge. Government policies related with housing have comprehensive impacts on the housing price. They affect wide arrangements of matters from urban development projects to land reserve system, from sale policies to financial regulations. In Shanghai, the government has not made any policies directly regulating the housing price from the start and no such measures implemented ever when the housing price was at the brink of out of control. The government has been leaning on taking the indirect actions to manage the housing market, the housing price. Following are the main policies, which exert considerable influence on housing price.

- 1□ Urban regeneration drive. Thanks to the legacy problems of the past era, in Shanghai there are wide areas in the city center where the housings are severely dilapidated and the living

conditions unacceptably poor. The situation is not only injurious to the dwellers, but also causing the black spots on the urban scenery. Such a shame it is that the municipal government is determined to deal with the problem and try to wipe them out as soon as possible. So the urban regeneration campaign was launched and carried out incessantly. Every effort to solve the problem is supported by the government and official policies were made to encourage the involvement of all sided.

The urban renewal drive is usually undertaken in Shanghai in the following steps. If the regeneration area is to be developed for for-profit purpose, the land will be sold through public auction or competitive bidding.¹³ Then the residents of the area in question will get the compensation (from the bidding company, not from the government) and move out. They will use the money to buy the house elsewhere and emigrate there to live. After the old structures are demolished and the site is cleared, the project could be processed under the conditions that all the requirements are met. Another scenario is that the area is cleared for the construction for environment improvement like the building of park, man-made lake, etc. In this case, there will be no for-profit business involved. Government is responsible for all the works, including housing compensation. The dwellers will leave and the housings will be destroyed and the area will be constructed into a public place.

The interesting thing which draws our attention is that the campaign creates housing demand and surprisingly this demand is very big force in the housing market in Shanghai. In one hand, the renewal project is often the large-scale project and implicated with thousands of families. Therefore it forms a large housing consumer group. In another, the people who are to be moved away get quite sum of emigration compensation. They get the money supposedly sufficient to buy another house to live in. So they possess enough purchasing power. Considering the high housing price in Shanghai, they are the housing consumer group standing out of the average purchasers. Henceforth, this group is an important demand force in the housing market. It is estimated that among the local housing purchasers, 40% are from this group. It will have big influence on the housing price. Some blame that the urban regeneration drive has resulted in too big demand and helped to push the price up.

□2□ Pre-sale policy. Pre-sale is referred as the practice that the housing, after finishing the necessary government approval, is sold before it is completely. The chief reason why the government allows such activity to happen is to fasten the housing project development. Housing project needs huge sum of money. If the project can only be sold after it is finished, few companies are capable of conducting the business. Thus the housing situation of the city will be improved in a very slow path. In order to facilitate the process, the product is permitted to sell in the early stage of the making. Pre-sale is such a popular practice in real estate industry that more than 95% of the projects are sold in this way.

As indicated above, pre-sale must get government approval. Government sets the requirements how it could be done. If the government lows the standards, there will be more projects meeting the demands. This clearly means that more housing will be available in the market. It is easy to understand if the standards are raised, the available housing in the market will be reduced. So the policy of pre-sale is actually becoming the means of manipulating the housing supply. It is believed effective. That is why the Shanghai government is going to low the requirements of pre-sale in 2004, intending to increase the supply as one of the measures taken to depress the high growth rate in housing price.

- 3□ Financial policies. In Shanghai, the government financial policies include mortgage policy, providential fund policy, enterprise's loan policy, interest rate policy, etc. We will briefly discuss these four items.

For individual Shanghai resident, if he wants to seek financial ways to help him financing home buying, he to some extents can rely on two outside sources of financing. One is from commercial bank mortgage. The other is from Housing Providential Fund. Mortgage is a popular form of financing in housing consuming around the world. In the coastal regions where the real estate market is highly developed, mortgage plays a vital role in housing purchase. In the cities, like Shanghai, Beijing, Guangzhou, Shenzhen, etc., mortgage is believed to be more than 90% in the home buying. Usually the mortgage is termed on 20% or 30% down payment and the financing periods are 20 or 30 years. Mortgage can be arranged in the pre-sale period and when it is the time to do this, the developer will co-ordinate the matter and collect all the parties involved, such as the consumer, the bank, the insurance company, the notary officer, to the specific site to finish the job. It is a simple process and everything is done according to the set rules. Mortgage is in essence the loan the bank offers to the individual homebuyer.

Providential Housing Fund (PHF) was established in the early 1990s in few cities in China. Contributed both by employee and employer according to one specific percentage of the employee's monthly average salary, the money collected can be used to finance the home buying. In 1992, the PHF system was officially created in Shanghai. From that time, the system has experienced some changes. But the principles are remained scarcely altered. In the institutions which joint the system, most of them are government departments and state-owned companies, the employees and the employers pay the identical fees (the rate is specified by government regulation, currently 7%, and based on employees' average monthly salary of last year) into a designated account controlled by government. The employees have the right to use the money when they purchase or build their house and more importantly are qualified to apply for PHF loan, which is more favorable than commercial loan in many aspects. The interest rate, the ceiling of the quantity and other conditions of the PHF loan are managed by the government policies concerned. To most Shanghai people, when they want to buy the house, they will first use the PHF loan. If the loan is not enough, the difference will be made up by the commercial loan.

The influence of commercial mortgage and PHF on Shanghai housing market and housing price is exerted obviously through the change of demand. If the PHF policy is becoming more positive, stronger desire to house demand will be stimulated and more people will be encouraged to buy or buy better houses. The same effect will take place if mortgage rate is reduced. But it seems that the relationship between mortgage rate and change of demand in Chinese housing market is not so closed as in USA and other western countries.

With regard to the enterprise's loan policy, it has a tremendously huge impact on housing supply side. In Chinese real estate industry, it is widely admitted that in housing development at least 60% or 70% of the development capital is coming from bank (H.M, Zhang, 2004), especially at the early stage of the process. Bank loan is in such a prominent position in the development that the relaxing and tightening-up of the loan policy will greatly affect the operational condition of the real estate development companies. When

the central government was alarmed by the big increase in real estate investment in 2002, 2003 and tried to prevent the possible “real estate bubble”, two documents, dubbed “18 document” and “121 document”, were issued in the late 2003 to tighten the real estate development loans, the industry was in panic and every one predicted that the “real estate winter” was coming. Past experiences have showed that if the real estate related loan policy really gets stringent, housing supply will dramatically contract. But the housing price would probably, oddly, go down.

The last one we will talk about is the interest rates policy. As in most market economy countries, one of the powerful arms the central bank possesses in influencing the operation of the national economy is interest rates policy. By raising or lowering the rates, thereby increasing or decreasing the costs of the capital, the central bank could manipulate the economic activities. The Federal Reserve Bank in America is a typical example in skillfully applying this tactic. The 30-year low interest rate is claimed the main contributor of booming housing market in USA. In China, the situation is to large extent different from America. The Chinese economy is not fully market-oriented economy and the housing market is in a low teenage and always behaves unpredictably. The changes of interest rates have little influence on the housing market and on the housing price.

5.1.5 The influence of the third-grade market of real estate

In China, we classify the real estate market into three grades. In term of housing, the first-grade sub market is land market. The second-grade is newly finished housing market. The third-grade is second-hand housing market. After the first transaction completes, the housing automatically slides into the third-grade sub market. This means that one considerable part of the housing price is automatically and quite sometimes substantially chopped off, even if the housing has actually not been occupied. It is understandable that in most cases the housing price in third-grade market is lower than that of new one. However, in few events, both are at the same level or even the old one is higher.

On top of the price advantage, the third-grade housing often holds another very meaningful merit, i.e. location. Location is the golden boy in real estate. Many old housing occupy the well-regarded areas. With these two powerful arms in hands, old housing business is more and more active in the housing market and successfully attracts the eye-balls of many home buyers. Third-grade market may be denominated a pretty beneficial supplement to the second-grade market and it should have its place in the whole housing market. Without properly developed third-grade market, the second-grade market will not grow healthily and the whole housing market cannot be on the fast track.

The third-grade market is generally speaking in a backward state in China compared with the second-grade one. It's development is very much slow-paced. Only in few cities the third-grade market has functioned as a weighty force competing with second-grade market. The most advanced one is in Shanghai. In 1996, the rate of trade volume of newly built housing and second-hand housing was 7:1 in Shanghai housing market, in the term of housing floor space. The third-grade market was very small. The situation has been changed gradually with the market development. In 2000, the rate was shrunk to 2:1. In 5 years, the percentage was increased by 20%. In 2001 the rate was further reduced to 59:41.¹⁴ In fact, the two sub markets are relatively separated from each other, and the focus of this essay is on the second-grade market. So why it is worth discussion of the third-grade market and what are the relationships between the two sections?

The existence of the third-grade market actually makes the housing consumers having more choices when they search the products in the market. When people intend to buy house, they face the selections of buying new one or old one. So at the end some of them will enter the third-grade market because of the advantages the second-hand housing enjoys. This will cut down the demand for the new housing. On the other hand, the third-grade market also performs the function of increasing the demand for the second-grade market, with the fact that after people sell their old houses in the second-hand market, they would turn to buy new and better houses in the first-hand market. Actually quite some people intend to do so. The proper development of third-grade market will release this potential purchasing power and help the second-grade market a lot. These two forces exist at the same time and at the same place. Generally speaking the latter force is more powerful than the former one because the attraction of the second-grade market is always stronger than the third-grade one, being so merely from the point view of psychological factor. Naturally the result for the second-grade market would be that the demand will be pushed up and the price might be raised.

But the complexity of the matter is that the very existence of the third-grade housing market also restrains the price increase in the second-grade market. Faced with the wide varieties of choices, if the prices of new houses are too high, or putting it another way, if the price differences of new houses and old houses is too big, consumers will have to choose buying the old houses, rather the new ones. This effect to many extents pins down the price increase of the second-grade housing market.

5.2 The micro-factors which influence the housing price

5.2.1 The influence of the property itself

5.2.1.1 The influence of the location

Location plays such an important role in the real estate project that it always has a decisive impact on the success of the project development. “The specification of location involves at least five aspects: distance from import locations such as the CBD, other employment concentrations, shopping areas, and transportation routes; the nature of land use in the neighborhood of the house; the socioeconomic character of the neighborhood; the physical nature of the neighborhood environment; and the local government jurisdiction in which the stock is located.” (Isaac, Allen, Mary) Here we discuss the influence the location factor exercises on the housing price.

In Chapter Four, we list the composition of the housing price, i.e., development costs, period costs, tax and profit. It is popularly accepted as a fact in the real estate profession that most of the items in the housing price are relatively stable in some periods (Table 5-9 exhibits the construction engineering costs¹⁵ and cost-index of Shanghai and Shenzhen). The value of the construction of the housing projects are relatively fixed in the case that the projects are classified in the same housing type and this value-fix could be remained so in quite a long time, because the housing structures in the same category are similar and the construction technology and materials do not experience big changes in the past and will not change dramatically in the foreseeable future. The utilities fees and development taxes are determined by the government and the rates will not be changed in some times. The period fees are the internal fees of the developing company. It should be different with the different conditions of different firms and projects. Yet the difference is small if it is measured in the percentage of the whole costs. So the two factors which may show a significant discrepancy among various projects are profit and land fees. These two may play the critical role in the

difference of housing price of each project.

Table 5-9 The housing construction costs and cost-index in Shanghai and Shenzhen¹⁶

CONSTRUCTION COSTS, SHANGHAI		CONSTRUCTION COST-INDEX, SHENZHEN	
YEAR	COSTS (¥/M ²)	YEAR	COST-INDEX
1995	1363	12,1993	100
2000	1947	12,1999	96.26
2001	1959	6,2002	96.17
2002	1983	6,2003	99.84

Source: http://www.shucm.sh.cn/zhtj2001/2002/cjsj_6.htm and <http://www.ccost.com/jjzb/shengzhen2003.asp>.

We have explained that most of contents of the producing costs of the identical or roughly identical housing products are not very different from each other. In the limited space in a city, no matter how large the city is, even the super large city, in the world standard, as Shanghai, the unit costs of constructing the same sort of housing fluctuate in a very small scope, probably less than 5% in several years. Other fees could be stayed at the same level for many years. But we know in reality that the prices of the same type of housing in the different areas are not at all the same. The price dissimilarity could be as large as double or even treble. What happen? The answer can only be that it is caused by land price and development profit. The issue of land price elicits the issue of location. Different locations reflect different land prices. And the differences of the land prices bring on the differences of the housing prices. Thus the relationships are established between location and land price and housing price. To most degree location firstly decides the land price, then influences the setting of housing price. All will agree that there are close connections between the three. But how exactly they are? What about the functions the profit plays? Let's see what are the relationships between location and land price and housing price (Table 5-10).¹⁷

Table 5-10 The relationships between location and land price and housing price in Shenzhen.

PROJECT NAME	HOUSING TYPE	CONSTRUCTION FLOOR SPACE (M ²)	PROJECT LOCATION	LAND PRICE (¥/ M ²)	HOUSING PRICE (¥/ M ²)	RATIO OF HOUSING PRICE/LAND PRICE
Xiumin Garden	High-rise	27333.54	Futian	2105	6500	3.1
Yingzuo Jinzhuan	High-rise	20792	Luohu	1683	9500	5.6
Oriental Haiya House	High-rise	34275	Nanshan	729	5000	6.9
Sea-bay Garden	Low high-rise	23817.58	Yantian	1183	6500	5.5
Shuishanyuan	Low high-rise	156377	longgang	457	3600	7.9
Baolihao House	Low high-rise and high-rise	202781	Baoan	463	3500	7.6

Land transaction is a very complicated matter in Chinese real estate market and market-oriented land trade was practiced for just few years. So land price has not yet fully reflected the market conditions. But we can see from the above chart that in general the trend is clear that good location results in high land prices and housing prices. The two highest land prices and housing prices are in Luofu and Futian districts, whereas the lowest ones are in the places far away from the city center.

In order to further explore the relationship between land price and housing price, we calculate the ratio of housing price to land price. Looking at the chart, we can find that the ratios become larger with the distances of the places farther from the Central Area. How to make of this phenomenon?

We said that the value of all other factors basically remain the same in some times, save the land price and enterprise profit. That is to say that the unit costs of others in the inside-boundary areas are not substantially higher than that of outside-boundary areas. But the housing prices in the former regions are significantly more expensive than that of later regions. The huge gaps are existed between the two regions and the gaps become more and more large with the expanding of the distance. Thus the land price must be reduced accordingly. If the government wants to attract the developments in the suburb to promote the balance policy and to alleviate the pressure on the city center, it should try to further cut the land price and makes the ratios even bigger.

5.2.1.2 The influence of the inherent features of the property

The inherent features of the property include apartment direction and floor position. These two factors also exercise some kinds of influence on the housing price.

(1) Apartment direction. When buying the house, people pay very much attention to the direction the apartment they are interested in. In Chinese tradition, the direction of South is considered the best direction, especially in the northern part of the country, because facing south makes the house get more sunlight and warmth. South is even regarded as auspicious in the custom of “Fengshui”. It does not attract such awareness in the very southern parts of China, like Shenzhen, where it is very warm all year round. It is a serious matter in many places. In Shanghai, the southeast direction is the best and the room toward southeast is really different from the one toward northwest, particularly during cold weather. In winter the north room is much colder and darker than the south room. So understandably the price of north flat will be lower than the south one. In practice in housing marketing, one method to set the price regarding direction is that the housing price which is showed to the customer will be set based on the bad apartment. The price of the good apartment will be expressed in the way of some percentage-plus, i.e., price-modification-coefficient. Of course the converse method is also acceptable. The gap is usually less than 10% on the same floor.

As a good reference, Table 5-11 lists the coefficients of directions from one official document issued in year 2002 by Shanghai Housing and Land Resource Management Bureau, which is denominated “Shanghai Urban Housing Demolishing and Immigration Evaluation Norm”. The document does not serve specifically for housing marketing. It, however, is widely accepted as the guideline in housing market.

Table 5-11 Coefficient of directions, Shanghai, 2002 (master room taken as the determinant)

DIRECTIONS	COEFFICIENTS
North	□8□
West	□3□

East	□2□
One room facing south	0
Two rooms facing south	1%
Three rooms facing south	2%

The above calculation method is quite complicated in counting the house price. Nowadays the housing project is always a synthesis of diverse housing types. When there are four or five types of houses on the one floor, it is tough to calculate the prices. To simplify the method, the housing developer often used one synthetic coefficient to set the house price when concerning with direction adjustment.

- (2) Floor position. In China, people have different opinion and propensity to the selection of floor position when buying house. It might be true that the importance of floor location is lower than that of orientation. After all the consumers in housing market do not enjoy so much luxury of rich choices as those in other commodity markets. Generally speaking, when people pay heed to the matter, they prefer the third or fourth floor in the case of multi-story building (seven-story high or below). As for the high-rise building, the higher floor, the better. Accordingly, the price on the third floor or the fourth in multi-story building is the highest and the higher the floor is, the dearer the price is in high-rise building.

The immediately above official document also gives the coefficients on the floor position (Table 5-12).

Table 5-12 The coefficients of floor position, Shanghai, 2002

TOTAL FLOORS FLOOR POSITION	1	2	3	4	5	6	7	ABOVE
1	0%	0%	0%	0%	0%	0%	0%	-3%
2		4%	4%	2%	2%	2%	2%	-2%
3			2%	6%	5%	5%	6%	-1%
4				-4%	4%	4%	5%	0%
5					-8%	2%	3%	0%
6						-8%	1%	1%
7							-10%	1%
8-11								2%
12 AND ABOVE								4%

In the case of a 6 stories high building, the coefficients are, from the first floor to the sixth floor, 0%, 2%, 5%, 4%, 2% and -8%. If the flat is on the first floor, the price has no change. The price of the flat on the third floor is 1.05 times of the standard price. The price of the flat on the top is 92% of the standard price.

In the second-grade market, the housing developers usually adopt a more simplified method in counting the impact of floor position. They simply add a number which ranges from 50¥ to 100¥ on each floor. Explicably, in multi-story building, the third floor or the fourth floor will be added the biggest number and in high-rise building each floor will be added a number equally.

5.2.1.3 The influence of the plot ratio and coverage ratio

Plot ratio and coverage ratio are the two most important indices in city planning and it has huge influence on real estate and housing project development. Plot ration is the ratio of total construction space to the plot area and the coverage ratio is the ratio of total ground space the buildings occupy to

the plot area. Both of them are set by the government's planning authority when the general planning of the city or of the districts is made. Government relies on these ratios to control the development degree of the lands in the specific areas in the city. The higher the ratios are, the higher the usage degree of the land is.

In theory, plot ratio and coverage ratio are official planning tools and they are calculated and fixed by the authority well in advance. From the definitions, we can learn that, when referring to plot ratio, it is a number bigger than one in most ordinary housing projects, whereas to coverage ratio, the number is always less than one (theoretically, the maximum is one, yet practically, it is not allow to reach that level). The definitions also imply that the bigger the numbers are, the larger the construction areas are and the more the money comes, in a given unit price. Naturally in order to earn more money, the developer will do his best to try to make the two ratios as high as possible. They have clear enough economic consequences.

(1) The relationship between plot ratio (PR) and coverage ratio (CR)

$$PR = \text{Total construction space} / \text{plot area}$$

$$CR = \text{The ground floor space} / \text{plot area}$$

$$PR / CR = \text{Total construction space} / \text{the ground floor space}$$

$$= \text{Floors (it is supposed that every floor has the same area space.)}$$

$$PR = \text{Floors} \times CR$$

When the floor number is fixed, the two ratios are changed in a positive and linear way as showed Figure 5-2 ("k" is for floors).

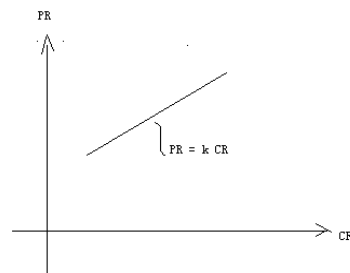


Figure 5-2 The relationship between PR and CR.

(2) The relationship between plot ratio and unit sale price, resulted from cost change.

The increase of PR will lead to the increase of more construction space. As above-mentioned, the unit costs are roughly kept the same regardless of the change of the construction area, except for floor land price. Let's calculate the minimum PR first.

When developer looks for the land, he needs to know the minimum PR. If it is lower than the figure of the land he is offered, the development loses the economic meaning for him. Minimum PR is referred to the situation when the sale price is equal to the unit costs.

$$\begin{aligned} \text{Unit sale price (USP)} &= \text{floor land price} + \text{unit costs of others (which are regarded as constant, c)} \\ &= (\text{total land price} / \text{total construction space}) + c \\ &= (\text{total land price} / (\text{PR} \times \text{plot area})) + c \\ &= (\text{unit land price} / \text{PR}) + c \end{aligned}$$

Unit land price is another constant, c' , thus we have,

$$PR = c' / (\text{USP} - c)$$

Figure 5-3 shows the minimum PR. (The left-down graph is not meaningful in reality.)

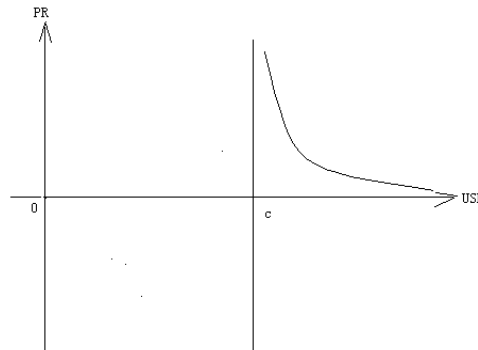


Figure 5-3 The minimum PR

Above is the minimum PR curve. Any point on left of the line is economically unacceptable for the project. In the graph, the minimum PR is exhibited as a downward curve line. The increase of PR will lead to the decrease of USP. The curve is on the right side of the c line. If USP is smaller than c, the PR value is a minus figure. This is completely meaningless. In practice it means that sale price must be well larger than one part of the costs. Theoretically speaking, when USP approaches c, the PR will become infinite, whereas when PR goes toward zero, USP will be infinitesimal. In real life, the PR will be in a very limited scale.

In normal conditions, there will be profit. Let's assume the unit profit remains the same. Thus the unit costs of others and the unit profit are combined into C.

$$\begin{aligned} \text{USP} &= \text{floor land price} + \text{unit costs of others} + \text{unit profit} \\ &= \text{floor land price} + C \end{aligned}$$

$$\text{PR} = c' / (\text{USP} - C)$$

Figure 5-4 illustrates what the change the minimum PR and actually PR perform in the normal scenario if the building density effect is not involved.

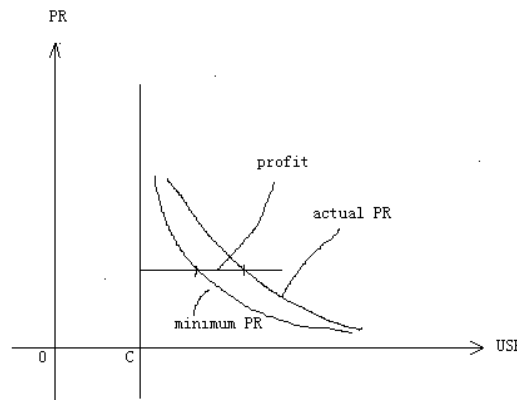


Figure 5-4 minimum PR and actual PR

Above is the minimum PR and actual PR curve. The actual PR curve must be on the right side of the minimum PR curve. The distance between the two is unit profit of the project.

(3) The relationship between plot ratio and unit sale price, resulted from density consideration.

In a given site, with the increase of plot ratio and coverage ratio, there will be more floor areas produced. But with the increase of more added space, the density of the buildings gets bigger and bigger. The increase of the density will lead to the worsening of the living conditions of the community, with regard to the aspects of sunlight, ventilation, privacy, etc. And this will inevitably evoke the decrease of the housing price.

5.2.2 The influence of project profit

Profit is really an issue in real estate industry. Many claim that in China real estate industry is one of the remaining few industries which still possess extravagant profits. Yes, it is true.

The definition of profit is very simple. It is the difference of price and costs. As for profit rate, it is a little bit complicated. Different denominator will produce different profit rates. For example, investment profit rate is the value of profit divided by investment, whereas the cost profit rate is the value of profit divided by the cost.

In the composition of housing price, profit is one part of the price. Due to the feature of the individuality of the housing project, different type of housing project could turn out quite different profit. The disparity of profits will exert big influence on the price, particularly when the profit occupies a significant share of the price. Let's use the examples of Table 5-11 to discuss the impacts of profit on the housing price (Table 5-13).

Table 5-13 The unit net profit and unit price profit rate¹⁸

PROJECT LOCATION	LAND PRICE (¥/ M ²) (1)	OTHER COSTS (¥/ M ²) (2)	TOTAL COSTS (¥/ M ²) (3)=(1)+(2)	HOUSING PRICE (¥/ M ²) (4)	NET UNIT PROFIT (¥/ M ²) (5)=(4)-(3)	PROFIT RATE ON COST (%) (6)=(5)/(3)	PROFIT RATE ON PRICE (%) (7)=(5)/(4)
Futian	2105	2960	5065	6500	1435	28	22
Luohu	1683	2960	4643	9500	4857	105	51
Nanshan	729	2960	3689	5000	1311	36	26
Yantian	1183	2960	4143	6500	2357	57	36
longgang	457	2960	3417	3600	183	5	5
Baoan	463	2960	3423	3500	77	2	2

Looking at the form, we can find that in some cases the profit exercises gorgeous influence on the housing price. The average unit price profit rate on cost of the four projects in the inside-boundary areas (Futian, Luohu, Nanshan and Yantian) is 38%. That is to say that in the price the cost is only 62%, while the profit is astoundingly 38%. Profit has a high proportion in the price. So if the price is to be trimmed down, something should be done to the profit. On the contrary, the two projects in the bad locations have a poor mean profit rate of 3.5%. This might tell the reason why developers are all doing their best to squeeze into the already very crowded good locations and so aversive to the bad ones.

5.2.3 The influence of development scale of the project

5.2.3.1 The relationship between the project scale and the cost and the price

We all are familiar with the term of “economies of scale”. It means that there is close relationship between the benefit and the scale. Bigger scale will bring on better benefits. In another word, with the increase of the scale, the benefit and efficiency will also get increased, although the marginal increase will become smaller and smaller. The most probably explanation to this economic phenomenon is that the augment of the production scale will result in the reduction of unit cost. But unfortunately the theory of “economies of scale” also states clearly that the benefit enjoyed by the scale is limited to some degrees. With the diminishing marginal increase, the benefit will eventually disappear and after some point, the even bigger scale will lead to detriment. “economies of scale”

becomes “diseconomies of scale”. This is because in the process after passing the lowest point, the unit cost begins to climb up, rather than down in the past way.

In the housing industry, “economies of scale” exists too. The larger the project is, the better the results are. The large housing project will save the unit cost and, by creating necessary space, make it possible to reduce the housing price. Developer who conducts large-scale housing program always enjoys cost advantage in the competition. Given that there are not many competition tools in the housing market, cost advantage is very important to developer. The specific reasons behind it are:

- (1) Material costs save. Among the direct construction costs of material costs, labor costs and machinery costs, material costs usually cover at least 60% of the total costs. So if the material costs can be successfully cut down, the whole costs could be reduced substantially. Understandably the developer of the large project is in a good position to do a good bargain with the material suppliers and the suppliers are willing to offer discount on the large quantity purchases. Further more, the big project not only consumes a lot of construction materials, but also lasts a long period. Therefore it is possible for developer and suppliers to establish long time and solid business relationship. This will bring on further benefit to the developer and make possible more cost saving.
- (2) Construction fees save. Developer needs to pay the fees on design, supervision, construction and others in the project development. Some of these fees or some parts of the fees are calculated in proportion to the whole costs of the works engaged. The larger the project, the lower the rate. So the large project will lead to the reduction of the unit costs. On top of that, considering the benefits and long time cooperation the large project produces, the designer, the contractors or others will be glad to provide favorite payment conditions. This is also very helpful to the cost saving.
- (3) Capital costs save. Housing development is quite a capital-consuming enterprise. In China, as mentioned early, at least 60% of the money needed for the housing project are coming from outside sources, among them bank source is the primary one. The three things the bank pays most attention to when offering loan are security, mobility and profitability. Security is based on the mortgage and credit, while the mobility and profitability are mostly depended on the project itself. Big scale development is better positioned than the small one in almost all aspects. So developer is capable of getting more preferential financial support from the bank. Because of the scale advantages, other favorable financing sources are also attainable.
- (4) Management fees save. In other industries, when talking about expanding production scale, we will naturally think of building more production space, purchasing more machines, adding more labors. Things are different in housing development. For developer, the only personals he needs are management personals (the issue of labor is belonged to the contractors and the labor costs are included in the construction costs). So the increase of the housing project scale does not necessarily means the increase of the working place area, the employees, or the increase is barely negligible compared with rate of the scale expansion. The large project will be developed stage-by-stage and spans over the course of many years. In most cases, the same group will deal with the project small and large. That is to say that the management fees are remains the same regardless of the scale of the project. The larger the project is, the smaller share the management fees are and the lower the unit costs are.

Armed with cost advantage, developer could readily translate this advantage into price

advantage and gains upper hand in the competition. Better, the large project brings other benefits in price. Because the large scale and time-span of the development, more advanced landscape design and better public facilities are possible. Traffic is more convenient. And brand building is also achievable. With hard wares and reputation are established, the project could even enjoy more favorite (higher) price.

With regard to the “diseconomies of scale”, the situation may be different from others either. In housing industry, the expansion of production does not precipitate the enlargement of the enterprise. It seems that the concept of “diseconomies of scale” could be even not applicable in housing industry.

5.2.3.2 The development of “big quarter”

Compared with small project, large-scale project itself can bring more profit to developer if the profit rates are the same, let alone the bigger scale will take in additional profits. So large-scale development is particularly attractive to housing developers.

So is born the so-called “time of big project”. In recent years, the housing projects become bigger and bigger in many real estate active cities like Shanghai, Shenzhen, Beijing, etc. Several years ago, the project of 100,000 m² (construction floor space) could be called the big one. Gradually, it was pushed up to 200,000 m², 400,000 m², and 500,000 m². Nowadays the threshold is one million. The projects of two million square meters or even bigger ones appear. If we take the average floor areas of one flat are 100 m², the project of two million square meters contains 20,000 families. This is indeed a town, a new town. No wonder the developers boast they are not building houses, rather new city.

The impacts of “big project” on the housing market are an interesting issue. If such big projects were put into the market immediately after finished, the market would be dealt a heavy blow, facing so huge supply increase and the housing price would be clapsed. Actually it is highly unlikely. The two million square meters would not be on the market at once, because the project will be completed step by step, may be seven or eight phases and lasts ten years. So the market would not witness a dramatic increase in housing supply.

The tricky question that could be asked is why such big projects which enjoy many cost advantages do not show price advantages, i.e., lower price than that of the small ones in the same location. Not lower, even higher, in that, the developers claim, there is “brand premium”.

5.3 The project financing factor which influences the housing price

In China the financing of housing project is heavily relied on outside sources. Because the financial channels of financing for housing development like real estate fund, real estate securitization, real estate trust have not been established fully, bank is by far still the main source for most of the housing development companies. But other forms of financing also play important role in the development process, although some of them strictly speaking are illegal, such as cushion-money from construction companies and the material and equipment suppliers. In summary, there are at least four sorts of financing the developer makes good use of in housing development.

5.3.1 Land loan

It has been explained above that there are several ways to get land. No matter what means they are, market-based ones as competitive bidding, auction, or old-fashioned ones as agreement transferring, developer need to pay the land transferring fees and this is a huge sum of money. In China, the policies concerning land fees payment are in disparity. Different cities have different

policies. In the same city, different times have different policies. In the same time, different sites have different policies. This is the reality in the country. But generally speaking the payment method is installment payment. The down payment is usually less than 20% of the whole fees and the remains should be paid out in, say, two years. After the down payment is done, developer will make the land to be evaluated by professional evaluation company and then mortgages the land to bank for applying for land loan.

5.3.2 Real estate development loan

After the housing project had passed the examinations of the government and got all the necessary official certificates, the developer can apply for development loan to bank with the so called "Four Certificates". The loan usually cannot exceed one set percentage point, say, 70%, of the whole construction costs. This loan is in theory short-termed and area limited, which means that it cannot be shifted to finance the projects in other cities. The development is aimed to solve the capital needs of daily operation of the project. Housing industry is a high profit rate industry. So banks are quite willing to provide housing development loan. And the developers are certainly more willing to accept it.

5.3.3 Mortgage loan

Nowadays in China, house buying is mostly supported by mortgage. May be the proportion is over 90%. Mortgage is one kind of loan which relates bank with consumer. Essentially, it is bank that provides loan to home buyer. But in practice, bank does not transfer money to the account of buyer, rather directly to developer. Thus in the end, it is the developer that receives the money. For them, it is clear that the more people apply for mortgage, the more mortgage loan the developer can get. No wonder there are so many cases of false mortgage, in that developer falsifies more mortgage applicants than the actually number to fudge the bank to get more money.

5.3.4 Cushion money

Cushion money is referred as the money coming from construction contractors to maintain the construction of the project. The practice should be done like this way that the development pays 30% of the material preparation fees to contractors for him to buy the necessary materials before the commence of the construction and pays regularly the engineering fees when the partly construction works are finished. But in reality, the engineering fees of the early construction works will not be paid until some stage which is negotiated in advance, let alone 30% material preparation fees. Until the time when the money comes from the developer, the contractors must try to find ways to pay the material price and workers' salary and others. This is in essence the loan provided by contractors to developer. And how do the contractors find the money? Bank loan again. Contractors are also eligible to apply for various loans to support their business.

Among the above four types of financing, three are benefited by the developer, one by the customer. The financial support to the developer will certainly produce the results of maintaining and increasing the capability of housing supply, and, to customer, of housing consumption. The influence could be very strong. Considering that the bank loan is vital to the project, it is safe to say that if the banks take action to reduce the loan-issuing substantially, developers will suffer from acute pain. But how about the housing price? The reduction of money supply will inevitably cut the housing supply to the end and then the housing price will rise due to shrinking production. However this is a long term effect. In the short run, because developers are short of money, they will cut down the housing price to promote the sale and then collect the money to sustain the operation. The housing price might go down.

5.4 The price-setting

5.4.1 The introduction of price-setting methods

Price is one of the most important factors in modern commodity market. “Price becomes a basic regulator of the entire economic system because it influences the allocation of production resources.”¹⁹

For consumer, the price of the commodity usually determines his purchasing decision of where to buy or how many to buy. For supplier, the commodity price often determines his production of where to produce and how many. The wrong price would lead to catastrophic results to the marketing. So it is easy to understand that pricing decision plays a vital role in the success of the production. Price setting is very important. Yet it is also very difficult because it is subjective and unpredictable. In practice, there are many ways to set the price. Let's have a brief introduction.

5.4.1.1 Pricing objectives

Before determining the price itself, the price objectives should be decided upon, although very few firms consciously do so in price setting. Pricing objectives may be classified as follows:

- (1) Pricing for profit. Company is the economic entity and its ultimate goal is to get profit. So the most common pricing objective is for profit, for maximizing the profit. To the companies, pricing is mostly a matter of obtaining the greatest possible spread between total cost and total revenue. The profit which pricing is aiming at could be divided into short-term profit and long-term profit, so the objectives may be for short-term profit or long-term profit. The former pricing method is sometimes used as a means of “rapid cash recovery”, rather than for profit itself. A company may be in such dire need of cash or it may have little or no faith in the future of its product that it is willing to risk its long-term security for immediate short-term gain. Conversely, the pricing policy for the later is apt to be far more beneficial to a company and to the public. Practiced over the long run, it could bring the company the benefits of building a large clientele and laying a solid foundation for the future profit maximization.
- (2) Pricing for sales volume. Companies, especially large companies, pay much attention to market share, because it serves the companies well. The change of the market share of the products can tell the manufacturers many important messages, one of them being whether the pricing is on target or not. The market is in a constant movement due to competition and other factors. When the market is changed, say gets bigger, the share of the market is changed too. In order to hold or increase the share, the companies need to adjust the pricing policies to meet the new situation. Barring for market share, pricing for sales volume could also express itself as the objective of increasing in “total sales revenue”. Lowering the price and raising the price both in some circumstances could boost the total revenue and an increase in total sales revenue may indicate the pricing policies are on target and bring benefits to the companies.
- (3) Pricing for market stability. Pursuing profit maximization is the basic goal of the production activity. But sometimes pursuing this goal could result in the opposite consequences, for in the industries which fluctuate wildly pricing for profit maximization would lead to loss in bad time. Therefore some large companies concentrate on the target of market stability as their pricing objective. They hate to ride the roller coaster and look for steady growth. So they turn to the price policies of less aggressive and more stable. Prices in such circumstances are typically set by one or several industrial “leaders” and others are expected to follow suit. Of course this does not mean the prices are all the same. But the leader prices are usually respected by the industry.

5.4.1.2 Price setting methods.

- (1) Cost-plus pricing. This might be the simplest and most widely used method in pricing. It is simply that price is equal to cost plus profit. In price setting, cost is the determining factor and a floor under a product's price. The producer calculates the cost and the profit he reasonably expects and puts them together. The price is thus formed. This does not mean price will never be below cost. Sometimes, for specific reasons, producer will sell the product below the cost. But if price stays under cost for a long period of time, the company will be forced out of the business.
- (2) Competitive pricing. Competitive price is the form of pricing that product price is, based on the evidence from the market, determined by reference to the prices of other competitive products. The effective marketing manager must have a comprehensive knowledge of the market competition conditions and his competitors. In reality, the competition situation is quite complicated. For the sake of safety and risk-avoiding, he will usually follow his competitors in pricing. He sets his price according to his competitors' price, his own product's nature and other considerations. This pricing method occurs often when there is/are leading price(s) in the market.
- (3) Market-oriented pricing. In the market, there are two fundamental forces, i.e., demand and supply. The basic economic theory tells us that under ideal competition the market will eventually reach a balance point where the demand meets supply and there will be an equilibrium price. So the producer sets the price just according to this balance price. Of course, the market balance will be broken. Thus the producer need to evaluate the new market situation and predicts the new equilibrium price and follows it.
- (4) Selective pricing. Selective pricing refers to the pricing method that producer sets different prices for the same product or service in light of different purposes. For example. "Customer group pricing" refers to the pricing method that the prices are set differently for different customer groups, such as students or seniors pay the price which is not the same as that paid by the normal customers. "Peak pricing" refers to the pricing that the price is changed in accordance with the peak time or off-peak time. "Delivery level pricing" refers to the pricing that the price is set in agreement with the delivery speed.

5.4.2 Price-setting methods in housing market

May be it is true to say that price-setting is an art, as well as a science. Faced with the complicated situation in the market, a company in most cases will adopt multi-attitude view in product pricing. So it is rarely happened that the company implements only one kind of pricing method in marketing. Often in different times, in different situations, different methods will be used. This is the case in housing marketing in China.

Although housing is a special commodity and it has unique characteristics, the pricing method in housing marketing is not unique. Only that it expresses its unique conduct. Let's see how the above four pricing methods are practiced in Chinese housing marketing.

- (1) Cost-plus pricing. Cost-plus pricing method is a very simple pricing method. But it is always not put on the stage and plays a major role. The principal reason for this is that cost-plus pricing is a totally self-centered method. It neglects the market situation and the demand reflection. It is only acted as the alarm and not used in actual pricing policy-making. So it is in Chinese housing pricing. There is one particular reason why it is not adopted in housing pricing. As it was mentioned early, in China the costs of housing are calculated in a special method called "quota

system". The process of costing goes through three stages, i.e., general calculating, pre-calculating and final calculating. This process is complex and long. And only after the project is finished, the final cost will be determined. Unlike other commodity industries, housing is not produced in a mass scale. So the cost of housing is one-product cost. It is delivered after the housing is produced. But the reality is that most of the housing are sold well before it is completed. This practice is named pre-selling and it is even encouraged by the authority. When the housing is sold at the stage of 1/3 finishing, the cost is far from certain. However, this does not mean cost-plus pricing is rubbish in housing pricing. Although the final exact cost is not clear when the housing is sold, the developer always has some figures of cost in his mind, which is based on the knowledge, on the experience, on the comparison and on the industry. Sometimes we can find the phenomenon that in the same location, the type of housing, but the price of one project is conspicuously higher than that of its neighbors. Most probably, cost-plus pricing is playing its role.

- (2) Competitive pricing. This is the most popular pricing method in housing marketing. Before undertaking housing marketing, the developer will conduct intensive market research works. In market research, one of the most important tasks is to investigate and master the prices of the same type housing project in the market. The prices of the competitors' project are thoroughly studied and taken into account in the pricing of the project in question. It is quite safe and popular to follow the prices of others. Thus it is common for us to see that in the same area, the same sort of housing, the prices are always in a close range. It is amazing to find that in a so-called keen competitive market, there seems no price war occurred in housing market. Certainly, the practice of following competitor's price in one's own pricing does not say that the prices are the same, or very close. The unique nature of the housing is always unique. Every project is different. And there is the factor of timing. It seldom happens that a dozen similar projects are being constructed at the same time, in the same location and being pushed into the market simultaneously. There is a time-difference. And this time-difference will cause price-difference. Another point is worth mentioning is that it looks like there is no leading company or leading product in housing market. If leading company or leading product plays a role in making the competitive price, there is no need to play such a role in housing market, because there are so few new things in housing. Frankly speaking, price-setting is relatively easy in housing market.
- (3) Market-oriented pricing. This pricing method almost has no practical meaning in housing marketing. Developer does pay attention to the situation in housing market. But it is just the general information. Housing price making is so closely related with particular locations and different locations produce so different prices that the general market price is not relevant to the price of one specific area. The market balance price is served for the macro-purposes.
- (4) Selective pricing. It is claimed that selective pricing method is often practiced in service industry. Housing industry is a product industry, yet the selective pricing is popular in it. For various purposes, developer will set different price for different customers and in different time. Unlike some commodities that people may have weak or strong preference to them, everyone likes house and likes to possess it. So when developer for some specific reasons doles out one favorite pricing scheme for one specific customer group, the effect is always very good. "Peak pricing" is also applicable in housing marketing. This method is related with timing, so in housing marketing it expresses itself as the different prices in different time. In the housing

marketing cycle, the price roughly goes like this way: price is low in pre-sale stage; then it will rise when the housing is approaching the completion. In a short time after the launch of formal sale period, the price will reach the peak; Thereafter, the price will gradually go down with most of the housings are sold out. “Delivery level pricing” is not applicable in housing marketing, obviously because of the nature of housing production. Housing project is finished all in the same time. There is no chance to get one housing earlier than another. (This is for multi-flat housing, not for detached single housing.)

5.4.3 The types of housing price

There are several different types of housing price. They could be classified as following:

- (1) Sale price. Sale price is the price of the finished product. It is the standard price and earns most of the money for the developer in normal conditions. It is also the market competitive price which will have influence on the price-setting of competitor's housing. Housing price is the official price developer needs to report it to the government management department for registration, statistics, filing or other purposes.
- (2) Pre-sale price. Housing can be sold well in advance of completion. This is denominated “pre-sale” and to some extent the income from “pre-sale” is critical to the life of the project. The practice is permitted supposedly because it could facilitate the development of housing and other properties. The price during the “pre-sale” period is of course pre-sale price. Given that the customer pays the price in advance and he does not get the commodity at the time he pays, essentially it is the kind of loan customer lends to the developer. According to the economic rule, developer must pay the interest to the lenders. So the pre-sale price ought to be lower than the formal sale price. This is exactly the case in pre-sale price-setting.
- (3) Internal purchasing price (IPP). Pre-sale is pretty legal in housing marketing if the developer gets the approval from the government. And actually it is necessary and beneficial for the housing development. If the developer sells housing before pre-sale, it is dubbed internal purchasing. Through informal channels, developer sells the housing units to customers who are interested in buying and put the money into the development. It is clearly illegal and done in the dark. But everyone knows it happens in many projects. IPP is certainly the price in internal purchasing and it is imaginably lower than pre-sale price. But the difference between the two is not very big, because only under the circumstance that the project is quite hot, people are willing to pay the money so early.
- (4) Clearance price. When the marketing period reaches the last stage and if the project is not sold out completely, developer will sell the remaining flats in a very low price in order to clear the marketing activity. This price is clearance price and this is not a normal price. Clearance is considerably lower than the above prices and probably lower than the cost. This is understandable because at this time developer sells the house not for profit, rather for clearance and additionally the flats which are unsold are always bad flats which have flaws or abandoned by the buyers.

□Summary. According to the economic theory, if the supply increases in the market, the price will go down. So if the land and finished housing supply increase, the housing price would go down. But the land supply is controlled by the government through the land reserve system. And the quantity of housing supply is restrained by how many lands are offered. Therefore the change of price is to some extent controlled by the government. The economic doctrines also tell us that if the demand

surpasses supply, the price will go up. This is exactly the case in housing market in Shanghai and in other cities. The housing has been increasing in recent years because the demand has been very strong. The investment and speculating purchases of housing and the government urban development policies, by in fact increasing the demand, put pressure on housing price. But the third-grade housing functions as a drag force. Among the micro factors, the location is most directly linked with the price-setting. Also, the plot ratio, coverage ratio and project financing are very prominent. The two ratios are the planning tools and the banks are state owned, thus it is associated again with the government policy. With regard to the price-setting methods in housing marketing, competitive pricing is the one mostly applied. □

Notes

1. In China, by law, the transferred land must be developed within two years. If nothing happens during the time, the government has the right to confiscate the land without any compensation.
2. The source is WWW.021fang.com, 27-08-2003.
3. “China Business” newspaper, 25-08-2003.
4. Here we use “finished construction area” to indicate the supply quantity. When the developer finishes the housing construction, he will not waste any time to begin the sale. Actually, in many cases, because of the pre-sale practice, the project is sold well before it is completed.
5. The figure from the Shanghai Statistics Bureau is 20.5%. But the figure from another government department is 13.8%. No instructions could be found to explain the differences.
6. Source: Shanghai Real Estate Trade Center, 2002. The group of “People outside Shanghai” is certainly referred to the people who are not local Shanghai residents. But as mentioned above, most of the people come from the nearby cities chiefly in the Jiangsu and Zhejiang provinces. The same is applicable to the group of “Overseas”. The bulk of them are from HK, Taiwan and Singapore. It is worth pointing out that in this group there are many people who studied abroad and obtained permanent residence permit in foreign countries.
7. The logic is that if the person is engaged in housing investment, the house he buys is surely his second house or third house or the fourth, because first of all he needs to secure his living place, and then he is capable of doing other things. It is assumed to be true that the more houses he buy, the more salient his intention of investment is.
8. Mini-apartment is referred to as the type of housing that is very small compared with the normal type of housing. For example, the floor space of three-bedroom apartment is normally around 100 m², in the meaning of construction areas. Mini-apartment is usually less than 80 m². Mini-apartment is all the rage in the housing market in the coastal cities. The popularity is due to its low total price (not low unit price) and it suits well for the young employees or the young couples. The persons who undertake housing investment are housing-problem-free and they have quite some money in their hands. They will not buy such a small sort of house for their own dwelling.
9. Newspaper *News Evening*, 04-02-2004.
10. One department manager, named Fong Wei from one very famous real estate research company in Shanghai, Huangdao Studio, claimed that the percentage of speculation purchasing in housing section over 7000 ¥/m² is well above 50%. Here we select the number of 35%.
11. The survey was undertaken in 11 districts which cover the areas where the 2002 housing prices are collected. And since the average price of inner ring area was 6287 ¥/m² in 2002 and it would reach 7000 ¥/m² in 2003 because the housing increase rate in 2003 was officially 20.5%, compared with that of 2002, we safely assume that the 35% speculation rate is applicable in the entire inner ring area.
12. The 20.5% increase rate is referred to the areas which is larger than the whole ring areas. But the bulk of the housing is greatly concentrated in the ring areas.
13. The land is offered via competitive means, but there are favorite policies in the land price and the payment

methods to attract the interests of investors, because urban regeneration project is in practice more complicated compared with ordinary project development.

14. The source of the data is <http://www.mifun.net/shichang/index.asp>.

15. Construction engineering costs are the costs required to finish the building, which include building construction costs, installation costs and decoration costs.

16. The costs in Shanghai are the yearly average costs of all buildings, whereas the cost-index in Shenzhen indicates only the monthly indices of high-rise buildings (the indices of multi-story and low high-rise building show the same pattern).

17. There are 6 real examples selected from Shenzhen. The data of land prices is from Shenzhen Planning and Land Bureau and the prices were got chiefly through the means of listing and competitive bidding (time-span from March, 2001 to September, 2002). The other information concerning the project are from the famous website of “Soufang” (marketing time-span from November, 2001 to February, 2004). The location is arranged according to the distance from the place of the main municipal government office building. The nearer the project is located to it, the higher it is in the table. The project’s scale is showed in “construction floor space” and the land price is in “floor land price” and the housing price is the mean price.

18. Except for land price, the other costs are from Table 4-4 and we assume that they are the same.

19. W.J. Stanton, Fundamentals of Marketing, p244.

Chapter six: The governmental management of housing market and price ¹

□ Abstract. In this chapter, the duties and organization of the government departments which are involved in housing market management in the two cities and the detailed policies are introduced. □

6.1 The introduction of the governmental management bodies

In China, housing market and housing industry are to same extent strictly controlled by the state. This is actually not something to do with the system of market economy or the past central-planned economy. Government management is not only necessary but also beneficial to the healthy development of the housing market and the industry. It is not right to say that government management is a guarantee of the prosperity of the market, rather there are still a lot of works for the government to do to improve the situation. It is safe to say that government participation is critical and only the government departments have the means and ability to govern the market and the industry. Housing development is a quite complicated matter, so the management is also complicated. There are many departments involved. Followings are the governmental institutes which play major (not all) roles in the management of housing market and industry.

There are some differences between Shanghai and Shenzhen in the department names, organization structure and functions played, resulted from the different history and local conditions in the two cities. They could be said the most effective and advanced housing management in China.

2

6.1.1 The principle governmental management departments in Shanghai.

□ Building and Land Resources Management Bureau

(1) Business responsibilities.

- a. To carry out and execute the laws, policies and regulations in the fields of housing, land and mining development and housing reform; Combined with the practical situation in the city, to study and draft the local laws, policies and regulations in the above fields, and to

- make the enforcement.
- b. In light of the city's national economy and social development general plan, to study and make the mid to long term plan in land use general plan, housing construction and real estate industry development plan, mine resources protection and reasonably use plan and geological disaster protection plan, and to organize and execute.
 - c. To take part in the examination in the detailed plan scheme of housing site; Together with other departments concerned, to check and prove the enlarged preliminary design of housing and related projects; To check and approve the housing project plan.
 - d. To be in charge of the making of the annual land development plan, housing construction and facility plan, geological prospecting plan, and to organize and execute; Together with the departments concerned, to make and adjust the city's housing design standard and the public service facilities standard in the residential area, and organize and execute after the government approval, and be responsible to supervise and exam the practicing; To be in charge of the making of the housing completion facility plan, newly built housing project's green construction plan, and to organize, cooperate housing facility construction.
 - e. To be in charge of the management of the land-origin and housing-origin, real estate registration and certificate-issuing; By law, to check and confirm property right, to establish databank of land-origin and housing-origin; To be responsible of land-origin and housing-origin surveying, and, together with the municipal survey department, to join the making of land-origin survey plan and organize and direct land-origin survey work.
 - f. To comprehensively manage the land resource in the urban and rural areas, and to be in charge of the total-volume control and usage control of the urban construction lands; By law, to be in charge of the land assignment, requisition, agriculture-land-transfer and the approval and management of the land cultivation, re-organizing and agriculture-land-return; Together with other concerned, to work on beach management.
 - g. To study and make policies in deepening land system reform and by regulation to organize and execute land offer, rent, pricing, transfer, trade and government buying, reserving;
 - h. To be in charge of the housing construction quality management; To be in charge of the approval of newly built housing delivery; To supervise and exam the works of the certificate-issuing for the new building delivery at the district and county housing management units; Together with other departments concerned, to check and make registration the qualification of the housing developing companies, engineering supervision firms.
 - i. To facilitate the acting of the national housing industry technology standard and industry normalization, and to cooperate the inaction of the city's housing modernization; To organize and draft housing industry technology improvement plan, industry policy, technology standard, and to popularize the housing technology achievements; Together with other departments concerned, to facilitate the works on built housing improvement.
 - j. To be in charge of thee real estate market management□works including the management of pre-sale□sale registration, trade, rent, exchange, evaluation, intermediation, information; To be in charge of the qualification management of real estate development company and real estate evaluation institute.
 - k. To be in charge of the management of property management industry, including the qualification management of the property management enterprise; To direct, cooperate and

supervise the work of property owners' committee and the management and usage of the housing maintenance fund.

- l. To be in charge of the administration management of the usage, maintenance, demolition, regeneration, reservation and safety appraisal of all kinds of housing.
- m. To be in charge of the organization and execution of the housing system reform and low-rent housing system.
- n. To organize, direct, cooperate and supervise the works of law enforcement related with housing, land, mining and housing construction development, housing system reform; By law, to conduct administrative penalty for all kinds of unlawful activities in the above fields, and to arbitrate the property right disputes; To be in charge of the works of administration re-deliberation acceptance and lawsuits.
- o. To be in charge of the science and education works related with housing, land and mining; To organize and direct the making of talents plan and working qualification training.
- p. To be in charge of the works of statistics and analyze in housing land and mining, and to provide on time the relevant information to the municipal government, the departments concerned and the whole society.
- q. To join the capital management of housing and land; To be in charge of the collecting, using and managing of housing construction facility engineering fee.

(2) Organizational sections.

- a. Administration office.
- b. Section of policy and law (Section of law enforcement and supervision).
- c. Section of planning management.
- d. Section of comprehensive planning.
- e. Section of capital management (Section of auditing)
- f. Chief engineer office (Section of technology)
- g. Section of personnel and education.
- h. Section of land use management.
- i. Section of housing demolition management.
- j. Section of housing facility management.
- k. Section of housing quality management.
- l. Section of housing industry.
- m. Section of urban housing.
- n. Section of property trade and right-origin management.
- o. Section of property management.
- p. Section of housing maintenance and regeneration management.
- q. Section of low-rent housing management.

□ Construction and Management Commission (Bureau)

- (1) Business responsibilities To carry out and execute the laws, policies, and regulations related with urban construction and management; Combined with the real situations in the city, to study and draft or cooperate the local laws, policies and regulations concerned.
- b. In light of the city's national economy social development general plan, to study and make the development strategy for the urban construction and management, and to make the mid to long term plan and annual plan.
 - c. To organize, direct and cooperate the research of comprehensive, systematic and future big

issues and policy making in the fields of urban construction and management.

- d. Under the authorization of the municipal government, to collect and arrange urban construction capital, and to strengthen the supervision of the use of the urban construction capital and urban management capital.
- e. To organize, direct, cooperate and supervise the law enforcement works in construction and management; To be in charge of the administration and industry management of construction industry (including decoration industry), construction material industry, and to nurture and normalize the construction market and construction material market; To be in charge of making the earth-quake-protection design standard of the construction engineering in all sorts of housings, their affiliating facilities and urban infrastructure, and the earth-quake-protection designing and constructing.
- f. To organize, direct, cooperate and supervise the construction of big engineering projects; To organize the early stage appraisal and technology reserve for the big construction projects, and to approve, in the scope of it's responsibilities, the project recommendation letter and feasibility report, and to approve the project preliminary design.
- g. To direct and cooperate housing construction works; Cooperating with other departments concerned to make the policies of housing providential fund system, and to direct and cooperate the system's execution.
- h. To organize and cooperate the research and development of influential project in the field of construction, and to direct the management and application facilitating in construction technology achievements; To cooperate and conduct education and training works.
- i. To be in charge of the administrative re-deliberation acceptance and lawsuits.

(2) Organizational sections.

- a. Administration office.
- b. Section of policy and law research.
- c. Section of comprehensive planning.
- d. Section of construction planning and science education.
- e. Section of engineering construction.
- f. Section of construction industry and construction material industry management.
- g. Section of economic cooperation.
- h. Section of urban management.
- i. Section of urban construction supervision.

□ Urban Planning Management Bureau

(1) Business responsibilities.

- a. To carry out and execute the laws, policies, and regulations related with urban planning making and planning execution, urban surveying, urban construction filing; Combined with the real situations in the city, to study and draft the local laws, policies and regulations concerned and to enact.
- b. To organize and make urban general plan, district plan, specific plan of some important areas and other specified plan from the municipal government, and to cooperate other professional plans; To direct the district planning sub-bureaus to make the plans in their scope; By law to exam and approve the plans (including city design schemes).
- c. By law, to execute the management system in construction project addressing letter, construction land use planning license, construction engineering planning license; To

conduct the following-supervision for the execution of planning approval (including the management of usage-changing of the building).

- d. To organize and make the plan concerning out-door advertisement facility, and to participate the approval of out-door advertisement setting; To cooperate the works of dismantling the illegal structures.
- e. To be in charge of the works of urban planning design, urban construction filing management; To organize, direct and supervise the administrative enforcement works concerning urban planning, and to direct the making of land-origin surveying plan; To be in charge of the qualification management of urban design and urban survey institutions.
- f. To be in charge of the public exhibition of the city plan, and to plan, organize and manage the work of urban planning information system.
- g. To be in charge of the reservation and protection of famous culturally and historically important buildings, towns, areas and so on.
- h. To be in charge of organizing the investigation and research of the big issues in urban development, urban plan and urban construction file.
- i. To participate the making of the mid to long term plan and annual plan in social and economic development and in urban construction.
- j. To be in charge of the works of propagating planning knowledge and professional education and training;
- k. To be in charge of the administrative re-deliberation acceptance and lawsuits.

(2) Organizational sections.

- a. Administration office.
- b. Section of personnel.
- c. Section of propaganda and education.
- d. Section of comprehensive management.
- e. Section of policy and law.
- f. Section of planning works.
- g. Section of district and county planning management.
- h. Section of construction planning management.
- i. Section of supervision and examination.
- j. Section of infrastructure planning management.
- k. Section of planning information management.

6.1.2 The principle governmental management departments in Shenzhen.

□ Planning and Land Resources management Bureau

(1) Business responsibilities.

- a. To carry out and execute the laws, policies and regulations of the state, province and Shenzhen special economic zone in the fields of urban planning, land, mining resources and real estate management; To study and make the regulations and industry development plan related with the city's urban planning, engineering reconnoiter, construction design, land resource, mining resource, surveying and real estate management, and to carry them out after due approval.
- b. To organize and city general plan, city land use general plan, district plan, sub-district plan and plan-map; To organize and make the specific plan for mining resource protection and reasonable development, city's infrastructure, and to cooperate the specific plans made by

other municipal bureaus; To organize the early stage preparation works for the infrastructure projects invested by city's land development fund and municipal government finance, and to be in charge of the planning of the city's infrastructure projects, planning management of temporary land use; To be in charge of the city's urban planning design and management.

- c. To organize and make the city's land use annual plan and land development annual plan (including commodity pre-sale plan), and to execute after due approval.
- d. To be in charge of the comprehensive arrangement and use management of the city's land development fund, and to organize and collect land transfer fee and land usage fee.
- e. To be in charge of the making, executing and managing of the city's land requisition plan.
- f. To organize and manage the city's state-owned land-use-right transfer work; To organize the tendering and auction of state-owned land-use-right, and by law to sign the "state-owned land-use-right transfer contract" with the land offer acceptance side; To normalize land trade acts.
- g. To be in charge of the city's land-origin and surveying works, and to establish the city's land-origin management system, and to make land-origin general map, and to supervise the changing situation of the city's land right ownership and land status.
- h. To be in charge of the site-setting of the construction project, the project's design focus, engineering design and planning check-and-accept.
- i. To be in charge of the city's place-naming, name changing.
- j. To be in charge of qualification management, industry and market management for engineering prospecting, planning and design companies.
- k. To be in charge of the city's commodity housing pre-sale.
- l. To manage the registration work of the city's real estate right, and to mediate the disputes occurring in real estate right.
- m. To direct the works of the filing and information management in the city's urban plan, infrastructure, land and real estate.
- n. To supervise the city's land use development, planning regulation execution and real estate development acts; To be in charge of the supervision of illegal building and illegal land use.
- o. To exclusively make and issue the contracts, licenses and certificates in planning, land, mining and real estate.
- p. To arbitrate or to provide arbitration recommendation to the municipal government for dispute in housing demolishing and setting compensation and in land right.

Construction Bureau

(1) Business responsibilities.

- a. To carry out and execute the laws, policies and regulations of the state, province and Shenzhen special economic zone in the fields of urban construction and construction industry management; In light of the real situations, to study and make the regulations in question and implementation methods, and to supervise the execution.
- b. To participate the making of the city's mid to long term development plan of urban construction, and cooperating with other departments to make the city's urban construction annual plan, and to execute.
- c. To be in charge of the city's capital construction plan, construction statistics and other statistic works.
- d. In light of the land development and supply plan to make land development investment plan

and appropriation plan.

- e. To select the organizational forms of the land development and land development units, and to be in charge of the land development appropriating and supervision.
- f. To be in charge of the determination of the land development general calculation, pre-calculation and final calculation, and the schedule management, quality examination and completion check-and-accept in land development.
- g. To be in charge of the examination of the technology data of the city's construction projects.
- h. To be in charge of the organization and direction of construction tendering of the city's construction projects, and to issue the "operation license".
- i. To be in charge of the official examination of construction organization design for big projects in the city.
- j. To be in charge of the comprehensive cooperation of the construction of the projects in the city, and to direct project site management, and to mediate the disputes between developer and contractor.
- k. To be in charge of the following-up management (including use function, construction standard and scale, whether or not abided by the approved plan, design scheme in works) of the projects in the city.
- l. To be in charge of the city's engineering quality and safety management, and to investigate and deal with the against-rule construction acts in the city.
- m. To organize the completion check-and-accept of the all the projects in the city, and to issue "completion check-and-accept certificate", and to participate the check-and-accept of the community planning.
- n. To be in charge of the qualification examination, registration, paper-issuing and management for the construction company, general contractor, decoration company, prospecting, design and construction supervision companies in the city.
- o. To be in charge of the introduction, sampling, summarizing and facilitating works of construction technology in the city, including new technologies, skills, products and materials.
- p. To be in charge of organizing the examination for the influential technological program and the conduct of influential technological issue in the construction.
- q. To deal with the re-deliberation, lawsuit concerning with administrative case.

(3) Organizational sections.

- a. Administration office.
- b. Section of law and policy.
- c. Section of construction industry management.
- d. Section of construction market management.
- e. Section of quality and safety management.
- f. Section of technology education.

6.2 The Policies of management³

6.2.1 Policies in development procedure management.

The major methods of development procedure management could be called "check-and-approval system" which is undertaken by the government departments concerned.

Residential real estate development is a pretty complex and deeply influential process. In order to make the housing development in line with the comprehensive development of the whole city,

therefore to benefit the whole society, and at the same to make the housing industry to go on the better way, government management is quite necessary. In China, housing development is strictly controlled by the government. In the housing development process, every major works must be checked and approved by the appropriate government departments before they could be done by the developer. Table 6-1 shows how the government manages the housing development process.

6.2.2 Policies in land management.

Land is the fundamental factor in housing development. On it is the whole housing industry based. The developer obtains the land and then to construct the structure and to sell it. Although the quantity of housing being put into the market is not directly determined by the space of land (it is directly determined by plot ratio), it is still claimed to exert decisive influence on the market. In Table 6-1 Government check-and-approval management in housing development process

MAJOR HOUSING DEVELOPMENT WORKS	MANAGING GOVERNMENTAL DEPARTMENT ⁴
Land acquiring	Building and Land Resources Management Bureau
Project recommendation letter	Plan and Development Commission
Feasibility report	Plan and Development Commission
Project company establishment	Industry and Business Administration Bureau
Tax registration	Tax Bureau
Project location recommendation letter	Urban Planning management Bureau
Enlarged preliminary project design	Urban Planning management Bureau
Preliminary project design	Urban Planning management Bureau
Construction land planning license	Urban Planning management Bureau
Land use right certificate	Building and Land Resources Management Bureau
Construction drawing design	Urban Planning management Bureau
Utility facility application	Public utility facility companies
Construction engineering planning license	Urban Planning management Bureau
Construction Bidding	Construction and Management Commission
Construction engineering building license	Construction and Management Commission
Building certificate	Construction and Management Commission
Commodity housing pre-sale certificate	Building and Land Resources Management Bureau
Project check-and-acceptance	Building and Land Resources Management Bureau
Housing delivery certificate	Building and Land Resources Management Bureau
Housing registration	Building and Land Resources Management Bureau
Real estate right certificate	Building and Land Resources Management Bureau

common sense, the more supply of land, the more housing will be produced and marketed, and the more supply of housing. So land management is essential to the efficient management of the housing market and therefore the housing price.

Aside from the check-and-approval management of planning, the methods of government land operation management are expressed in two ways. One is the land transferring method. The other is the setting-up of land reserve system.

In China, by constitution, the land is owned by the state. Individual is prohibited to own land. The ownership of all lands is belonged to the state. However the use-right of the state land can be moved to the qualified parties for business purposes. In the past the land can be moved through many ways, most of the acts being non-market oriented. And this caused big problems and had

filthy social consequences. The situation has been changed significantly in recent years, and the inevitable trend is towards market-oriented land transferring.

Let's have a review of land transferring policies.

The first document about land management was issued by State Council on 26/07/1980 entitled "The temporary ordinance about the construction land of the joint venture". The core contents of the document are that when the enterprise hopes to obtain construction land, it should apply for it at the local department concerned, and pays the "site use fee" after the approval.

On 01/01/1987, the law, "Land Management Act", specifically targeted at land management was enforced. It clearly stated that the use-right of state land can be transferred and the transfer fees must be paid by the grantees. It also declared that the land would be retrieved by the government if it was laid idle for more than two years. But the law did not indicate how the land could be transferred.

The document entitled "The notification about strengthening real estate trade management" issued jointly by three national departments on 08/08/1988 very simply mentioned, in article 4, that the land should be classified and priced reasonably.

The next document entitled "The notification about making better the work of urban land transferring", 28/09/1988, was specifically aimed at the land transferring. But it is clear that at that time land transferring was still in the trial. Some cities were selected to test the feasibility of land use-right transferring. So the policies of land transfer had not been taken form at this stage. Noticeably, the short document vaguely mentioned land price regulation.

In the document entitled "Some ideas about strengthening urban comprehensive development", which was issued on 26/04/1989, it was stated that, with the gradual carrying out of the land policy of using-on-payment, the transfer of use-right of land should be conducted on schedule by the means of transferring-on-payment like agreement, bidding and auction. Here, for the first time, the market-oriented methods were put out.

In May 1990, the document "The temporary ordinance for urban land transferring" set the foundation of the management of land trade. It made clear the definition, the scope and year-limit of land transferring. It stated that the transferring methods were agreement, bidding and auction. All the land transfer fees must be paid off within sixty days after signing the contract.

"The notification about issues of strengthening real estate development", 04/11/1992, went a little further that except the projects invested by the government, the lands for the constructions of business, finance, tourism, commodity housing, etc., should gradually adopt the means of transferring-after-payment, time-limited in land transferring, and the act should be done in a planned way. The price of the land should be evaluated and different land usages should be in different prices.

By this time, nearly all the basic rules concerning with land management had been set. After that, there were not many new measures in the management. All the major contents of the documents afterwards only reiterated those measures. The most important thing, as all the times the case, is the execution of the rules.

The Urban Real Estate Management Act, which was enforced from 01/01/1995, "Land Management Act", 29/08/1998, formally put together all the measures related with land management and wrote them into the laws.

On 09/05/2002, the document "The rule of auction, bidding and listing in transferring of state-owned land use-right" required the termination of the method of agreement transferring from

01/07/2002. This was dubbed the “new round of land revolution”. On 31/03/2004, “The notification about continuing the supervising on bidding, auction and listing in land transferring of for-business land use-right” set the deadline of terminating the “agreement transferring” on 31/08/2004. So after more than two decades, the market-oriented method in land trade is hopefully taken into the place.

In Shanghai, “land use-right transferring method, Shanghai”, issued 05/21/2001 and enforced from 01/07/2001, and “The method of auction and bidding in trial for the land transferring, Shanghai”, in July, 2001, indicated that all the lands for-business projects should be transferred through the market means, barring in exceptional conditions. Of course, from 31/08/2004, the agreement transferring will be forbidden. In order to control the scale of land development, from 07/09/2004, the method of pre-checking will be adopted before the issuing of “land planning license”.

Except the adoption of market-oriented transferring in land management, another measure is the establishment of land reserve system in Shanghai. According to “Land reserve method, Shanghai”, which will be enforced from 01/08/2004, the government will set specific land reserve company to store land. The sources of the land reserve will come from six types of lands which include the lands government retrieves from the developers due to non-development over two years and the land government requisites. The goal of the system is to regulate the land first-grade market, so to effectively manage the real estate market, mainly the price. The government official claimed that the developer has no right to reserve the land. Only the government can do so⁵. This poses serious challenges to the government for their market management and to the developer for the sustainable development.

6.2.3 Policies in development management.

For the development of the real estate project, the major government management methods are focused on the real estate development enterprise qualification grade management, project bidding and construction quality.

6.2.3.1 Real estate development enterprise qualification grade management. Real estate project development required professional knowledge, skill and professional, so specific requirements are asked for the enterprise which is engaged in the business. In the “Urban Real Estate Management Act”, 1995, it stipulates that the real estate project can only be conducted by the enterprises that possess appropriate qualification. The “Real estate development enterprise qualification management ordinance”, 2000, emphasizes that the company which does not have qualification certificate cannot undertake real estate development. The real estate development companies are classified into four grades and each grade has its corresponding business scope.

6.2.3.2 Project bidding. In the past when China was still in the central planned economy, there was no bidding in the construction field. With the economic reform, the practice of open bidding was introduced and established gradually. In 1999, the law of “Bidding Act” was passed and from then on all the construction projects must be conducted through bidding. The aims of the law is to protect the benefits of the parties concern, improve the economic efficiency and engineering quality and it deals with all the aspects of the works in the bidding. Compared with other regulation measures related with construction, the law is quickly accepted by all the parties and pretty well enforced. In fact, the law also plays the significant functions in preventing corruption and contributing to the reduction of the project costs. In real estate industry, bidding has been widely adopted in all the major works like designing, construction, supervising, material and equipment purchasing to make sure the works are done by the qualified institutes and be finished in consistent with the

requirements. It has good effects on the operation of the project and plays the role in the improvement of engineering quality in the recent decades. In Shanghai and Shenzhen, the practice of bidding is firmly established in the real estate development process.

6.2.3.3 Construction quality. The quality of the project is the most fundamental issue. But unfortunately it was to some extent ignored in the past. Since the reform began, many policies concerning construction quality had been made to strengthen the quality management. The representative one was the “Construction Act”, enforced from 01/03/1998, parts of it devoted to the construction quality management. Summarized from relative policies, the chief measures for the quality management are (1) the selection of the construction companies must be conducted through open bidding; (2) the construction of the project must be properly supervised by the qualified supervision company, quality supervision being the major task; (3) all the works of prospecting, designing and constructing and all the materials and equipment must meet the standards set by government or professional bodies; (4) the system of quality check-and-acceptance. Only after passing the procedure of quality check-and-acceptance which is organized by the government when finished can the works be declared completed; (5) “guarantee period” policy, which means that the construction companies guarantee the quality for some specific period during which time the companies will repair the building if any problem related with quality occurs and bear the total costs.

6.2.3.4 City planning. City planning is the foundation of every real estate development project. And the government pays a great attention in the management of planning. From the development procedure, we can see that the government approval concerning urban planning for real estate project is in the pivotal position. As early as in 1990, the “Urban Planning Act” was enforced and it remained valid as of today. The planning act states the general principles related with city development and the core of the contents of course are to meet the demand of the society, protect the public interest and facilitate the future city development. The three tools used in the planning, which have direct and tremendous influence on the real estate development are the use of the land, the plot ratio and plot cover ratio. The latter two exercise huge impacts on physical appearance of the project and the marketing price.

6.2.4 Policies in marketing management.

6.2.4.1 Sale price. Real estate price is the subject of this research. So it is important to know how the government manages the real estate price.

It is safe to say that in China now real property is inarguably considered one kind of commodity, special one notwithstanding.⁶ So the laws which cover the price of all commodities and are valid till now should be applicable for real estate commodity, including housing. The basic law governing price management is “Price Act”, which was enforced from 01/05/1998. Article three, save for very few commodities and service prices, all the prices should be set by the market. The market function has been emphasized. Article four, competition is encouraged and price management, supervision and regulation could be exercised if necessary. So the adoption of strong measures like price regulation has its legal base. Article eight, the foundation of price-setting is business costs and market conditions of demand and supply. Article eighteen, under some circumstances, the prices of few commodities and services could be set by the government: (1) the prices of the few commodities which are greatly influential to the development of the national economy and the life of the people; (2) the prices of the few commodities with severely scarce resources; (3) the prices of the commodities with the nature of natural monopoly; (4) the prices of

essential public utilities; (5) the prices of the services with important public interests. Article thirty□ when the prices of some important commodities or services are rising or prone to rise significantly, government could take measures like restricting the price difference rate or profit rate, price-limit, price-increase-application system to intervene.

If the law above had been seriously enforced, the price problems in real estate, in housing would be in a more benign status. The government has the right to do something to control the real estate price. But tragically it failed the society. However, this is not to say that the government did nothing in the management of real state price. It realized (although always too late) the severity of the price problems and tried to make the situation not out of control. The problem is that it did too few and not do them right.

Now lets focus on real estate price management. In China, the tradition is that the government would do its up most to control as many business activities as it can. But quite strangely, it did very little in real estate price regulation, considering it is so important for the economy and the people's life, and even when it realized that the real estate price was in danger of going out of rail, it still did not take direct, strong and effective measures to control the situation.

The "Urban Real Estate Management Act", 1994, just very simply stated, in Chapter four, that (1) basic land price, standard land price ⁷ and re-settling housing price ⁸ should be published regularly; (2) real estate price evaluation system is to be established; (3) real estate price transaction reporting system is to be established. For the marketing of new housing, the developer should report the authentic sale price to the government after the trade. Nothing more.

After the real estate development company sells the property to the buyer, he should report and register the sale price at the government management department. The price should be the real trading price. In order to prevent the false price reporting (which may result in false tax claim), the document "Urban real estate transferring management ordinance", 1995, in Article fourteen, stated that if the reported transaction price was obviously lower than the market price, there would be an evaluation price with which the government levies the tax. It tries to avoid tax evading by the developer. (This article was still valid after the ordinance was revised in 2001.) The ordinance said nothing about how to deal with the price which was evidently higher than the market price. Hence, of course, the developer will not get any punishment if he sells the high price.

Three years later, in the document entitled "Urban real estate business management ordinance" ⁹, in article thirty, it states that the transaction price of the real estate project ¹⁰ and the sale price of the commodity building ¹¹ are to be decide by the trading parties. Thus in theory it is totally the free market mechanism which determines the real estate price. Government will not interfere. The exactly the same was reiterated in the "Commodity building sale management method", 2001.

Above are the law-natured documents which are related with real estate price management. Now lets check the documents which are in the junior level in legal means, but which also have considerably effects on the industry and market management.

As early as 1988, one document named "The notification about strengthening real estate transaction market management" amazingly stated, in article four, that price and real estate management departments should, in light of different situations, reasonably set the real estate price and gradually rationalized and normalized the price structure. The price between the trading parties was decided by negotiation based on evaluation price. If necessary, the government had the right to set the price ceiling. This document, probably the first official paper dealing with how to manage the real estate price, was made in year 1988 when the real estate industry was at the very early stage of

development, against the background that the planned economy was in dominant position and the government had very few knowledge about how to govern real estate development. It could be argued that the measures were strongly smelled of the planned economy. But one thing is clear that the aim of the issue of the document was to stabilize the real estate price that was under pressure from the rapid investment in real estate development.

One year later another document “The notification about strengthening the city planning, real estate reform and real estate industry management” mentioned that the emphasis of the management was to regulate the property price and keep the land price stable.

On 08/18/1990, the document “The notification about strengthening the commodity housing management” pointed out, in article nine, that the price-setting of the commodity housing should be primarily based on costs and conducted by local price management department alone with planning, construction, auditing departments and “construction bank”. The sale price of commodity housing cannot be above the price fixed by the price management. Reckless price increase was prohibited. So there was a plain rule in price management of residential real estate.

The price regulation reached its climax in 1992 when, in July, there was amazingly one document which was completely devoted to commodity housing price regulation and also the only one to date. It is worthy to introduce this paper, “The notification about the temporary methods in commodity housing price management”, in details.¹² The main points of it are:

- (1) The price of the commodity housing should be based on reasonable costs and contains appropriate profit. It is set according to the conditions of the supply and demand and the state policies in question, and adopts different prices in light of the factors like floor, direction, location, etc.
- (2) The price of commodity housing is consisted of the following items:
 - A. Cost.
 - a. Land requisition fee and demolition and resettlement compensation fee.
 - b. Prospecting, design and early-stage engineering fee.
 - c. Construction fee.
 - d. In-boundary infrastructure construction fee and non-profit facility fee.
 - e. Management fee.
 - f. Loan interest.
 - B. Profit.
 - C. Tax.
 - D. Location difference-price
- (3) The algebra-add of the difference-price which is set in light of the floor and direction should approach zero.
- (4) The enterprise which develops the housing project should, before the completion of the early-stage engineering, report the housing price, which is calculated based on pre-calculation, profit, interest and taxes, to price management department and the department, in collaboration with real estate management department and the construction bank, then checks and approves the price. Any price increase resulted from additional facilities beyond the approved housing component factors is not allowed. In the cases of the necessary price increase due to unpredictable item construction, the price adjustment should be conducted according to the designated procedure. The developer should sell the housing by the approved price and could low the price in compliance with

the market conditions.

In fact, this price regulation policy is still very simple and coarse. Because the life-span of the policy is quite short, it is to most extent ignored in reality.

The first law specifically aiming at regulating the real estate development was made in 1994. In the same year the national Construction Department issued its document “The notification about carrying out the ‘Urban Real Estate Management Act’”. In article five, to strengthen the work of real estate evaluation and price management, it clearly stated that the law made a change in price management that the pricing was no longer checked and approved by the government, rather it was set by the trading parties. That is to say, in pricing, the practice of planned economy was abandoned and the one of market economy was immediately and completely established. A clear-cut and abrupt change without buffer period.

Ever since the law which turned the price management 180 degrees around in 1994, the commodity housing management has not have any big change. The market mechanism has been firmly established. In the following years, there were several official papers which dealt with the issue, but they just wanted to take the measures to revoke some fees in anticipating to reduce the costs of the housing therefore to pull down the high housing price. Those fees are merely the negligible portions of the costs, so the measures actually produced no effects. The housing continued to get higher and higher. In 1999, a system called price-certificating was established to certify the price level of the commodity. If someone thinks the price of the product he buys is not at the reasonable level, he can ask the price be certified by one specific institute which is capable of determine whether the price tag is apt or not. The system is supposed to cover all the commodities. But housing is so special a commodity that it is always not treated as the common commodity. If other commodities had been ever caught by this system, housing had surely not.

6.2.4.2 Pre-sale. Pre-sale is as the name suggested the practice that the developer sells the project before its completion. In other industries, pre-sale is rarely adopted. But in Chinese real estate market, particularly in housing market, pre-sale is overwhelming exercised. Almost from the exact incipency of the real estate industry in early 1980s, pre-sale had been accepted by the industry and approved or even encouraged by the government. And the government policies which supported the practice maintain to date, although the policies expressed their elasticity with the changing situation and the knowledge of its functions on the market.

The most important law regulating pre-sale is “Urban Real Estate Management Act”, 1994. In article forty-four, it laid out the preconditions for pre-sale.

- (1) Paying off all the land transferring fee and obtaining the “land use right certificate”.
- (2) Obtaining the “construction engineering planning license”.
- (3) At least 25% of the money which is required by the housing that is to be pre-sold should be put into the project and the construction schedule and project completion date have been fixed.
- (4) The procedure of pre-sale registration at the county-level or above real estate management department has been finished and obtaining the necessary certificate to do the pre-sale. The money collected from the pre-sale must be used in the construction of the project, not elsewhere.

According to the newest version of the principle ordinance which is specially targeted at pre-sale management, “Urban commodity building pre-sale management methods”, 2004, and other documents dealing with the issue, including the ones from Shanghai, the management methods of pre-sale are:

- (1) The pre-sale can only be undertaken after meeting the set pre-requisites. As for the four, the requirement for the number three is more strict (30% or above) in Shanghai and other cities. And there is addition requirement set for housing pre-sale in Shanghai, the requirement for the completion of the structural ceiling (for low-rise housing) and 2/3 of structural frame (for high-rise housing).
- (2) The application submitted by the developer and the check-and-approval embarked by the government should be undergone in line with the set procedure. The management department should deliver the result in the set time period in case of complete application materials.
- (3) In marketing, the pre-sale license should be public ally exhibited and showed to the customers.
- (4) Within 30 days after the signing of the contract, developer should report and register the sale at the management department. With 90 days, the developer should help the buyers to get the ownership certificate if not otherwise agreed in the contract.

In 2003, the price of commodity housing in Shanghai was increased at an alarming rate. The matter was reported by the media and attracted the attention of all the sides of the society. Facing the pressure to do something about it, the Shanghai municipal government acted quickly and made a policy, “The decision about pre-sale commodity building transferring, shanghai”, which aimed at controlling the phenomenon of over-speculation in housing. It stipulated that from 26/04/2004 the housing bought via pre-sale couldn’t be transferred to others before the housing was completed and property ownership certificate was obtained. The measure is clearly targeted at the rampant speculation in housing pre-sale, which is blamed for the rapid increase in housing price.

6.2.4.3 The convergence of inside-sale housing and outside-sale housing. In the past, in Shanghai housing market, there were two kinds of distinguished sub-markets. One is so called inside-sale housing, the other outside-sale housing. The former could only be bought and traded by the Chinese residents, while the latter being constrained in non-Chinese residents. The housings which were sole to foreigners were built in high standards, so these are good quality housings and the price was very high compared with the inside-sale housing, actually the market price. With the development of housing market, particularly to meet the requirements of joining WTO, the two sub-markets were in need to be reformed. In July 2001, the new policy was issued to change the situation and the past inside-sale policy was abandoned. From August the first, 2001, the market would be unified and there would be no restriction on the identification of persons who wanted to buy whatever kinds of housing. The convergence of the market was a two-step scheme. One the one hand is the convergence of land sale, i.e., all the land being transferred through market methods adopted by the outside-sale housing. The other is the convergence of transaction, i.e., unifying the customers, the contract, the process, the fees and the certificate-issuing. In fact, the change means the comprehensive repeal of the policy of inside-sale and the full adoption of outside-sale policy. This of course also means the convergence of the prices, the disappearance of the low price of inside-sale housing.

6.2.4.4 Check-and-acceptance. The project cannot be delivered to the buyer before the procedure of check-and-acceptance which is conducted by the government. In housing project, the process is more comprehensive and more stringent. Given that most of the housing project are pre-sold, it may happen that the developer is not so warm-hearted to devote all the necessary resources to guarantee the quality of the project because he has already gotten almost all of the money (usually 95%). The check-and-acceptance process will push the developer to pay more attention to the quality.

6.2.5 Policies in project financing.

Project financing is very important in every industry. Much more so in Chinese real estate industry. The industry is so heavily depended on the outside financing, most of them the bank loan, and this dependence accumulates great risk to the banks themselves and eventually to the whole economy that the government endeavors to control the situation. Numerous documents were issued to deal with the real estate finance. The aims of the management are to control the over-fast increase of real estate investment and to prevent harmful property speculation. Following are the major measures taken in the real estate financing management.

- (1) Housing mortgage was launched in 1991 by two state-owned banks, China Construction Bank and China Industrial and Commercial Bank.
- (2) The issuance of the document in 1995, “The self-managed housing loan management methods for commercial banks”, claimed the housing mortgage was formally on the track. But at that time the loan policy was quite stringent. Firstly, the rule of double guarantees, i.e., mortgage and sponsorship; Secondly, the longest loan period was 10 years; Thirdly, the lender must deposit no less than 30% of the housing price in the bank and cannot withdraw in six months.
- (3) Two years later this rigorous policy had been significantly relaxed. All of the three were abandoned.
- (4) With the rapid development of real estate industry and the realization of the contribution of the industry, the housing mortgage policy became more and more prone home-buyer. In April, 1998, the “Individual sponsorship housing loan management methods” and the “The opinion about encouraging consuming loan”, 1999, intentionally encouraged the bank to be more actively engaged in the mortgage business and individual was also favored in mortgage. The down payment was lowered from 30% to 20%. The loan period was extended from 20 years to 30.
- (5) The favorite policy played major role in the fast development of the real estate market. Fast is a good thing. Yet too fast was not. In 2003, the real estate market was obviously in the danger of over-heating. So the government took the measures to make it cool down. Not so different from the actions adopted in the past to curb the over-fast development of real estate industry, once again it is the financing policy that the government relied on. “The notification about further strengthening the management of real estate loan business”, June 2003, required the commercial banks to tighten the loan for real estate development and individual mortgage. In April, 2004, the decision was made by the State Council to raise the own-capital rate in real estate development from 20% to 35%. The strong signal that the monetary policy began to get tough.

6.2.6 Policies in information management. After two decades of development, real estate industry has gradually come into being. The achievements are great, whereas at the same time problems cannot be ignored. In order to deal with the problems and improve the analysis and research at the real estate field, the government in recently years realized that it is essential to establish real estate information system and eventually supposedly to establish the pre-alarm system. The result of the consciousness is the issuance of the several documents which target at this goal. The most important one is “The notification of establishing real estate market information system and pre-alarm and forecast system”, 07/01/2004. If the two systems can be successfully set up in the near future, the Chinese real estate industry will benefit from them immensely. The main contents of this document are as following.

In order to closely monitor the operation situation in real estate market and strengthen the

governmental ability in macro-regulation and control to the real estate market, seven national level government departments jointly issued the document to try to establish an information collection and alarming and forecast system to monitor and analyze the market and issue the warning well in advance if the market development derails or is in the danger of forming “bubble”.

The establishing of real estate market information system and pre-alarm and forecast system are relied on the good cooperation between the departments involved. The real estate management department is to provide the data in commodity building pre-sale, real estate transaction, registration; the development and economic planning department is to provide data in real estate development project approval; the land management department is to provide the data in real estate development land; the urban planning department is to provide the data in construction land planning license, construction engineering planning license; the banks concerned are to provide the data in real estate financing; the tax department is to provide the data in real estate taxes; the price department is to provide the data in real estate price; the statistics department is to provide the data in real estate development statistics and relevant macro-economic information. The systems should be put into use in the first half of year 2004.

Due to the nature of high localization in real estate development and real estate market, the systems should be made to adapt to the local conditions. General speaking, the ultimate goal is to establish the information system that should be consisted of the GIS (geographical information system) data base, real estate development project information system, real estate transaction and registration information system and land use-right transaction information system. At present, the two sub-systems of building transaction information system and real estate development project information system would be firstly erected.

□Summary. Government intervention in the housing market is always very powerful. The prime departments concerned are the Building and Land Resources Management Bureau, the Construction and Management Commission and the Urban Planning Management Bureau. They are responsible for the management and supervision of all the activities related with real estate development. The policies they made are in the management of development procedure, land, development practice, marketing, financing and information. □

Notes:

1. All the information concerning government departments in this chapter comes from corresponding official government websites.
2. In the introduction, all the contents that are not related with housing or real estate development business are omitted. Another point which should be mentioned is that only the municipal bureau is introduced, not the district bureau or county bureau, because the municipal bureau is more comprehensive and representative.
3. In this section, the documents are from the national departments in question and in Shanghai.
4. Some developments are checked and approved by several government departments. The table lists the departments which are in charge of the works concerned.
5. Actually it is clearly expressed in the law which stipulates that the government will charge less than 20% of the transferring fee if the land is idle for one year and confiscate if the land is idle for over two years.
6. Of course here the commodity is referred to the ground-above structure, not the land. Land is not a commodity in China, so it cannot be sold.
7. Standard land price is the price of land which is made by professional land evaluation institution and approved by

the government.

8. Re-setting housing price is the price of the house which is supposedly rebuilt now with last year's price level.

9. This document is actually the extension of the "Urban Real Estate Management Act", 1994, which designs the detailed regulation measures to make the law applicably. This is usual practice in China.

10. In China, the real estate project could be transacted, if the project meets the set conditions. This in fact is the origin of real estate speculation.

11. Commodity building includes residential building and non-residential one.

12. The document was jointly issued by National Price Bureau, national Construction Department, Finance Department and China Construction Bank and came to effect on 10/08/1992. The file number is PFN[1992]382.

Chapter seven: The analysis of the price mechanism and recommendations

□Abstract. There are two parts in this chapter. The relationships between the characteristics of housing, the development process, the price structure, the price-setting, the government management and the housing price are carefully analyzed in the first part. The second part comes up with the recommendations.□

7.1 The analysis of the relationships between the natures of the Chinese commodity housing and the price

7.1.1 The housing sector reform and the housing price.

Before the overall economic reform at the end of the 1980, housing was the welfare product of the state. The government spent the budgetary money to build the housing, public housing in essence, and allocated the housing totally freely to the urban dwellers and collected the symbolic rent from them. Everything was in the hands of the government. Because there was no transaction, housing market was non-existence. The year of 1978 witnessed the dramatic turnaround in the contemporary Chinese history and in the ensuing two decades the housing reform made the situation changed completely. On the one hand, the old public housing was gradually, through favorite policies, sold to individuals and, in theory, by paying the corresponding land price to the government, could be traded in the market. ¹ The result of the privatizing campaign is the contracting share of public housing in the housing market and increasing home ownership rate. On the other hand, the private housing developed from scratch to playing important role in the people's life and in the economy.

The greatest achievements of the housing reform are the establishment of private housing market and, for urban dwellers, the forming of the consciousness of buying housing to satisfy the need of living through market-oriented means. By releasing the huge demand and creating new demand for housing, it spurs the development of the housing market tremendously.

With regard to the demand-change caused by the reform, it could be articulated as the followings.

- (1) Under the planned economy system, the public housing was built only for meeting the minimum requirement of living. So understandably the living condition was poor, small, crowded, badly arranged and pitifully equipped. The house was the public house and it belonged to the state. The dwellers were allocated the place and almost paid nothing to possess a living space. They certainly did not satisfied. They wanted to change. But it was impossible under the old system. With the establishment of the private housing market, people's demand for better living place can be possibly met. They can buy the homes they like according to their financial ability. They have the luxury of choosing where and which one to live. The depression was lifted. This is the huge release of demand.
- (2) After 1998, the people working in government departments and other state-owned companies would not be allocated the physical houses as it had been in the past. Rather they would be given housing subsidy as part of the salary to buy the house they want. This was called "moneylized housing-allocation". Public servant is an excellent group of housing consumer. They are well-educated, good taste of living, and have very stable income sources. In recent years, the salary level of the public servants in the big cities like Shanghai, Beijing and Shenzhen had been raised many times and this is the undeclared official policy aimed at preventing serious corruption. At the end of 2002, there were approximately 100,000 public servants in Shanghai, of those 49.2% were under the age of 40. ² They form a strong force of housing demand.
- (3) One of the obvious results of the privatization of the public housing is that in all meaning the city dwellers began to own the house they live. And after paying the required land price and finishing the specific procedure to procure the necessary ownership certificate, the house can be

traded freely in the private housing market. With the advantages such old public housings enjoy like the good location, the convenient public utilities and facilities, the mature living atmosphere, the privatized housings actually possess the good value. In Shanghai, in recent years, the municipal government successfully launched a so-called “benefiting-the-dweller engineering” campaign, one of the contents of it is to change the roofs of the many condominiums from the flat-roof to slope-roof,³ therefore it will improve not only the living conditions of the top-floor dwellers, but also the ascetic effect of the buildings. After executing the alteration, the value of the house will be maintained or even raised.⁴ For example, in the wake of the engineering, the value of the “Weining residential quarter” in Changning District is raised by more than 20%. The price is approaching the new ordinary housing!⁵ The value-maintaining or the value-increasing of the privatized house is a good reason for the owner to sell the house or to mortgage it to apply for loan to buy new and better housing. This could be called the newly created demand.

- (4) The housing sector reform and the establishment of the private housing market in China is only twenty something years old. In such a short time period, facing such a big change from planned economy to the market-oriented economy, the problems of lack of experience, lack of knowledge and lack of professionals are exposed completely. It is clearly not realistic to hope the industry to be self-constrained, to be self-disciplined, nor the consumers to be self-improved, to be self-awakened. Given that it is quite understandable that the somewhat chaos would occur, especially at the early stage, the government should bear the responsibility to take necessary measures to keep the situation in order. Unfortunately, the government’s actions are aimless, weak and ineffective. The housing producers have been doing what they want. The housing consumers have been left to take their own fate and the housing market has been in severe unbalance and dominated by one side.

From the discussion of housing reform, we may conclude that the explosive demand release and the rapid demand increase, combined with the inexperience and immaturity of the government handling in housing market management and other factors, help to contribute to the occurring that the price of the commodity housing grew out of control in a short span of time.

7.1.2 The nature of the housing and the price.

The characteristics of the Chinese housing commodity, including the high valuation, the immobility, the durability, the heterogeneity, the dualism and the synthesis, were discussed in Chapter two. It seems that no other commodities incarnated so many unique characters in themselves. Housing is really a special product and it deserves a special price.

Housing property is the combination of land and the physical structure. So the price is also consisted of these two parts, as well as others directly and indirectly with the two. Taking the city of Shanghai as the example, the shares of these two parts in the whole cost of the property had been in the changing. In the 1990s, for residential building, it is generally accepted that the land cost, the structure cost and other costs each occupies one third of the total cost. However, in some “hot” areas, the share of the land cost was a little bigger thanks to the heavy expenses in land preparation. In the 2000s, people were talking about the share of 50% for land cost because of the change of land transferring from agreement transferring to bidding, auction and listing which gave rise to substantial increase in land price. With the coming of the inevitable result that all for-business lands will be transferred through market-oriented means like bidding, auction and listing, the land share will be further increased. And the land resource will only get tighter and tighter in Shanghai. Every

other thing unchanged, the mere increase in land price will push the housing price even higher. Land is scarce. Land is precious. So land should be very expensive. So the housing should be very expensive.

Housing structure is built on the earth. After the building structure is finished, it becomes a fixed stuff and cannot be moved to other places. This is to say that the place will be occupied for a long period of time, that the land will be consumed for several decades or even centuries. Now that the land price becomes dearer and dearer, the building, which uses up large quantity of this dear commodity (covering a large space of land) and does it one-off for such a long time, ought to be a high-priced commodity. The housing commodity is immobile and remained so for a long span of time. This character gives rise to the issue of durability. The reason why it could last so long is the exceptionally lengthy longevity of the structure. Here we are talking about the permanence of the structure of decades or centuries. What other common commodities can be consumed and consume so frequently (daily, it could be said) for such a durable of time? It can be argued how the exact relationships exist between the durability of the commodity and its value. Yet it might be accepted that any product which is capable of making such a usage has the reason to ask for a high price.

Furthermore, the housing commodity is extraordinarily heterogeneous. Every housing is different more or less. Every project is finished in different ways in the aspects of designing and construction. Thus pretty unlike others, there is no mass production in housing industry. The heterogeneity of housing manufacturing makes it hard to enjoy the advantage of cost saving in flow-line production. The housing commodity is not only susceptible to withstand the long time use, but also amazingly able to resist the decrease of the value of it. Housing is famous for its outstanding feature of value-keeping if maintained properly and there is no deterioration of the environment in the location. In many cases, the value will even increase. This happens in a lot of cities in China nowadays. No matter what the purposes the housing commodity is consumed for, its value-maintenance or value-augment is a firm foundation of its high price. Housing is a consuming product. It also is an investment product. Both characters are concentrated in one body. It can be consumed to provide the living space and it can be invested to produce money return. We can do the investment in stock, in gold, in oil. But when these investment tools cannot deliver results, they to most extents become useless to the investors. Not the housing commodity.

7.2 The analysis of the relationships between the housing development process and the price.

7.2.1 The project company.

7.2.1.1 The characteristics of the project company.

One of the conspicuous features in Chinese property development is the emergence of the so called “project company”. This kind of company is set up specifically for the operation of the property development project and in most cases solely served for one project. The natures of the company and its operation play the role in the development of the housing price. It is worth looking into it. The major characteristics of the project company are:

- (1) Provisional. This is the most important feature of the project company. As mention above, this sort of company is established by the “mother company or companies”,⁶ after the land has been secured and the project establishment has been approved by the government.⁷ In the wake of the establishment of the project company⁸ the “mother company or companies” will transfer nearly all the responsibilities concerning with the development of the project to this company and it will act independently. When the project is finished, the company will soon be dismantled.

⁹ So the life of the project company is short and its meaning of existence is totally to serve for the designated project. It is a temporary company and its life is foreseeable. This characteristic gives rise to the drawback of lack of strategy in the development of the company. It does not need to consider for the future, because there is no future. Henceforth it acts accordingly.

- (2) Small scale. Considering that the project company is short-lived and specific-task-designated, the scale of the company is certainly quite small. It employs the minimum required professionals and facilities. Its working place should be always near the site (in fact, in most cases, the office is just set up inside the site) and the offices are small and simple and not well equipped.
- (3) The flow of the professionals. With regard to the engineering works,¹⁰ the development of the housing project needs to employ certain quantity of professionals who is responsible for one or a few specific tasks like the architecture design, the structure, the construction, the materials and equipment, the water, the electricity and so on. When the company finishes its task, the professions will hop to other places. Thus the persons are in constant flow. It is notorious that the job-hopping rate in real estate industry is significant higher than that of other industries.

7.2.1.2 Why is the project company created?

The drawbacks the project company intrinsically possesses prompt the questions: why it is created? Why it is the form of the real estate development so popularly adopted by so many companies? What advantages it has? The answers may be:

- (1) Real estate industry is really a brand-new industry when it was appeared in China. So to all people, it is a virgin land. The knowledge can be obtained and the operation can be introduced from outside. But this is a slow process and needed to be tried and tested in the Chinese environment. The project company is quick to set up and easy to operate. Thus it is a good form to meet the demand of developing property project when everything and everyone were in trial.
- (2) It is a deep-rooted tradition in China that the government changed the policies so frequently that people did not pin any big hope on the government for its long-time and consistent policies. Some regulations were made. Yet after may be several months, they were abandoned, and some were even contradictory. This is the reality and people can only adapt to it. For businessman, facing the risk of losing money, he naturally wants to act swiftly, to reap the results swiftly. The project company suits this desire well.
- (3) One of the unique natures of real property development is that it is indispensable with one distinguish resource---the land. In modern economy, the consistent production is solely depended on the consistent supply of the production resources---the materials. There is no problem this requirement can be met in any industry, except in real estate industry. The supply of urban land for construction is not in any means continuous. That is the reason why land reserve or land bank is advocated. In the early stage of the development of the property industry, land reserve was not widely practiced. So the situation was always like this: when the project was finished, the company did not have the excuse to exist. This is exactly what the project company is.
- (4) Another unique natures of real property development, at least in China, is that all the major works concerning the project construction are outsourced to specific companies and the developer does not need to involve in the detailed works that are in the scope of each specific company. The developer just needs a small-sized and capable organization to do the works of cooperation and check. The property company is able to meet this requirement well.

(5) In some cases, the project company is the most direct and expedient result of the then market situation. China was under the economic system of planned economy in the past and the symbol of the system was the dominance of the state-owned companies in the overall economic structure. Therefore these companies often possess the precious urban land recourse. Out of no matter what reasons, the company may want to engaged in the business of real estate development. They have land, but they do not have the money and others which are necessary for the job. So they will usually joint with the professional real estate development company to erect the project company to develop the designated lot. The formation of the project is thus quite natural.

7.2.1.3 The impacts of the operation of the project company on the price.

There are ample and convincing reasons why the formation of the project company is adopted and widely practiced in Chinese real estate industry. But at the same time it is also clear that this kind of company has it intrinsic disadvantages. The existence and operation of the property company in the housing sector contribute to push the housing price upward and make it unstable.

The project company is set up merely to serve for the development of the specific project. All the works it does are related with the target project. Usually one housing project lasts more or less than two years. That time is also the life time of the company. The very limited longevity and highly concentrated working task inevitably lead to the situation that it only cares for the things it can clearly see and tough. There are definitely no needs to plan for the long-term development of the company, such as to set the future development target, to make the development strategy, to establish the solid customer base, to improve the organization management, to breed the appropriate enterprise culture. It is pretty understandable that if the enterprise is not founded on the long-run strategic consideration and destined to live a short life, it will and can only behaved very hastily and impulsively, strongly smack of so-called “short-term behavior”. The company considers everything else is negligible, barring the profit. The ultimate goal of the company is for pursuing profit, the highest profit margin as possible and in shortest time. All the activities are served for this purpose. The most effective way to realize this pursuit is to raise the price. Under this circumstance, the housing price faces tremendous pressure. Every effort will be made to increase the price. Every excuse will be collected to support the increase. Thus the housing price increase became unstoppable and inevitable in a period of time. And this short-term-profit-pursuing-butressed increase is one of the potential reasons for the instability of the price.

7.2.2 The housing development model.¹¹

7.2.2.1 The analysis of the housing development process

In Chapter three, the whole process of housing development was introduced in details. Now let's us have a review over the procedure and see what conclusions could be withdrawn from it. It is worth mentioning it again that the process is the example happened in Shanghai. Different places have different processes, not so disparate notwithstanding.

The housing development course was divided into seven sub-courses, i.e., investment decision, land acquisition, government consents, project preparation, property construction, property marketing and facility management. This is the integrated process, organized approximately in working order, which embraces all the contents of the development. And of course each of the sub-courses also contains a lot of detailed works. They are carefully explained in Chapter three.

The investment decision is the first and vital step in the whole procedure and it is certainly made by the investor himself. It becomes the trend, however, that the investment decision is more

and more relied upon the results of the investment research. This paper classifies the research into market research and product research. The former is mainly concerned with the analysis and judgment of the overall market situation and the government policies, whereas the latter is largely focused on the design of the exact product, the price of the competitive project and other specific questions the developer is interested in. In Shanghai and in Shenzhen this work is popularly done by professional market research company. This kind of company is specialized in property market research.¹² Yet the essential point is that their subsistence is totally depended on the willingness of the developer.

The second step is the land acquisition. The whole process can go on only after this step is finished. Obtaining land is the foundational work for the developer and he bears this responsibility single-handedly. Chapter three listed seven ways to procure land for the developer, among them some could be called market-oriented and some not. No matter what are the natures of the acquisition, this job is done by none other than the developer. There may be two reasons for that. In the past the most common form of land transferring was not market-oriented. So the land price was very low. But the finished product was sold according to the market price. The huge difference brought huge profit for the developer. Therefore the land acquisition became more critical for developer. The huge profit involved in the land transfer made the matter very complicated and it was very much necessary for the developer to deal with it by himself. This is the one reason. The other might be that in reality there were no other institutes to replace the developer to do the job. In China there were no professional land development companies which specialize in land business.

The next step is the government consents. This is the issue of project legality. The development of the project must be approved by the government and in the development process there are many certificates and official documents needed to be prepared and acquired. In real estate development, government approval lasts from the beginning to the end and is always a time-and-energy-consuming work, and, worse, real estate development is still notorious for its endless “adjustments” in designing, constructing and other factors. Additionally, the submission of the applications, the data and information exposed may concern with the “business secret” of the developer. All these aspects make the developer convinced that it must be finished by himself.

In Chapter three, it broke up the works of project preparation into three stages, which were segregated by the hallmarks of land acquisition and the start of the construction. The two stages have been explained immediately above. Here the third stage is dealt with. Because the major works in the real estate development are almost completely out-sourced, the most important job before the commence of the ground-breaking is to select and determine the various contractors which include the design company, the construction company, the material and equipment suppliers, the supervision company, the facility management company, etc. The usual practice is that the developer diffuses (in recent years public announcement was adopted) the information of the project and then the contractors will apply for the engineering works and then the developer will make the decision. The process of selection and determination, which involves the works of interviewing, investigating, bidding, paper preparation and others, is quite complex and is finished by the developer.

Then the process enters into the phase of the physical construction of the project. The construction of the real estate project is a big engineering work, it there forth engrosses many parties. They have their own personals and equipment. They require their specific working conditions. Sometimes, simultaneously, there are several companies working in the same building. One

company is withdrawing after finishing its work, while another is entering to begin its job. Under such circumstances, the organization and cooperation becomes extremely important. It is not realistic to ask the numerous individual contractors to get the things in order voluntarily. They simply cannot. There must be an organizer, a coordinator. The developer is.

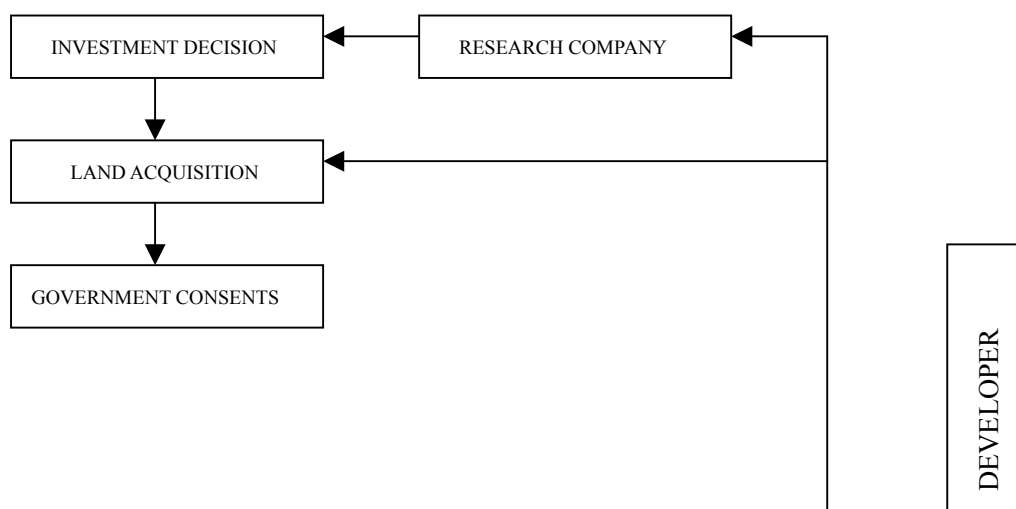
In the process of construction, the project is prepared to be put in the market. This is called “pre-sale”. In Shanghai and Shenzhen the property marketing is in many cases conducted by professional property marketing company. The success of product marketing is certainly the biggest factor in property development and property marketing asks for unique knowledge, skills and methods that are exactly many property development companies lack and the property marketing companies good at. It has been proved that property marketing companies contribute a lot in the advance of property marketing. Generally speaking, the marketing company only offers the necessary personals and the service. All others are provided by the developer, such as the finance, the premises. The activities concerning with the marketing like the promoting, the price-setting must be approved by the developer. In all, the developer is in firm control in everything.

The last step is the facility management. In the wake of the completion of the construction and the marketing and the governmental approval, the project will be delivered to the residents. Thus begins the facility management. In most cases, the facility management companies are closely related with the development companies or even may be directly transformed from the project companies. Some would argue that this practice is problematic due to lack of competition. But in fact it has its reasons. When the project is being developed, the facility management company would be engaged in this stage out of the requirement of “advance involvement”.¹³ And more, given that the facility management company positions itself well in advance, it goes through the process of the property development, so it is very familiar with the property. Certainly this will benefit greatly for the future work. In such case, the developer and the facility management company are actually in the same family or even the same one.

Now it is clear that the developer is in a dominant position and plays a pivotal role in the whole process of project development.

7.2.2.2 The developer-centered housing development model.

The conclusion of the above section indicates the roles played by the development company in the operation process of housing development. The developer’s functions are comprehensive, overwhelming and indispensable. No party participating in the course can replace him. Figure 7.1 summarizes the undertaking of the procedure of housing development in China and illustrates the position of the developer.



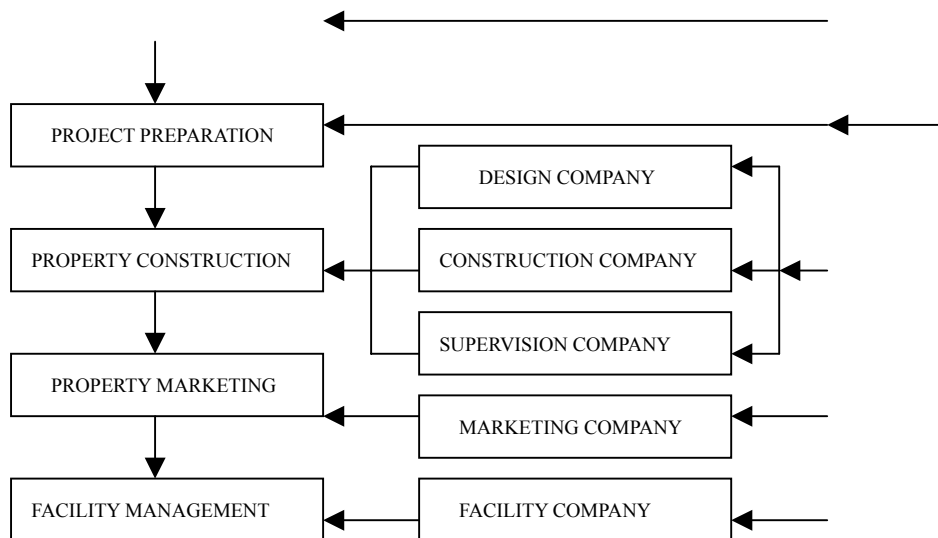


Figure 7.1 The developer-centered housing development model ¹⁵

The three outstanding characteristics of the model are:

- (1) The dominance of the position of the developer. From the decision making to the asset management, the developer is always actively involved in every step of the whole process and plays the commanding role of directing, organizing, coordinating and monitoring. Every participant needs to get approval from him before any work could be started and the finished works must be certified and approved either directly by him or by him agent or by the official institutes he brings in. The power of the developer is so overwhelming in the process that the development machine will not run without him.
- (2) Outsourcing of the main development tasks. In the housing development process, two of the principle tasks, construction and marketing, are outsourced to professional organizations. The physical construction of the structure is totally completed by builders. The developer will not touch any detailed construction works. He only supervises the working situation to make sure they reach the standards and the set schedule of the progress. And he will also help to solve the disputes arose between the different participants. The same is in outsourcing the marketing. The daily sales activities are operated and managed by the marketing company. The developer will not entertain the customers and listen to the enquiring telephone calls. But the developer knows what are going on and he holds the money matter firmly.
- (3) The unique product distribution method. When we talk about the common commodity products, we usually will focus on the process of production, distribution and consumption. Between the manufacturer and the consumer, there is one important intermediary--- the distributor. In most cases, the producer does not meet with the end user of his production. It is the distributor who buys the commodities from the manufacturer and sells them to the consumers. Therefore the price of the commodity is the addition of the out-of-door price from the factory and the cost of the distribution and the profit the distributor earns. For housing commodity, the picture is quite different. Because the property is fixed on the ground and cannot be moved, the distribution is no longer operated in the usual way, if we still call it the distribution. Both the parties involved in the transaction are all the time in a face-to-face situation. If the developer employs the marketing company to sell the housing, the marketing company is not the real distributor, rather an agent of the developer because he does not buy the housing from the developer and then sell

it to the consumers. So it is obvious that the cost of the intermediation will be saved.¹⁶ Considering the significant share of the distribution price (the costs occur in transportation, loading and unloading, the damage, the storage, the sale personals, the sale premises and the sale profit) in the whole commodity price, such a saving ought to result in a substantial reduction in the whole commodity cost.

7.2.2.3 The model and the price.

Someone call the process as “HK Model”. (Mu, 2004) From the perspective of the model itself, the housing development model could contribute a lot to the reduction of the development cost for the developer. This could be explained from the three characteristics above discussed.

Firstly, the dominance of the developer in the process. It would bring several benefits for the developer. (1) Because the developer participates in the whole process in person, in control and from the start to the end, he knows every detail of the major works and monitors the costs and the budgets execution very effectively. This enables him to avoid not only the costs of waste and repetition, but also spending on the unnecessary expenditures; (2) The parties participated in the development process are in a weak position, they will always yield to the demands of the developer. Given that the developer pays big attention to the costs, the participants will take measures to reduce the costs---the best way, or at least are constrained not try to ask for more; (3) The selections of the contractors engaged in the major works like the design, the construction, the project supervision are all through tendering. The competition, very stiff in most of the time, will certainly lead to low, not necessarily the lowest, bidding price, the best companies winning out, the most effective working efficiency. All these will help to push the costs down.

Secondly, the outsourcing of the major works. Here we discussed the two works of property construction and marketing. Both works are outsourced to the specialized companies, the construction company and the property marketing company. And the method of conferring the jobs is open bidding. The dual restrictions of specialization and competition create the favorite condition for the cost cutting. Housing development is not a high-tech industry. It does not require for highly advanced technology. The developer does not have difficulties to do the jobs by himself. But this is not the case. In fact, outsourcing takes in a lot of benefits for the developer.

Thirdly, the missing of distribution chain in housing marketing process. It is a fact that the cost of distribution is a major part in the total cost of the commodity. Due to the backwardness of logistics in China, the share of this cost is much higher than that in western countries. One paper reports that the distribution cost is 20% of the national GDP, while the rates are 9.5% in USA and around 10% in other developed countries.¹⁷ As for the situation of industrial commodities, another claims that the distribution cost of Chinese merchandises occupies 50%-90% of the sale price.¹⁸ Such a high proportion would evoke what a high price if there was distribution cost in the housing marketing. Additionally, because the developer always has a face-to-face contact with the consumers, he has ample opportunities to know the opinions of the consumers on the housing price. If the majority of them complain the housing price is too high, the developer know they are not satisfied at the price.

7.2.3 The pre-sale and the “cushion-money”

7.2.3.1 The practice of pre-sale in housing marketing.

It is popularly asserted that the practice of pre-sale was introduced into China from Hong Kong and Singapore in the early 1980s when the real estate development was landed in China. True or not, the fact is that pre-sale was, and is to date, all the rage in these two places. And more tellingly,

at the very beginning of the development of the real estate industry, the few companies which were engaged in the business were, in most cases, joint-ventures, with the outside partners were always those from HK or Singapore, particularly the former. They are the vanguards and they did a wonderful contribution to the real estate development in China.

The performance of housing pre-sale is pretty easy to explain and to understand. It is the action that the housing is put on the market for sale before it is still under the construction.¹⁹ So it means that the developer will get the money back in advance, well in advance actually, before he finishes the construction and sells the housing. Pre-sale is not definitely the unique activity in housing industry. It occurs in other industries as well. But in Chinese housing industry (real estate industry as a whole), it is adopted in almost every project. The adoption of the practice was the results of the huge pressure put on government to meet the demand of improving the housing conditions of the urban dwellers and the cities image as quickly as possible. Real estate development is famous for its immense capital demand and long developing period. The implementation of pre-sale and the sale income resulted will notably facilitate the real estate development and change the situation promptly. The reality proves that it is indeed the case.

So the carrying-out of pre-sale serves the developer and the government well. It benefits the urban citizens too. No doubt about it, because it leads to more housing supply, better living environment and good city appearance. But unfortunately it does not make further benefit in the housing price for the home-buyers. It is the truth that the price of pre-sale is lower than that of the sale price later. But the gap is only the reflection of the interest of the money paid ahead by the purchasers.

Pre-sale enables the developer to return the money before he formerly sells the finished product. The product is housing and housing product involves huge sum of money. It is not a secret in Chinese housing industry that way less than half of the sale will recoup all the investment, and selling out 30% of the project in pre-sale period is very common. Besides, more than 90% of the housing purchases are done through mortgage. Mortgage is a kind of loan which is provided not to the buyers, rather to the developer and which reaches the hands of the developer the lump-money and quickly after the signing of the contract. Thus, pre-sale brings gorgeous benefits to the developer and these benefits are brought into solely by the government policy. Is it not fair to ask the developer to transfer some of them to the consumers in the aspect of, say, the housing price?

7.2.3.2 The practice of “cushion-money” in housing construction.

The practice of pre-sale in housing marketing is definitely legal, whereas that of “cushion-money” is not. It is in theory illegal. But it is widely practiced.

Under normal circumstances, when the developer signs the contract with the contractors and suppliers, he should pay accepted proportion (30% in some documents) of contract-money in advance to them, so they are able to begin the preparation works. In the process of their works, the developer should pay the remaining money in accordance with the contract. It is reasonable and a common practice in other industries. But the situation is different in Chinese housing industry. The real and abnormal circumstances are that, in general, the developer will not pay any money to the contractors and suppliers until significant proportion of works have been completed by them. This practice is dubbed “cushion-money”. So in fact “cushion-money” is the loan the construction contractors and equipment and materials supplier provide to the developer and the loan providers do not charge any interest. Considering that only small parts of the equipment and materials are directly purchased by the developer himself, and the contract-money of the contractors in design, project

supervision and other fields does not occupy the bulk share of the total contract-money of the project, the main contributor of “cushion-money” to the developer is construction contractor (including installation contractor).

Because of the negative impacts of the action of “cushion-money” for the construction company, (actually, for the developer does not pay the money punctually to the construction company, the construction company therefore will not or cannot pay the due money to its suppliers and even its employees. This could elicit damaging chain-reaction to the economy, or may cause social problem.) the government made the policies to prohibit it and repeatedly. It, however, failed. “Cushion-money” is rampant in the whole real estate industry. The reason for that is very simple: the over-supply of construction companies in the market. There are too many redundant construction capacities in the construction sector and, in order to survive the keen competition, the construction companies are inevitably succumbed to the pressure from the developer to substantially delay the payment. This makes “cushion-money” possible and resistible.²⁰

“Cushion-money” is in essence the loan, interest-free loan, the construction contractor provides to the developer and in most cases it could join the time when the pre-sale of the project could begin. Thus by using the money returned from the pre-sale to pay the construction companies, the developer actually has a beautiful cash-flow in the process. In fact, “cushion-money” saves substantial amount of capital costs for the developer.

7.3 The analysis of the relationships between the housing price structure and the price

7.3.1 The costs.

7.3.1.1 Cost items. In Chapter four, we listed the costs incurred in housing development under general circumstances. They are: development costs, period fees and taxes, and amongst of them, the amount of development costs are usually much bigger than the other two. Lets have a short summery of the three costs.

(1) Housing development costs. The costs are the ones incurred directly related with the construction of the structure in the housing development process. They include:

- Land-use right fees;
- Forward engineering fees;
- Building construction and installation engineering fees;
- Infrastructure construction fees;
- Development indirect fees.

(2) Period fees. These costs are actually the indirectly costs related with the construction of the structure and the property marketing in the whole housing development period. They include:

- Management fees;
- Financial fees;
- Marketing fees.

(3) Taxes. In China, for housing development, taxing is relatively simple. The main taxes which the developer needs to pay are:²¹

- Business tax, which is 5% of the business income;
- City maintenance and construction tax, which is 7% of the business tax;
- Education fee added, which is 2% of the business tax.

In total, the taxes are 5.45% of the business income and they should be paid to the government immediately when the income occurs.

7.3.1.2 The payment of the costs.

It is certainly an essential matter that how much the costs are.²² It is equally a vital issue that when the costs incurred and when the developer undertakes the defrayment, because it to most extent illustrates the real costs the developer bears.²³

(1) Land-use right fees. Given that the land cost is one of the most important costs for the project and it often occupies more than 30% of the entire costs, the payment of land fees has a big influence on the developer's cost burden. The land costs are widely recognized between 30% to 50% of the total costs. (The trend in the last decades proves that the share of them has been getting bigger and bigger, mainly resulted from the tightening of the land supply by the government and the adoption of the market-oriented land transferring methods.) In order to simplify the calculation, here we use the figure 40%.

There are specific requirements on how to calculate the land price in land transferring in the official documents. But the payment methods are not clear at all. The policies concerned just stipulate that that when the fees are paid is determined by the land transferring contract. That is to say that the payment time is negotiated by the parties involved in the contract. No clear-cut dates are set in the regulations. From Chapter three, 3.2.3, we learn that the payment of the land fee are related with the matter of the issuing of land certificates, not connected with other works of government consents, except for the pre-sale certificate and real estate property right certificate. This could mean that the progressing of the project could go a long way before the land fees are paid off.

Looking into the process, we can see that when the "land commencement registration" is to proceed, the proof of land fees payment is required. In theory, this registration could only be finished after all the land fees are paid off. Yet this work could be delayed to the time when pre-sale application is lodged. This is to say that, in definitely observing the regulation, the total land transferring cost would be incurred at the time of pre-sale application. Prior to this time, the land fees the developer must prepare are the guaranty bond and the earnest money, if in market-oriented land transfer, in usual cases, each one being about 10% of the land price. (If the land is granted in the form of agreement transferring, the situation may be quite different. It will surprise nobody that nothing is paid until the issue of "real estate property right certificate".)

(2) Forward engineering fees. These fees are incurred before the former beginning of the engineering construction work of the project. The incurrence period is usually from the approval of the establishment of the project by the government to the time of the ground-breaking. The fees are estimated about 10% of the total costs.

(3) Building construction and installation engineering fees. These fees are for the physical structure of the housing and incurred from the time of the ground-breaking to the check-and-acceptance by the government. The fees are estimated about 30% of the total costs and would not change acutely in a period of time. (Ren, 2004) They are also the most transparent part of the total costs. (Shen, 2004)

(4) Infrastructure construction fees.²⁴ These fees are for the construction of utilities like the road, lamp, water, electricity, etc., within the plot. Roughly speaking, they incurred the same period as that of number (3). The fees are estimated about 5% of the total costs.

(5) Management fees. Management fees incur throughout the entire period of the development of the project. Here we define the incurrence time from the step of "the preparation of the set-up of the project" to the check-and-acceptance. The fees are estimated about 5% of the total costs.

(6) Financing fees. The fees could incur throughout the entire period of the development of the

project. Here we define the incurrence time from the step of “the preparation of the set-up of the project” to the check-and-acceptance. The fees are estimated about 3% of the total costs.

- (7) Marketing fees. Generally speaking the marketing fees incur from the approval of pre-sale to the check-and-acceptance. The fees are usually 3% to 5% of the total costs. Considering the importance of marketing, here we fix them at 5%.
- (8) The others. All other costs are estimated 2% of the total costs and incurred from “the preparation of the set-up of the project” to the check-and-acceptance.

7.3.2 The cash flow illusion of the costs.

All the costs related with the housing development are incurred during the process, not at one specific moment or few moments. It is a continuous and consistent course. In order to study the real cost in housing development, it is necessary to illustrate the cash-flow chain of the cost incurrence.

²⁵ Figure 7-2 exhibits the cash flow out of the costs in the time order of the development process.

Housing development process

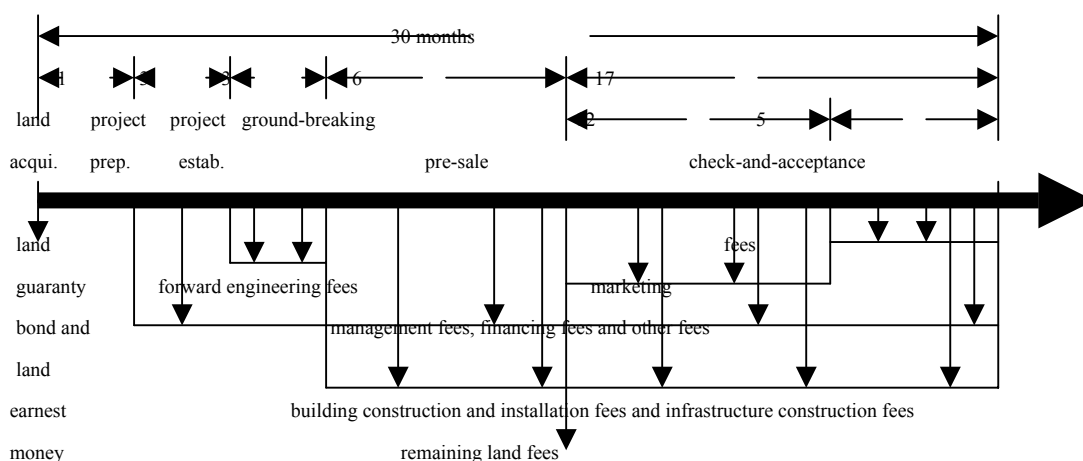


Figure 7-2 Static cash flow of the costs ²⁶

Given that the marketing campaign could be formally launched from the time of the endorsement of pre-sale, therefore the project begins to produce cash-flow-in---the sale income for the developer, the moment of pre-sale on the process line is very much a turning point for him. Before that point, if the regulations being strictly observed, ²⁷ the developer can only use his own capital to pay all the expenses. After that, the income begins to come in. So let’s calculate how much the developer spends prior to the moment when sales income is generated.

The following presumptions are made in order to do the calculation. ²⁸

- (1) The time period of the process from the land acquisition to check-and-acceptance is 30 months. The detailed schedules are:
 - Land acquisition to project preparation: 1 month.
 - Project preparation to project establishment: 3 months.
 - Project establishment to ground-breaking: 3 months.
 - Ground-breaking to pre-sale: 6 months.
 - Pre-sale to check-and-acceptance: 17 months.
- (2) The total costs are 100. So the detailed costs are:
 - Land fees: $40\% \times 100 = 40$.
 - Land guaranty bond: $10\% \times 40 = 4$.

Land earnest money: $10\% \times 40 = 4$.

So the remaining parts to be paid before pre-sale: 32.

--- Forward engineering fees: $10\% \times 100 = 10$.

The fees incur in three months. Each month: 3.33.

--- Building construction and installation engineering fees: $30\% \times 100 = 30$.

The fees incur in twenty-three months. Each month: 1.3.

--- Infrastructure construction fees: $5\% \times 100 = 5$.

The fees incur in twenty-three months. Each month: 0.22.

--- Management fees: $5\% \times 100 = 5$.

The fees incur in twenty-nine months. Each month: 0.17.

--- Financing fees: $3\% \times 100 = 3$.

The fees incur in twenty-nine months. Each month: 0.1.

--- Marketing fees: $5\% \times 100 = 5$.

The fees incur in seventeen months.

The first twelve months: $80\% \times 5 = 4$. Each month: 0.33.

The remaining five months: $20\% \times 5 = 1$. Each month: 0.08.

--- Other fees: $2\% \times 100 = 2$.

The fees incur in twenty-nine months. Each month: 0.07.

So the money the developer needs to pay before any income is created is:

The land costs + Forward engineering fees + twelve months of Management fees, Financing fees and Other fees + six months of Building construction and installation engineering fees and Infrastructure construction fees

$$\begin{aligned} &= 40 + 10 + 12 \times (0.17 + 0.1 + 0.07) + 6 \times (1.3 + 0.22) \\ &= 63.2. \end{aligned}$$

This clearly shows that the costs before pre-sale are 63.2% of the total costs. The developer is in theory required by the progress of the project to make that amount of money ready in hand to continue the development process.

If “cushion money” is involved, the costs will be further reduced. In most cases, the practice means that the developer will not pay any money or very few to the builders and suppliers until pre-sale is under way. Precisely speaking, only after the construction reaches the stage that meets the requirements of pre-selling does the developer starts to conduct the delayed payment to the contractors and suppliers. And at that time, the sales activities have begun. The developer will simply use the sales income to pay the fees. So in essence the costs of the Building construction and installation engineering fees and Infrastructure construction fees are saved. Thus the real cost prior to pre-sale is 54.08 ($63.2 - 9.12$).

Lets go further to discuss what happen after the pre-sale. When the project is progressed to the stage where pre-sale is allowed to commence, the developer will begin to get money to pay the construction costs and others. The movement of sales income could be closely related with the marketing promotion and the “marketing control”.²⁹ Lets do the third presumption.

(3) The profit is 20³⁰ and therefore the sales income is 120.

If we suppose in the first 8³¹ months of the sales season the sales income is 70% of the total and in the remaining 9 months, the income is 30%, then

the average monthly income of the first period is: $120 \times 0.7 / 8 = 10.5$ and

the average monthly income of the second period is $120 \times 0.3 / 9 = 4$.

The average monthly costs after the pre-sale is:

$$(100 - 54.08) / 17 = 2.7 \text{ (2.2 if no cushion-money)}$$

So the sales income is way enough to cover the costs. Adding the cash flow in, we can sketch the Figure 7-3 to exhibit the complete cash flow of the process and to give a clearer picture of what can be delivered from the analysis. The conclusion is that under normal situation the real costs in housing development is about 54% of the total nominal development costs.

Housing development process

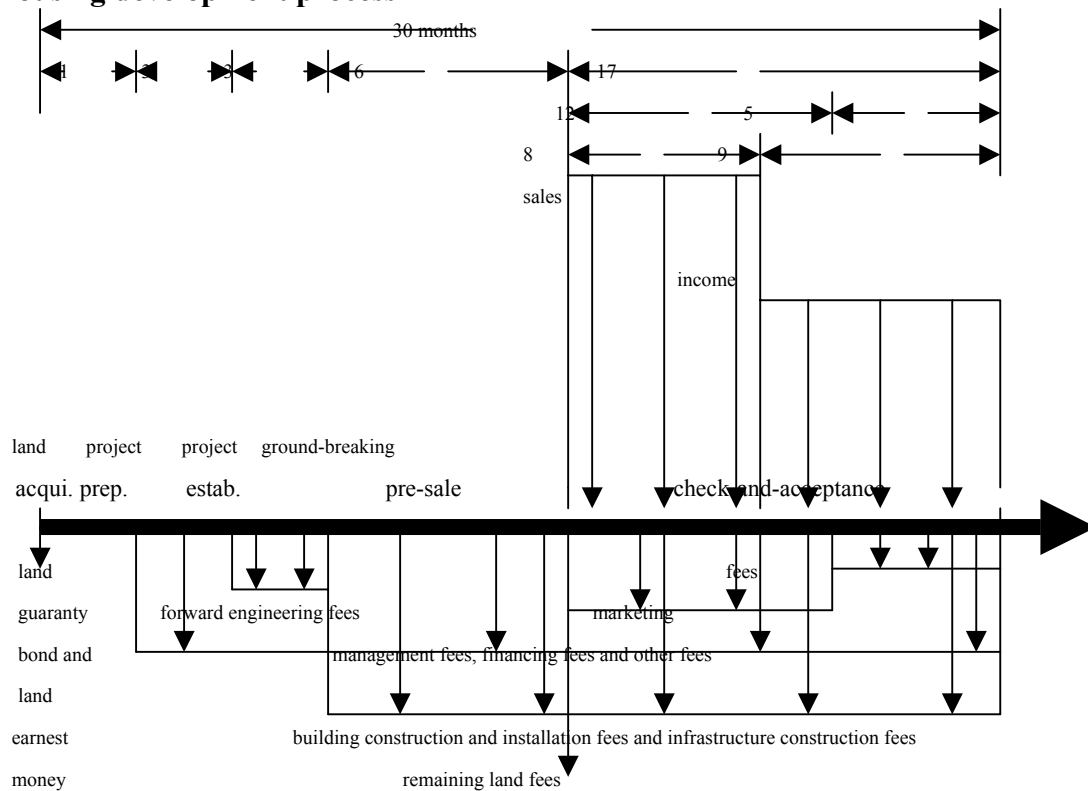


Figure 7- 3 The complete cash flow of the process

7.3.3 The discussion of the housing static cost and the dynamic cost.

The characteristics of the production in Chinese housing industry have been explained repeatedly and the costs calculation is also analyzed above. Considering the importance of the cost in housing price and the exposure of the real cost through cash-flow method, it is possible now to introduce and clarify the concepts of housing static cost and the housing dynamic cost.

7.3.3.1 The housing static cost.

The static cost are the summoning up of all the cost items listed in the above section ((1) + (2) + ... + (8)). In the case of the computation of this paper, it is 100. This is the simplest way to count the housing cost and the one that is most commonly used to be the foundation of the housing price estimating and setting. But the above analysis proves that this method is defective and even misleading, and it does not reflect the real cost the developer bears in developing housing.

The formula of calculating the housing dynamic cost is as follow.

$$C_c = (C_1 + C_2 + \dots + C_n)$$

C_c --- static cost

C_n --- each cost item

7.3.3.2 The housing dynamic cost.

The method of calculating the housing dynamic cost overcomes the drawbacks in the calculation of static cost. The most important thing is that it exposes the genuine costs of the project. In the case of the computation of this paper, it is 54.08.³²

The formula of calculating the housing dynamic cost is as follow.

- If the income after pre-sale is larger than the costs incurred:

$$C_d = (C_1 + C_2 + \dots + C_m)$$

C_d --- dynamic cost

C_m --- each cost item before pre-sale

- If the income after pre-sale is smaller than the costs incurred:

$$C_d' = (C_1 + C_2 + \dots + C_m) + (C_1' + C_2' + \dots + C_m')$$

C_d' --- dynamic cost

C_m' --- the difference between the income and the costs

7.3.4 The discussion of the housing profit rate on cost.

The profit rate in Chinese housing industry is a hot topic. We heard somebody said that the profit rate is 50% or well over. We also heard the sigh from the persons engaged in the industry that the industry has entered into the territory of “slim-profit” and the profit rate became smaller and smaller in recent years, even below 5%, although they might admit that in the past it was phenomenally high. They are right and wrong. Lets continue to use the example in 7.3.2 to calculate the rates.

- The static housing profit rate on cost.

The total costs are 100. The profit is 20, so the static housing profit rate on cost is 20%. This is the rate all the persons are referred to. Given that the urban lands for housing development become more and more scarce and more and more the land transfer is conducted through the market-oriented means, and the policy is to tighten the supply of land, the land price soars in many places. Some sky-high land prices, resulted from the stiff competition for the hot-plots in the public auction, were reported by the media and attract the attention of many. In these cases, the profit rate is very slender if calculated by the static cost.

- The dynamic housing profit rate on cost.

The real costs are 54.08. Thus the profit becomes 65.92 (120 – 54.08).

The dynamic housing profit rate = 65.92 / 54.088 = 122%.

This could be called the real profit rate in Chinese housing industry. Three points are worth mentioning: Firstly, the profit is achieved under normal and legal (except cushion-money) conditions, although the reality is quite not the case, which only means that the costs will be further reduced and the income comes earlier; Secondly, the bank financing is not involved. If it was, the costs will be substantially diminished; Thirdly, the entering of sales income is in a usual pace. It is not impossible that some projects achieve bad results in sale and it leads to the economic disaster for the developer. But this is just rarely happened.

7.4 The analysis of the relationships between the price-setting and the price

7.4.1 The housing market and the price.

In every means, housing price is high in Shanghai and in Shenzhen, and it had remained in such a high level for many years without significant reduction. Because there was in fact no housing price control in the market in China, it could be said that the high price is resulted from the market factors. No one could argue that it is the strong demand force that ultimately support the price level and push

it going up and up. This is very much correct. May be in the whole history of the housing market in the two cities mentioned the demand had been surpassing supply. In Chapter five, we have proved that in the last several years, the demand was indeed ahead of the supply, although the difference is not large. We unfortunately do not have enough data to calculate the exact figures of how the situation of demand and supply has been in the last decades. But we could use some relevant information to analyze the facts to show that the supply has its limit and the demand easily exceeds supply in all the times.

7.4.1.1 The supply capability. As to the supply, people always think that it is an easy thing. Numerous stories have been told about the over-capacity in many industries. And in the industrial history, it is the fact that most of the recessions and crises were directly related with it. As if the production capacity was no boundary, limitless and it could all the times meet the demand of consumption. The situation may be a little different in housing production.

It had been mentioned that the housing development is quite a capital-consuming activity. The huge quantities of housing had been built. It certainly would consume huge quantities of money. But in a certain period of time, the total capital that could be put in the housing construction in the economic system is not from a source-without-ending. The share of investing in housing sector is not allowed to be too disproportionately high, for that might damage the development prospect of the whole economic system. Table 7-1 illustrates the situation of housing investment in fixed assets investment and GDP in Shanghai in a little more than two decades.

Table 7-1 the share of housing investment in fixed assets investment and GDP in Shanghai from 1980 to 2003.

YEAR	HOUSING INVESTMENT (M.M ¥)	FIXED ASSETS INVESTMENT OF THE SOCIETY (M.M ¥)	GDP (M.M ¥)	HOUSING INVESTMENT IN FIXED ASSETS INVESTMENT (%)	HOUSING INVESTMENT IN GDP (%)
1980	4.24	45.43	311.89	9.3	1.4
1981	9.87	54.6	324.76	18.1	3
1982	10.95	71.34	337.07	15.3	3.2
1983	11.16	75.94	351.81	14.7	3.2
1984	15.72	92.3	390.85	17	4
1985	25.18	118.56	466.75	21.2	5.4
1986	28.03	146.93	490.83	19.1	5.7
1987	35.79	186.3	545.46	19.2	6.5
1988	44.73	245.27	648.3	18.2	6.9
1989	34.67	214.76	696.54	16.1	5
1990	42.97	227.08	756.45	18.9	5.7
1991	48.92	258.3	893.77	18.9	5.5
1992	61.23	357.38	1114.32	17.1	5.5
1993	77.14	653.91	1511.61	11.8	5.1
1994	300.65	1123.29	1971.92	26.8	15.2
1995	433.76	1601.79	2462.57	27.1	17.6
1996	466.99	1952.05	2902.2	23.9	16.1

1997	458.22	1977.59	3360.21	23.2	13.6
1998	404.96	1964.83	3688.2	20.6	11
1999	378.82	1856.72	4034.96	20.4	9.4
2000	443.9	1869.67	4551.15	23.7	9.8
2001	466.71	1994.73	4950.84	23.4	9.4
2002	584.51	2187.06	5408.76	26.7	10.8
2003	694.3	2452.11	6250.81	28.3	11.1

Source: Shanghai Statistic Yearbook and statistic data from Shanghai Construction Commission.

With regard to the rate of housing investment in the city GDP, the shares were below 10% before 1994 and from then the percentages were often above 10% and even reach 17.6% in 1995. This shows that the contribution of housing industry to the city economy has been generally growing, especially in the past decade.

The shares of housing investment compared with the fixed assets investment of the society are more telling. In the recorded period of 24 years, the average ratio of housing investment to fixed assets investment is 20.8%. In the first ten years from 1980 to 1989, the figure is 16.8%, while, in the last ten years, it is 24.4%. Housing investment had been in the increase and the pace of increase is over pass that of fixed assets investment. But it is constantly below 30% and should be thought remaining so in the near future. Too much capital invested in the one sector would reduce the capital flow into other industries. It would have negative impacts on the whole economy. So the investment for housing is limited. Further more, housing development is greatly constrained by the availability of land supply. The urban land for housing development is even more strained due to the limited space of the city and the very complicated economic and social consequences of clearing land for it. And the restriction on supply will cause higher housing price. This is confirmed by the research. (Ruijue & Williams, 1994)

7.4.1.2 The demand capability. While we may conclude that the housing supply capability is relatively limited□the demand for housing might be said limitless and without end, at least in the near future. In Chapter one, a serious of facts were listed to prove the phenomenally bright prospects of housing industry in China. This actually reflected the huge demand for housing. Specifically speaking for Shanghai, the biggest city and one of the most important economic centers in China, the degree of the demand is even more immense.

(1) The urbanization of the city.³³

---- Land area, 6340 km².

---- Resident population, 13.42 million. (2002)³⁴

---- Population density, 2116 per km². (2002)

---- Urban population, 10.42 million. (2003)

---- Living area per capita, 13.8 m²,³⁵ construction area per capita, 29.4 m² (2003)

In a densely populated area, with ten million urban residents living in a small home space, the desire for an independent home, a better and more comfortable dwelling is certainly very strong, especially for the youngsters.

In old Chinese tradition, it is thought a happy life if there is a large family and all the family member living together. This concept of tradition is dismantling in all over China. In cities, particularly in big cities, it has been abandoned by many people. In Shanghai, it virtually totally disappears. All the people pursue the independent life after they become adults. Possessing one's own house is the dream of every body.

(2) The increasing income. The people's desire for housing is gorgeous. But it is not the real demand. The effective demand could come to being only after the financial ability reaches certain level. Thanks to the rapid economic development in the city in the last two decades, the income of most of the citizens of Shanghai has been on the rise (Table 7-2). This increase steadily transforms the desire into effective demand and puts pressure on the housing market.

Table 7-2 The Mean Distributable Income Per Capita (MDIPC), 1980---2003, Shanghai

YEAR	MDIPC (¥)	INCREASE RATE (+%)
1980	637	--
1981	637	0
1982	659	3.5
1983	691	4.9
1984	834	20.7
1985	1075	28.9
1986	1293	20.2
1987	1437	11.1
1988	1723	19.9
1989	1975	14.6
1990	2182	10.5
1991	2486	13.9
1992	3009	21
1993	4277	42.1
1994	5868	37.2
1995	7172	22.2
1996	8159	13.8
1997	8439	3.4
1998	8773	4
1999	10932	24.6
2000	11718	7.2
2001	12883	9.9
2002	13250	2.8
2003	14867	12.2

(3) The buyers from HK, Taiwan and other regions and countries. Because Shanghai is the biggest industrial city and the economic center in China, it has huge business opportunities and thus attracts large quantities of people. The official figure of these person are listed below, Table 7-3. They are long-term residents of the city. So they need to have the long-term living places. Quite of them who are from HK and Taiwan are eager to purchase their own houses and, compared with local people, these businessmen usually earn high salaries, generally ten times higher or more. Although the proportion of these people is small in the whole population, their purchasing power is pretty significant, and because most of the houses they buy are high-end ones, their purchasing behavior plays somewhat the leading role in the market. And among them, many are engaged in investment and speculation.

Table 7-3 The long-term residents from HK, Taiwan and other places, 2000—2003, Shanghai.

YEAR	FOREIGN BUSINESS MEN
2000	51653
2001	39647
2002	48324
2003	58152

(4) The buyers from the neighboring cities. The two adjacent provinces of Shanghai are Zhejiang and Jiangsu. From many aspects, custom, culture, language and so on, the people of these two provinces are historically related very tightly, particularly the people from south part of Zhejiang Province and the region south of Yangtze River in Jiangsu Province. It is also the dream of many people to work and live in Shanghai. They are proud of owning the property there. Conservatively estimated, the population with such strong desire ten million.³⁶ More over, these two provinces are also among the richest provinces in China. The booming economy makes many people becoming rich entrepreneurs. They very much want to buy, not rent, houses for themselves and, more, for their children. This is not a neglectable demand force.

7.4.2 The financing of housing development and the price.

Outside financing is vital in housing development. It is often claimed that the proportion of it is as high as 60% of the total capital, or 76%, (Ma B, 2005), 80%, (Yang, 2004; Wang, 2004), 90%, (Wu, 2005) The sources of housing development financing are relatively limited. In Chapter five we have introduced four types, i.e. land loan, development loan, mortgage and cushion-money (the development loan and mortgage are internally related.) (Luo, 2004). In essence the former three are bank loan, whereas the last one is the credit the developers somewhat unofficially get from the parties with which the developers do business.

These four sorts of outside direct financing have existed for a long time and they have been doing their contribution to the high housing price. In fact, it is very difficult to undertake the quantitative research on this matter, for lack of reliable data and information. As mentioned in Chapter five, the financial industry is by far still totally state-owned and in a complete monopoly position. With the progress of the economic reform, the situation has been gradually changed. More and more private companies began to engage in the banking business. But the government still has a tight grip on this sector. Because the banks are the state-owned enterprises, they are largely politics-oriented. In many cases, the land loan and development loan are not issued on the economical principles, rather on sundry factors, conspicuously amid of them being personal relationships. The money is owned to the state, not to the private company, so if the good personal friendships are maintained, the borrower would not feel the pressure and is not at all in a hurry to return the money, at least he can contrive to delay the return till he gets enough sales income. It makes no incentive for the developers to promote the sale by reducing the price, rather it makes the developers to increase the price. For the banks, they also do not want to see the price down because it may increase the risk.

In fact, the introduction of mortgage financing is a tremendous boost to the housing customer. Because of the mortgage, the financial burden to buy a house, such a dear commodity, is saliently reduced. In order to attract more buyers, some developers reduce the down payment to 10% or even no down payment. And although by official line, this is obviously against the policy, the government did not intervene. This makes the housing demand even stronger and the price going up and up.

7.4.3 The price-setting methods and the price.

In Shanghai and in Shenzhen, the overwhelmingly adopted method in housing price-setting is competitive pricing. It is a very simple and easy method. The pricing of one project is primarily based on that of the competitors nearby. And the referred competitive areas are narrowed to the quite limited locations. So the result is that if the price of one project is high, the others will be the same and so the whole specific location. This could result in “price-ally”. (Chen & Xu, 2005)

7.5 The analysis of the relationships between the government management and the price

By now it is very clear that the high housing price is a pretty complex issue. It is the results of many factors functioned through each other in a long period of time. No single cause plays the decisive role. It is the combination of the many. Given that China is a highly politicized and virtually a policy governance country, government management and government policies play such a distinguish role in almost every aspect of the society. So these two factors related with housing have a close relationship with the housing price.

7.5.1 The managing governmental departments.

In the two cities this paper deals with, the principle government department which is in charge of the housing industry, housing market is Building and Land Resource Management Bureau in Shanghai and Land and Planning Management Bureau in Shenzhen. The working responsibilities and the department organization of the department are listed in Chapter six. The department covers wide variety of areas and bears heavy responsibility in the real estate sector. It is in charge of most of the important aspects concerning the development, like the planning, design, construction and facility management. But it does not have specific working duty on price management and there is no price management section set up in the department. The governmental department which is related with market price management is Development and Planning Commission. However among the wide range of commodity prices it focused on, real estate price or housing price is not involved. (In Chapter six, this department was not mentioned because it is not the main departments participated in real estate management.)

Real estate price or housing price is such a critical issue in the development and in the operation of the market. Unfortunately it is not paid enough attention. The specific and on-time information cannot be collected and analyzed. And therefore the relevant measures could not be made and taken to control the situation when something is wrong. This may be one of the reasons why when the price had reached the irrationally high level the alarm bell did not ring and that price level could be maintained on and on without appropriate review, examination and correction.

7.5.2 the government policies.

Through the review of the past government policies which could have significant impacts on the change of the housing price, we could conclude that the policies played the major role in pushing the housing price up. The big events concerned (in Shanghai) are listed below according to the time order.

(1) From 1990, the concept of transfer-on-payment of the land use-right was first formally introduced into the market. This is a very important event. From then on the method of transfer-on-payment was established and the beginning of the gone of free or almost free land grant. The system was primitively taken into shape in 1992. So the land price began to be one part of the development costs and its share in the costs were become larger and larger. The immergence and add-on of the land cost substantially boost the costs of the housing development and hence the

housing price, although the rapid price increase was happened primarily in outside-sale housing. In 1992 and 1993, the first real estate boom occurred in China. The housing price was raised rapidly in the boom period and not impressively reduced in the aftermath crash.

(2) In 1991, the mortgage was introduced into China. But at that time, the mortgage was in the testing stage. It did not apply to the market until 1995 and from 1997 it became popular in housing purchasing. The introduction of mortgage, the embarking of all the state-owned commercial banks on this business and the broad acceptance by the consumers all contribute to the release and big increase of the demand force. Mortgage greatly increases the housing demand, so to push the housing price high.

(3) In July 2001, in Shanghai, the past two independent sub-markets of inside-sale and outside-sale housing were converged into one single market. The result of the unification of the Shanghai private housing market was that the price of the inside-sale housing immediately was raised to the level of outside-sale housing. The average housing price in the market therefore increased saliently.

(4) Also in July 2001, Shanghai began to comprehensively adopt the market-oriented land transferring methods, the auction, the bidding and the listing. The tightening up of the land supply and the higher and higher land price made the costs of the development and the price going up and up.

7.6 The recommendations

This chapter deals with two issues: why the housing price is so high and whether it should be so high. The analysis of the nature of the housing commodity, the housing development process, the cost structure of housing, the price-setting and the governmental management is just trying to answer these two questions. The causes of the problem have been exposed and discussed. Now the possible solutions should be offered. Of course, there are no cure-all medicines. But if the following recommendations are adopted and enforced, the situation may get a good change.

1. The set-up of housing information system.

The real estate information system and the real estate alarming system had been promoted through official means in China. It is hoped that the primitive shape of the systems will be taken in 2004. The promotion of the establishment of the systems was in fact against the background that the real estate investment and price were increased at a dangerous rate and the bubble-talking was widespread. Given the heavy damage caused by the past two or three real estate bubble burst, the government wants to learn the lesson and tries to have a soft landing. So the systems are clearly aimed and practice-oriented. This is not wrong. But it may be short-sighted.

Many problems exist in real estate sector nowadays. Unfortunately they cannot be properly tackled with. On the one hand, the real picture is not clear. On the other, the effects of the measures and policies aiming at the problems will be weakened. This may be largely due to enough precise information. Hence the information system must be erected to serve the management, development, research and others. It is a foundational work. If successfully done, it will benefit the industry immensely.

The set-up of the housing information system in Shanghai (as part of the real estate information system) ought to meet the following requirements:

(1) Comprehensiveness. The above mentioned real estate information system which is directed and supervised by the State Construction Department is a system which is more prone to problem-solving. It requires the collection of information in the areas that are in the vicinity of the

operation of real estate development.

- The data in commodity building pre-sale, real estate transaction, registration; the development (provided by the real estate management department);
- The data in real estate development project approval (provided by the economic planning department);
- The data in real estate development land (provided by the land management department);
- The data in construction land planning license, construction engineering planning license (provided by the urban planning department);
- The data in real estate financing (provided by the commercial banks);
- The data in real estate taxes (provided by the tax department);
- The data in real estate price (provided by the price department);
- The data in real estate development statistics and relevant macro-economic information (provided by the statistics department);
- The data in floating population (provided by labor department and public security bureau).

As a system aimed at servicing an influential market, the information gathered should be comprehensive. It should cover not only the sale information, but also the rent information. The first grade housing market, as well as the second grade housing market. The private housing market, as well as the public or quasi-public housing market. The popular multi-family condominium housing, as well as the detached family housing. The information system should be in a position to reflect the market as complete as possible, as detailed as possible.

(2) The regularity. The data should be collected in a regular time and regular way. The purpose of this requirement is to guarantee the accuracy and compatibility of the data. The establishment of the system is to help analyzing the situation, undertaking the research, making the policy and others, therefore the information is expected to be precise, punctual and compatible. In most cases, only the data could be compared, the right conclusion could then be induced.

(3) Localization. "The most significant forces of demand and supply in the real estate market are predominantly local." (Richard, 1949, p296) The real estate information system which the state department stipulates to set up is a national system. It envelops the whole country and is designed to suit the conditions of most of the places and reflect the general picture. Given that the real estate market is highly localized, Shanghai should set up its own housing market information system, an independent system which is well-matched with the national one. The same data may have different meanings in different places, in different period. Shanghai is in a unique position in China in many aspects. It is well advanced in economic term. So it is necessary to establish its own information system, its criteria in judging the development of the housing market. A web-based housing transaction system had been established in Shanghai. From early 2004, the Building and Land Resource Management Bureau somewhat compulsorily requires all the developers to register the sales information on this system. It is a step in the right direction. But it is not enough. More works should be done. Save the contents already available, the Shanghai housing information should add:

- The data of each urban district;
- The data of each ring-area;
- The standards of classifying high-priced housing, medium one and the low one,
- The data of non-resident housing purchasing;
- The definition of vacant rate;
- The definition of investment purchasing and speculation purchasing;

(4) Accessibility. The establishment of the information system is to serve the government, the research institutes and the whole society. So it should be an open, transparent system and it can also be gotten access easily. Only in doing so could the system be more valuable and meaningful.

This might be a hard task for the government which initiates and manages the system. Information open to the public is not the tradition of the Chinese government and its usual practice. So it requires the special endeavor and courage. With the development of the society, the government will do what the public want.

2. The creation of price management department.

Given the unreasonably high housing price and the importance of housing price in the economy and the society, the creation of real estate price management department is very much necessary and strongly recommended.

(1) The location in the governmental organization.

The main governmental department that is in charge of the real estate sector is Building and Land Resource Management Bureau. It covers a wide range of fields concerned and assumes the principle responsibilities in real estate management. More over, after more than two decades of direct involvement in the real estate management, it has accumulated rich knowledge and experience in the work. Real estate price management is closely related with the various works the department undertakes and needs the good cooperation and support of the existing sections. So it would be better both for the market and the government to set up the real estate price management section inside this bureau.

(2) The major responsibilities.

- To design and provide the appropriate forms for information collection;
- To collect the information in real estate price, especially housing price;
- To collect the information in real estate cost and profit;
- To edit and formalize the gathered information;
- To provide relevant data for the real estate information system;
- To publish the conducted data to all the parties concerned;
- To analyze the price data and undertake the research in real estate price;
- To submit recommendations for real estate price management;
- To submit and publish the reports in real estate price.

3. Governmental price regulation.³⁷

With the establishment of the housing information system and the specific price management section in the Building and Land Resource Management Bureau, the condition is ripe for the adoption of governmental price regulation in housing management. And it is supported by the theories. (Dong, 2005)

Every one agrees that the economic reform initiated two decades ago has brought enormous benefits to every Chinese. After tremendous effects by so many people, the market economy has finally taken its root in China. It is naturally to do everything according to the principles of market economy. Price regulation is the tool more used in the planed economy. Its adoption looks like against the general trend in the Chinese society nowadays. So it probably would be quite controversial to recommend the execution of the somewhat non-market-oriented economic measure to manage the economic activity. But it is necessary under the current circumstances and could be

effective to deal with the price problem in housing market. ³⁸

(1) Why is the price regulation necessary?

---- Housing is an extremely important commodity. It is not only an economic commodity, but also the social commodity. It is a living necessity, to most extent determining the life quality of the people. People pay every aspect to it.

---- The housing price is too high and in some years increased too fast. For most of the urban dwellers, the average housing price is substantially beyond their purchasing ability, and sometimes the price increase rate far overrun that of their income. The gap between the housing price and purchasing power becomes larger.

---- Too high housing problem, or bubble, could result in dire consequences. (Yi R.X, 2005) In economic term, high price inevitably attracts investment capital. Too much capital flowing into housing development produces “bubble” which would cause huge financial risk, the imbalance of the economic structure. This danger had been proved time and again around the world. In social term, the ever larger gap mentioned above would give rise to instability in the society.

---- The problem in housing price is a long time problem and brought about by many factors, ostensibly the immense demand, the imbalanced and opaque market and the inefficiency of government management. The demand should be properly dealt with. The developers will not solve the price problem by themselves. And the efficiency of government management could only be achieved by the government. All these require the government to deeply involve in the price management and take strong measures to correct the situation.

---- The immaturity, inefficiency and imperfectness of the industry and the market. Private housing market has a young history in China. In a little over twenty years, it developed from scratch to one of the economic pillars of the city and the nation. The short growing-up period always means that there will be many problems. Housing market is also inefficient. Alan listed the followings as the causes of market inefficiency: location, market segmentation, property as bundles of characteristics, infrequency of trading, economic change. (Alan, 1995) Another problem is that the housing market is quite imperfect. The supply of the market is largely non-market-oriented, while the demand is almost totally market-oriented. (Sun, 2004; Ye, 2005)

The housing markets are not perfectly competitive, chiefly because of the three sources of market failure: □ A housing unit is a differentiated product with few substitutes, which may confer some market power on owners; □ owners collectively ignore that, by putting extra vacant units on the market, they make the market thicker and improve matching quality; □ not only is the *search cost* high (which reduces the quality of matches in a thin market), but also a *search externality* exists, because searching households reduce available opportunities, increasing the search costs of others. (Alex, 1997)

May be we can add two more. The forth is strong position of developers in the market; the fifth is the asymmetry of information in the market. “Thus, decades of US-based research on housing market dynamics in the context of a market-dominant policy regime supports the ironic conclusion that the unfettered market cannot fully be relied on to deliver decent, affordable housing to the poor.” (George, 1996) It would be the same in China that it is very difficult for the market to routinely provide the ordinary-priced housing to the ordinary people. Some degrees of government intervention are effective and necessary. The urgency to depress the housing price was even showed in the Premier Wen’s “Annual Government Report, 2005”. (Qing, 2005)

(2) If the price regulation is feasible?

---- The establishment of the housing information system could be fundamentally benefit the practice of price regulation. We should say that price regulation is not doing its job according to impulse and passion. It is still constrained by rational principles. The policies are made on the comprehensive and reliable data, so are the measures taken. Hence the information system is vital to the success of the regulation management.

---- The creation of price management section at the Building and Land Resource Management Bureau. Price regulation is a serious matter in the housing management and the job is tough and heavy-burdened. Given this hardness, price regulation requires firm organization support, able man power, adequate financial means, fixed working place and others. An independent institution which is focused on the specific task of price management is definitely obligatory. The creation of price management section inside the real estate managing department suits well to this purpose. Therefore one of the most important tasks of the section is to undertake housing price regulation.

---- In Chinese long history, government had been playing very important roles in every aspect of the society. No matter people like it or not, and no matter it is right or wrong, it is the reality and the reality is in everybody's mind. Twenty years ago, China began to embark on the economic reform, and the market concept was introduced. The reform is indeed successful. But it is only twenty-something old. Free market has not been completely taken root in every fiber of the society. So if it is deemed indispensable and understood by most of the people and operated in appropriate way, people will accept it and support it. After all, price regulation will directly profit consumers, the numerous but weak group in the society.

---- Under planned economy twenty years ago, price regulation was a common practice. It encompassed every commodity. Several decades of strict price regulation was bad for the economy. But it made the government very familiar with the practice and the parties involved possessed rich knowledge in this enterprise. So price regulation is not an alien thing to the government. Actually in 1992 when the real estate industry began to take flight, the government made a price regulation policy and it is quite broad and meticulous. If that policy had been carried out seriously, the real estate would be under somewhat control and the housing price nowadays would not reach so high a level.

---- The practices of other countries. "In Britain, where the modern market economy was originated, as early as 1910s, faced with stern housing situation, the British government actively intervened into the housing market and took strong measures to allay the housing problem. The measures include the housing rent was determined by the local government, rather than by the landlords; the selling of some housing was under control." (Yin, 2004; li, 2005; Kim and Kim 2000) stated that "it (the Korean government) has relied heavily on direct intervention through various regulations in the housing and land market, of which the price control on new apartments has been the key ingredient."

(3) How to regulate the housing price? ³⁹

---- Making housing price index system. Given the importance and distinction of location in housing price, the area-index should be made, which means that the urban areas will be classified and each area has its own price index. The three big areas are the three ring-areas. In each ring-area, they are further divided into the sub-areas according to the recognized locations. Each sub-area and area have a corresponding price index. The housing price index system contains the indexes of multi-storey housing, the low-rise housing and high-rise housing, and all the indexes will be announced regularly and are open to everyone.

---- Reporting requirement. Before the start of the sales activity, the developer should first report the costs and the expected sales price of the impending housings to the price management department. The main contents of the cost reporting is the cost cash-flow table which must show clearly how the land fees are paid, how much the other costs and how the required own capital and outside loans are used. The department will check the table and the capital flow, and calculate the dynamic cost. And then the department will discuss the dynamic cost with the developer.

---- Price fixing. After the discussion and determination of dynamic cost, the price management department will set up the standard of profit rate. The suggested mean profit rate, say 20%, and a profit ceiling, say 50%, could be established. The developer will decide his own profit rate, constrained by the ceiling and add other fees to form the price. The final price should be approved by the government department.

---- Registration requirement. When the developer meets all the requirements for sale and is allowed to undertake the selling, all the sales information should be registered in specific forms, time and places designated by the price management section and is open to the public via Internet and other medias. The information should be accurate, on time and updated, especially that concerned with the price, the sold and the unsold.

---- Price adjustment. In the wake of the initial sale, the developer might need to adjust the housing price in the light of the changing market and his own business situations. It is permissible, but it must be done in accordance with the requirements set by the government. The price management department will stipulate the span of time when in this period the price must be kept stable, and the scope of price adjustment according to the movement of the price index.

(4) What are the possible impacts on the industry and on the market?

---- The developers will be depressed. The price regulation is aimed at regulating the behavior of the developers and they will lose a lot of privileges they fully enjoyed in the past like the manipulation of price, the asymmetry of information, the confusion of cost calculating, etc. They might no longer earn easy money. So the big question would be posed: in doing the price regulation, will the housing supply be severely affected? The answer may be “not”, because the price regulation does not prohibit the developers to get outside financing and the scope of the profit rate permitted is still rather spacious. The industry will not suffer a heavy blow and the supply will not reduce significantly.

---- The consumers will be mostly happy. The measure of price regulation will no doubt greatly benefit the housing consumers. The stability and restrained increase of housing price will make them to buy their desirous home more easily. But sometimes the negative impact may appear. If the housing project is excellent and many want to buy, due to price regulation, the queue would become very long and many will not have the lucky to get what they want.

---- The government will be calm. The carrying out price regulation will not have dire consequences on the housing industry, so it will not suffer heavy loss in income of land offering, in taxes collected. The worry might be that it assumes more responsibility of the development and prosperity of the industry and the market. What the influence of the coercive intervention in pricing on the long term prospect of the housing sector and on the society may be still a wait-and-see.

4. Property tax.

Property tax is a popular tax in many western countries. It is one of the most important

financial sources for the government. (Ma & Chen, 2004) But in China, there is no property tax. Before the introduction of market economy, all the real properties were owned by the state. So it was impossible to levy the tax. Now the private ownership of real property is widespread. In theory, the foundation for collecting the tax has been established. And it is reported that the government is considering to have a try. (Sun & Yang, 2004) To create a new tax is a hugely complex matter, and it is both time-consuming and results unpredictable. Yet the trend is that eventually the tax will be imposed and every body must accept it. One of the reasons why property tax is recommended now is that the imposition of the tax would expect to have an impressive impact on reducing the present high housing price. Lets briefly summarize the main advantages and disadvantages of the tax.

(1) The main advantages.

---- The reduction of housing price. It is the fact that land price occupies a lion share of the total housing costs, and therefore exerts a decisive influence on the housing price. The situation will get even sterner with the comprehensive adoption market-oriented land transferring. Through this market means, the only direction land price will go is upward. Looking into the components of the land price, the large part is for the construction of infrastructure and utilities of the city. This means that by land transferring the government collects the money, one-off, rather than the property tax doing so little by little in the whole life of the property, to build all the infrastructure and utilities to meet the demand of the development of the city. If the property tax is carried out, this big lump does not have the reason to exist and has to disappear. The disappearance will greatly reduce the land price, and hence reduce the sales price.

---- The stable source of revenue for the government. By market competition, the land transferring in most cases will result in the high land price and therefore brings large sum of money to the government. At present and in the foreseeable future, more and more local governments incline to or will resort on this financial resource and depend on the money to improve the city image rapidly. But the problem is that real estate development has its circle and history has approved that the circle was quite shocking in many times. When the industry was in depression, the land would be hard to transfer and the price would be heavily discounted. The somewhat violent change in the land price means that to government this resource is unstable. Property tax is collected year by year and it is influenced very little by the change of the economic situation.

(2) The main disadvantages.

---- The difficulty in calculating the tax. The collection of the property tax is based on the value of the property targeted. So it is vital to have the property value fixed. Devoid of the appropriate valuation of the property, the property tax cannot be calculated. The work of evaluating the property value is done by professional property evaluation institutes. The credibility of the work of the evaluation is founded on the credit of the institutes, the scientific methods they applies and enough qualified professionals. All of which are in serious short supply, particularly the credit and the reputation. It is difficult to get a mostly accepted value. So it is difficult to levy the tax.

---- The reluctance of the collector. The market-oriented land transferring in good times always brings huge sum of money to the coffers of the local governments. The money improves the financial condition of the governments and make them more relaxed in investing in the infrastructure construction of the cities, thus changing the urban image and creating more economic opportunities. If the property tax is levied, the land price will decrease dramatically. In a short term, the governments probably will face financial difficulties. So may be it is they who are reluctant to impose property tax.

5. The legalization of “cushion money”.

As explained before, “cushion money” is the construction fees and materials and equipment fees, mostly the former, the developer owns to the various contractors in the housing development process. The developer ought to pay the fees when the construction works are done and the materials and equipment are supplied. But he delays the payment to a later stage. So actually the “cushion money” is the loan provided by the contractors. This money is somewhat crucial to the developer in that it forms an important part of the capital-chain of the developer. Without it, in some cases, the capital-chain will become very stretched, and this is dangerous for the developer.

The problems which are evoked by the “cushion money” would bring on bad economic and social outcomes, such as the damage of the normal operation of the construction companies and other business sectors, the doubt crisis, the trouble-making of the contract workers and the so on. So all the time the government position is that “cushion money” is illegal and it should be banned.

The prohibition of the government policy did almost nothing to stop the practice. “Cushion money” exists all the places. The deep-seated reason of the existence of the “cushion money” is the over-capacity of construction. Over-capacity being there, it is impossible to terminate the “cushion money”. But it is also very difficult to chop off the over-capacity because most of the construction companies are state-owned and the scale reduction of them would cause terrible unemployment problem.

Given that the practice of “cushion money” is widely existed and accepted, and it is not possible to wipe it out under present circumstances, why not make it legalized? The legalization of “cushion money” would not lead to dire consequences because it already has stayed alive for a long time, rather it might have substantial contribution to the cost cut and price reduction.

The legalization of “cushion money” automatically means the legalization of the loan the developer receives. To the developer, the “cushion money” is the cost he should bear in the early construction period of the project. Now that it has been legalized, this cost is legally assumed by the contractors who provide the money and the developer is just relieved of the financial burden momentarily. If the project is proceeded normally and the sales income outstrips the costs the developer needs to stand, this cost (“cushion money”) is the complete minus to the total costs. So the costs of the whole project should be reduced. Considering that the “cushion money” is always a big sum, the reduction is quite noteworthy. The significant drop of costs could further increase the pressure to trim down the sales price.

□Summary. After the discussion of the previous chapters, it is possible here to answer why the housing price was lifted to such a high level and what could be done to deal with it. The answers are anything but simple. Housing price is decided by many factors, never by the developer or the speculation alone.(Shen, 2004) We could reach the conclusion that the housing reform helps to establish the market mechanism. At the same time it released the huge demand for housing; the nature of housing naturally indicated that housing price poises to be high; the project company pursues the short term goals, so it does everything it can to get a high price; the housing development model puts the developer in such a dominant position in the process that he could ignore the factors that could reduce the price and takes full advantage of those that push the price up; the practices of pre-sale and cushion-money are in favor of developer and they create the conditions for price reduction. But they failed to achieve the effect; the development costs are usually known as

the static costs. If they are calculated as dynamic costs, they could be dramatically cut to 54% of the static costs; the housing demand is various and sturdy, but the supply is limited by the resources. This is the basic reason for the price hike; the lax policy in financing does not offer any stir to the price decline; the competitive pricing method puts aside the cost factor and stimulates the price; the organization of the government bodies concerned is divided. The departments are devoid of the neutrality and authority to effectively manage the market. And the policies they made were destitute of long-time consideration and strategic planning. As for the recommendations, considering that the government is so powerful and many of the problems are more or less interconnected with it, this paper strongly favors the idea of government intervention. □

Notes

1. The policy permits the privatized public house to trade in the private housing market. But in reality this kind of housing is in majority for dwelling. Only a small fraction of it were put on the market (second-hand market).
2. The date comes from the website "www.54hr.com/brow.asp?id=10618".
3. In Shanghai the most popular form of build for urban dwelling is multi-family housing, or may be called condominium, where many families live in the one building. The condominium could be low-rise building as well as high-rise one. Here the buildings the campaign deals with are only low-rise condominium. Most of them were built flat-roofed with the gradient less than 5/1000. Now an additional slope-roof will be put on the buildings.
4. The roof-change of the buildings is the important part of the engineering works. But in fact with the conducting of the campaign, there are other works to do. Actually it is a "comprehensive alteration" which also includes the works of indoor facility renewal, the improvement of the environment of the residential quarter. Henceforth after the works finished, the living conditions will be upgraded comprehensively.
5. Shanghai newspaper "Jiefang Daily", 15-09-2004.
6. The mother company is referred to as the company which initiates the project and which then acquires the land and the government approval to develop the project. The initiating company could be one company or the combination of several companies.
7. The approval of the project establishment by the government means the project has been listed in the construction plan of the city. This is only the one step, although essential one, in the long process of government consents. After that there will be planning approval, construction approval, etc.
8. The government requirements for the establishment of the project company is less strict than the comprehensive real estate development company.
9. In many occasions the project company will naturally be changed into the facility company to manage the community. This practice is popular in Shanghai and in Shenzhen and it is also necessary in that some parts of the property may belong to the developer in a long time. It also benefits the residents, at least in the beginning, because the so founded facility management company is familiar with the development process and possesses the necessary recourses. Of course, in some cases, if the mother company has another project to develop just after the completion of the present project, the project company may move to another place to continue the work. But it rarely occurs.
10. The department which is in charge of the engineering works is always the largest department in the real estate development company. Of course there are other departments. Yet they are small compared with the engineering department.
11. As of the concept of the model in real estate development, it could include the general development model and the specific development model. The former is essentially the macro-model that indicates the spatial strategic development of the company. For example, the "regional model" is referred to that the company does business in many regions of the country, while the "provincial model" being within the province and the "city model" being

confined in the city. The latter is a micro-model that could be divided into the “product model”, which means that some companies may develop a series of different properties from high-end to low-end, whereas other companies may focus only on developing high-valued property, or some develop housing, as well as commercial property and others, and some only focus on one kind of property, and the “construction model”, which summarize how the project is processed and what are the relationships between all the parties involved. It is the model which this section discusses. Among the three models here mentioned, the “general development model” and the “product model” had been discussed in the industry widely and frequently. The “construction model”, however, appears to be neglected. This creates difficulty for the analysis.

12. In Shanghai and Shenzhen there are few market research companies which are solely engaged in real estate research. Their business scope encompasses wide areas. But real estate research is an important part of the business if the company covers the field.

13. “advance involvement” is the new requirement for the exercising of facility management. It differs from the traditional practice that the facility management starts its work only after the dwellers move in. Rather, it will begin its work when the property development is still in progress and the company will put forward its recommendations to the developer concerning the future facility management to prevent the problems in advance, thus to make better the prospective facility management works.

14. If the project is developed by the project company (as is the case mostly this paper deals with) and the project company is named developer, strictly speaking, the first two steps might be finished by the investment company or companies, for at that time the project company has not been erected. In this case, the developer in the graph could be called “mother developer”.

15. The model only includes the parties directly involved in the development process. Indirectly participants are excluded.

16. If the housing is sold through the marketing company, he will charge the commission for the sale. But this fee could hardly be classified as distribution cost, because it could be recognized as one part of the marketing cost of the developer.

17. <http://www.logisticschina.org/>

18. <http://www.jutailong.com/chs/i0.htm>.

19. Of course, the execution of pre-sale is under the requirements set by government. The requirements are different in different cities and in different times to adapt to different conditions.

20. It is clear that “cushion-money” is detrimental to the construction companies and to the entire economy (in Shanghai and Shenzhen construction industry contributes a lot to the local GDP) and the origination of the problem is the over-supply of construction capacity. So the obvious and effective solution is to cut the capacity with no matter what the means of market force or government intervention. Not so simple. The detailed discussion of this issue is beyond the scope of this paper. But shortly put, there are two reasons. One is that most of the construction companies are state-owned companies. The other is that if the capacity is cut down, how to do in booming times?

21. The rates of the taxes had been changed over the time. It is not possible to list all the numbers in the past two more decades. But the change is small. The figures listed are the latest ones.

22. The rates of the costs recorded in the paper are certainly the estimated ones based on the numerous reports in the media, on the commonly accepted knowledge in the housing industry and on the first-hand working experience of the author. It is impossible to get official figures. To simplify the matter, the tax is excluded, considering that the amount is small and it is heavily evaded in the reality.

23. The costs payment and methods are the example occurred in Shanghai.

24. This paper is principally based on the practice of market-oriented land transferring. If the land is not granted in this way, as it was always the case in the past, many things will change. With regard to the infrastructure construction

fees, it is hugely different which method is implemented. The fees are made of two parts. The first part is for the fees incurred within the “red-line”, the second outside, and the second one is much bigger than the former one. If the land is transferred through market method, the land price embraces the second part, so the fees are only referred to as the first part.

25. The technique of “present value” is not involved.

26. The lengths of the cash-flow-out lines and of the times of each development step on the housing development process line are not proportionate.

27. In reality, some of the regulation concerning sale are ignored. The sale can be started only after the pre-sale approval. But many methods are invented to go around the restriction. One of the methods which is so widely used by the developers is so called “internal purchase” which means buying the house through internal channels like the employees, the friends, etc.

28. The presumptions are made under normal development conditions and based on a medium-sized project or one phase of the multi-development project in Shanghai. If the costs incur in a period of time such as the management fees, the costs of every month is the average value of their whole costs, except for the marketing fees which are not even in the period. Here we presume that 80% of the costs incur in the first 12 months, the remaining in the next 5 months.

29. “Marketing control” is the method the developer employs to raise the housing price. The developer will put specific amount of housing units in controlled pace on the market. The aim of doing so is to create intentionally the atmosphere of short supply and, hopefully, the price will be pushed up eventually.

30. The profit rate of 20% in housing development is widely talked about in the industry and it seems almost a semi-official figure.

31. This figure is based on the author’s working experience in a large real estate marketing company for two years.

32. One factor is saliently omitted in the cash flow analysis. That is the bank loan upon which the developer is heavily depended. In financial term, it is the debt for the developer. But it is a cash flow in. Considering that, in China, maybe it could be said that bank financing is not so much an economic behavior as a political one, and this kind of financing is disparate, this factor is elided.

33. All the data in this section are from Statistics Bureau.

34. From 1993 on, the city has experienced 11 years of minus population increase. So the ten-million plus population has been for a long time.

35. Living area is only referred to as the area of bed-room, excluding living room, kitchen room, toilet, pass way, etc.

36. One tenth of the combined population of the two provinces in 2000.

37. Governmental price regulation in housing market is a big and very complicated issue. A lot of works require to be done. Here it is just a preliminary discussion.

38. It should be noted that the measure recommended here is applicable for limited cities like Shanghai, Hangzhou, not for most of the cities in China. The situation varies widely from city to city, so price regulation might be inappropriate in many other cities.

39. It only deals with first-hand multi-family private housing in Shanghai.

Chapter eight: The conclusions

This paper deals with the empirical study of housing price mechanism in Chinese housing market, primarily from the prospective of housing industry. Given that the Chinese housing market is very complicated and covers broad areas, the scope of the paper is limited merely in the private first-hand housing market of the two Chinese cities, Shanghai and Shenzhen, and the research target is concentrated on the multi-family apartment building, the most popular form of residential property in China. By undertaking the detailed investigation and research into the housing price mechanism, the paper will try to answer three basic questions, i.e., if the housing price is too high, why it is so high and how to tackle this price problem. The focus of the research is on the former two.

The conclusions of the research are as followings.

1. If the housing price is too high?

This question is the foundation question on which the research bases. The answer of it will decide the fundamental value of this research. And the answer is yes.

The concept and practice of real estate business were introduced into China, mainly from Hong Kong and southeastern Asia regions, a little more than two decades ago, a result of the overall economic reform. In such a short time period, the real estate industry experienced a phenomenal growth. Twenty years ago, it was in non-existence. Twenty years later, it contributes 3% of the GDP. The rapid development of real estate market changes the Chinese cities and the urban citizens tremendously, especially obvious in the two cities this research touches. Due to the fact that housing industry plays a leading role in the real estate industry, the great contributions the real estate industry made could be largely credited by the housing industry.

Housing market is very important to the people's living, to the economy and to many other sides of the society. And with the favorite conditions and development such as the increasing purchasing power of the people, the encouraging government policies and the unstoppable urbanization drive, a bright future for it appears to be guaranteed. But there are many problems in the market. They include the price problem, the normalization problem, the structure problem, the vacancy problem and the law problem. This paper is specifically aimed at the price problem.

So what is the price problem? The problem this paper primarily concerns is that the housing price is too high. The housing price is unreasonable and unaffordable for the ordinary urban dwellers in Shanghai and in Shenzhen.

There are some arguments about whether the price problem is really existed and its seriousness. In order to prove the existence and gravity of the problem, four indexes are applied. They are the ratio of housing price to household income (R-HP/HI), the ratio of housing price to disposable household income (R-HP/DHI), the ratio of down payment to disposable household income (R-DP/DHI) and the ratio of monthly installment payment to monthly disposable household income (R-MIP/MDHI). Partly using the official statistic data and partly the neutrally gathered and reliable information, we can calculate these four ratios.¹

---- In Shanghai:

$$R-HP/HI_{sh} = 17.5$$

$$R-HP/DHI_{sh} = 19.9$$

$$R-DP/DHI_{sh} = 7.7$$

$$R-MIP/MDHI_{sh} = 1.4$$

---- In Shenzhen:

$$R-HP/HI_{sz} = 13.4$$

$$R-HP/DHI_{sz} = 14.4$$

$$R-DP/DHI_{sz} = 4.5$$

$$R-MIP/MDHI_{sz} = 0.84$$

The figures illustrate that for the ordinary urban family, if it wants to buy a new house, the price of the acceptable one is 17.5 or 13.4 times of the yearly whole income and 19.9 or 14.4 of the disposable income of the household; the down payment is 7.7 or 4.5 of the disposable income of the household; the monthly installment payment is 1.4 or 0.84 of monthly disposable income of the household. So we can arrive at the conclusion that the housing prices in the two cities concerned are too high and they are beyond the reach of ordinary people. Relatively speaking, the situation in Shenzhen is better than in Shanghai. But it is still not good.

At present, people usually employ only one ratio, R-HP/DHI, to evaluate the housing price level. Although this is a meaningful criterion in judging the housing price and accepted by all the parties, it is not enough. In order to comprehensively test the price problem, the above four indexes are recommended, particularly the two ratios of R-HP/DHI and R-MIP/MDHI. If these are unsatisfactorily elevated, the housing price is a problem.

Given that the index of R-HP/DHI is so widely recognized and the range of 3-6 is considered as the acknowledged standard, the paper then tries to count the appropriate number of R-HP/DHI which could be used to judge the price level in China. This number is around 10. Thus instead of the 6 as the ceiling of typical housing price affordability ratio in the world, in China, the situation may be different. The Chinese standard might be higher than the world one.

Interestingly, the formula of R-MIP/MDHI can be used to produce other results. If it is

transformed, we can build the relationships between the ratio of the monthly installment payment and the housing price, between the ratio of monthly installment payment and the ratio of housing price to disposable income. The former connection is:

$$P = (R_{IP} \times DI) / (C \times R_{DP})$$

P---housing price

R_{IP}---ratio of monthly installment payment to monthly disposal income

DI---monthly disposable income

C---installment coefficient

R_{DP}---down payment rate

While the latter one is:

$$R = R_{IP} / (R_{DP} \times C \times 12)$$

R--- ratio of housing price to disposable income

R_{IP}---ratio of monthly installment payment to monthly disposal income

R_{DP}---down payment rate

C---installment coefficient

DI---monthly disposable income

P---housing price

DI'---yearly disposable income

* yearly disposable income is changed into monthly disposable income.

We can use these two formulas to easily calculate the desired housing price and the well-admired ratio of housing price to disposable income by fixing the rate of monthly installment payment.

The various ratios and calculation methods discussed here are served to answer the question of housing affordability. With regard to this issue, it is noteworthy to explain a little bit more about three prices. One is the first-hand housing sales price. The second is the second-hand housing price and the third is the housing rent price.

All the calculations conducted in this paper are closely related with first-hand housing sales price. But what price should be adopted? Of course, the city's average housing price gives out important message. However, considering such a big housing market and disparity of housing prices in the big cities like Shanghai, this figure is too general and vague in demonstrating the issue of affordability. Every one talks about the importance of location and the location does represent the living quality. The location and affordability should be linked together. In this paper, the location housing prices had been collected and they were used in the calculation to show more clearly the problem of housing affordability.

As for the other two prices, because they are beyond the scope of this research, they are not involved in the calculation. But it must be pointed out that if there is a complete discussion of housing affordability, they must be engrossed. This is the task of further research on this matter.

2. Why is the housing price so high?

Actually the bulk of the paper is devoted to answering two questions: why the housing price is so high and whether it should be so high. In probing the causes of the price problem, the research is undertaken in the field of the price mechanism of the housing market and, because of the relatively abundance of the data and others, the work is conducted chiefly from the perspective of housing

industry.

The housing price problem is not a new problem. It had existed for a long time. Additionally the housing price is also tightly related with the housing market, which has become more and more massive and complex. So the origins of the problem are very intricate and deep-rooted. The previous researches had attributed the high housing price to: rising prices of materials and other inputs; administrative inefficiency; unjustified levies in the form of various fees and costs from local governments; the unfamiliarity of real estate agents with the business; the exploitation of market power by sales agencies; and non-standard treatment of land rent. (Chen, 1996) This paper instead tries to explore the reasons why the housing price is so high by thoroughly investigating the nature of the commodity housing, the housing development process, the housing cost structure, the housing price-setting and the governmental housing management mechanism. The findings of the investigation are as followings.

(1) The nature of the housing commodity.

Under the system of planned economy, the housing is the state's welfare product, not a commercial commodity. With the progress of the economic reform, housing changed the status dramatically to one sort of important merchandise. The housing industry was born and grew up explosively, and the private housing market was created and expanded exquisitely. The fast development of housing industry and market brought great benefits to the people and the society as a whole. It at the same time also carries with the outcomes of the concept-establishment of profit-pursuing of the manufacturers and the huge relieve of demand. And these inevitably led to the result of high housing price.

The natural characteristics of the housing commodity also contribute to the occurrence of high price. Here we talk about the housing features of the high valuation, the immobility, the durability, the heterogeneity, the dualism and the synthesis. Housing is understandably an expensive commodity because the land it occupies is very expensive and to produce it, a lot of materials and manpower are involved. The immobility and the long durability of the housing tell the fact that in that it must stick firmly to the particular place, so it must consume the precious resource of land for a long time and a large area. The characteristic of heterogeneity of housing shows that housing must be made individually and the manufacturing cannot benefit from the fruit of cost saving brought about by the modern invention of mass production. More over, housing is also an amazing dualism commodity. The combined natures of both a life necessity and a popular investment instrument make the housing full of potential in term of value-maintenance and value-increase. All these outstanding traits make the housing commodity a high-priced goods.

(2) The housing development process.

□ The project company. In China, there is a special form of company which is in a conspicuous position in housing development. That is so called "project company". This sort of company has been playing the very important roles in housing development, in fact in the whole range of real estate developments, almost from the bud of the industry. Simply put, the project company is the kind of firm which is created primarily and specifically for completing the housing project concerned and after the completion of the project the company will be cancelled. The creation of the project company is due to the factors that the real estate industry is very young, the government policies being awfully capricious, the built-in land function and unique large-scale outsourcing in the development and the legacy of the past planned economy. The project company possesses such a series of characteristics like the provisionality, the small scale and the flowability that it

predictably inclines on behaving nearsightedly and takes the profit-pursuing as the sole target, therefore it helps to push the housing price higher.

□ The housing development model. We can roughly categorize the housing development process into seven steps, i.e., investment decision, land acquisition, government consents, project preparation, property construction, property marketing and facility management. It is a long and arduous process. In China, this process is to most degrees totally operated and controlled by the developer. We may call this the Chinese model. The development model has at least three outstanding features: the dominance of the position of the developer, outsourcing of the main development tasks and the unique product distribution method. By analyzing the features, we should say that they are able to raise the price, but also to depress it. The monopoly-like position of the developer in the housing development process and in the market gives him enough power to set price without needs to pay heed to other parties. The outcome of this is the high price. But his strong position also render him the muscle to reduce the costs by creating competition environment and impelling the various contractors to lower the prices of their supplies. The cost-squeeze could also happen if the other two features were better implemented. Unfortunately the reality is that the developer only uses his power in pushing the price higher and greatly stifles and ignores the factors of cost-saving. This is wrong.

The impacts of housing development model on the housing price are apparent. The Chinese-model mentioned above could be called the derivative of HK-model. Given the different conditions in different countries, there should be copious housing development models around the world. If other models can be compared, discussed, and analyzed, the influence of Chinese-model on the housing price could be more thoroughly exposed and better understood.

□ The pre-sale and the “cushion-money”. Pre-sale is the practice that the housing project is allowed to sell the unfinished products before they are fully completed. This conduct is the upshot of the pressure on the government to facilitate the development of the city and the living standard of the dwellers. It is salutary to the government, as well as to the housing developer. The biggest advantage of pre-sale for the developer is that it greatly allays the tightness of capital-chain which is vital to the success of the housing project. By pre-selling the housing, collecting a huge sum of money, the developer can sustain the capital-chain happily. So in essence this policy assuages significantly the financial strain of the developer.

“Cushion-money” is truly the costs the developer needs to pay to the contractors who are in the project construction, yet he delays the payment to the later stage. Thus this money is the interest-free, constrain-free loan the contractors provide to the developer. With this loan, the developer’s capital-chain will get more loosed and the costs of the project further cut down.

Thus the pre-sale and the “cushion-money” could help the developer to lighten the pressure on the capital and reduce the costs of the project. They could play the trick. But this advantage the developer enjoys does not at all translating into lowering the sales price of the housing. This is also wrong.

(3) The housing costs. Because the housing costs are somewhat different in different cities, we here discuss the cost-issue which occurs in Shanghai. The composition of the housing costs can be classified as the development costs, the period fees, the taxes and the profit. Among them, the development costs have the lion share in the whole costs and the most important items in the development costs are the land acquisition fees, the construction fees and the utilities fees.

If all these costs are put together, the combined figure is the total cost. This cost is the static

cost and it is used as the true cost of the housing. But this is not the case. The cost which more truly reflects the authentic expenditure in the housing development procedure is the dynamic cost. The dynamic cost is the cost calculated based on the cash flow of the costs and the income and it endeavors to reflect the actual money the developer really pays out and the real costs he bears. From the analysis of the housing development process, we can see that the developer enjoys many favorable conditions. And he has ample opportunities to reduce the sales price because the costs are in fact cut down. But he did not do that. So it is necessary to reveal the truth.

In calculating the dynamic cost, the timing of pre-sale is essential. Before the pre-sale, the developer is in the position of net payout. When the pre-sale begins, the income will flow in and usually it is enough to compensate the costs he must pay. So under normal circumstances, the costs prior to pre-sale are the true costs the developer bears and these costs are 63.2% of the total costs, i.e., the total static cost. If the “cushion money” is legalized and it is regarded as cost-saving, the true costs will become 54.08%. So the introduction of the calculation of dynamic cost could be capable of reducing nearly 46% of the costs.

The computations of the static cost and the dynamic cost could also be applied to calculate profit rate of housing development which is one of the hot and very puzzling topic in the professional circle. In the example of chapter seven, the profit rate on static cost is 20%. But the profit rate on dynamic cost is rather astonishingly 122%, more than 6 times of the former. And the fact is that it is the true profit rate.

The calculation of dynamic cost excludes the issues of debts the developer procures from outside sources, like the bank loans, the trusts, the stock-issuing and so on. How to absorb these factors into the counting of the dynamic cost and the static cost is the task of further studying.

(4) The setting-up of housing price.

In setting up the housing price, many factors exert their influence on it. These include the macro-factors, as well as micro-factors. And the means of project financing and the methods of price setting are also very important. With regard to the macro-factors, we talked about the influences of the supply-side, the demand-side, the market investment and speculation, the government’s urban policies and the third-grade market of real estate. The supply-side wields its power through land supply and housing supply. If the land supply is abundant, the housing supply will be increased, the housing price therefore will drop. In chapter 7, the land reserve system was discussed. By tightening control of the land first-grade market, the government hopes to make the housing market developed in a measured way it desires and to stabilize the price. This is actually one measure of government land use regulation. “...land-use regulations can cause the bottom of the housing market to malfunction, and that to restore the equity, they need to consider subsidizing those harmed by the malfunction.” (Stephen and Richard, 1996) The impacts of this system need to be further studied. In Shanghai, in recent years, the housing supply has been short of demand, although not so severe. But this shortage of supply supports the fact that the housing price has been rising. In the market, the demand could be divided into three forces, the local residents, the groups from surrounding areas and overseas. Among them, the locals have a share of 75.7%. So no matter what the arguments are, we should put the local residents as the priority target to try to find their demands and to meet them.

The investment and speculation in Shanghai housing market is another hot topic. It is really a difficult question to answer, because the reliable data is so scarce and it is almost not possible to distinguish the two. Both housing investment and speculation have their positive impacts on the

housing market. But the drawbacks are also not negligible. In 2003, the housing price in Shanghai had a big increase. Based on the information procured from a government survey, we calculated the exact impact of speculation in the increase rate. Under the normal conditions, the number tells us that the influence is significant (contributing 17.6% of the increase). However it is not so decisive. The problem is that we cannot calculate the exact influence of psychological impact of housing speculation on shoving the price, which appears quite tricky. With regard to the demand impacts on the high housing price, the research in western countries delivered an astonishing result that “the housing market apparently behaves in a paradoxical manner. When house prices are rising, demand appears to rise, and when prices are falling the converse appears to be the case.” (Mark, 1996) Is it the case in China? Further researches are needed.

The government’s urban development policies are very important to housing price too. The urban regeneration campaign creates huge housing demand. The pre-sale policy increase the supply substantially. And the financial policies also exert the influence on price through various means. The influence of third-grade market is another interesting topic. The impacts are expressed in three places. The first is that it creates another choice for home buyers, thus it decrease the demand for second-grade market. The second is that, for many, by selling the old houses in the third-grade market and but new ones in the second-grade market, the demand for second-grade market is increased. The third is that the well developed third-grade market will constrain the price increase in the second-grade market. How these factors are functioned is the topic for further research.

As for the micro-factors, the issue of location is to some degrees the issue of land price. In essence the main reason why the good location could ask for good housing price is that the land price of good location is good. The relationship between the housing price and the land price is measured in the ratio of the two. Table 5-10 tells us that the ratios in general become larger with the worsening of the location. The decrease rates of land prices are bigger that that of housing prices with ever enlarging of the distance from the city center. The inherent features of the property also have their impacts on the housing price. The prices of the houses with good directions and stories certainly are higher than the bad ones. The relationships between the plot ratio and the coverage ration and the housing price are: firstly, the relationship between plot ration and coverage ratio is linear; secondly, the relationship between plot ratio and unit sale price is a downward curve. The increase of one leads to the decrease of the other; thirdly, the relationship between plot ratio and unit sale price is the same as the second one. The scale of the housing project is related with the housing price too. Thanks to the economics of scale, the big projects clearly enjoy the advantages of cost saving. Considering that the so called big-project in recent years was in the rage, these projects should had a dent on price increase in the housing market with their cost and price advantages. But unfortunately the fact is that in many cases the prices of the big-projects were not lower than the others, even higher by charging the self-imposed “brand premium”. This is another example of the developer’s greed.

The influence of project financing on the housing price is a matter seemed neglected by many. It is claimed in Shanghai, the same in China, that as many as 2/3 of the capital the housing project needs comes from outside sources. Given that housing financing is very poorly developed in China, the financing is overwhelmingly the loans from the commercial banks. They include the land loan, which is used to purchase land; the development loan, which is a short-term loan and used to support the daily operation of the project and the project is the security of the loan. For the developer, if he sets the price high, the value of the project gets high, and then he obtains more loans. The mortgage

loan is for housing purchasing, it increases demand. Another source of project financing is “cushion money” which is provided by contractors and it could be used to reduce cost. The project financing is actually playing the role of helping the developer to undertake his business. So it enhances the housing supply. Given the importance of it, if the policy is turning to tighten the financing, the supply will be affected and the price will eventually go up.

The above discussion tries to answer the question of how the price is set and how the price is set high? The fundamental reason is that in the housing market the demand has been overrunning the supply in all the times. We do not have the data to directly prove the claim. But by explaining the limit of supply capacity in the fixed period and the much more robust demand capability, we could come to the conclusion that the high housing price is plainly the reflection of the basic market condition that demand consistently outdoes supply. Another reason is concerned with the housing project financing. If everything is conducted according to the normal economic rules, the financial pressure of debt will press the developers to improve the efficiency, to reduce the costs, to strengthen the competition capability and the likes. But the actual situation is that the loans are procured through personal relationship and the developers therefore are not hurrying to return, or never desirous of paying back. Under this circumstance, the situation becomes hard to discern. One outcome might be that the housing price remains high if it is already high.

And the simple price setting method of competitive pricing in the housing industry does not help to reduce the high price either, to the larger extent. Being that the new prices are fixed mainly according to the competitive projects will keep, if not increase, the high price still high.

(5) The government management. Government has been playing extremely important roles in the Chinese history and its influence is not at all vaguely perceived in every corner of the society. The housing sector is thence under tight control by the government. Pitifully the fact has proved that the firm control is inefficient and does not produce the good results, at least in the aspect of housing price. The present severe housing price problem is fairly blamed on the malfunction of the governmental management. The failure of the governmental price management is exhibited in two facets. The first one is that in the government organization structure there is no one section which manages specifically the matter of housing price. So when the problem appears it cannot be properly and promptly tackled. The second one is that the government did not make apt policies to curb the too rapid price increase, rather the high housing price was truly the upshot of some influential policies in the field of land transferring, in mortgage, in market convergence, etc., and it did not take enough cautious measures to diminish the possible impacts of those policies in pushing the housing price upward.

3. How to tackle the price problem?

After delivering the answers to the questions of whether the housing price is too high and why it is so, naturally the next question is how to do something to tackle it. As mentioned before, this paper puts much more emphasis on analyzing the former two questions. The last question is just curtly discussed. The comprehensive study of the possible solutions to the price problem is the task of another dissertation. Here several recommendations which are considered worthwhile and effective are given.

(1) The set-up of housing information system. One of the basic principles of modern science is that the research should be undertaken based on reliable data. Unfortunately modern science was not born in China. Thus this principle is always disregarded there. It is very clear that the management

of housing market cannot be fulfilled without the support of comprehensive and precise information. The government has become conscious of this issue and thus eagerly promotes the establishment of the information system. This is very right. The set-up of the system in Shanghai should also pay attention to the four issues of comprehensiveness, the regularity, the localization and the accessibility. With the creation and improvements of the housing information system, the housing sector will have a good opportunity to develop in a rational way.

(2) The creation of price management department. Considering the vitality and complex of the matter of housing (or the better real estate) price management, an independent government department which is specifically focused on housing price management must be erected. If a strong hand in housing price administration is needed, the creation of a powerful department is very much indispensable. The price management department is better set inside the Building and Land Resource Management Bureau as a normal function section and in charge of the responsibilities of price monitoring and regulating.

(3) Governmental price regulation. This management method is staunchly recommended by this paper. May be governmental price regulation is an arguable suggestion and not welcomed by many. But this paper insists this is a good method because it is necessary, possible and applicable.

The necessity.

- Housing is an extremely important commodity.
- The housing price is too high and in some years increased too fast.
- The unreasonably too high housing problem could result in dire consequences.
- The problem in housing price is a long time problem and brought about by many factors.
- The immaturity of the industry and the market.

The possibility.

- The establishment of the housing information system.
- The creation of price management department.
- The important roles played by the government.
- Price regulation has its historic root in Chinese economy.
- The practices of other countries

The applicability.

- Making housing price index system.
- Reporting requirement.
- Price fixing.
- Registration requirement.
- Price adjustment.

The expected impacts of the governmental price regulation. This is a tough issue and a lot of researches should be conducted to study the possible impacts of the measure. But we can say that in general in a short period of time the outcomes of the regulation are in favor of the demand and not for the supply, in that the consumer could enjoy the relatively stable housing price the developers will be regulated in their pricing monopoly. This may be the picture of the short-run. The long-run impacts are not clear. The regulation policy is aimed to benefit consumers. It might, however, harm them eventually. "...most research reveals that rent control helps renters in the short run, but hurts them in the long run by making rental markets less efficient and by reducing the number of available rental units." (Fallis and Smith, 1984; Linneman, 1987; Murray et al., 1991) Price control in rental market in long term is probably harmful to the customers. Is it so in selling market? Is it so in

Chinese housing market? The solution could be that the price regulation is a short time measure and it must be reviewed and modified according to the new development.

(4) Property tax. Property tax is a common tax in western countries. But not in China. With the aim of reducing the present high housing price, property tax may be helpful. It does the trick by reducing the land price significantly. The problem is that it might be just the tax collector, i.e., the local government, which is reluctant to impose the tax because the imposition of the tax will reduce the huge income brought about by the land transferring promptly. Another problem is that it is very difficult to evaluate the value of the various properties. And there are even arguments that property tax may indeed increase the housing price. Further researches should be taken to better understand the impacts of the tax.

(5) The legalization of “cushion money”. In theory, “cushion money” is not lawful. Yet it is widely accepted and practiced. It is the reality and it did not lead to serious problems as the government fears. The important point is that “cushion money” is created by the construction market, so the solution should also come from that market if we respect the market. The legalization of “cushion money” would not cause troubles, rather it will help to cut the construction costs saliently.

The followings are the sum-up of the chapter.

Is the housing price too high?	
The answer is yes, because: #	
In Shanghai:	In Shenzhen:
R-HP/HI _{sh} = 17.5	R-HP/HI _{sz} = 13.4
R-HP/DHI _{sh} = 19.9	R-HP/DHI _{sz} = 14.4
R-DP/DHI _{sh} = 7.7	R-DP/DHI _{sz} = 4.5
R-MIP/MDHI _{sh} = 1.4	R-MIP/MDHI _{sz} = 0.84

Why is the housing price so high and whether it should be so high?

The high price is caused by assorted factors and it could be reduced.

- (1) the housing reform helps to establish the market mechanism and it released the huge demand for housing;
- (2) the nature of housing naturally indicated that housing price poises to be high;
- (3) the project company pursues the short term goals, so it does everything it can to get a high price;
- (4) the housing development model puts the developer in such a dominant position in the process that he could ignore the factors that could reduce the price and takes full advantage of those that push the price up;
- (5) the practices of pre-sale and cushion-money are in favor of developer and they create the conditions for price reduction. But they failed to achieve the effect;
- (6) the development costs are usually known as the static costs. If they are calculated as dynamic costs, they could be dramatically cut to 54% of the static costs;
- (7) the housing demand is various and sturdy, but the supply is limited by the resources. This is the basic reason for the price hike;
- (8) the lax policy in financing does not offer any stir to the price decline;
- (9) the competitive pricing method puts aside the cost factor and stimulates the price;
- (10) the organization of the government bodies concerned is divided. The departments are devoid of the neutrality and authority to effectively manage the market. And the policies they made were destitute of long-time consideration and strategic planning.

How to tackle the problem?

The possible measures are:

- (1) The set-up of housing information system

(2) The creation of price management department

(3) Governmental price regulation

(4) Property tax.

(5) The legalization of “cushion money”.

R-HP/HI --- the ratio of housing price to household income;

R-HP/DHI --- the ratio of housing price to disposable household income;

R-DP/DHI --- the ratio of down payment to disposable household income;

R-MIP/MDHI --- the ratio of monthly installment payment to monthly disposable household income.

THE END.

Notes.

1. If, for one index, there are severally different results, the figures listed below are basically the mean number.

Appendix 1--- The calculation of the housing prices in three-ring areas in ten districts of Shanghai.

--- Yangpu District:

□ Inner ring:

<i>Peace Garden South</i>	8000 ¥/m ²	(high-rise housing)
<i>Shanghai Grand Garden</i>	6500 ¥/m ²	(low high-rise housing)
<i>Henglian Garden</i>	6700 ¥/m ²	(multi-storey and low high-rise housing)

The average price is 7067 ¥/m²

□ Middle ring:

<i>Zhongtong Apartment</i>	6500 ¥/m ²	(high-rise housing)
<i>Zhongxuanli Garden</i>	5600 ¥/m ²	(low high-rise housing)
<i>Pinshen Garden</i>	6500 ¥/m ²	(multi-storey and low high-rise housing)

The average price is 6200 ¥/m²

□ Outer ring:

<i>Minhe Garden</i>	4500 ¥/m ²	(low high-rise housing)
<i>Shihe Garden</i>	3775 ¥/m ²	(low high-rise housing)
<i>Sun Garden</i>	3900 ¥/m ²	(multi-storey and low high-rise housing)

The average price is 4058 ¥/m²

--- Hongkou District

□ Inner ring:

<i>Zhonghong Building</i>	8500 ¥/m ²	(multi-storey and high-rise housing)
<i>Ruijia Garden</i>	9200 ¥/m ²	(high-rise housing)
<i>Shibo Garden</i>	7400 ¥/m ²	(high-rise housing)

The average price is 8367¥/m²

□ Middle ring:

<i>Hongliang New Garden</i>	6000 ¥/m ²	(multi-storey)
<i>Menhu Garden</i>	5800 ¥/m ²	(multi-storey)
<i>Kaiyang New House</i>	6500 ¥/m ²	(low high-rise housing)

The average price is 6100 ¥/m²

□ Outer ring:

<i>Fenghua Home</i>	5900 ¥/m ²	(low high-rise housing)
<i>Hongkouxu Garden</i>	5800 ¥/m ²	(low high-rise housing)
<i>Liangchen Meijing</i>	5500 ¥/m ²	(multi-storey)

The average price is 5733 ¥/m²

--- Zhabei District

□ Inner ring:

<i>Yongshen Garden</i>	5000 ¥/m ²	(low high-rise and high-rise housing)
<i>Heyu Garden</i>	7200 ¥/m ²	(low high-rise housing)
<i>City Home</i>	8500 ¥/m ²	(high-rise housing)

The average price is 6900 ¥/m²

□ Middle ring:

<i>Runhua Garden</i>	6000 ¥/m ²	(multi-storey and low high-rise housing)
<i>Pearl City</i>	7000 ¥/m ²	(high-rise housing)
<i>Shanghai Min City</i>	5700 ¥/m ²	(multi-storey and low high-rise housing)

The average price is 6233 ¥/m²

□ Outer ring:

<i>Lufu Apartment</i>	4000 ¥/m ²	(low high-rise housing)
<i>Chongwen Garden</i>	5500 ¥/m ²	(low high-rise housing)
<i>Sun Garden</i>	5200 ¥/m ²	(multi-storey and low high-rise housing)

The average price is 4900 ¥/m²

--- Putuo District:

□ Inner ring:

<i>Suti Chuengxiao</i>	9200 ¥/m ²	(high-rise housing)
<i>Maco Garden</i>	8500 ¥/m ²	(low high-rise and high-rise housing)
<i>Waterfront House</i>	7700 ¥/m ²	(low high-rise and high-rise housing)

The average price is 8467 ¥/m²

□ Middle ring:

<i>Wanli City</i>	6700 ¥/m ²	(multi-storey, low high-rise and high-rise housing)
<i>Guanlong Home</i>	7200 ¥/m ²	(low high-rise housing)
<i>Shanghai Bense</i>	6800 ¥/m ²	(high-rise housing)

The average price is 6900 ¥/m²

□ Outer ring:

<i>Jinhua Garden</i>	5500 ¥/m ²	(multi-storey)
<i>Xinhe Century City</i>	5000 ¥/m ²	(multi-storey, low high-rise and high-rise housing)
<i>Jianianhua</i>	6000 ¥/m ²	(multi-storey and low high-rise housing)

The average price is 5500 ¥/m²

--- Changnin District:

□ Inner ring:

<i>Goden bridge Garden</i>	9000 ¥/m ²	(high-rise housing)
<i>Xinhua Grand house</i>	8000 ¥/m ²	(high-rise housing)
<i>Xinchen Apartment</i>	6600 ¥/m ²	(low high-rise and high-rise housing)

The average price is 7867 ¥/m²

□ Middle ring:

<i>Haiyi Apartment</i>	7500 ¥/m ²	(multi-storey, low high-rise and high-rise housing)
<i>Wanbo Garden</i>	8000 ¥/m ²	(low high-rise and high-rise housing)
<i>Big Celebrity</i>	9000 ¥/m ²	(low high-rise housing)

The average price is 8167 ¥/m²

□ Outer ring:

<i>Century Spring Garden</i>	7800 ¥/m ²	(low high-rise housing)
<i>Longxin Garden</i>	4250 ¥/m ²	(multi-storey)
<i>Yutingfeng</i>	7200 ¥/m ²	(low high-rise housing)

The average price is 6417 ¥/m²

--- Xuhui District:

□ Inner ring:

<i>Xujiahui Garden</i>	8800 ¥/m ²	(high-rise housing)
<i>Hengchang Garden</i>	9300 ¥/m ²	(high-rise housing)
<i>Xinchen Garden</i>	8000 ¥/m ²	(low high-rise housing)

The average price is 8700 ¥/m²

□ Middle ring:

<i>Xiyatu</i>	7500 ¥/m ²	(low high-rise and high-rise housing)
<i>Xuhui New City</i>	5000 ¥/m ²	(multi-storey and low high-rise housing)
<i>Baoli New Garden</i>	7500 ¥/m ²	(low high-rise housing)

The average price is 6667 ¥/m²

--- Jinan District:

Inner ring:

<i>Jin Garden</i>	8700 ¥/m ²	(low high-rise and high-rise housing)
<i>Ruili Apartment</i>	9000 ¥/m ²	(low high-rise and high-rise housing)
<i>Daan Garden</i>	9500 ¥/m ²	(high-rise housing)

The average price is 9067 ¥/m²

--- Luwan District:

Inner ring:

<i>Dongtai Garden</i>	7000 ¥/m ²	(multi-storey and low high-rise housing)
<i>Kaichen Garden</i>	5500 ¥/m ²	(low high-rise and high-rise housing)
<i>Ponglai Home</i>	8000 ¥/m ²	(low high-rise and high-rise housing)

The average price is 6833 ¥/m²

--- Huangpu District:

Inner ring:

<i>Waterfrant Garden</i>	10000 ¥/m ²	(high-rise housing)
<i>South Garden</i>	6500 ¥/m ²	(low high-rise and high-rise housing)
<i>Zhongyang Fujin</i>	5900 ¥/m ²	(multi-storey and low high-rise housing)

The average price is 7467 ¥/m²

--- Pudong District

□ Middle ring:

<i>Dan Garden</i>	5500 ¥/m ²	(multi-storey)
<i>Jinxiu Garden</i>	6500 ¥/m ²	(low high-rise and high-rise housing)
<i>Jinyuanjia Garden</i>	5400 ¥/m ²	(multi-storey)

The average price is 5800 ¥/m²

□ Outer ring:

<i>Huajin Garden</i>	3400 ¥/m ²	(multi-storey)
<i>Yiejinjia Home</i>	4600 ¥/m ²	(low high-rise and high-rise housing)
<i>Huaxia Home</i>	3900 ¥/m ²	(multi-storey and low high-rise housing)

The average price is 3967 ¥/m²

--- Minhang District

Outer ring:

New Times Scenery Home 5800 ¥/m² (low high-rise housing)

Urban Good Home 4600 ¥/m² (multi-storey and low high-rise housing)

Urban Star 5000 ¥/m² (low high-rise housing)

The average price is 5133 ¥/m²

--- Baoshan District

Outer ring:

Kanghua Garden 4500 ¥/m² (multi-storey, low high-rise and high-rise housing)

Huixiu Apartment 4800 ¥/m² (high-rise housing)

Shonpu Garden 3950 ¥/m² (multi-storey and low high-rise housing)

The average price is 4417 ¥/m²

Appendix 2--- The calculation of the housing prices in three-ring areas in ten districts of

--- Ruohu District

<i>Sungang Building</i>	6628 ¥/m ²	(high-rise housing)
<i>Xiangfuya Home</i>	6000 ¥/m ²	(high-rise housing)
<i>Huzhen Building</i>	7500 ¥/m ²	(high-rise housing)
<i>Jinding Huihuang</i>	9000 ¥/m ²	(high-rise housing)
<i>HuandaoLi Garden</i>	7500 ¥/m ²	(high-rise housing)
<i>Dijinhao Garden</i>	8000 ¥/m ²	(high-rise housing)
<i>Minjunhao Garden</i>	5800 ¥/m ²	(low high-rise and high-rise housing)
<i>Ruying Chuidi</i>	5600 ¥/m ²	(multi-storey)
<i>Feichui Garden</i>	5200 ¥/m ²	(multi-storey and low high-rise housing)
<i>Baohunin Garden</i>	5900 ¥/m ²	(high-rise housing)

The average price is 6713 ¥/m².

--- Futian District

<i>Junjinhao Garden</i>	6500 ¥/m ²	(high-rise housing)
<i>Hongjinwan Gaeden</i>	7000 ¥/m ²	(high-rise housing)
<i>Yitian Garden</i>	6800 ¥/m ²	(high-rise housing)
<i>Tianjian Century Garden</i>	8400 ¥/m ²	(low high-rise and high-rise housing)
<i>Shenye Garden</i>	8500 ¥/m ²	(low high-rise and high-rise housing)
<i>Jialinhao Garden</i>	7000 ¥/m ²	(high-rise housing)
<i>Gelanqintian</i>	8300 ¥/m ²	(high-rise housing)
<i>Fenglinzhuoan</i>	6400 ¥/m ²	(low high-rise and high-rise housing)
<i>City Winner</i>	6300 ¥/m ²	(high-rise housing)
<i>Xiangyemin Garden</i>	6500 ¥/m ²	(high-rise housing)

The average price is 7170 ¥/m².

--- Nanshan Distric

<i>Julong Home</i>	5550 ¥/m ²	(low high-rise housing)
<i>Yinlunmin Garden</i>	5300 ¥/m ²	(low high-rise housing)
<i>Nanjing Garden</i>	5300 ¥/m ²	(high-rise housing)
<i>Ruyi Home</i>	5000 ¥/m ²	(low high-rise housing)
<i>Liya Home</i>	4400 ¥/m ²	(low high-rise housing)
<i>Wanxiangmin Garden</i>	4600 ¥/m ²	(high-rise housing)
<i>Yangguangzhongru</i>	5500 ¥/m ²	(multi-storey and low high-rise housing)
<i>Costal Pearl</i>	5450 ¥/m ²	(low high-rise and high-rise housing)
<i>Youth Home</i>	5500 ¥/m ²	(high-rise housing)
<i>Dongdohaojingmin Garden</i>	4800 ¥/m ²	(multi-storey and low high-rise housing)

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