# Key Factors Affecting Real Estate Markets in Asian Context: An Overview on Real Estate Bubble in Singapore and China

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**ABSTRACT:***Asian housing market is booming at a high rate that may lead to a bubblelike what happened in US property market. My research will highlighta set of indicators that work as warning signals to a dramatic increase in housing prices in Singapore and China housing market. The aim of the paper is to shed some light upon the research results relating to housing bubble in both countries' housing market.*

*Property price in Singapore and China have been rising at a staggering pace in the past few years due to the strength of their economies. Nowadays, China's housing prices have surprised not only Chinese people but also the whole world. Singapore as the leading country in Asia has also experienced a dramatic increase in its housing market. Whether housing bubble exists in China or Singapore has become a heated debate in the world for several years.*

*The purpose of this research work is trying to analyze whether housing bubble has already existed in Singapore and China. Analysis will be conducted by assessing real estate marketin both countriesby applying the fundamental factors, recognized indicators and the debate in the world. After deep analysis, the results show that housing bubble has formed in both countries. Now Singapore and Chinese government have paid great attention to it and have taken effective measures one after another to control housing prices, so as to prevent bubble from getting bigger and avoid the disaster when bubble bursts. At the end of the paper, recommendations are given to the current situation in the regions,and what actionsSingaporeandChinesegovernment have done and their future strategies areexplored as well.*

*On the basis of consulting theoretical studies in Singapore aswell in China (Beijing and Shanghai) quoting full-scale and authoritative statistics, using the method of qualitative and quantitative combination, this research study selects the key factors thataffect real estatemarket performances during the recent five years period of time.*

*Physical data forthe research was carried out in both countries through questionnaires, feedbacks and interviewswith real estate market leaders and agents; total samplingof data was analyzed and consolidatedto detect thedegree of real estate bubble in Singapore and China's large cities.*

**Keywords:** *Housing and development Board (HDB), Monetary Authority of Singapore (MAS), International Monetary Fund (IMF)*

## I. INTRODUCTION

The housing market turmoil that began in the U.S. in 2007 shows little sign of abating. It led to a financial crisis that subsequently spread to the rest of the world, triggering aftereffects that are still being felt today. The credit crisis in the U.S. and Europe brought to an end a decade of sustained growth in global real estate. Over the past years, it has become increasingly clear that the economies of Europe, U.S. and Asia are moving at different rates and with quite different features and issues.

In Asia, it appears to be business as usual with the ongoing changes in public policy towards the real estate markets in the region. Questions continue to be asked as to just how severe an impact the present credit crisis will have on the region. Arguably, many have been surprised by how relatively little Asia has been affected. While both pricing and rentals in Asian markets fell steeply in 2008 and early 2009 in step with those in the West, markets across the Asian region have been lifted in the second half of the year by the remarkable resilience of the Chinese economy, which has been buoyed by a series of fiscal and monetary stimulus measures.

One thing that is certain is that a little more than a year after the crash, asset markets in Asia are holding up surprisingly well compared to their peers in Europe and the U.S. Property price in Singapore and China have been raising at a staggering pace in the past few years due to the strength of their economies. Will Singapore and China real estate bubble burst soon? Traditionally most Asians bought residential real estate as a place to live for life, in recent years that attitude has been changing. Due to the availability of cheap credit, more Asians have become real estate speculators. Residential prices in China started increasing again after a lull in

2008. The demand for housing exceeds the supply in most of China. Urban housing stock made up 41 percent of Chinese household wealth in 2011, compared with 26 percent in the United States, according to Nicholas Lardy, a senior fellow at the Peterson Institute for International Economics. Lower home values could make Chinese consumers rein in their spending, making it tougher for U.S. and foreign firms to sell their products here.

The vexed situation has urged Singapore and Chinese government taking effective measures one after another to control housing prices so that to prevent bubble from getting bigger and avoid the disaster when bubble bursts.

### 1.1 Problem Discussion

Asian countries fearing a disastrous US-style property bubble are striving to cool down their real-estate markets as the region powers out of global financial crisis (Ganges, 2010). The real estate rush is fuelling fears that the bubble may burst, devastating homeowners, banks, developers, stock markets and local governments. Policymakers are worried that excessive exuberance could push property prices far above their real value, only to crash and bring down with them banks that lent money too freely and individuals who borrowed beyond their means. Singapore was one of the countries hit by the 1997-1998 Asian financial meltdown. That crisis followed a property crash, leaving a blighted landscape of unfinished projects across the country and banks gasping for lifelines.

Low interest rates, strong demand and speculation have pushed property prices in many Asian cities higher, in some cases surpassing peaks reached in 2007. Singapore was facing the problem of housing shortage as well as the increasingly high housing prices. A shortage of apartments and strong demand from buyers is accelerating price growth in Singapore with some analysts calling for property cooling measures to be reviewed. During 2007 to 2008 limited land supply in Singapore, the demand for public housing had been increasing at a rapid rate. "It is better to pre-empt a bubble than wait for it to get serious and have to take more drastic measures," Singapore Prime Minister Lee Hsien Loong said after the city-state took fresh measures against speculation (Ganges, 2010).

"The risk of an asset bubble is quite high in certain (economies) such as China, Hong Kong and Singapore," said Chua Yang Liang, head of Southeast Asia research at property consultancy Jones Lang LaSalle. A bursting of that bubble could "potentially derail economic growth, especially if banks and other investment houses are overly exposed to those sectors," Chua told AFP, singling out real estate as a cause of concern (Singapore property investors, 2010).

In China, property prices in 70 major cities hit a 21-month high in January, 2010 (Singapore property investors, 2010). "Once the bubble pops, our economic growth will stop," warns Yi Xianrong, a researcher at the Chinese Academy of Social Sciences' Finance Research Center. Else, on Dec. 27, 2010, Chinese Premier Wen Jiabao told news agency Xinhua that "property prices have risen too quickly." He pledged a crackdown on speculators. (Realestate, 2010). How did this bubble get going? Low interest rates, official encouragement of bank lending and Beijing's half-trillion-dollar stimulus plan all made funds readily available. City and provincial governments have been gladly cooperating with developers; Economists estimate that half of all local-government revenue comes from selling state-owned land. Chinese consumers, fearing inflation will return and outstrip the tiny interest they earn on their savings, have pursued property ever more aggressively. Beijing now has tightened lending, requiring buyers of second homes to put up a down payment of at least 40 percent, and they also face higher interest rates on their mortgage loans (Business, 2010).

Except real estate bubbles, the rising phenomenon of globalization also has influence on real estate. Real estate has historically been viewed as a local phenomenon, the global economic downturn's effects on real estate proves the industry is no longer a local asset, but a global one open to many risks and opportunities.

### 1.2 Questions at Issue

It is primarily relevant to examine how the real estate bubble as the key factor affecting real estate markets in Singapore and China, thus the question:
   a)   Is there a real estate market's bubble in Singapore and China?
   b)   How did the real estate bubble get going?
   c)   How does Singapore and China government act on the issue?

Thereafter, the main question of the research project follows:
   a)   Will Singapore and China real estate bubble burst soon?
   b)   Where the real estate market is moving towards future?

### 1.3 Delimitation

Since this research study will be dealing with the real estate bubble as a starting point, the main focus will lie on an overall assessment of the phenomenon in Singapore and China real estate market. A further

delimitation will be carried out regarding the survey, where focus will lie on the public responses to the effects on the bubble issue. The rising phenomenon of globalization also has influence on real estate market, which will be taken into consideration in the proceedings of this research as well.

## II.  LITERATURE REVIEW

### 2.1 Review of the Real Estate Market in Singapore Context

Several studies on property bubbles and its significant factors were based on the rational expectation theory (Stiglitz, 1990; Kim and Shu , 1993; Muellbauer and Murphy , 1997; Riddel, 1999; Ortalo-Magne´ and Rady, 2001; Black et al, 2006; Mikhed and Zemcik, 2007). Some theorists model the speculative nature of housing bubble growth by considering the homeowners expectations of future price growth. They assert that it is the buyers' view of the house as an investment for income purposes that propel the bubble growth in the asset. A number of studies tested whether there is a positive housing wealth effect on consumption in Singapore, which has been found to be true in OECD countries (Abeysinghe and Choy, 2007). There exists ambiguous conclusion among different studies. However, they noted that the rise in HDB resale prices does have a significant pump-up effect on aggregate consumption.

Agnello and Schuknecht (2009) used a random effects panel probit model to model the probabilities of booms and busts. More recently, Phillips and Yu (2011) concluded that there was residential real estate exuberance in Singapore in 2007 and 2008, as well as from late 2009 to January 2011. They computed a test statistic for explosive behavior in time series, and compared it against an asymptotic distribution. The International Monetary Fund (IMF, 2011) used cross-country regressions to identify global factors that contributed to the near decade-long global housing price boom in the run-up to the 2007 financial crisis.

A new record price for a HDB resale flat was set last month for a property in Bishan. An executive maisonette along Bishan Street 13 changed hands for S$1.01 million, beating the previous S$1 million paid for a similar unit in Mei Ling Street, Queenstown last September (Source: HDB)

### 2.2 Review of the Real Estate Market in China Context

The housing market in China, many researchers set up demand and supply functions for housing and uses the equilibrium conditions of efficient markets to test for house price bubbles, but their definitions of a bubble are vague. Kocherlakota (2009) and Wang and Wen (2009), concludes that in incomplete financial markets, bubbles can exist as a form of liquid asset at one of the equilibria.

Hui and Shen (2006) is an exception and they find that there seemed to exist a housing bubble in Shanghai in 2003, but not in Beijing. To the best knowledge of the author, there have not been more studies focusing on housing bubbles in Beijing and Shanghai in the existing publications. Between 2001 to 2004, house prices increased by 25 percent or more in almost every major city in China (Deng, Shen and Wang, 2009). Prices continued to rise rapidly from 2004 to 2007 (Ye and Wu, 2008). The most recent development has been triggered by the fiscal stimulus program launched at the end of 2008 in response to the financial crisis (Cova, Pisani and Rebucci, 2010). The housing markets of Beijing and Shanghai are of great importance and stands for the trend direction in Chinese housing markets. In recent years, the demand for housing in both cities has increased along with the growth of urbanization and per capita disposable income (PCDI) of households. As to studies on bubbles in the Asian housing markets, Glindro et al. (2008) explore housing bubbles by investigating the issue of housing price overvaluation in nine Asia-Pacific economies over the period 1993-2006. Compared with other studies, they use a wider set of fundamentals in the model. The results suggest that speculative housing bubbles may exist in such leading markets as Seoul, Beijing and Shanghai, while there is little evidence of overvaluation or bubbles at a national level in the selected economies.

Structural models are based on the demand and supply side of the housing market. For example, Capozza, Hendershott, Mack and Mayer (2002) and Gallin (2006) have advocated models to derive the stationarity of the price income ratio. This measure has increased steadily, especially in Beijing, Shanghai, Shenzhen and Hangzhou (Wu, Gyourko and Deng, 2010). It should be noted, however, that a non-stationary behavior of the indicator does not inevitably imply the presence of a bubble. The structural parameters generally depend on the elasticity governing housing demand and supply.

Over the last years, the housing markets in Beijing and Shanghai have experienced a dramatic fluctuation of housing prices. While many studies have documented housing bubbles around the world, only a few studies have been concerned with housing bubbles in the two largest metropolitan areas, even though the rapid growth of Chinese economy suggests that both cities are among the most interesting for this topic.

### 2.3 Relevance to the Research Issues

The performance of the housing market over the last ten years has been remarkable both in Singapore and China. According to the Year of Statistics Singapore 2009, the residential property appreciated in value at

an average of 4.99 % per annum (62.8% over the whole time period). Even more remarkable is the fact that it does not seem to move in tandem with the overall economic activity and has generated a considerable amount of commentary along with the suspicions of the housing price bubble, while the real estate market of China has become a prosperous business and a pillar industry in the country. For many observers, the Chinese economy has been spurred by a bubble in the real-estate market, probably driven by the fiscal stimulus package and massive credit expansion (Nicolas 2009).

The Chinese experience of the past decade probably provides a good case study of the relationship between monetary policy and housing prices. Housing prices in major cities such as Beijing and Shanghai more than tripled between 1999 and 2010. The total value of China's residential housing market reached 91.5 trillion Yuan at the end of 2009, nearly three times nominal GDP in the same year (Source: China Securities Journal, July 15, 2009). Will Singapore and China real estate bubble burst soon? In recent years, economists and policymakers have become increasingly worried about China's housing bubble and are now highly cognizant of the huge risk associated with a potential bubble-burst of such magnitude. Forbes has recently ranked China's real estate market bubble second in the top seven looming financial bubbles in the world.

I firstly investigated the existing theories, models and practices by previous researchers used to probe into a bubble and evaluate the degree of the effect of a bubble in the two typical countries. The previous researches gave a powerful proof to delve further into my research issue. Therefore, based upon the combination of literature review of real estate bubble and the feature of Singapore and China real estate market environment, an evaluation framework tailored for the issue are established, which evaluate the current real estate market situation and problems from such aspect as an influence factor to develop my research, the research questions as indicated earlier in section 1.  2 will be explored.  Additionally, although culture is an important factor in Singapore's and China's real estate environment, the study does not select the culture as a criterion for evaluating the factors affecting real estate market in the two countries.

## III.     RESEARCH DESIGN AND METHODOLOGY

Research design is the plan, structure, and the strategy of conducting a research project. Every research project is based on certain methodology that is a way to systematically define and solve problems and attain its objectives. This is a crucial guideline and lead to a concluding outcome of any research project through marketing observation, data collection and data analysis.

### 3.1 Research objectives and scope

The main objective of this study is to provide an in-depth empirical investigation into the dynamic relations between real estate markets and risks, key factors using the Singapore, Beijing and Shanghai data to delve deeper into the key factors affecting real estate markets in Asian context.

### 3.2 Design of the study and research approach in data collection methods

This study adopts descriptive research and exploratory research by using primary data and secondary data as the research methodology. This study proposes a positivistic approach as the research plan for data collection and analysis, and develops the survey method and questionnaire design. The data used for supporting the analysis in this section is from a practical survey of the public and the real estate industry in Singapore and China supplemented by literature references. In the survey, 10 managers were selected from investment/commercial banks, real estate enterprises, constructions, and the developers to participate in the survey, in which 5 from Singapore, the rest from China (Beijing and Shanghai). The survey was conducted from November 2012 to February 2013 both in Singapore and China. Interviews were adopted using structured non-disguised questionnaires as research method for data collection, in which the types of questions used are open-ended, multiple-choice and close ended. The set of questionnaires were designed to define the key factors affecting Real Estate Markets in Singapore and China context.

Two methods were applied to enlarge the sample size. The first method is called a remote survey. It relies on a combination of emails and tele-interviews. Emails and phone calls were sent to some managers of major real estate firms and institutions, constructions, developers and investment/commercial banks in China inviting them to take part in the survey either online or by telephone. The other method for increasing the survey sample size further was to conduct the survey face-to-face. Finally, the research data was collected and analyzed; the results of the survey will be shown in chapter 4.

### 3.3 Methods and techniques
Research methods and techniques that was planned and used are stated below:

**Table 1: Research Methods and Techniques**

| Type of Research | Descriptive Research and Exploratory Research |
|---|---|
| **Research Question** | **Singapore and China Real Estate Profile Survey**<br>The types of questions will be employed are open -ended, multiple -choice and close-ended. |
| **Sampling Technique**<br><br>**Sampling Size** | Convenience sampling<br><br>A total sample size of 210 was collected, in which 105 of the samples were conducted in Singapore (5 by experts/managers); and the others were conducted in China. |
| **Sampling Areas** | **Singapore:**<br>Raffles Place, City Hall, Orchard Road, Bugis Junction, Dhoby Ghaut and East Coast<br>**China:**<br>Beijing & Shanghai |
| **Data Collection** | A set of structured non -disguised questionnaires is the main source of data collection. The research work was done through market survey technique.<br>**Primary Data:** Empirical questionnaire survey<br>**Secondary Data:** Authoritative data sources |

## IV. RESEARCH RESULTS AND DATA ANALYSIS

For the purposes of this research, the questionnaires were used to gather the necessary and essential information. The survey questionnaire was completed by 210 respondents, 105 of the 210 respondents were conducted in Singapore, and the rest were conducted in China. To determine further the factors affecting real estate in today's market, 10 experts (managers) were selected from investment/commercial banks, real estate enterprises, constructions, and developers to participate in the survey research in Singapore and China. These experts comprised senior managers with many years' experiences in the real estate and construction industries. Two parts of questionnaires were used in this research to obtain information Section A and B. A total of 200 replies were received to Questionnaires Q1-Q16 (Section A) consolidated results as shown in table 2(Questionnaires in Appendix 1) and another 10 replies were received to Questionnaires Q17-Q20 (Section B) from professionals. Section A is determined to gain the public insights of individual property homeowners.

Through this survey, the empirical results from the survey questionnaires are tabulated in Table 2.

*Table 2. Survey Results of the Factors Affecting Real Estate Market In Singapore and China*

| Research Questions (Section A) -16 Questions | Survey Results | |
|---|---|---|
| | **Singapore** | **China** |
| 1. Gender of Respondents | Men: 55 Women: 45 | Men: 60 Women: 40 |
| 2. Age of Respondents | 85% of under 55 years old | 90% under 55 years old |
| 3. Race of Respondents | Chinese: 58%<br>Malaysian: 15%<br>Indian: 18%<br>Arabic: 2%<br>Latino/Hispanic: 1%<br>African American: 1%<br>White/Caucasian: 5% | Chinese: 96%<br>Malaysian: 0%<br>Indian: 0%<br>Arabic: 1%<br>Latino/Hispanic: 0%<br>African American: 0%<br>White/Caucasian: 3% |
| 4. Highest level of formal education | Less than High School: 2%<br>High School/GED: 3%<br>Some College: 11%<br>2-Year College Degree: 15%<br>4-Year College Degree: 41%<br>Master's Degree: 8%<br>Doctoral Degree: 4%<br>Professional Degree: 16% | Less than High School: 4%<br>High School/GED: 4%<br>Some College: 13%<br>2-Year College Degree: 16%<br>4-Year College Degree: 39%<br>Master's Degree: 9%<br>Doctoral Degree: 5%<br>Professional Degree: 10% |
| 5. Occupation of Respondents | Professional: 34%<br>Businessman: 21%<br>Administration Executive:33%<br>Student: 4%<br>Others: 8% | Professional: 28%<br>Businessman: 25%<br>Administration Executive:31%<br>Student: 6%<br>Others: 10% |
| 6. Total Annual Personal Income of Respondents | Less than $30,000: 12%<br>$30,000-$39,999: 10%<br>$40,000-$49,999: 18%<br>$50,000-$59,999: 23%<br>$60,000-$74,999: 15%<br>$75,000-$99,999: 11%<br>$100,000-$149,999: 8%<br>$150,000-$249,999: 3%<br>$250,000-$499,999: 0<br>$500,000-$999,999: 0<br>$1 million or more: 0 | Less than $30,000: 16%<br>$30,000-$39,999: 9%<br>$40,000-$49,999: 14%<br>$50,000-$59,999: 21%<br>$60,000-$74,999: 14%<br>$75,000-$99,999: 9%<br>$100,000-$149,999: 8%<br>$150,000-$249,999: 8%<br>$250,000-$499,999: 1<br>$500,000-$999,999: 0<br>$1 million or more: 0 |
| 7. Are you currently Looking to purchase a new home? | 54% answered "Yes"<br>36% answered "No"<br>10% responded "Not Sure" | 58% answered "Yes"<br>38% answered "No"<br>4% responded "Not Sure" |

| Research Questions | Survey Results | |
|---|---|---|
| | **Singapore** | **China** |
| 8. What type of primary residence are you Interested in? (*HDB for Singapore respondents; Flat for China respondents) | HDB: 26%<br>Condominium: 30%<br>Apartment: 25%<br>Landed residence: 19% | Flat: 19%<br>Condominium: 39%<br>Apartment: 27%<br>Landed residence: 15% |
| 9. What are the main factors that lead you to buy a property? | Good location: 18%<br>Access to public transportation: 11%<br>Plenty of amenities: 13%<br>Low price: 28%<br>Investment: 28%<br>Others: 2% | Good location: 9%<br>Access to public transportation: 10%<br>Plenty of amenities: 11%<br>Low price: 36%<br>Investment: 33%<br>Others: 1% |
| 10. Do you think you (buyers) can afford this property in this current market? | 36% responded "Yes"<br>49% responded "No"<br>15% given "No Comments" | 38% responded "Yes"<br>52% responded "No"<br>10% given "No Comments" |
| 11. What do you think about the housing price in current market? | Very Low (-20% of expected):0<br>Low (-5%-20% of expected): 0<br>Ok: 3%<br>High (+5% of expected): 29%<br>Very High (+20% of expected): 68% | Very Low (-20% of expected):0<br>Low (-5%-20% of expected): 0<br>Ok: 0<br>High (+5% of expected): 25%<br>Very High (+20% of expected): 75% |
| 12. Do you think there is Real estate bubble in this current market? | 81% responded "Yes"<br>11% responded "No"<br>8% given "No Comments" | 87% responded "Yes"<br>9% responded "No"<br>4% given "No Comments" |
| 13. Do you think the home loan rates are affordable? | 68% responded "Yes"<br>25% responded "No"<br>7% given "No Comments" | 64% responded "Yes"<br>28% responded "No"<br>8% given "No Comments" |
| 14. The opinions of respondents on the present home loan rates | 8% responded "Increased"<br>16% responded "Decreased"<br>69% believed "Keep Same"<br>7% given "No Comments" | 12% responded "Increased"<br>14% responded "Decreased"<br>72% believed "Keep Same"<br>2% given No Comments |
| 15. The opinions of respondents on the value of property in next 6 months | 38% responded "Increased"<br>34% responded "Decreased"<br>23% believed "Stay Same"<br>5% given "No Comments" | 36% responded "Increased"<br>33% responded "Decreased"<br>28% believed "Stay Same"<br>3% given "No Comments" |
| 16. What are the factors That keep housing prices high even with the presences of vacant housing? | Low interest rate: 15%<br>Massive Liquidity: 10%<br>Artificially low land price: 2%<br>Easy Credit: 15%<br>High Book Value: 11%<br>Psychological factors: 12%<br>Expectation/Uncertainty<br>Transaction Cost: 16%<br>COE<br>(Cost Over Evaluation): 17%<br>Disregard of Market demand: 2%<br>Others: 0 | Low interest rate: 13%<br>Massive Liquidity: 10%<br>Artificially low land price: 1%<br>Easy Credit: 14%<br>High Book Value: 16%<br>Psychological factors: 12%<br>Expectation/Uncertainty<br>Transaction Cost: 11%<br>COE<br>(Cost Over Evaluation): 16%<br>Disregard of Market demand: 7%<br>Others: 0 |

**Section B: Experts/Managers in Relative Enterprises**

In order to gain the essential insights of the current real estate market and further discover the key factors affecting real estate market in Singapore and China; as discussed in last chapter. Summary of the survey overview from experts / managers shown as follow:

**Table 3: Survey Overview from Experts / Managers**

| | |
|---|---|
| **Survey Method** | Questionnaire corresponded by e-mail, website, and interview. |
| **Surveyed Firms** | Investment/commercial banks, real estate enterprises, constructions, and developers |
| **Duration of Survey** | November 2012 – February 2013 |
| **Number of Responded Firms** | 10 |
| **Surveyed Use** | Singapore and China Real Estate Profile Survey |
| **Surveyed Countries (Cities)** | **Singapore:** Singapore<br>**China:** Beijing and Shanghai |

10 experts / managers were selected from Singapore and China expressed their personal thoughts and opinions for current real estate market trends and perspectives in the future; from their responses and answers I have summarized and came to the conclusion as follow:

**Q17. What are your thoughts on today's real estate market? What is your opinion on market outlook for the next 24 months?**

The answers from these experts and managers proved that today's real estate market has experienced a dramatic run-up in housing prices both in Singapore and China. Beijing and Shanghai have been the leading housing markets in urban China. In the late half of the 2000s, both metropolises experienced a pronounced process of housing price appreciation. Currently, house prices are at all-time highs, and have been increasing at high rates especially over recent years. Home mortgage loans have played a significant role in the development. Banks have provided easy credit for housing development, probably without sufficient evaluation of risks.

The housing issue is not only a problem from an economic perspective, but also an issue of the people's livelihood that can affect social stability in today's real estate market in China. Few experts and managers in China predicted that the high housing prices may be still broadly in line with the fundamental factors, and could be still supported by solid demand for residential housing within the next 24 months; the others predicted that housing prices in the first-tier cities like Beijing and Shanghai may stop rising remarkably further, but are still at record levels.

Thoughts on today's Singapore real estate market from few experts and managers that the current low interest rates and a healthy economic outlook are expected to keep Singapore's mass market residential property market resilient, particularly for developments in the Outside Central Region (OCR).

Answers from experts and managers in Singapore predicted that there were signs of a cooling in Singapore's red-hot property market, which has seen falls in some quarters this year, but due to strong demand from a growing population and low borrowing rates, the real estate market will remain resilient with uncertainty in the next 24 months.

**18. Do you think there is a real estate bubble in today's market? How did the real estate bubble get going? What do you think whether the bubble bust will happen or not?**

Based on the question, the answers from experts / managers showed that Beijing and Shanghai appears to have been on the way of forming a housing price bubble during the course of the past decade. Singapore in recent years has as well. With the expectation of housing prices may become stronger; and the speculative behavior is more likely to produce a bubble by buying at a certain price with the plan of soon selling it at a higher price in both metropolises Beijing and shanghai and the city-state Singapore.

In China real estate market, due to the ongoing integration of China into the world markets, a bubble might also have an international dimension. The apparent house price bubble is one of the major risks to a sound recovery of the global economy after the financial crisis. On the view of whether the bubble bust will happen or not, both experts and managers from the two surveyed countries concerned that once the housing price deviates too much from its fundamental value, it may give rise to problems and even financial crisis.

Since the low interest rates are strongly prevailing both in Singapore and China. Experts from investment / commercial banks also concerned that perhaps now the homebuyers think they can afford an expensive flat/condo with a reasonably cheap mortgage, but their dreams will burst soon and the flat/condo will become unaffordable when the interest rises in the future. Variations in interest rates can mask or magnify structural affordability.

**19. Do you think government has taken corrective action to cool down the property market? What's your opinion on the actions?**

Based on the answers and responses from the experts and managers in China, the feedbacks and comments came to the conclusion:

Undoubtedly, the Chinese government has taken varies of actions to cool down the property market. To slowdown the development, the People's Bank of China has increased its nominal interest rate. Furthermore, the Chinese government has introduced measures to combat record prices, including higher mortgage rates. Down-payment requirements for second homes have been raised extensively. In some high housing price cities like Beijing and Shanghai, house owners are restricted in further house purchases. Many state run mortgage lenders have started to cut mortgage discounts. Additional measures are in the pipeline, for example higher taxes on property. As a result, housing prices in the first-tier cities stopped rising further, but are still at record levels.

Few of these experts and managers showed their opinion that the government's challenge is to scrap out speculative inflows, whilst not killing a major growth engine. However, while accelerating house prices may indicate the presence of a bubble, its existence is controversial. In fact, urbanization trends, rising incomes and low interest rates can have triggered the evolution. Higher house prices may be still broadly in line with the fundamental factors, and could be still supported by solid demand for residential housing.

While in Singapore, based on the answers and responses from experts and managers the feedbacks and comments came to this conclusion:

Policies and measures are being taken by the Singapore government to cool down the property market unceasingly. The Global Financial Crisis in 2008 had a severe impact on the Singapore property market. The PPI declined from its peak, and transaction activity waned. In response, the government suspended the supply of land to developers and allowed them to phase the construction and sale of their projects. Demand recovered strongly after 2009, however, as economic recovery gained traction and interest rates fell. The government announced measures on 14 September 2009 aimed at pre-empting a speculative bubble. It increased land supply, withdrew loan schemes that could have encouraged speculation, and decided not to renew the aforementioned concessions for developers.

New sales of private residential property moderated following these measures. However, transaction activity rebounded in 2010, prompting further measures in February and August 2010. Once again, moderation was temporary, prompting further tightening of LTV (Loan-to-value) limits and sellers' stamp duty (SSD) terms on 13 January 2011. It can be seen, till now, the new policies and measures still formulated accordingly by the government in accordance with different steps of real estate market.

Experts and managers also showed that property is an important sector in Singapore. It is the largest component of household wealth. Public housing policies and management need to keep in tandem with rapid socio-economic changes and the increasing complexity of the housing needs of its population. Despite the wide spectrum of public housing policies, only certain initiatives have been found to be significant in influencing the prices of public housing. The degree of impact also appears to vary from policy to policy, and is sensitive to the particular segment of the population targeted by the policy. There are also policies, which have generated some unexpected consequences; those are opposed to their initial objectives.

**20. What is your idea about green buildings?**

Based on the question, the answers from experts and managers in Singapore and China expressed various viewpoints on their thoughts about green buildings.

First of all, from experts and managers the "Green Building" refers to a structure and using process that is environmentally responsible and resource-efficient throughout a building's life-cycle: from siting to design, construction, operation, maintenance, renovation, and demolition. Generally, green homes are healthier, more comfortable, more durable, and more energy efficient and have a much smaller environmental footprint than conventional homes. On the thoughts that what makes a building green? The experts and managers gave a clear and sound description that a "green building" aims to be environmentally friendly in seven areas: energy efficiency and renewable energy, water efficiency, waste reduction, building materials, toxics reduction, indoor air quality, and smart growth and sustainable development.

Both managers and experts in the two surveyed countries gave opinions that sustainable properties are the future of the real estate industry. Consumer demand, residential builders and government policies are making this happen. Many consumers, real estate professionals, and property owners are taking steps towards greening their properties. As the green building movement is gaining momentum, so does the consumer demand for greener properties. Nowadays, a slew of homebuyers are paying attention to green homes and buildings; they recognize the link between green properties, cost savings and healthy living. On the other hand, government incentives and policies are increasing the number of green residential and commercial buildings and retrofits as well. They also expressed that energy consumption can be effectively lowered by constructing green buildings.

In Singapore the BCA (Building and Construction Authority) Green Mark Scheme was launched by BCA in January 2005 as an initiative to drive Singapore's construction industry towards more environment-friendly buildings. It is intended to promote sustainability in the built environment and raise environmental awareness among developers, designers and builders when they start project conceptualization and design, as well as during construction. Energy efficiency is no longer enough to satisfy many of Singapore's green building users, who are demanding broader environmental sustainability from their spaces, say experts and managers. They expressed their approval and agreement on the schemes and measures done by government. Singapore's green building schemes also emphasize water and waste minimization, recycling and the use of sustainable materials. In Singapore, more businesses are beginning to demonstrate an attitude towards greater environmental responsibility. Eco-friendly interiors benefit everyone in the community with greener, healthier working and living environments. Growing awareness of environmental concerns is the result of years of energy efficiency initiatives combined with better media communication and education.

While in China, the Chinese government has established a goal of having green buildings account for 30 percent of new construction projects by 2020, according to a document jointly released by the Ministry of Finance and the Ministry of Housing and Urban-Rural Development. According to the document, the government will adopt a slew of measures including increasing policy incentives and improving industry standards, as well as promoting technological progress and the development of related industries in order to attain the goal. The document also specifies a goal of bringing China's building energy consumption ratio closer to that of developed countries by 2020. Experts and managers in China showed that those goals and measures underscored China's intent to speed up the development of energy-efficient constructions. The document indicates that China's green construction sector is moving into a fast development phase, and shows the government's resolve to speed up energy-saving and emission-reduction efforts.

**NOTE:** In section B, 10 managers and experts were selected from investment/commercial banks, real estate enterprises, constructions, and the developers to participate in the survey research; in which 5 from China (Beijing and Shanghai), 5 from Singapore. List of the participators are shown as below:

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Singapore:
Bobby Chua: Consultant of Huttons Real Estate Group (Singapore)
Suki Liew: Manager of UOB Venture Management Pte. Ltd
James Koh: Manager of ERA Realty Network Pte. Ltd, Singapore
Jenny: Manager of HSR International Realtors Pte. Ltd
Wang Liang: Senior Sales Director of DTZ Property Network Pte. Ltd

China:
Liu Yanzhi: Manager of Poly (Beijing) Real Estate Development Co., Ltd
Qin Kefei: Construction Developer (Shanghai)
Yuan Quan: Consultant of Regal Lloyds International Real Estate Consultants (Beijing) Co. Ltd
Wang Hai: Manager of Greenland Group (Shanghai)
Lu Ping: Marketing Director of Asset Management in Bank of China (Beijing)

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# V.     CONCLUSIONS AND RECOMMENDATIONS

## 5.1 Conclusion

The study sheds some light on this debate by examining housing price developments in 2 economies in Asian context, including Singapore and China. Not surprisingly, the patterns of national house price dynamics exhibit significant cross-country heterogeneity, which can be attributed to different stages of economic development, different institutional arrangements and market-specific conditions. Singapore and China have witnessed very strong house price inflation recently. Given the not-so-distant experience of financial crises in this region (e.g. the 1997 Asian crisis), in which booms and busts in real estate markets played a crucial role, concerns has arisen that new housing bubbles could form.

This research study examined that whether there are housing price bubbles in Singapore and China (Beijing & Shanghai). Several preliminary conclusions could be drawn.

Firstly, the results suggest that, as discussed previously in Chapter 4 that Beijing housing market appears to have been on the way of forming a bubble since 2005; a bubble appeared to be forming in Shanghai with a sharp rise of housing prices in 2002; while Singapore has seen a surging demand for residential units and created housing prices new heights one after another. This finding is supported by the evidence that the empirical results gained from the research study.

Secondly, the finding revealed the key factors affecting real estate markets in Singapore and China. The empirical results gained from the research study revealed that the main factors that keep housing prices high in Singapore are "COE", "Transaction Cost", "Low Interest Rate" and "Easy Credit"; while in China despite of the high presences of vacant housing, the main factors that keep housing prices high are "COE", "High Book

Value", "Easy Credit" and "Low interest Rate". A number of studies have addressed newly emerging mortgage markets. There are good reasons why the public and policymakers should monitor house price developments closely. Fluctuations in residential property prices tend to have a bigger wealth effect than those of financial assets. In addition, there are strong linkages between the residential property cycle and the credit cycle and by extension the banking sector and the macro-economy. This is because the purchase of a house is predominantly funded by mortgage loans originated by financial institutions, and real estate property is widely used as a major collateral asset for bank loans. Aimed at the issues over "Low Interest Rates" and "Easy Credit", Chairman of MAS, Tharman Shanmugaratnam said: "Monetary conditions worldwide are far from normal. QE3 and low interest rates have made credit easy, but this will eventually change. We are taking this step now to require more prudent lending, and will continue to watch the property market carefully. We will do what it takes to cool the market, and avoid a bubble that will eventually hurt borrowers and destabilize our financial system." (Posted: 09 October 2012, Asia Singapore). The Chinese government has repeatedly stated that the country will maintain property regulation policies without wavering, even after economic growth slowed to a near three-year low of 8.1 percent in the first quarter of 2012. During a recent inspection tour to Wuhan, capital city of central China's Hubei province, Premier Wen Jiabao asked local authorities to carry out property tightening measures and increase affordable housing for low-income earners to ensure a healthy property market

Thirdly, the answers from experts and managers suggested that the authorities have responded actively to today's real estate market, even in the event of sharp price movements, risks for growth and financial stability seem contained. Policies and measures are being taken by the government in both countries to cool down the property market unceasingly.

We used the above results to discuss the question whether a bubble in real house prices exists. Importantly, throughout this paper we detected the house price overvaluation and a housing bubble in both surveyed countries. House price overvaluation refers to the fact that current house prices are substantially higher than their fundamental values. The overvaluation consists of two components. For one, imperfections in housing markets, such as lags in supply and credit market frictions, can cause house prices to exhibit fluctuations around their fundamental values in the short run. In this study, we consider this cyclical component of house price overvaluation as simply reflecting inherent frictions in the housing market. On the other hand, the residual component, i.e. the part of house price overvaluation that can be explained by serial correlation of house price dynamics, is most likely driven by overly optimistic expectations of future house price movements and hence treated as evidence of bubbles. Using this definition, we find evidences of housing bubbles in the Asian context economies, especially in Singapore and China.

The debates on real estate bubbles are controversial. There may have two opposite views. Pessimists argue that house prices have been overvalued in many countries and will face downward corrections in the near future. At the extreme, some see evidence of new speculative housing bubbles, and call for supervisors and central banks to take active measures to contain them. By contrast, the optimists consider this round of house price growth as a manifestation of recovery from the previous crisis. The optimists argue that, in the aftermath of a previous crisis, house prices were too low compared to their fundamental values. Therefore, the rebound of house prices from very low levels is simply a consequence of the mean reversion process. Moreover, the liberalization of housing markets and housing finance systems in the past decade, including a general trend towards more market-based housing markets, greater availability of mortgage products and more liquid secondary mortgage markets, have arguably improved market efficiency, stimulated demand and contributed to house price growth.

**5.2 Limitations and recommendations**

For many analysts, the Chinese economy is spurred by a bubble in the housing market, probably driven by the fiscal stimulus package and massive credit expansion, with possible adverse effects to the real economy. The bubble is particularly huge in the cities in the southeast coastal areas and special economic zones, especially in Beijing and Shanghai. While the impact of real house prices on CPI (Consumer Price Index) inflation appears to be rather strong, GDP (Gross Domestic Product) growth may not be heavily affected. Thus, a decline of the bubble will likely have only modest effects on the real economy. The equilibrium may be destroyed when housing prices rise dramatically in a short time, for instance, in Beijing and Shanghai as discussed in Question 10. If such equilibrium is caused by the rapid growth of housing prices, the change of fundamentals such as the income of households or per capita GDP have to increase in a parallel way consistent with the shifts of prices. Otherwise, housing prices may crash without the support from the positive change of fundamentals. Undoubtedly, the slower or stagnant growth of income per capita will have negative impact on the economic development in the long run. This implies that, in such cases, the policies should pay high attention to the steady and parallel increase of household income and employment.

House price risk has attracted much attention in recent years. The perceived lower risk has encouraged laxity in mortgage market lending criteria, which lie at the heart of the ongoing subprime crisis. Ultimately, the authorities should safeguard the interests of first-time buyers. The predominance of public housing in Singapore underlines the urgency and need for the authorities to introduce measures to strike equilibrium between helping first-time home buyers and sustaining home values in the long run. To restrain property bubble the Singapore government has taken a dual-pronged strategy – increasing land supply, and imposing market curbs. Singapore government took the following steps:

| Date | Policy Change |
|---|---|
| 14 Sep 09 | Reinstate confirmed list for Government Land Sales (GLS) program in 1H10. |
| 14 Sep 09 | Removal of the Interest Absorption Scheme (IAS) and Interest Only Loan (IOL). |
| 19 Feb 10 | Introduced Sellers' Stamp Duty (SSD) sold within 1 year from purchase date. 1% levied on the first $180,000 of the consideration, 2% for the next $180,000 and 3% for the balance. |
| 19 Feb 10 | Lowered the loan to value (LTV) limit for the financing of residential properties to 80% from 90%. |
| 30 Aug 10 | Disallowance of concurrent ownership of both HDB flats and private residential properties within a minimum occupation period (MOP) of 5 years. |
| 30 Aug 10 | Minimum occupation period for non-subsidised HDB flats has been extended to 5 years (from 3 years previously). |
| 30 Aug 10 | Seller stamp duty has been extended from one year to three years (graduated scale). The full SSD rate will be imposed for sales made within first year of purchase while two-thirds and one-third of the full SSD rate will be imposed on sales made within the second and third year respectively. |
| 30 Aug 10 | Increase in minimum cash payment from 5% to 10% & decrease in LTV from 80% to 70% for property buyers with outstanding housing loans at time of purchase. |
| 30 Aug 10 | Allowing households with income of between $8,000 to $10,000 to buy subsidised HDB flats (previously restricted to Executive Condominiums); ii) increasing supply of new flats from 16,000 new units in 2010 to 22,000 new units in 2011 and iii) shorten the completion time of Build-to-Order flats (reduction from 3 years to 2.5 years). |
| 14 Jan 11 | Increase in sellers' stamp duty (SSD) rates to 16%, 12%, 8% and 4% for residential properties sold in the first, second, third and fourth year of purchase respectively. |
| 14 Jan 11 | Lowering of the loan-to-value (LTV) limit to 60% for 2nd home. An additional regulation on LTV limit of 50% will also be implemented on purchasers who are not individuals. |
| 8 Dec 11 | Additional buyers' stamp duty (ABSD) imposed. 10% for foreigners/companies, 3% for PRs buying 2nd homes, 3% for citizens buying 3rd homes. |

Source: URA, BofA Merrill Lynch Global Research estimates, 7 December 2011

The evidences of house price overvaluation can be important for policy considerations. To mitigate house price overvaluation driven by cyclical movements related to market frictions, a policymaker should probably focus on measures that aim at reducing the magnitude and frequency of house price cycles, such as loosening land use regulation, improving information availability and transparency and enhancing property right protection. By contrast, to contain a bubble, the policymaker should instead adopt measures that counter the over-confidence of investors in the housing market and their unwarranted expectations of capital gains.

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## AUTHORS PROFILE

**Mr. Naganathan Venkatesh** obtained his Degree and a Master degree in Computer Science from University of Madras, India as well he also holds another Master's Degree in Human Resource Management and presently he is pursing PhD in Computer Science & Engineering from University of Madras, India. As Research Scholar, from NITTTR (National Institute of Technical Teachers Training and Research, Ministry of Human Resource Management, Govt. Of India) he has published many international journals to his credit. He is an Assistant Editors for Asian Journal of Management Sciences & Education (AJMSE, Japan) as well Associate Editor for International Journal of Research in Management & Technology (IJRMT, India). He is a charted member of Microsoft and holds Microsoft Certification in MCAD.Net, MCPD.Net, MCSD.Net and MCTS in SQL Server 2005 and BizTalk Server 2006. He is also a ACTA (Advanced Certificate in Training and Assessment) certified Trainer, Assessor and course developer awarded by WDA, Singapore

He got fifteen years of work experience out of which; 5 years he worked in software industry with different roles played - Business Analyst, Associate Consultant, Team Lead and Program Manager for various clients in US and India whose company status was PCMM Level 5. In training industry he has over 10 years' experience; roles played has a Corporate Trainer, Train the trainer, Chief Manager, Senior Lecturer, Assistant Dean, Academic Head. He had delivered and conducted wide range of training in Information Technology, Business Management and Human Resources Management subjects for various Universities; from Australia (Monash University, Deakin University, University of Western Sydney); from UK (University of Greenwich, Liverpool John Moores University, Anglia Ruskin University, University of East London) and University of Madras (from India). He had delivered number of technical and marketing seminars in US, India, Singapore, Malaysia and Indonesia for respective employers he worked earlier.

**Appendix1:Market Research for Singapore and China Real Estate Profile Survey Questionnaire**

<u>Individuals</u> (Check Only One Option)

**1. What is your gender?**  ☐ **Male**  ☐ **Female**

**2. In which age group do you belong to?**

☐ **18-24**  ☐ **25-34**  ☐ **35-44**  ☐ **45-54**

☐ **55-64**  ☐ **65 and above**

**3. What is your race?**

☐ **Chinese**  ☐ **Malaysian**  ☐ **Indian**  ☐ **Arabic**

☐ **Latino/Hispanic**  ☐ **African American**  ☐ **White/Caucasian**

**Any Other (Please Specify):**_____

**4. What is the highest level of formal education you have completed?**

☐ **Less than High School**  ☐ **High School/GED**

☐ **Some College**  ☐ **2-Year College Degree (Associates)**

☐ **4-Year College Degree (BA,BS)**  ☐ **Master's Degree**

☐ **Doctoral Degree**  ☐ **Professional Degree (MD,JD)**

**5. What is your occupation?**

☐ **Professional**

☐ **Businessman**

☐ **Administration Executive**

☐ **Student**

**Any other (Please Specify):** _____

**6. What is your total annual personal income? (Include income from all sources—salary, bonuses, investment income, rents, royalties, etc.)**

☐ **Less than $30,000**  ☐ **$30,000 - $39,999**  ☐ **$40,000 - $49,999**

☐ **$50,000 - $59,999**  ☐ **$60,000 - $74,999**  ☐ **$75,000 - $99,999**

☐ **$100,000 - $149,999**  ☐ **$150,000 - $249,999**  ☐ **$250,000 - $499,999**

☐ **$500,000 - $999,999**  ☐ **$1 million or more**

**7. Are you currently looking to purchase a new home?**

☐ **Yes**  ☐ **No**

**8. What type of primary residence are you interested in?**

(*HDB for Singapore respondents; Flat for China respondents)

☐ **HDB/Flat**               ☐ **Condominium (with facilities)**

☐ **Apartment**              ☐ **Landed residence**

**9. What are the main factors that lead you to buy a property?**

☐ **Good location**          ☐ **Access to public transportation**

☐ **Plenty of amenities**    ☐ **Low price**        ☐ **Investment**

**Any other (Please Specify):** _____

**10. Do you think you (buyers) can afford this property in this current market?**

☐ **Yes**          ☐ **No**          ☐ **No Comments**

**11. What do you think about the housing price in current market?**

☐ **Very low (-20% of expected)**

☐ **Low (-5% - 20% of expected)**

☐ **Ok**

☐ **High (+5% of expected)**

☐ **Very high (+20% expected)**

**12. Do you think there is real estate bubble in this current market?**

☐ **Yes**          ☐ **No**          ☐ **No Comments**

**13. Do you think the home loan rates are affordable?**

☐ **Yes**          ☐ **No**          ☐ **No Comments**

**14. On your opinion the present home loan rates need to be**

☐ **Increased**        ☐ **Decreased**        ☐ **Keep same**        ☐ **No Comments**

**15. In next 6 months what do you think the value of property will?**

☐ **Increase**        ☐ **Decrease**        ☐ **Stay same**        ☐ **No Comments**

**16. What is the key factor you think that keeps housing prices high the most even with the presences of vacant housing?**

☐ **Low interest rate**  **Massive** ☐ **Liquidity**        **Artifici**☐**y Low Land Price**

☐ **Easy Credit**          ☐ **High Book Value**

☐ **Psychological Factors: Expectation/Uncertainty**          ☐ **Transaction Cost**

☐ **COE (Cost Over Evaluation)**              ☐ **Disregard of Market Demand**

**Any Other (please specify):** _____

**Any suggestions:**