Is the China’s housing market a bubble?
-policy review and analysis
Master of Science thesis

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Abstract

Whether the China’s housing market has blown a bubble is highly debated. The ones for that argument are expecting its burst due to low assets’ rent-to-sale ratio and housing prices far beyond household’s affordability. The ones against are supported by incredibly strong demands with solid price levels under current tightest-ever regulation.

After examining bubble indicators, the article reveals its existence and proves the bubble-featured market is a systematic outcome but rather than a simple irrational capital-chasing game by reviewing economic and legal systems. It is in trend with the China’s urbanization, while combined interest of local authorities and developers largely appreciate land values. Negative real interest rates and huge excess money supply enthuse investment needs. Property market becomes highly favored because of bright expectations and limited investment channels. Those findings will help us to understand the incompetency of the undergoing regulation, and forecasts of future policies are made to deal with the dilemma.

Acknowledgement

My truly thanks go to Mr. Han-suck Song, who helped me all along the way. Without him, I couldn’t have achieved it.
Is the China’s housing market a bubble: policy review and analysis

Abstract

Whether the China’s housing market has blown a bubble is highly debated. The ones for that argument are expecting its burst due to low assets’ rent-to-sale ratio and housing prices far beyond household’s affordability. The ones against are supported by incredibly strong demands with solid price levels under current tightest-ever regulation.

After examining bubble indicators, the article reveals its existence and proves the bubble-featured market is a systematic outcome but rather than a simple irrational capital-chasing game by reviewing economic and legal systems. It is in trend with the China’s urbanization, while combined interest of local authorities and developers largely appreciate land values. Negative real interest rates and huge excess money supply enthuse investment needs. Property market becomes highly favored because of bright expectations and limited investment channels. Those findings will help us to understand the incompetency of the undergoing regulation, and forecasts of future policies are made to deal with the dilemma.
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1. Introduction

The China’s property market starts to arise from 1998, when the complete commercialization of housing system took place and the real estate was established as one of the key industries of economy. The upward trend had been kept until 2008 when temporarily adjustments of interest rate occurred, but quickly turned up at a faster speed in 2009. According to latest data, from January to August of 2010, the total sold floor space of housing is 527 million sqm and the total transaction amount is 2642 billion RMB, which equals to 5012 RMB/m² (see the chart below).

Chart 1: Average housing prices in China

Naturally, such a dramatic increase triggers a highly debated topic: whether the China’s housing market has formed a big bubble? The ones for that argument are expecting its burst since assets’ rent-to-sale ratio has become extremely low compared with benchmark interest rates and housing price has gone far beyond household’s affordability. The ones against have been proven correct during the past few years, supported by incredibly strong demands alongside with the firm price level in the 1st tier cities and increasing transaction volumes and prices in the 2nd and 3rd tier cities even under the strictest-ever regulation issued by central government recently.

Moreover, the argument is not only economically focused but also spreading to the social structure. More extreme cases occur, like the so-called ‘Ant-living-race’, referring to young generations who suffer crowded shelter conditions due to the unaffordable housing prices. Government’s non-performance, combined interests of
local authorities and developers attract more and more public attentions. Ultimately, the off-track property price has started to question the governance ability and become a shaking stone of China’s social stability.

A few fundamental questions are brought up by those disagreements: how to define a bubble? Are there any indicators implying that the China’s property market is producing a bubble? If there is a bubble under developing, how to prevent its burst, and why is the bubble-looking scenario able to last so long? What kinds of economic and social structural changes are needed for the situation?

In the second section below, definitions of bubble will be discussed. And a few bubble indicators will be examined under China’s circumstance. In the third section, after reviewing current economic and legal systems, answers for why the bubble-looking market lasts so long will be laid out. In the fourth section, an analysis of the latest regulation will reveal its insufficiency, followed by forecasts of future policies regarding to deeper economic and social reforms. The fifth section will conclude.
2. Definition and indicators of a property bubble

2.1 Definition of ‘bubble’

One of the most recited definitions given by Stiglitz, quoted as ‘if the reason that the price is high today is ONLY because investors believe that the selling price will be high tomorrow – when ‘fundamental’ factors do not seem to justify such a price – then a bubble exits (Stiglitz, 1990)’, focuses on the irrational expectation during a bubble and factors which are not capable to support such a price level. While questioned by Lind, this definition is not precise enough because it does not include a whole bubble episode – both a price increase and a fall, and the term of ‘fundamental factors’ is controversial. The narrow definition of ‘bubble’ should be only referred to dramatic price changes, quoted as ‘There is a bubble if the (real) price of an asset first increases dramatically over a period of several months or years and then almost immediately falls dramatically’(Lind, 2008). However, according to this narrow definition, an irrational price increase can not be defined as a ‘bubble’ unless it drops significantly in a short term even its non-sustainability has been fully realized before evaporating.

Such as before the sub-prime financial crisis, a lot of efforts had been paid to the soaring property prices in the US. Belke and Wiedmann (2005) examined many bubble indicators and found strong implications of a bubble, but could not reach a bubble conclusion because not a price drop seen yet. Or the price level adjusts in a smoother way due to late remedies, such as the famous property bubble of Japan in 1980s, which took almost a decade for property prices to get amended to the starting level (Shigenori Shiratsuka, 2003)

There is another concept developed by Kindleberger, where a bubble is defined as ‘a non-sustainable pattern of price changes’ (Kindleberger, 2005), focusing on those non-sustainable price determinations. Considering China’s feature of a policy-oriented property market, a similar definition will be applied in this paper:

As long as factors generating current price level are artificially populated and not sustainable, and the price level is beyond individual affordability, a bubble scenario should be concluded.
2.2 Indicators of a property bubble

A list of property bubble indicators was formulated by Lind, which will be examined under China’s conditions to identify whether they are able to imply a bubble.

2.2.1 Price/Income Ratio

Price/Income ratio is one of the most important bubble indicators as its consistence over time in many countries. There’re a number of states experiencing rising ratios, which eventually fell back to historical averages (Case and Shiller, 2003). With the stable income level, which seldom increases significantly in a short time period, this relationship becomes capable to identify whether a strong increase in the price is likely to be followed by a decrease. Due to different ways of calculating household’s income, per Capital GDP is introduced as a conventional replacement due to its proportional relationship to personal income.

An interesting cross-country comparison between Housing Price and per Capital GDP, estimated by UBS in 2009, pictures where China stands at. There’re 4 countries being circled, which are the US (ratio=5), Hong Kong (ratio=20), China (slightly lower than 20) and India (slightly above 40). Considering the lower Chinese household’s income proportion of per Capital GDP, China probably should move more upwards if in terms of comparison between Housing Price and Household Income.

Chart 1: Cross-country HP/per Capital GDP ratios

Among those countries with per Capital GDP lower than 10,000 USD, China is 5 out
of 12, and 3 out of 7 among those with per Capital GDP lower than 5,000 USD, only left behind by Indonesia and India. This figure is significantly higher than ratios in the developed countries with per Capital GDP higher than 40,000 USD, except Singapore due to its limited land resource.

This estimation is also supported by the latest housing price data released by National Development and Reform Commission in June of 2010. The table below contains the Housing Price/per Capital GDP ratios of fifteen major Chinese cities. Besides a few cities with extreme figures, such as Beijing and Shenyang, the average Housing Price/per Capital GDP ratio of middle twelve cities is 17.9.

<table>
<thead>
<tr>
<th>City</th>
<th>Housing Price*</th>
<th>per Capital GDP**</th>
<th>HP/GDP ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beijing</td>
<td>24,592</td>
<td>68,788</td>
<td>35.8</td>
</tr>
<tr>
<td>Shenzhen</td>
<td>22,813</td>
<td>97,897</td>
<td>23.3</td>
</tr>
<tr>
<td>Fuzhou</td>
<td>7,962</td>
<td>36,640</td>
<td>21.7</td>
</tr>
<tr>
<td>Shanghai</td>
<td>17,209</td>
<td>79,705</td>
<td>21.6</td>
</tr>
<tr>
<td>Hangzhou</td>
<td>15,724</td>
<td>74,924</td>
<td>21.0</td>
</tr>
<tr>
<td>Chongqing</td>
<td>3,899</td>
<td>19,647</td>
<td>19.8</td>
</tr>
<tr>
<td>Xi'an</td>
<td>5,446</td>
<td>28,622</td>
<td>19.0</td>
</tr>
<tr>
<td>Wuhan</td>
<td>8,290</td>
<td>48,276</td>
<td>17.2</td>
</tr>
<tr>
<td>Xiamen</td>
<td>10,013</td>
<td>68,290</td>
<td>14.7</td>
</tr>
<tr>
<td>Guangzhou</td>
<td>12,289</td>
<td>88,544</td>
<td>13.9</td>
</tr>
<tr>
<td>Dalian</td>
<td>8,575</td>
<td>68,886</td>
<td>12.4</td>
</tr>
<tr>
<td>Tianjin</td>
<td>7,530</td>
<td>62,403</td>
<td>12.1</td>
</tr>
<tr>
<td>Nanjing</td>
<td>6,929</td>
<td>66,281</td>
<td>10.5</td>
</tr>
<tr>
<td>Qingdao</td>
<td>5,761</td>
<td>57,418</td>
<td>10.0</td>
</tr>
<tr>
<td>Shenyang</td>
<td>4,799</td>
<td>59,130</td>
<td>8.1</td>
</tr>
</tbody>
</table>

Table 1: 15 major Chinese Cities Housing Price/per Capital GDP ratio

However, it is rather hash to conclude whether this Price/Income ratio address a bubble. First, the ratio is adversely affected by interest rates. When the real interest rate in China keeps falling and stays negative most of time over last five years, strong investment needs naturally push up prices, which results to higher Price/Income ratios. Second, it is also difficult to determine a historical average ratio for the China’s property market because the time period of changing from a welfare housing distribution system to a more market-oriented market is rather short. The most famous property bubble that happened in Hainan Province in 1993 had a slightly higher Price/Income ratio (=22.4) than the current level (Yuan, 2007), but the macroeconomic conditions have been changed thoroughly.
In a word, the cross-country comparison of Housing Price and per Capital GDP, evidenced by data from fifteen major Chinese cities, might imply the speed of uprising housing prices exceeds per Capital GDP growth, but the case in China does not stand out among those developing countries. Furthermore, without a historical benchmark ratio, a ‘bubble’ conclusion should not be drawn simply according to this number.

2.2.2 Housing expenditure

Interest payment is a major part of housing expenditure, thus the relationship between nominal interest payment and buyer’s income becomes a potential bubble indicator. If this ratio is much higher than in earlier periods, risk taken by buyers might exceed their affordability and thus a bubble indicated.

According to an internal report issued by China Everbright Bank (CEB) and a property agency HomeLink based on their second-hand house transactions in Beijing City (CEB & Homelink, 2010), covering the period from 2007-01-01 to 2010-08-15, the ratio between Total Loan Payment (Loan Amount + Total Interest) and per Annual Salary Income went up from 28.5 in 2007 to 30.1 in 2008 because the People’s Bank of China turned up interest rates eight times in-a-row in 2007, but fell down to 26.9 in 2009 when interest rates were projected lower. It then rose to 34.3 in April of 2010 before the latest regulation being introduced and climbed to a historical high 40.6 later due to the soaring property prices (see the table below).
Table 2: 2007-2009 Loan Payment / Personal Income ratio

<table>
<thead>
<tr>
<th>Year</th>
<th>Type</th>
<th>Contracted Value</th>
<th>LTV</th>
<th>Loan Amount</th>
<th>Actual rate</th>
<th>Total Interest</th>
<th>Total Loan Payment</th>
<th>Per Annual Salary</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>All</td>
<td>846,254</td>
<td>89%</td>
<td>672,203</td>
<td>5.81%</td>
<td>465,992</td>
<td>1,138,195</td>
<td>39,857</td>
<td>26.5</td>
</tr>
<tr>
<td>2008</td>
<td>All</td>
<td>925,268</td>
<td>89%</td>
<td>743,414</td>
<td>6.66%</td>
<td>603,692</td>
<td>1,347,106</td>
<td>44,715</td>
<td>30.1</td>
</tr>
<tr>
<td>2009</td>
<td>All</td>
<td>1,166,350</td>
<td>80%</td>
<td>865,012</td>
<td>4.16%</td>
<td>420,133</td>
<td>1,305,145</td>
<td>48,444</td>
<td>26.9</td>
</tr>
<tr>
<td></td>
<td>First Purchase</td>
<td>1,436,773</td>
<td>80%</td>
<td>1,149,418</td>
<td>5.05%</td>
<td>678,756</td>
<td>1,828,184</td>
<td>5328*</td>
<td>34.3</td>
</tr>
<tr>
<td></td>
<td>Second &amp; More Purchases</td>
<td>60%</td>
<td>862,064</td>
<td>5.05%</td>
<td>509,075</td>
<td>1,371,139</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>First Purchase</td>
<td>89%</td>
<td>1,358,610</td>
<td>5.05%</td>
<td>802,300</td>
<td>2,166,910</td>
<td>5328*</td>
<td>40.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sec. Purchase</td>
<td>59%</td>
<td>849,131</td>
<td>6.53%</td>
<td>673,886</td>
<td>1,523,017</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Third &amp; More</td>
<td>Banned</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: CEBS/HomeLink, Beijing Statistical Bureau
* projected Unit: ¥

The dramatically growing proportion of interest payment to personal income reveals property prices grow much faster than individual income, which strongly doubts the price sustainability.

2.2.3 Housing supply

The classic supply and demand theory plays a key role of explaining a bubble (Stiglitz, ‘Economics’, 2nd edition). The steadily increasing demands push up price level, which leads to higher profitability of housing construction and hence larger supplies. More resources will be allocated due to the bright expectation. Gradually, this expectation becomes more and more impractical but people will not realize until the future turns to be dark. Then follows rush sales, shrinking demand and a bubble burst at the end.

In China, fuelled by large amount of population and its urbanization, it is not surprise to see the total floor space under construction to have grown rapidly from 2000 (see the chart below). The annual sold floor space overcame the completed floor space in 2005 and has maintained the surplus since then, except the slightly negative figure in 2008 due to the adjustments of interest rates in 2007. After 2008, the margin between the sold and the completed has been amplified again, reaching a historical high record of 234.9 million square meters in 2009.
But notice the rapidly expanding floor space under construction, which enjoys a faster growing rate than both the completed and the sold floor space. A typical residential project in China (total construction sqm = 30,000 m², construction capacity = 1.0) normally will take 12-15 months to complete. Hence if taking the difference between floor space under construction with the completed floor space of next year to compare with the sold floor space of next year, a expanding margin implies the supply of housings is beyond the demand. The accumulative amount from 2000 until now is estimated to be 6170 million sqm, seven times of annual sold record in 2009.

From the demand side, if the type of capital-gain-chasing demand exceeds the self-occupancy need, property prices might not be stable either. The increasing supply
could face a shrinking demand if price expectation changes. Interestingly, the
distinction of capital-gain-generating demand and self-occupancy demand has been
argued over years but never covered by any official organizations. The topic recently
becomes hot again because of an unofficial survey released by State Grid Corporation
of China (the state-owned utility company) in July 2010, stating there are 64.5 million
property units in China without consuming any energy over last 6 months. After its
creditability denied by National Bureau of Statistics of China, who says such a data
collection is not convinced, a media press in Shanghai organized a sample-selected
survey called ‘Black-house Counting’ which focus on non-lightening house rate over
two-week period. See the result below.

Table 3: Black-house rate survey

<table>
<thead>
<tr>
<th>District in Shanghai</th>
<th>Black-house Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>BaoShan</td>
<td>73%</td>
</tr>
<tr>
<td>ChangNing</td>
<td>69%</td>
</tr>
<tr>
<td>MinHang</td>
<td>67%</td>
</tr>
<tr>
<td>JingAn</td>
<td>57%</td>
</tr>
<tr>
<td>PuDong</td>
<td>53%</td>
</tr>
<tr>
<td>PuTuo</td>
<td>52%</td>
</tr>
<tr>
<td>HongKou</td>
<td>46%</td>
</tr>
</tbody>
</table>

Similar surveys operated by other local media carry similar outcomes. The authority
and the accuracy of those media reports are naturally doubtful, but they reflect the fact
that a large proportion of property purchases are not self-occupied, which fits a bubble
definition because those profit-generating demands are not sustainable. As long as
price expectation changes, this part of demand will diminish rapidly.

2.2.4 Buyers’ expectations about prices

One feature of a bubble is the wide-spreading confidence about the future, even the
price level has risen significantly. What should be noted regarding Japan’s experience
is that enthusiasm of market participants, not consistent projection of fundamentals,
contributed largely to maintaining temporarily high asset prices at that time. Such
enthusiasm is often called euphoria. Kindleberger (1996) employs the concept of
euphoria to describe financial history of major asset price bubbles. Shiller (2000) uses
a term of “irrational exuberance” to describe similar phenomenon. Garber (2000),
however, offers a negative view against the explanation of bubbles from the viewpoint
of mass psychology.

According to a survey issued by China Academy of Social Science (Xiaoling, 2007),
property investors’ psychology shows quite optimistic. Interestingly, this bright expectation is becoming doubtful recently due to soaring prices which attract the central government and state-owned media to question the greedy role of developers publicly, and even claim controlling property prices to be the fundamental of keeping social stability for the first time. Under such a political pressure, the uncertainty of future price is spreading from consumers’ side to developers’, yet not any sign of price fall has been seen.

2.2.5 Buyers’ impatience and financial risk taking

There’re three features of buyers’ behaviors in a property bubble mentioned by Lind (2008):

1) **tend to enter the property market at an earlier age or at a higher quality level**

2) **tend to choose riskier financial alternatives**

3) **tend to amortize less**

According to the report issued by CEB and Homelink Co., the average age of applicants of property loans in Beijing is decreasing continually from 33.9-year old in 2007 to 32.2 in 2010, much younger than most regions around the world, such as 42-year in Japan and Germany, 36-year in Taiwan, which exactly matches the first standard (see the chart below).

![Chart 4: Average Applicant’s Age of Housing Loans](chart.png)

The percentage of applicants younger than 30-year old experiences an increase from
29.1% in 2007 to 43.5% in 2010, squeezing all the other age groups from 70.9% in 2007 down to 56.5% (see the table below). This dramatic structural change reveals the strong expectation of property price, which forces more young people to enroll the market by undertaking heavy mortgages at early ages. Thus potential financial risks are amplified if taking consideration of lower income levels of young generations.

Table 4: Applicant's Age Group of Housing Loans

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;25</td>
<td>0.8%</td>
<td>1.9%</td>
<td>3.3%</td>
<td>3.7%</td>
</tr>
<tr>
<td>25-29</td>
<td>28.3%</td>
<td>36.6%</td>
<td>37.9%</td>
<td>39.8%</td>
</tr>
<tr>
<td>30-34</td>
<td>35.8%</td>
<td>31.0%</td>
<td>29.0%</td>
<td>27.8%</td>
</tr>
<tr>
<td>35-39</td>
<td>18.0%</td>
<td>14.2%</td>
<td>14.4%</td>
<td>13.5%</td>
</tr>
<tr>
<td>40-49</td>
<td>13.1%</td>
<td>12.6%</td>
<td>11.4%</td>
<td>11.6%</td>
</tr>
<tr>
<td>&gt;=50</td>
<td>4.0%</td>
<td>3.7%</td>
<td>4.0%</td>
<td>3.6%</td>
</tr>
</tbody>
</table>

Source: CEB&Homelink

The average amount of housing loan in CEB and Homelink’s report goes up from 420,000 per unit in 2007 to 750,000 per unit in 2010, 179% more in three years. But interestingly, the loan-to-value percentage behaves against the bubble feature, down from 53.7% in 2008 to 47.5% in 2010, and even lower to 31.4% after the latest issued regulation in April 2010 (see the chart below). The reason for the decrease is because of investment limits proposed by government’s regulation. It also reflects the fact that property market has gradually become a heavily capital-demanding game only enjoyed by rich people, who are able to amortize more.
In summary, except leverage ratio is fixed by borrowing policy, this group of bubble indicator explicitly addresses that a property bubble is under generating.

### 2.2.6 The credit market

Credit availability is known as a key element of enhancing property transactions. A number of researches have been dedicated to this feature, such as in Kindleberger (2005), it underlines a bubble is always companied by easy credit. During a property price boom, increasing of loan-to-value ratios typically stand for abundant credit and loosening borrower’s credit evaluation is another sign.

See the chart below, which covers all adjustments of benchmark interest rates of long-term loan (more than 5 years) from 2004. The borrowing interest rate gradually went up to 6.84% in 2006 and experienced a series dramatic upwards adjustments, reaching 7.83% at the end of 2007, then was projected down significantly to 5.94% at the end of 2008 until now, a number even lower than the starting point of 2004.
As an important instrument of stimulating real economy during the financial crisis, the People’s Bank of China (PBC) is very unlikely to adjust interest rates. But for the concern of controlling rising property prices, the borrowing limit is frequently adopted by the central government as an effective method to increase investment barriers and to reduce financial risks for banks (see the table below).

<table>
<thead>
<tr>
<th>Time</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007 Jan</td>
<td>For the first purchase, down-payment 30% minimal, 85% of the benchmark IR; for the second purchase, 40% down-payment minimal, 110% of the benchmark IR.</td>
</tr>
<tr>
<td>2008 Oct</td>
<td>Down-payment 20% minimal, 70% of the benchmark IR</td>
</tr>
<tr>
<td>2010 April</td>
<td>For the first purchase, down-payment 30% minimal, 85% of the benchmark IR; for the second purchase, 50% down-payment minimal, 110% of the benchmark IR; loan temporarily suspended for the third purchase</td>
</tr>
</tbody>
</table>

Meanwhile, the banks’ evaluation of borrower’s credit affordability has been largely eased since 2008. See the chart below, the percentage of commercial housing loan shrank 350 basis points from 2007 to 2008. But the adjustment of interest rates issued in October 2008 pushed commercial loan to rule more than half total transaction volumes, reaching 52.9% in 2009. The so-called ‘Public Housing Fund’ is practically a stated-subsidized loan with comparative lower interest rate. If summarized together, the loan’s percentage of total transaction volume has increased three years in-a-row, from 83.0% in 2008 to 91.8% in 2010. The structural changes of commercial mortgages reveal the decisive impact of government’s policy. The percentage of
commercial loans goes up if the investment limits is lower and down if lifted up.

2.2.7 Speculative behaviour: a large number of short-term sales

It is rather difficult to detect how many short-term sales are undergoing limited by data collecting barriers. But there are several side angels which might help to view the problem, such as the number of property agencies. As reported by a media press, the number of agencies in Shanghai used to be around 20,000 in 2005, dropped dramatically to 8,000 in 2006 because of then regulation and slowly recovered to 15,000 in 2007 but shrank to barely over 10,000 in 2008, alongside with the increasing interest rate. With the booming transaction volumes in 2009, the number went back to 20,000 but is facing a 25% drop again due to the latest regulation. As estimated, the break-even point of the small agencies (less than 20 chain stores on the market) is to deal with 1,200 unit/month, and 5,000 unit/month for the middle-sized (20-50 chain stores) and at least 8,000 unit/month for the agencies having more than 50 stores.

2.2.8 Summary

Generally speaking, the ratio comparison between Housing Prices and per Capital GDPs of different countries does not make China’s case stand out among the developing countries. Being lack of a historical benchmark, it is also rather difficult to determine which level of HP/per Capital GDP implies a property bubble in China. But
notably, taking account of the lower proportion of personal income to per Capital GDP, this ratio might be higher.

The significantly growing proportion of interest payment to personal income implies over-valued property prices. The house supply and demand curves are in line with China’s urbanization trend. But the increasing margin between annual floor space yet completed and floor space being sold indicates a large quantity of potential supply. From the demand side, the distinct of different demand types are vague, but media reports stress extremely high capital-gain-generating need, which is not sustainable if price expectation changes.

While buyers’ expectation has been remained optimistic for years, the doubt of unaffordable price level and the fear of central government’s control are spreading from consumers’ side to developers’, especially when the government cites a stable property market is an important part of social stability.

Data reveals buyers’ tendency to enrol the market at earlier ages. The people younger than 30-year old have become major forces of property buying, much earlier than other countries. Without sufficient financial support, lower ages normally suggest higher financial risks, which is in line with the abundant credit availability. Due to the low interest rates and easing borrowing limits, the percentage of commercial loans of total purchase has been expanding continually until the latest regulation adopted. Banks are eager to lend more under the profit-generating incentive by enjoying the comfortable margin of fixed save-borrow interest rates and thus loosening credit checking process.

Even without an official data concerning on short-term sales, the cases might be evidenced by dramatically changing numbers of property agencies.

In a word, most of indicators address a suspicious bubble of China’s property market. Beyond self-occupancy demand, profit-generating purchases behaviour aggressively due to the bright expectation and strong investment need. Flourish credit liquidity offers technical support but also involve more financial risks.
3. Review of Macro and Micro policies

If there’s a bubble being populated from years ago, why this bubble-featured market is able to last for so many years without any sign of burst? Are there any structural reasons for such a scenario? After reviewing China’s current economic and legal systems, three fundamental reasons will be discussed as following:

1. China’s urbanization and housing system's reform

2. Local governments’ incentive and behavior

3. Excess money supply versus strong investment needs

3.1 Urbanization and housing system reform: the fundamental reasons for a booming property market

3.1.1 Urbanization: the key engine for China’s development
The urbanization process naturally creates more housing demand because more and more people will be transferred to cities, and this need is largely amplified by China’s biggest population of the world. A large number of researched dedicated to this topic, such as Yin & Zhong, etc (2010), and findings show the urbanization has accelerated at an unprecedented scale and rate and mainly been driven by policy reform, population growth and local governments’ plan.

Interestingly, according to the latest report issued by China Development Research Foundation (CDRF, 2010), a think tank of the State Council, the urbanization of China is 46%, compared with 55% global average, and 85% in the developed countries. It estimates the urbanization rate will reach 65% until 2030, meaning to offer housing education and other public goods for 20 million people flowing from countryside to cities every year, which also makes urbanization a key engine for China’s next 20 years’ development.

3.1.2 The reform of welfare housing system
As a distinctive element of planned economy, the welfare housing distribution system was an important compensation to city-workers who received the distorted human labour payments. All means of supports were required from local governments and
state-owned enterprises, in the terms of providing lands, finances and construction materials. This burden became extremely unaffordable for the state-owned units after the economy pattern transforming from plan-oriented to market-oriented. The appreciation of land values in the open market also discouraged the local governments’ motivation. Without suitable regulatory system, the decision making process of distribution was always accompanied with corruptions and abuses of authority, which were intensified by the rising asset price.

From 1994, small-step reforms of welfare housing system had started in various cities. In 1998, the State Council issued the document ‘Further deepening the urban housing system reform and accelerating housing construction’, which was signalled as the fundamental stone of China’s real estate industry. Addressed in this document, all kinds of welfare housing systems are legally terminated and commercialization of housing supply is established as the major source of providing properties.

3.1.3 Availability of commercial mortgage

The first personal residential mortgage was issued in 1992, but the total amount of loans remained small until 1998, with the impact of the released fundamental document and decreasing interest rates. According to China Banking Regulatory Commission, the amount of commercial residential mortgage reached 2572 billion RMB at the end of June 2007, rising from mere 19 billion RMB in 1997, 135 times larger in 10 years. See the chart below:
At the end of 2003, the amount of individual residential mortgages exceeded 1000 billion RMB to 1178 billion, almost 43% up from 2002. The amount went up to 1592 billion RMB in 2004, 35% up of 2003’s figure and hit 1843 billion in 2005. It was the first time the commercial property loans exceeded 2000 billion RMB point in 2006 to 2251 billion. But this record was quickly beaten by the amount of loans issued in the first half of 2007, which was recorded as 2572 billion RMB.

The introduction of commercial loan is the most important step for opening China’s property market. The application of this financial tool leverages limited personal income and ensures to fertilize the property market with abundant capital.

### 3.2 Local Governments’ behaviour: background reasons and the legal frame

The special political structural has massive influence on current property market, which has been noticed by a lot of researchers. Tsai (2004) explores the unexpected outcomes of taxation system reform and concludes the impact as ‘fiscal decentralization has lead local governments to – namely the hoarding of off-budget revenues… reliance on informal finance… and local protection.’ And land transferring/using fee is a major source for those informal finances. Li, Chiang and Choy (2010) point out China’s property cycle is closely related to central-local governments’ conflict due to the financial systems, fiscal distributions. Hence,
‘China’s property cycle is not well explained by economic fundamentals alone, for government conflicts have invalidated or lessened their impacts on the property sector.’

3.2.1 Separation of taxation system: the original incentive for local governments’ addiction to high land prices

The reason of why local governments are addicted to high land values underlines in a special legal arrangement: the separation of taxation system. A major reform of taxation system took place in 1994, aiming at improving central government’s deficit and making clear separation between central and local authority’s tax resources. Before the reform, the tax income of local authority was 78% of the overall national tax revenue while the central government only took 22%. During 1994 to present, the percentage of tax income collected by central government has gradually grown up to 53.3% in 2008, while local government’s portion has shrunk to 46.7%. Most of taxation resources with stable incomes are allocated to central government. See the list below:

Table 6: Major Tax Resources of Central and Local Governments

<table>
<thead>
<tr>
<th>Central Government</th>
<th>Local Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Custom Tax</td>
<td>1. Income Tax of Local Enterprises</td>
</tr>
<tr>
<td>2. Consumption Tax</td>
<td>2. Vehicle Tax</td>
</tr>
</tbody>
</table>

Shared tax
*75%-Central,25%-Local
**50% each

<table>
<thead>
<tr>
<th>Shared tax</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. VAT Tax*</td>
</tr>
<tr>
<td>2. Stock Tax**</td>
</tr>
<tr>
<td>3. Natural Resources Tax</td>
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</tbody>
</table>

The congenital disadvantage of the taxation reform is its inconsistency with public expenditure distributed between central and local government. With shrinking tax revenues, local government still needs to afford around 70% of public expenditure, including two major ones: education and health care (see the chart below).
Naturally, the separation of taxation system result to a rich central government with stable tax incomes and comparative poor local governments facing increasing deficits. Estimated by UBS, the total amount of local governments’ debt will reach 11,000 billion RMB (ab. 1,600 billion USD) in 2010. The chart below shows the difference between tax revenue and public expenditure of Shanghai Government. Before 1994, Shanghai Government was able to maintain a fiscal surplus, but has been running deficit since then due to the taxation system reform. The deficit has been increasing and reached its all-time high at the amount of 82.4 billion RMB in 2009.
Besides tax revenue, one of the major sources of local government’s income is the transferring fee of land usage right. The percentage of land transfer fee to the local government’s income has never been revealed by the authority, but believed as taking 30%-50% share of the total income. That’s why the finance of local government is sometimes labelled as ‘land finance’.

### 3.2.2 Highly investment dependent GDP figure

China has amazingly maintained highest developing speed of the world for last 20 years, and is expected to exceed Japan to become the second largest economy in 2010. The total amount of GDP has reached 33,535 billion RMB in 2009 (ab. 4,900 billion USD).

However, the GDP growth pattern is under criticized. Large proportion of investment inputs, severe environmental pollution, huge profit of state-monopolized industries and worsening real economy investment environment due to the abuse of authority are outlined as vulnerable points of its sustainability.

The fundamental reason for this number-driven situation is because GDP figure has become the most significant standard to judge local government’s governance ability. Without a proper rating and regulatory system for officials, all political achievements are dependent on this figure. Hence it is not surprising to see the proportion of Fix Asset Investment to GDP to grow from 34% before 2001 to 57% in 2008.
3.2.3 state-owned land ownership and acquisition methods

As a heritage of the planned economy, the urban land legally belongs to the state and the rural land ownership is held by rural collective units. The land usage right can be rent up to 70 years but the first-hand land supply is monopolized by all levels of authorities.

According to the latest Property Right Law, issued on the 1st October of 2007, there’re four major ways to acquire the land usage right, which are:

1) by administrative order

2) by agreement with authority

3) by open market transfer

4) by rent

Most of public usage lands are allocated by administrative orders or by reaching agreement with local authorities. Most commercial acquisitions of the usage right are currently through bidding processes in the open market. Only a small percentage is operated through agreements.

The state-controlled land supply is the first layout of the current bubble-looking scenario. The monopoly right is the most decisive element of land price. As investigated, the land purchase cost has already become the major part of total
construction cost of developers and will transfer to house consumers ultimately.

3.2.4 Separation of urban and rural land
Meanwhile, the speed of land urbanization is 7% annually, which overcomes 4% of population urbanization. The faster land urbanization speed highlights government’s intention to allocate more land available for city’s expansions without sufficient immigration. The digest of 3% margin would large result to profit-generating purchases.

Government’s intention of transforming urban land lines beneath a legal arrangement: separation of urban and rural land, which is an attachment of binary residential registration. Each rural resident has a certain amount of land, which is from rural land, allocated to its registration while the urban one doesn’t have such a benefit.

The government is authorized, by the legal system, to collect rural land by paying compensation far below the market price and re-label it as urban land, which can be transferred in the open market and thus massive margin will be created. This split land valuation system is one of the important methods to generate income for the local government, but also causes a lot of social problems due to its exclusion of rural residents to enjoy the appreciated land value.

3.2.5 Construction permission: monopolized industrial profit
Due to the unfair split of urban and rural land, rural individuals or collective units have made their own efforts to take a share of the monopolized real estate profit by building up so-called ‘partial right property’. The ‘partial right property’ term specifically refers to those buildings attached to the rural land, which are not legally allowed to circulate in the open market under the current law frame. However, without paying huge amount money to obtain land usage right, the ‘partial right property’ is normally worthy one-third of the market value and hence becomes popular. The underlying reason for eliminating this type of property and issuing construction permission is that the land usage right transfer and income tax from registered developers are the major income resource for local governments.
3.3 Excess money supply and limited investment channels: the reasons for strong demands

3.3.1 Excess money supply: reason and methodology

A lot of studies dedicated to measurements of monetary liquidity. One of widely used concept, which focuses on broad money aggregate to GDP ratio, also known as ‘Marshall’s K value, reflects the relationship between money supply and demand of real economy (Gourier and Szpiro, 2005). The growth rate of the narrow money and the broad money is applied by Baks and Kramer (1999). European Central Bank defines excess liquidity as the difference between real money stock and expected equilibrium level, while People’s Bank of China regards it as M1/M2 ratio within Chinese content. Also, the gap between deposits and loans, the broad money to GDP ratio can be treated as good indicators for excess money liquidity (Tang, 2007).

Concluded by Wei, et al (2009), it is nature to see the money supply in China to keep increasing with the expanding economic scale and more economic activities, which requires more money involved as the instrument of trade. After the reform, all goods gradually can be transferred by people’s willingness, and thus the need of money outbreaks. In 1985, the ratio between M2 and nominal GDP (as mentioned above, Marshall’s K value) was 54%, then exceeded 100% in 1993 and reached a historical high level of 182% of nominal GDP in 2009 (see the chart below).

Chart 13: M2/GDP ratio

Interestingly, the cross-country comparison does not line out China’s case. At the end
of 2008, UK had a K value of 1.33 and Japan had 1.49 compared with 1.54 of China. Only the US keeps a stable level of money supply, maintaining K value around 0.5-0.6. But diverse financial structures should be considered. Such as in the US, a big portion of savings will be transferred into the terms of bonds and stocks and hence the amount of quasi-currency is small. Relatively, the majority term of financial assets is deposit in banks, which is capable of generating more credit availability.

Proved by an internal working paper of PBC (Han&Li, 2004), their constructed model of M2/GDP shows the maximum tolerated ratio in China might be as high as to 2.5. CPI might not have direct relation with this ratio, but has more strong implicates of the way M2 increases. Only the growth rate of M2 exceeds GDP’s more than 6% and shows the trend of accelerating, inflation expectation will be triggered on.

Hence, the relation of M2 growth rate with GDP’s might be a better indicator of evaluating money supply impact. The traditional money supply equation MV=PY can be conducted to dM/M+dV/V=dP/P+dY/Y, in which dP/P+dY/Y stands for the nominal GDP growth rate, thus the difference between the growth rate of M2 and the rate of nominal GDP becomes a good indicator of excess money supply if the assumption of constant money velocity (dV/V) is taken (see the chart below).

**Chart 14: difference of growth rate of M2 and GDP**

From 1996 to 2003, China’s excess money supply maintained at a high level except for the temporary drop in 2000. After reaching the lowest point in 2007, the excess money supply soars up to a historical high point in 2009, which performances as a
fundamental of China’s stimulus plan to fight against the sub-prime financial crisis but also triggers the button of inflation and strong investment incentives.

### 3.3.2 Foreign capital regulation: a method of generating money supply surplus

China adopts a special foreign capital regulation, which requires all foreign currency inflows to be exchanged to RMB then transferred by the People’s Bank of China to other commercial banks. Mechanically it means every single foreign currency (normally in the terms of USD) inflow will generate extra 7.5 RMB (the weighted-average exchange rate from 1997-2009).

From 1998-2000, The annual added foreign exchange reserves remain at a low level, from mere 5 billion to 10.7 billion USD, which roughly generated ab. 210 billion RMB (1 USD = 8.26 RMB for then). But since 2001, the foreign exchange reserves have been fuelled by foreign trading surplus from 46.5 billion USD in 2001 to 450 billion USD in 2009. The total amount of foreign capital inflow for last nine years is 135 trillion in RMB, 4 times larger than the 2009’s GDP.

See the chart below, which includes a comparison between international trade surplus and annual M2 and GDP figure. The foreign trading surplus maintained a low proportion before 2002 but has becomes an important way of generating RMB supply since 2003. From 2003-2009, 5% of issued RMB on average is from the international trade surplus inflow, which means around 9% of annual GDP.

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**Chart 15: International trade surplus against M2 and GDP**

[Chart showing international trade surplus against M2 and GDP from 1998 to 2009]
3.3.3 Long-term distorted real interest rate

For a highly investment dependent GDP growth pattern, the low interest rate plays a dominant role as the instrument to stimulate money inputs and to reduce default risks. Moreover, since China adopts the non-flexible exchange rate policy which binds Chinese RMB with the US dollar, the low interest rate also hedges against large amount of foreign currency inflows under the strong currency appreciation expectation.

From 1996, the People’s Bank of China (China’s central bank) has started to publish China Interbank Offered Rate (CHIBOR), functioning as a series of benchmark interest rates with various maturities. It is a simple, no-guarantee, wholesale interest rate calculated by arithmetically averaging all the interbank RMB lending rates offered by the price quotation group of banks with a high credit rating.

This rate was 1.71% at the beginning of 1998, and quickly fell to 1.44% at 1st of July in the same year. Almost one year late, in June of 1999, it went down to 0.99% and has remained at the level of 0.72% since 21st of February 2002 till present, with only 2-month exception during July to September of 2007 at the level of 0.81%. Meanwhile, China’s economy was facing deflation due to the large-scale reform of state-owned enterprises and the 1997 Asia Crisis, which kept CPI negative for 2 years in a row. Gradually, the stimulus plan, symbolized by encouraging real estate market as the most significant policy, started to take effect and shifted CPI to positive in 2000. See the chart below, which compares the CPI figures with the weighted-average Over Night CHIBOR rates

From 2007, CPI has exceeded the Over Night CHIBOR. The margins are extremely heavy, rating as 2.6%, 3.6% and 2.3% respectively, which naturally boom the investment incentives.
3.3.4 Limited investment channels and worsening investment environment

During the latest financial crisis, the former trade equilibrium between the import and export countries collapsed, and re-shape of the new balance has started by reducing import of trade-deficit countries, dominated by the US and the European ones, and by cutting down export of trade-surplus countries, leading by China, Germany and Japan. A lot of conflicts occur due to the rising global trade barriers, set up by those deficit-running countries and argued by those export-driven ones, especially between the US and China, the biggest importer and the exporter. After jumping to $42bn in May 2010, the US trade deficit rose to $50bn in June, a number not seen since the summer of 2008 and never before mid-2004, which leaves the US government two choices: either protection or soaring trade deficits with rising unemployment. It’s almost certain that the former gets chosen, but if over-reacted, another round of global trade war would possibly start due to injury to trade-surplus countries.

Moreover, the long-term distorted labour cost has been revised by the government as a part of the economy stimulus plan. Meanwhile, alongside with the booming plan, the net operating profit of private enterprises is squeezed by the authority through issuing more limits and franchises which favour the state-owned companies. Hence, many Chinese private-owned companies have found them ended up in a profit-squeezing and cost-rising situation.
On the latest data issued All-China Federation of Industry and Commerce in August 2010, a state-controlled ‘non-government’ organization, the total amount of net profit after tax of top 500 private enterprises has reached 218.0 billion RMB in 2009, 32.84% more than 2008’s. While the most 2 profitable state-owned companies, China Mobile and China Petro has earned net profit of 145.8 and 103.3 billion RMB separately. The sum of top 2 state-owned companies is 249.1 billion RMB, 14.3% more than top 500 private ones. Interestingly, among those 500 companies, 221 of them have admitted to have the plan to enter property development in the next 3 years. A dilemma has been drawn clearly by this release: without being allowed to enter those monopolized industries, the living space of private enterprises is squeezed by authority and global trading barriers due to the financial crisis, private enterprises gradually shift their profit from productive economy to other return-generating aspects, such as real estate.
4. Analysis of current regulation and future policies forecast

4.1 The latest ‘Property Number Ten’ policy: not ease the investment demand and impractical to operate

4.1.1 Contents of ‘Property Number Ten’ regulation and its complements
On the 17th April of 2010, the latest regulation, so-called ‘Property Number Ten’, was issued against the rocketing property price (see the appendix). Dislike previous regulations, there’re a few distinguished features to be noticed:

1. It is the first time to specify local government’s responsibility to maintain a sustainable housing price by a central government’s document. An assessment system will be established to measure officials’ effort to stabilize price and to supply public-rental housing.

2. The supply of public-rental housing policy is clearly quantified, which includes 3 million units of public-rental houses for low-income households and 2.8 million units of converted houses for old residential areas.

3. More land supplies will be available. According to previously released document by National Land and Resource Department, the total amount of land supply will reach 1.8 million acres, three and half times more than the average amount of last 5 years, which is believed to ease the soaring land price.

4. The threshold of real estate investment has been raised significantly. The down-payment of a first-time property purchase should be at least 30% of total value, while being raised to 50% if second-time with paying 1.1 times of the baseline mortgage rate, and loans of third-time purchases will be temporarily suspended.

5. The land value-added tax for developers will be operated more tightly by tax authority. Property Tax might be introduced to increase costs of maintaining assets.

6. More regulations will be applied to developers, including supervisions on dark-box operations, illegal financing method with more transparent transaction information mandatory to reveal.
After that, there’re also a few local complements been introduced or under consideration, mostly focusing on establishing more financing barriers for developers, which would ideally cause cash flow problems and force them to lower property prices, such as the proposal against pre-sale income in Beijing. Pre-sale income is the major cash inflow during the construction period. Except the down-payment of acquiring land usage right (normally 10% of the bidding price) and the pre-construction expenses, all the costs during the construction period will be covered by the pre-sale income. According to the internal investment analysis report by Beijing Capital Group, the pre-sale income is highly dependent, covering up to 75% of the total operating costs. The proposal mentions the pre-sale income would be regulated by a third but official party, which largely delays its time to hit developers’ account.

4.1.2 Analysis of its insignificance

Similar as previous two major regulations, which happened in 2004 and 2007 respectively, the latest operation does not shake the economic fundamentals but still concentrates on setting investment barriers and preventing capital-chasing purchases.

1. lack of effort to improve local government’s addiction to land sales

Without a revision of income generating sources, a simple classification of local authority’s role of controlling housing price is not sufficient to break the combined interest of the local and developers. As long as the balance sheet of local government is dependent on land sales, land prices will not fall down significantly. Revising the taxation system and reaching a new balance between the central and the local should be the correct solution. But apparently this process will take very long time.

2. impractical public-renting housing policy

The highly stressed public-rental housing policy lacks effective supports. There has not been a clear legal system to classify parties supplying land and financing though the short-term target has been planned. Among the estimated investment of 167 billion RMB, local authority will afford 118 billion, over 70% of the total input. Apparently, without expanding income sources, local government will not have motivation to carry on. According to the data revealed by Ministry of Housing and Urban-Rural
Development, 3.1 million units of public-renting houses were planned in 2009 but only 2/3 was completed. In 2006, Shenzhen and Guangzhou (two major cities in Guangdong Province) published their 5-year plans on public-renting house in 2006. Until the end of 2009, Shenzhen was only able to finish 10% of the planned number and 32% of Guangzhou. The proportion of public-renting house to the whole housing sale declined from 10% in 2004 to 6% in 2008.

Under political pressure, cities try to transfer the burden of public-renting house to developers as response of central government’s policy. In Lanzhou, the capital of Ganshu province, hybrid layout plans are attached to the land transfers. For a piece of land, the acquiring developer is mandatory to build up certain amount of public-renting houses according to area of the land. It results to a bizarre case: the rich who spend market prices to purchase properties are complaining the low-income dragging down the value of the community, while the low-income are complaining about higher maintenances as the community has high quality facilities.

3. no adjustment of excess money supply and interest rates

The money supply M2 and the real interest rate have strong impacts on investment need, which is not eliminated by limiting real estate investment. As showed before, when the growth rate of M2 exceeds GDP’s more than 6%, inflation pressure will be largely enhanced. Without increasing credit price by raising interest rate or through open-market activities, the strong investment demand will remain, and property market will be a decent option due to its capital consuming and the bright return expectation.

There are two major reasons for not adjusting money supply and interest rates. First, sufficient money supply and low interest rates are important elements of stimulus real economy during global crisis. As long as the international financial environment remains in uncertain, it is very unlike to see a slow down of M2 supply and higher interest rates, at least not a higher borrowing rate. Second, the low interest rates are also instruments of keeping fixed exchange rates. The higher interest rates are, the more global hot capital will inflow to China, adding more pressure on appreciation of RMB.
4. Introduction of controversial property tax

The possibly introduced Property Tax attracts most attention of this time. The pre-test property tax has been projected for years, but not really come into practice yet. A lot of people support this tax type because it has the ability to largely ease local governments’ deficit problem. But more fundamental dilemmas have been raised for this tax:

1) This tax violates the fundamental land ownership. As long as the land legally belongs to the country, why should people afford tax for 70-year usage right assets, especially after paying high property prices?

2) Without a proper legal arrangement, it is rather difficult for local governments to give up the vested land profits. The new tax might be no more but only a function of generating income for the authority.

3) The determination of property tax is highly controversial, no matter based on assessed value or actual contracted price. Being lack of an authorised and transparent organization, any valuation will nature bring disagreements.

4.2 The possible future policy: systematic economy and social policies required rather than a case-to-case process

As analyzed above, the current regulation does not have sufficient ability to deal with fundamental problems of China’s property market. And a systematic change is required, from easing money supply to cooling investment needs, from restoring financial balance between the central and the local to improving real economy environment.

4.2.1 Short-term adjustments

1) Adjustment of money supply: the faster growth rate of M2 than GDP puts a lot of pressure to inflation and thus property becomes a decent choice to keep value of money. A proper deceleration of money supply is a necessity.

2) Adjustment of interest rates: keep the interest rates above CPI will largely ease investment needs. The borrowing rate could remain with the fear of affecting real
economy, but raising the saving rate by 25 basis point will be a powerful tool to cool down the market.

3) Revision of pre-sale policy: restraint of developers cash flow can put extra pressure

4.2.2 Long-term adjustments

1) Adoptable public housing system: it is rather important to classify parties who offer finance and supply land. A fairer distribution method of public-renting houses should be considered.

2) Revision of tax sources split between the central government and the locals: to change the rooted reason of the addiction to high land values. The central government should afford more public expenses to fix locals’ balance sheets.

3) The determination process of interest rates moves to market-oriented: as the price of money, the policy-determined interest rates normally react late and are not able to reflect real needs of capital. A more market-oriented process would make interest rates flexible and thus capital allocations would not be concentrated in a specific industry.

4) Economy growth pattern changes from export-driven to consumption-driven: to improve production industry and broaden investment channels would be available.
5. Conclusion

After amazing growths in all economic dimensions and aggressive expansions of urban areas for three decades, it is not surprised to see China’s property market booming from both supply and demand sides. More resources are allocated to this industry and more people enjoy decent lives with their needs fulfilled.

But beyond the reasonable expectation, China’s real estate industry is highly featured by government’s policy and thus not fully explainable by free-market’s fundamentals. Large excess amount of money supply and distorted interest rates generate incredible demands for capital consuming. And the property market is naturally favoured by offering protection against inflation and decent returns compared with struggling real economy. Behind the curtain, the local governments are waving economic tools to collect huge profits from land to fix their financial deficits through monopoly rights guaranteed by legal system. Finally, a property bubble has developed to challenge individual’s affordability and might not get burst if those artificial factors are maintaining.

Therefore, a structural change of economic and legal system is required to deal with the dilemma but rather than a case-to-case process. Simply raising investment barriers only accumulate needs into later explorations. Local governments should give up certain vested interests to make foreseeable commitments for more public goods.
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