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The Maturing of the Chinese Real Estate Market

Table of Contents

1. Introduction.....	1
2. Macroeconomic Prospects and Status.....	2
3. Real Estate Performance... 5	
• Real estate fundamentals.....	5
• Office markets.....	7
• Retail markets.....	10
• Industrial/logistics markets..	12
• Residential.....	13
• Hotel markets.....	15
• Real estate pricing.....	17
4. Real Estate Market Risks....	19
5. Conclusions and Further Research.....	22

1. Introduction

Given the recent dramatic growth in the scale and activity of the Chinese real estate market it is worth pausing to consider the evolution of the market and some of the opportunities and challenges in the years ahead. In this paper, we provide a framework for understanding the attractiveness of the market as a way to identify some of the steps that Chinese real estate needs to go through to ensure the continued development of the market. The paper draws from recent research on global, regional and local real estate markets, as part of RREEF's ongoing analysis of the market¹.

In understanding the evolution of the Chinese real estate market, it is useful to explore some of the key issues that determine the attractiveness of the market to institutional investors, along three dimensions:

1. Macroeconomic Prospects and Status
2. Real Estate Performance
3. Real Estate Market Risks

These issues are explored in turn, and the paper concludes by assessing the relative attractiveness of the market on each of the dimensions, and by identifying areas for further research.

Authors:

Tan Yen Keng

+852 2203 8062

yenkeng.tan@rreef.com

Peter Hobbs

+44 (0)20 7547 4855

peter.hobbs@rreef.com

Henry Chin

+44 (0)20 7545 6611

henry.chin@rreef.com

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THE TEXT OF THIS REPORT

¹ RREEF (2006), "Global Real Estate Insights"; RREEF (2006) "Asia Pacific Property Cycle Monitor", November.

2. Macroeconomic Prospects and Status

...phenomenal economic growth means that by 2010, China's GDP will exceed Germany and, by 2015, that of Japan

A combination of factors including strong manufacturing activity and exports, and increasing domestic wealth and rising consumption means that China has, over recent years, experienced phenomenal economic growth. This growth means that, by 2006, China had become the fourth largest economy in the world, ranked in front of UK and France. By 2010, China's GDP will exceed Germany and, by 2015, that of Japan, making China the second largest economy in the world.

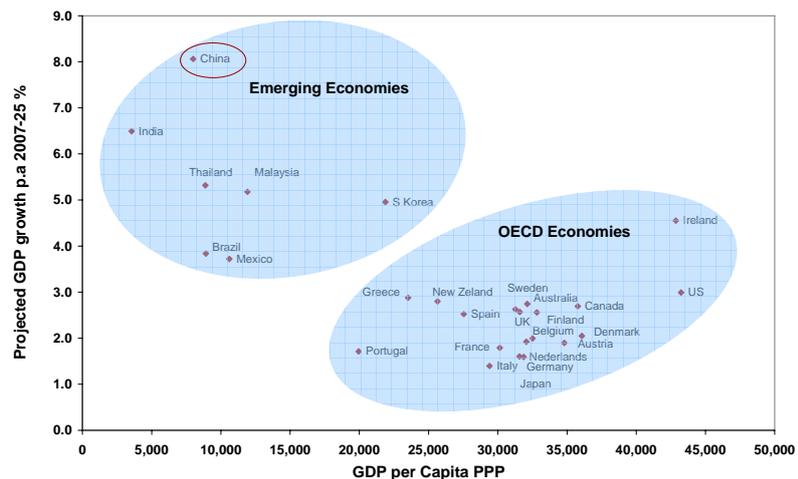
Table 1: Top Ten World Economies: Ranked by GDP, US\$ Billion

Country	1995	Country	2006	Country	2010	Country	2015	Country	2020
US	7398	US	13237	US	16103	US	20278	US	25624
Japan	5246	Japan	4351	Japan	5908	China	8235	China	13466
Germany	2525	Germany	2905	China	4753	Japan	6977	Japan	7655
France	1572	China	2624	Germany	3719	Germany	4122	UK	5212
UK	1135	UK	2376	UK	3153	UK	3858	Germany	5043
Italy	1128	France	2237	France	2967	France	3485	France	4479
China	761	Italy	1853	Italy	2413	Italy	2782	Italy	3533
Brazil	704	Canada	1271	Russia	1749	Russia	2429	India	3508
Spain	597	Spain	1221	Spain	1740	India	2228	Russia	3088
Canada	591	Russia	986	Canada	1544	Spain	2130	Spain	2821

Source: RREEF Research, Global Insights, World Bank

China's GDP growth is set to exceed 10% in 2006 and, although it will slow slightly in 2007 due to the "mid-cycle slowdown" of the global economy and the "administrative tightening" by the Chinese government, growth is set to remain around 9.5%, the fastest rate of growth of all the major global economies². Despite an expected deceleration of export growth for China to 17% in 2007 from 2006's 25% due to a slowdown in G3 growth, domestic growth is coming to be a more important component of GDP, and this is set to support high rates of growth over the medium and longer term³. Based on this and a series of other changes, a recent study by Deutsche Bank Research forecast that China is expected to have, alongside India, the strongest rate of annual average GDP growth among the major economies over the coming 15 years⁴.

Chart 1: Long Term Economic Prospects



Source: RREEF Research, Global Insights

² Deutsche Bank (2007), "Global Economic Perspectives", January.

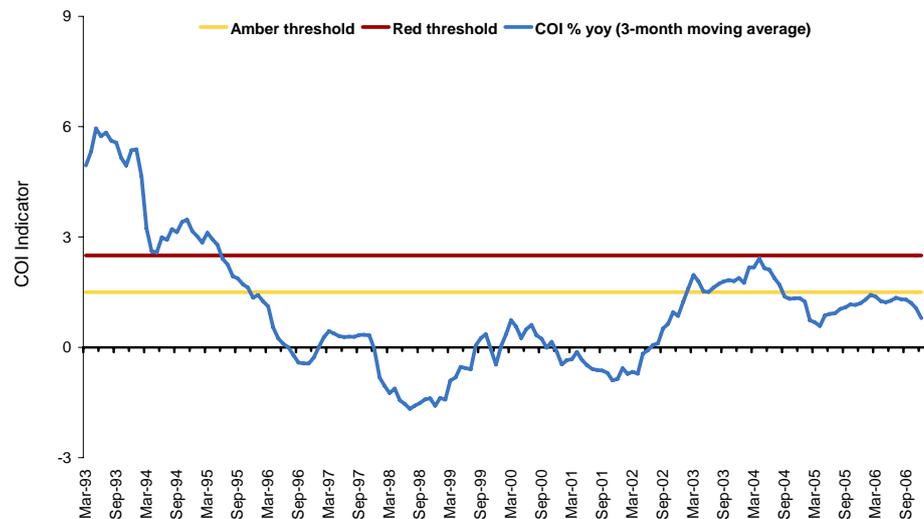
³ Deutsche Bank (2006), "2007 Emerging Markets Outlook", December.

⁴ Deutsche Bank Research Formel-G (2005), "Global Growth 2020".

...despite recent volatility in financial markets, the tightening measures seem to be having the desired effect

Despite the favourable outlook, there remain two significant economic risks facing the Chinese economy, those of “overheating” and of “economic maturity”. The recent volatility of the Chinese stock market and increasing concerns by the government over the liquidity in the market demonstrate the ongoing risks facing the Chinese economy. Despite the recent volatility, the tightening measures seem to be having the desired effect, with inflation remaining low and with Deutsche Bank’s “China Overheating Indicator” (COI) hovering below the overheating warning threshold (amber threshold) since Q4 2004⁵. It is expected that the Chinese government will maintain a tightening bias as long as there are signs of overheating. Despite this, aggressive policy tightening has become less likely as the quality of economic growth has improved significantly over the past year with little sign of inflation and sectoral imbalance, and broad-based improvement in profit growth and profit margins⁶.

Chart 2: China Overheating Indicator



Source: Deutsche Bank Research

Note 1: COI tracks demand factors that exert upward pressure on prices and can be used as leading indicator for inflation

Note 2: The amber and red thresholds represent 1.5 and 2.5 standard deviations from the historical average of the series, and are applied to gauge the extent of overheating pressures

Note 3: Higher score indicates a greater risk of overheating

In terms of economic risks, the government has, over recent years, introduced a series of measures and reforms to enable greater economic flexibility and liberalisation. Despite this, the economy and political system remains centrally controlled, such that the “country risks” associated with investing in China are significantly higher than for other major global economies (Chart 3). This is particularly due to the relatively poor regulation of credit, labour and business markets, as well as uncertainty of legal structures and the security of property rights⁷. Although China suffers from relatively high degrees of “country risk”, there are significant efforts to liberalise the economy driven, according to the Economist Intelligence Unit, by concerns to reduce social inequalities which have led “the balance of economic development [to be] altered in favour of social priorities. The economy is opening up now that China has joined the World Trade Organisation and is pursuing further liberalisation. A private sector made up of domestic and foreign-funded interests is now fully encouraged to expand and complement the state sector.”⁸

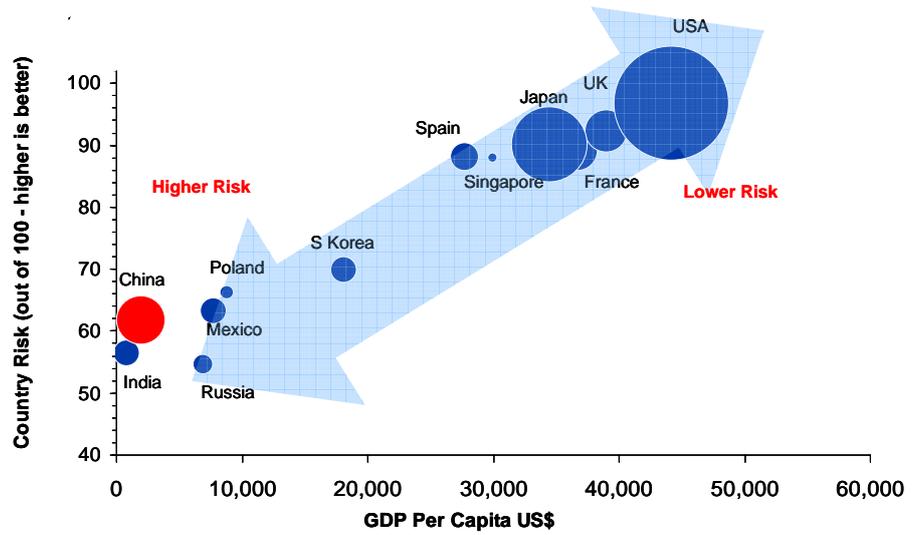
⁵ Deutsche Bank (2007), “China Overheating Indicator”, March.

⁶ Deutsche Bank (2006), “2007 Emerging Markets Outlook”, December.

⁷ Fraser Institute (2006), “Economic Freedom of the World Annual Report”.

⁸ EIU Country Briefing, November 2006.

Chart 3: Country Risk vs. Economic Growth



Source: RREEF Research, EuroMoney, Global Insights

Note 1: Size of bubble represents nominal GDP size

Note 2: Country risk score based on a combination of political, economic, debt, credit, financial and capital market considerations

3. Real Estate Performance

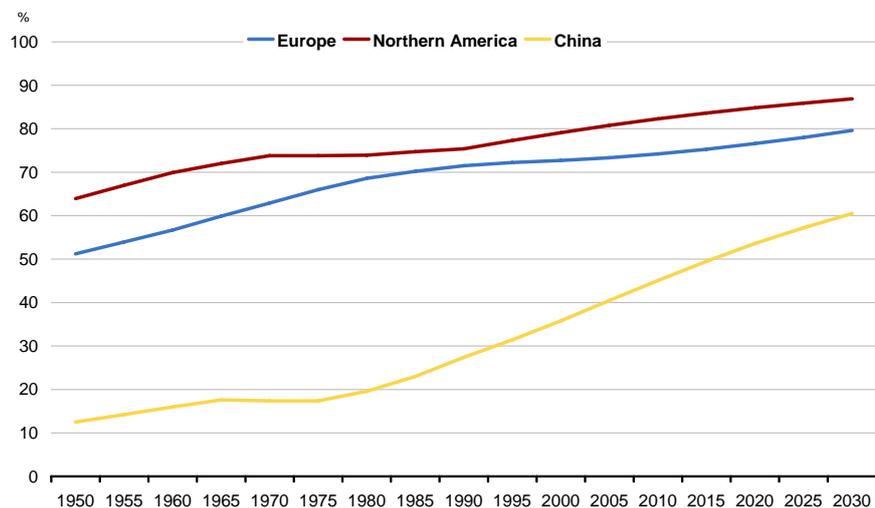
3.1 Real Estate Fundamentals

The second critical factor for investors relates to real estate performance in terms both of market fundamentals and pricing. In terms of **market fundamentals**, the strong pace of economic growth coupled with the very low levels of good quality space mean there has been significant growth across all real estate sectors in China, and this is set to continue over the medium and longer term.

...urban population larger than North America and India...

As the Chinese economy has grown and modernised, so the role of cities has increased. During the 1950s, it is estimated that less than 15% of the population was “urban”⁹. Over the following decades, urbanisation increased dramatically such that, by 2005, over 40% of the population had become urban (Chart 4). This rapid increase means that China now has a bigger urban population than North America and India, and is marginally behind Europe. The United Nation Population Division forecasts the degree of urbanisation in China will grow to over 60% with an urban population of 875 million by 2030.

Chart 4: Urbanisation Ratio, %



Source: RREEF Research, United Nation, World Population Prospects: The 2005 Revision

...113 cities with a population of more than one million people...

This urbanisation trend is widespread across China, such that the country now has a total of 113 cities with a population of more than one million people, and three mega cities with more than ten million people¹⁰. Many of these cities are regional centres with heavy concentrations of economic activity. Although the national GDP per capita is only slightly above US\$1,700¹¹, there are 35 cities (including the four Tier-1 cities of Beijing, Shanghai, Shenzhen and Guangzhou) with over 900,000 people and a GDP per capita over US\$4,000. These 35 cities in aggregate only account for 8.7% of the total population but contribute 35% of the country's GDP.

The increased urbanisation rate will see cities continue to grow in size, especially the more economically developed cities. Infrastructure and public services such as transportation network, utilities, education and healthcare facilities, as well as housing, will need to expand to cope with the growing population¹². It is estimated that at least 15 million new

⁹ United Nation, World Population Prospects: The 2005 Revision.

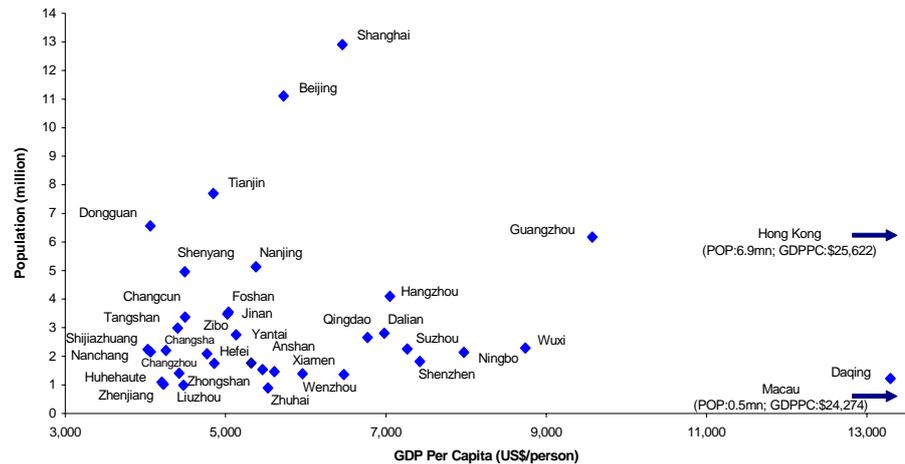
¹⁰ Beijing, Shanghai and Chongqing – according to The Yearbook of China's Cities 2006.

¹¹ As of 2005, International Monetary Fund.

¹² RREEF Research (2006), “Asian Infrastructure Markets: Exploring Trends in a Changing Market”, November.

residential units in cities are required over the next 5 years driven by this urbanisation¹³. In the 11th Five-Year Plan¹⁴, the Chinese government has acknowledged that rapid population expansion in the established cities (i.e. Tier-1 cities) will strain the limits of their infrastructure and population growth in these cities should be moderated via industry-based restructuring. Despite these measures, the population of Tier-1 cities is set to continue to grow but probably at a lower rate than the second-tier cities where urbanisation continues to be encouraged.

Chart 5: Chinese Cities with Over 900,000 People and GDP per capita over US\$ 4,000



Source: *The Yearbook of China's Cities 2006, China Statistical Yearbook 2006*

Note: Data shown in this chart are 2005's figure

...transformations in the urban structure are driving demand for real estate.

The dramatic transformations in the urban structure of the Chinese economy are driving strong demand for all forms of real estate, especially in the major cities. The high levels of new supply mean that certain property markets are facing rising vacancies and stable or declining rents over the short term, but the medium and long-term prospects for each of the main property sectors remain favourable, as summarized below:

¹³ DTZ Research (2006), "China's 11th Five Year Plan: What It Means for the Property Sector".

¹⁴ The Central People's Government of the People's Republic of China "The 11th Five Year Plan".

3.2 Office Markets

The scale of economic growth and the urbanisation and liberalisation of the economy have led to the rapid expansion of both domestic and international companies across the major cities in China. This growth has been accompanied by a general shifting of the economic base within major urban areas such that there has been a move away from production-based industrial activities to more service-based activities. This restructuring of economic activity has underpinned the exceptionally strong demand for office space in the major urban areas, in a similar way to the strong and sustained growth experienced in North America and Japan between the 1950s and the 1980s.

...surge of new supply such that new construction has accounted for over 20% of the existing stock

In the face of this strong demand and, given the relative shortage of quality office space, most of China's major cities have experienced a surge of new supply over recent years. During much of the 1990s, new construction activity averaged over 20% of the existing stock, twice as high as the regional average, as shown in Chart 6. The scale of construction activity, coupled with the inherent cyclicity of office markets, means that vacancy rates and rental growth has tended to be fairly volatile over recent years. As the markets gain scale and critical mass, it is likely that new construction will come to represent a smaller share of the overall inventory, and this is likely to reduce the volatility of vacancy rates and rental growth.

Chart 6: Office Space Under Construction



Source: RREEF Research, JLL

Note 1: As of Q4 2006

Note 2: China Cities include Shanghai Pudong and Puxi prime office stock and Beijing prime office stock in CBD, East Chang An, 3rd Embassy and Zhongguancun

Note 3: Regional average covers prime office stock in Beijing, Shanghai, Seoul, Tokyo, Sydney, Melbourne and Singapore.

...poor quality of much of the existing office space... leading to a "flight to quality".

Beyond the strong and sustained nature of demand for office space and the likely reductions in the volatility of the major markets, there are a number of additional factors that will influence the performance of office markets over the coming years. First, the relatively poor quality of much of the existing office space, despite the high levels of construction activity over recent years. Much of the existing stock is of poor quality or functionally obsolete for office occupiers that have become more sophisticated and more demanding, and this has been demonstrated by the "flight to quality" in Tier-1 cities in recent years. Within this context, the prospects seem to be better for the relatively few prime quality office buildings in the best locations. Such buildings will continue to experience strong demand and be able to maintain high occupancy and high rents even when the market as a whole is experiencing considerable oversupply. In contrast, the

prospects for poor quality and functionally obsolete office space are less good with increasing pressure for the refurbishment or redevelopment of such buildings.

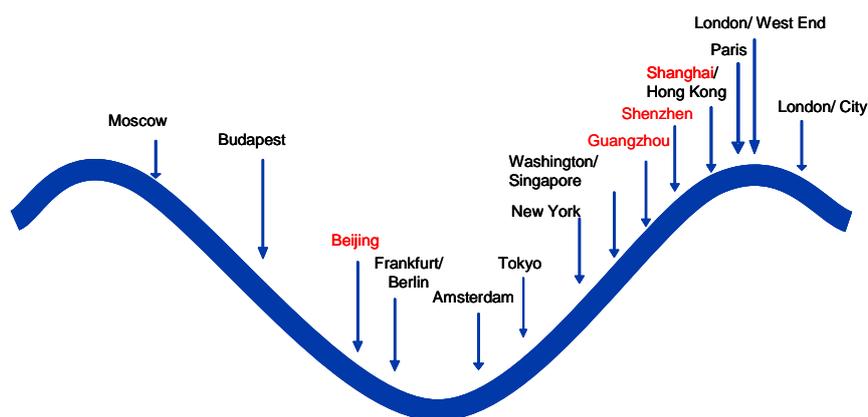
...marked variations at the sub-market and asset-specific levels.

A second additional feature of the maturing of the market is the marked variations within individual cities, at the sub-market and asset-specific levels. The scale of many of the larger cities means that they tend to have multiple CBDs and, with the continual improvements to the transportation infrastructure and occupier preferences, the relative strength of different sub-markets can vary over time within individual cities. This is clearly demonstrated for the case of Beijing, as explained below, but is also apparent within other major cities.

Beijing's office market is expecting a surge in new supply in 2007 due to the moratorium on new development during the hosting of the Olympic Games in 2008. This surge of new supply is, however, concentrated in particular sub-markets, most particularly in the CBD where vacancies are set to rise. The new supply in other office submarkets such as Lufthansa and Financial Street is less significant compared with the CBD. The high occupancy rates in these sub-markets, coupled with strong occupier demand, means that vacancy rates are likely to remain relatively low, certainly compared with the CBD. The liberalisation of the local banking and insurance industries will underpin strong demand in Beijing office market as a whole but there will continue to be marked variations across the major sub-markets.

In Shanghai, the short term prospects for the office market remain good due to the resilience of demand and, with limited to moderate new supply in the Puxi and Pudong area, declining vacancy rates. By the end of 2006, vacancy rates had declined to close to 6% and prime rents continued to grow strongly. New supply is expected to come to the market in 2008 and 2009 with the majority in the Pudong area. This is likely to push the vacancy rate up, particularly for the older and secondary office stock given the high quality of the space that is being completed. Over the medium and longer term, the outlook of the market is positive due to the strength of demand and underlying economic fundamentals of this key business centre of China.

Chart 7: Global Office Market Rental Cycle, 2007



Source: RREEF Research

Note: Based on RREEF 2006 year-end forecast

Guangzhou's prime office market has benefited from a relative shortage of supply which, coupled with the steady economic growth and declining vacancy rates, led to strong rental growth during 2006. With the development of a new CBD in Pearl River New City, the new office space comes on stream between 2007 and 2009 will increase to 1.5 million sq m¹⁵. Over the medium term, the continuous deregulation of China's financial market will drive Guangzhou's economic development which, coupled with increasing demand for professional and business services, will help absorb the increased supply of prime offices. As the Guangzhou real estate market matures, there are signs that an increasing number of developers are choosing to hold their newly developed properties under sole ownership for rental income, instead of selling the property in strata title units¹⁶.

As for other Tier-1 cities, Shenzhen is experiencing active office development, with more than 900,000 sq m of office space scheduled for completion during 2007. Many of the new buildings are of higher quality and have been pre-sold or pre-leased to occupiers. The demand for quality office space in Shenzhen is driven by the expansion of local businesses and the continued influx of foreign enterprises, partly due to the WTO and CEPA agreements, increased ties between Shenzhen and Hong Kong, and the Guangzhou-Shenzhen-Hong Kong Rail Link¹⁶. Despite the strong demand, the office vacancy rate is expected to rise in the short term, but office rents will be likely to remain stable as a series of occupiers seek to upgrade their existing accommodation.

¹⁵ JLL REIS services.

¹⁶ CBRE (2006), "China Office Market Review 3Q/2006".

3.3 Retail Markets

Retail markets benefit from structural changes...

Although the office markets in China are highly cyclical, the retail markets are benefiting from structural changes associated with the maturing of the overall retail market (see Charts 8 and 9). Rising prosperity together with the liberalisation of the retail sector including the relaxation of restrictions on foreign retailers entering China, has boosted retailer demand for the limited amount of high quality retail space in prime location. These factors are set to continue to underpin strong rental growth for prime retail sectors and markets across China.

... but certain markets are oversupplied.

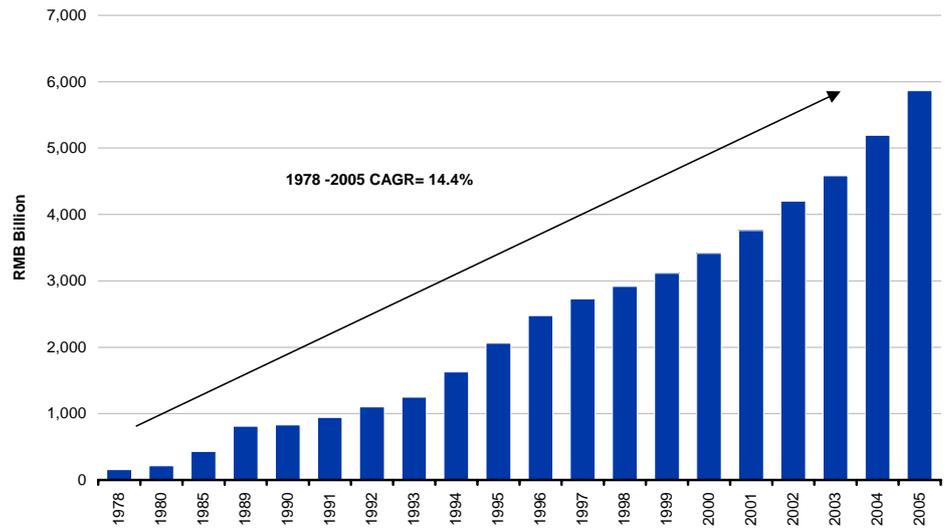
Strong retail sales and confidence in the performance prospects for professionally managed retail property have spurred investment interest from both investors and retailers. The introduction of a series of austerity measures to curb housing speculation in 2006 has also seen some funds being channelled into retail property. Although high quality retail space in prime location remains attractive due to their scarcity and strong demand, certain parts of the Chinese retail market are becoming oversupplied. This is particularly the case where there has been massive retail development in regional areas and second-tier cities that is likely to result in downward pressure on rents.

Prospects for prime rents in the Tier-1 cities remain more favourable. For instance, retail rents in Shanghai rose by around 30% in 2006¹⁷ due to the strong demand, often driven by high-profile international retailers, and the limited amount of space in the downtown commercial areas. With new prime retail developments mostly pre-let, vacancy rates are expected to trend downwards during the remainder of the decade, such that positive rental growth is likely to continue. In Beijing, prime rental growth was broadly flat in 2006 due to the anticipation of a surge in new supply in 2007 and retailers' increasing resistance to paying higher rents. The vacancy rate is expected to peak in 2007, with modest rental growth likely to return by the end of the decade with retail sales being buoyed by rising tourism, increasing disposable incomes and the 2008 Olympics. Retail markets in Shenzhen and Guangzhou were active in 2006 with major local and international retailers taking up more retail space, driven by buoyant retail sales. Small strata-title retail units have attracted interest from private investors and funds that have been diverted from residential market¹⁸. With the maturing of the retail market and demand for better managed retail space, new retail developments are more likely to be single owned rather than strata-titled.

¹⁷ JLL (2007), "REIS Preliminary Market Overview 4Q/2006".

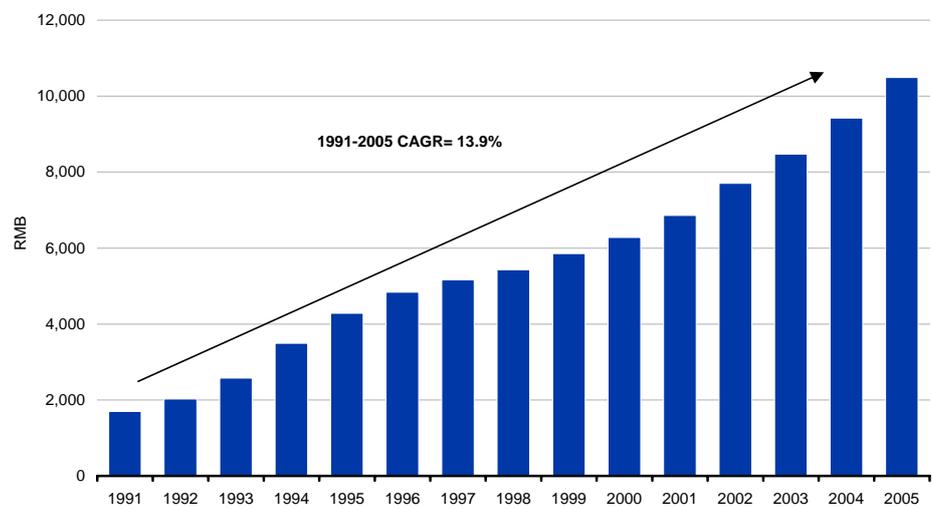
¹⁸ DTZ (2006), "Property Times – Guangzhou and Shenzhen 3Q/2006".

Chart 8: Retail Sales in China, RMB Billion



Source: RREEF Research, National Bureau of Statistics of China

Chart 9: Disposable Income in China, RMB per capita per annum



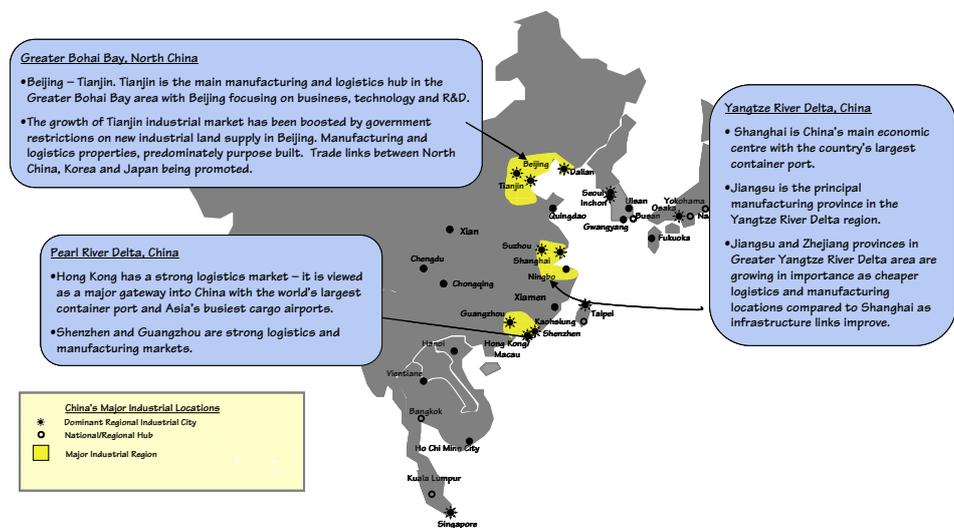
Source: RREEF Research, National Bureau of Statistics of China

3.4 Industrial/Logistic Markets

Strong manufacturing base and increasing role in global trade are driving industrial and logistics markets

As for the retail market, the industrial/logistic market is benefiting from strong underlying demand and structural changes in the nature of the market. On the one hand, the country is benefiting from the region's strong manufacturing base, rising affluence and consumer spending. On the other, the country has come to play a key role in global trade, with some of the world's largest container ports and busiest cargo airports being located in China. Although industrial activity is increasing throughout the country, there are three major concentrations as shown on the map. The industrial/logistic market in China is still very much dominated by local players with very high owner-occupation rates but international logistic players are increasing their presence in China and this has brought a structural shift to the demand of high quality purpose built industrial/logistic facilities.

Chart 10: China's Major Industrial Location



Source: RREEF Research

In terms of short term prospects, Beijing, Shanghai and Guangzhou benefit from relatively limited good quality supply, even in prime logistic centres and industrial zones. But there are exceptions to this tight supply, such as in the city of Shenzhen¹⁹, where a number of new industrial parks have recently been completed. Despite such exceptions, the strong fundamentals mean that in most markets high-spec buildings are expected to experience double-digit rental growth during 2007, although the vacancy rate for poorly constructed properties will remain high. Over the medium term, a series of factors including rising land costs due to the new industrial land auction policy, increasing government controls on land supply, fixed investments and foreign investment, and the boost to the local economies from the 2008 Olympics and 2010 World Expo should also all contribute to rents continuing on their upward trend.

¹⁹ DTZ (2006), "Property Times – Shenzhen 3Q/2006".

3.5 Residential

There has been considerable recent comment on the pricing of the Chinese residential market, and the measures to curb house price speculation as well as to restrict foreign investment in the residential market²⁰. It is clear that house prices have risen strongly, with average prices in the Chinese residential market increasing nearly 400% in 15 years. Despite this surge, the growth of per capita net disposable income has outpaced the growth of housing prices resulting in improved affordability over this period, as shown in Chart 11.

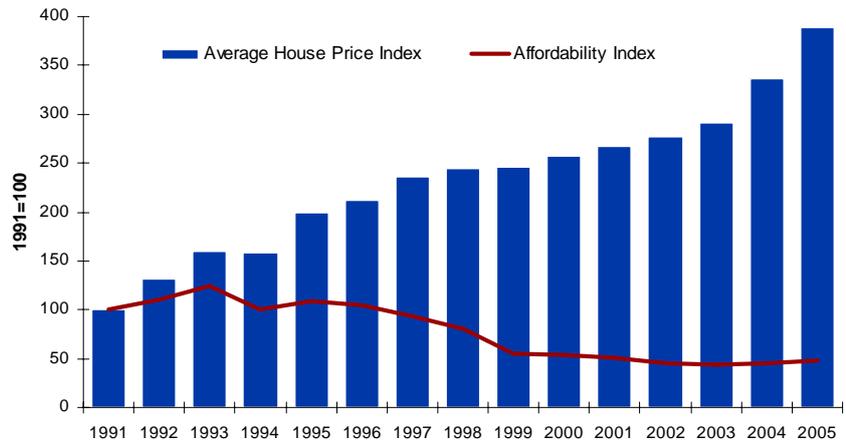
Despite the surge in house prices, the growth of disposable income has also risen such that affordability has increased...

Based on the analysis of house prices, per capita income growth and affordability, it seems the rapid increase in house prices is a structural response to the growing wealth of the overall Chinese economy. It also seems that the demand for affordable residential remains very strong given the favourable economic environment, rising income, improved living standards and urbanisation. Coupled with the functionally obsolete residential units built decades ago, these factors are likely to create a structural shortage of housing supply, particularly, in cities. It is notable that the Chinese government's control measures are targeted at high-end residential, while the government continues to encourage the development of affordable mass residential to cater for the rising housing needs of the population.

The continued liberalization of the Chinese economy has attracted many foreign firms and expatriates. The accommodation needs of these expatriates, coupled with an increasingly large local high-income group, have underpinned the demand for high-end residential units. However, the austerity measures have put pressure on the sales market and more potential buyers have turned to leasing. In Shanghai, the huge supply of luxury apartments between 2006 and 2009 is expected to lead to an increase in the vacancy rate to around 20%. In Beijing, the vacancy rate of luxury apartments increased in 2006 and this is set to rise further due to the anticipated growth in supply during 2007 and 2008. Rental growth for the high-end residential is expected to be minimal or even negative due to this oversupply and government control measures. However, over the medium term, the continued increase in demand in Beijing and Shanghai associated with the 2008 Olympics and the 2010 World Expo, as well as the expectation of the further RMB appreciation is likely to fuel investment interest for high-end properties.

²⁰ Chinese Urban and Rural Real Estate Economic Research Institute (2006), "Monthly Report of Real Estate Market Prices", various issues; Policy Research Centre of the Construction Department (2006), "Weekly Report of Construction and Real Estate Industry", various issues; Xinhua (2006), "New Macro-Control Measures to Curb Soaring House Prices", 21 May 2006; Colliers International (2006), "Greater China Quarterly Research Report", July 2006; DTZ (2007), "Foreign Real Estate Investment Surges in Mainland China", February 2007.

Chart 11: Average House Price and Affordability Index in China



Source: RREEF Research, NBS, CEIC

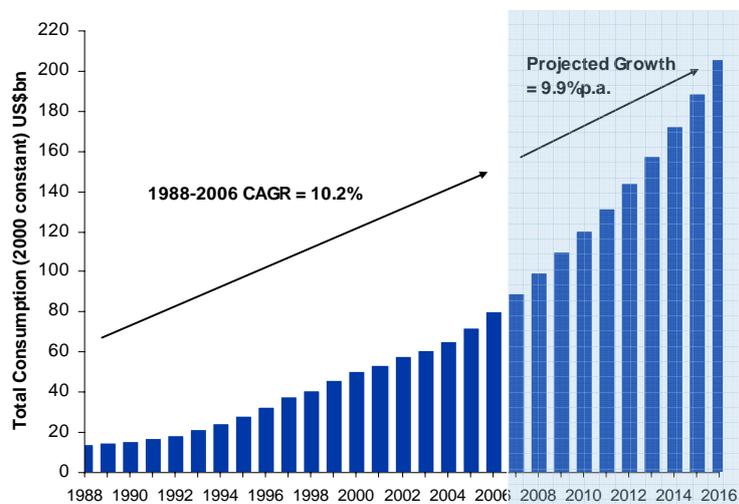
Note: The affordability index is calculated as the average mortgage payment for a 20-year mortgage loan for an average unit over per capita disposable income in China

3.6 Hotel Markets

Three drivers behind the hotel market, increased domestic tourism, rising business travel and increased international visitors...

The travel and tourism industry in China, which is the underlying demand driver for hotel markets, is one of the fastest growing markets in the world²¹. In the past two decades, the real consumption of domestic travellers grew at 10.2% p.a. to reach US\$80 billion in 2006, and that of business travellers, at 9.8% p.a. The number of international travellers to China grew even more quickly, rising at a compound annual growth rate of 18.9% since 1988. The expanding economy and business activity, increasing MICE²² functions, rising domestic middle class, continued investment and development of historic and tourism spots, improving tourism infrastructure and transportation network are among the key contributing factors to this impressive growth. According to the World Travel and Tourism Council, the growth trend is expected to continue into the next decade (see Charts 12 to 14). By 2020, the World Tourism Organisation forecasts that China will become the world's top tourist destination with 130 million arrivals.

Chart 12: Consumption of Domestic Traveller

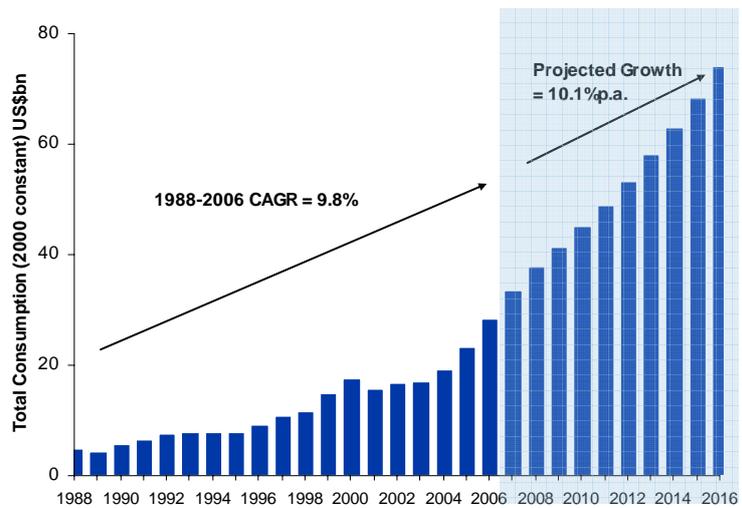


Source: RREEF Research, World Travel and Tourism Council

²¹ World Travel and Tourism Council (2006), "China Travel & Tourism Climbing To New Heights: The 2006 Travel & Tourism Economic Research".

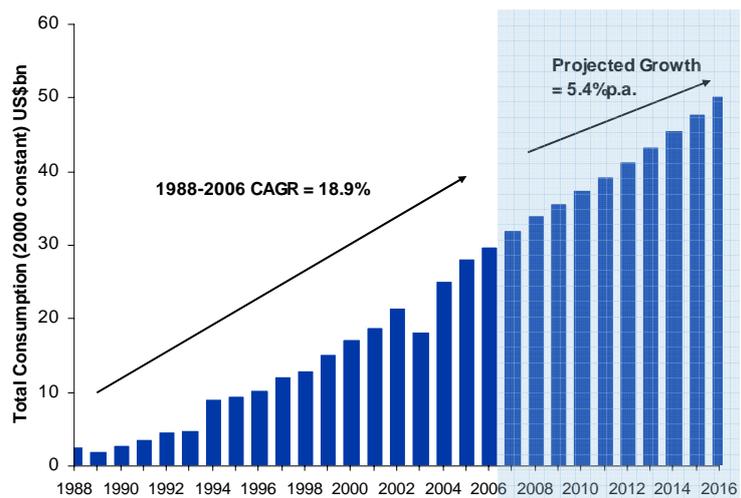
²² MICE is an acronym for Meetings, Incentives, Conferencing and Exhibitions.

Chart 13: Consumption of Business Traveller



Source: RREEF Research, World Travel and Tourism Council

Chart 14: Consumption of International Traveller



Source: RREEF Research, World Travel and Tourism Council

On the supply side, China has the largest hotel development pipeline in Asia Pacific with over 300 hotel projects being developed²³. The majority of these hotel developments are concentrated in the larger cities such as Beijing, Shanghai, Shenzhen, Guangzhou, Tianjin, Ningbo, Chengdu and Macau. In Beijing, hotel development has been fast tracked leading up to 2008 Olympic Games, with 22²³ hotels scheduled to open between 2007 and early 2008. In Shanghai, 43²³ new hotels are in the development pipeline and are planned to open between 2007 and 2010, before the World Expo takes place.

Increased hotel supply (especially post international events), booming domestic/international visitors and business travellers, and continued expansion of international hotel operators have brought a structural change to the hotel industry in China. The ADR for high-end (5-star) international (branded) hotel has been on a steady rise at a

²³ Lodging Econometrics (2006), "Development Pipelines and Three Year Supply Growth Forecasts for 21 Asian Countries", October 2006.

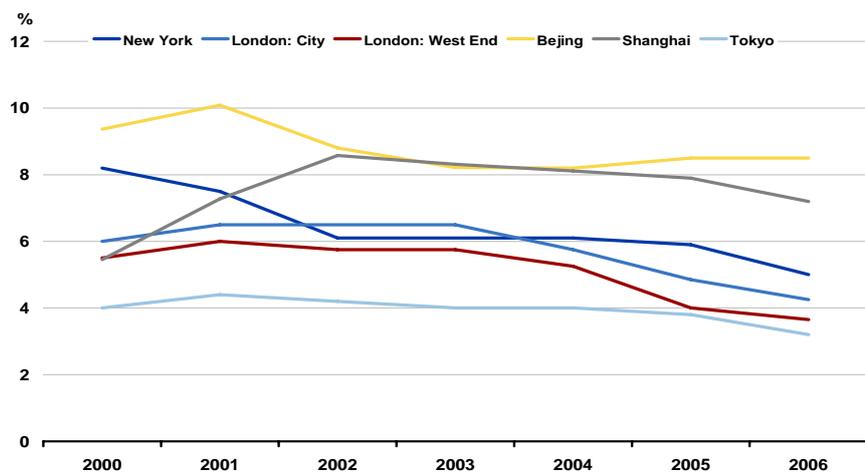
rate of over 9% in the past four years, whilst the ADR for lower range local operated (non-branded) hotel recorded minimal growth (1%) over the same period²⁴. This divergence is expected to continue as the competition within the industry intensifies. Going forward, it is likely that the niche hotel class such as business hotel (targeting business traveller) and budget hotel (targeting domestic travellers) will outperform locally operated 4- and 3-star hotels, and non-branded hotels are likely to lose out to branded hotels. The dominance of international hotel operators in the high-end sector and business class hotel will continue given their established brands, extensive client and marketing networks, and experienced hotel management teams.

3.7 Real Estate Pricing

Current levels of yields mean many Chinese cities have become relatively attractive...

In terms of **pricing**, the growing demand from both domestic and international investors for real estate product in China has led to general downward pressure on cap rates, although this has eased over the past year or so. This easing is due to a combination of factors including the increased restrictions on foreign investment, as well as the prospect of oversupply and reduced rental growth in a number of office markets. This stabilisation of cap rates contrasts markedly with other major cities, as shown on Chart 15. As we see in the following section, there is a series of risks associated with investing in China, and investors need to be compensated for these risks by higher yields. Despite this, the current level of yields mean that many Chinese cities have become relatively attractive compared with a series of other major global markets.

Chart 15: Cap Rates for Key Global Office Markets



Source: RREEF Research, JLL, and CBRE

²⁴ China Hotel Industry Study 2006.

Chart 16: Spread between Cap Rates and 10-year Govt. Yield



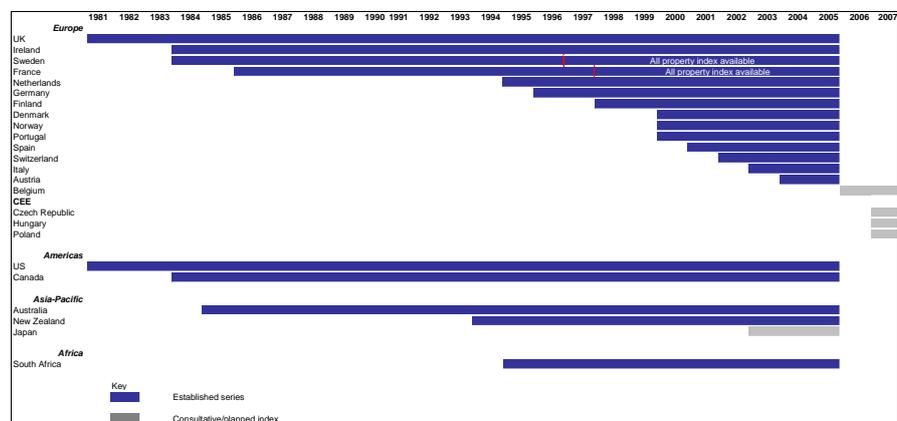
Source: RREEF Research, JLL, CBRE, Deutsche Bank, Global Insights

4. Real Estate Market Risks

China suffers from a shortage of market and performance data...

Investors tend to categorise real estate risks into two groups. First, “**institutional**” factors related to the maturity of real estate markets as this plays a major role in determining the risks of different markets²⁵. A range of institutional factors is important, including liquidity, the reliability of professional services and the availability of market information. The availability of performance measurement services and general market data is a good indicator of market maturity/immaturity. The chart below demonstrates that China, as for other emerging markets, suffers from a shortage of such market and performance data and this makes it harder for investors to gauge the risks of real estate investment²⁶. There are a number of signs that the institutional risks of investing in China are being reduced, with JLL’s transparency rating improving between 2004 and 2006 due, in particular, to “more effective legal measures that address the compulsory acquisition process”²⁷.

Chart 17: Real Estate Performance Series Availability



Source: RREEF Research, IPD

Note: Based on the availability of real estate performance series

The market remains relatively illiquid, but this is starting to change...

A more fundamental indication of the reduction in institutional risks relates to the increasing liquidity of the market. Although China is the second largest real estate market in Asia, it has a relatively high owner occupation ratio, as shown on Chart 18. This high level of owner occupation reduces the level of investment activity but this is set to change given the increasing desire of owner occupiers to raise capital by the sale and leaseback of their buildings and the increasing moves to enable domestic institutions (insurance companies and pension funds) to invest in real estate. There are signs that there could be greater domestic investment in commercial real estate, with recent reports that the regulator is considering widening the scope of investment such that domestic insurance companies might be able to invest in real estate alongside equities and bonds²⁸. Even though the restrictions remain in place, there has been a surge of liquidity in recent years, with recorded investment activity in Shanghai and Beijing increasing seven times between 2003 and 2005, reaching US\$ 5.9 billion²⁹. For 2006 as a whole, there was a total of US\$ 4.6 billion of transactions in the two cities. The slight reduction in activity during 2006 was primarily due to the tightening of various policies on real estate by the Chinese Government that had a particular impact during the second half of the year. It is likely that

²⁵ Chin et al. (2006), “An Exploratory Analysis of Barriers to Investment and Market Maturity in Southeast Asian Cities”, Journal of Real Estate Portfolio Management; Chen, J. and Hobbs, P (2003) “Global Real Estate Risk Index”, Journal of Portfolio Management.

²⁶ See also ULI (2006), “Emerging Trends in Real Estate: Asia Pacific 2007”, p. 12.

²⁷ Jones Lang LaSalle (2006), “Real Estate Transparency Index”, p. 8.

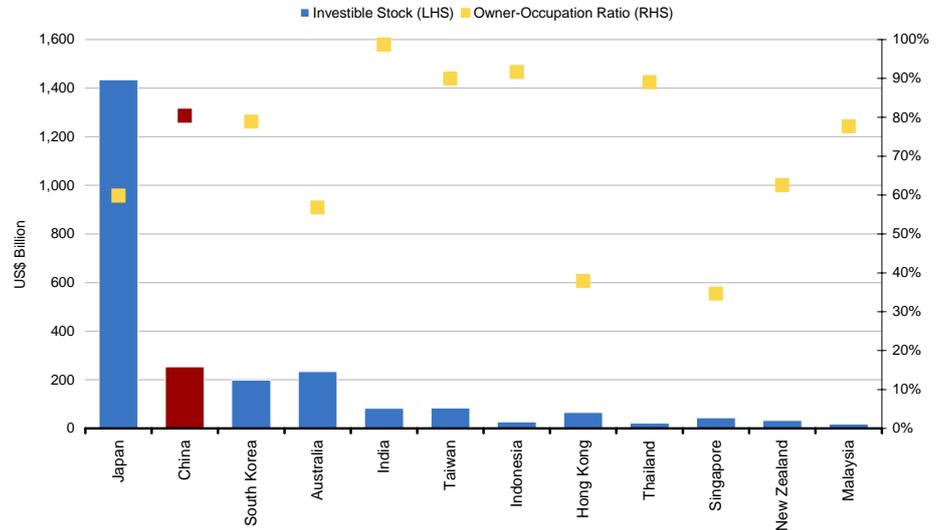
²⁸ Whiting, D and Zhu, C. (2007), “Insurers Poised to Spur China Commercial Property”, Reuters February 9th

²⁹ These estimates are based on JLL REIS’s figures on sales and purchases of commercial real estate. Although this is likely to underestimate the level of commercial investment activity, it demonstrates the rapid increase in activity over recent years.

... phenomenal growth of cross-border investing...

these tightening measures are part of a cyclical effort to slow the economy and it is likely that, as the tightening is relaxed, levels of investment activity will resume their recent strong growth. The growth of cross-border investment has been even more phenomenal. In 2006, cross-border investment reached US\$ 2.2 billion, up from the barely significant US\$ 67m in 2003, with the US, Singaporean and Hong Kong investors being the most active overseas investors.

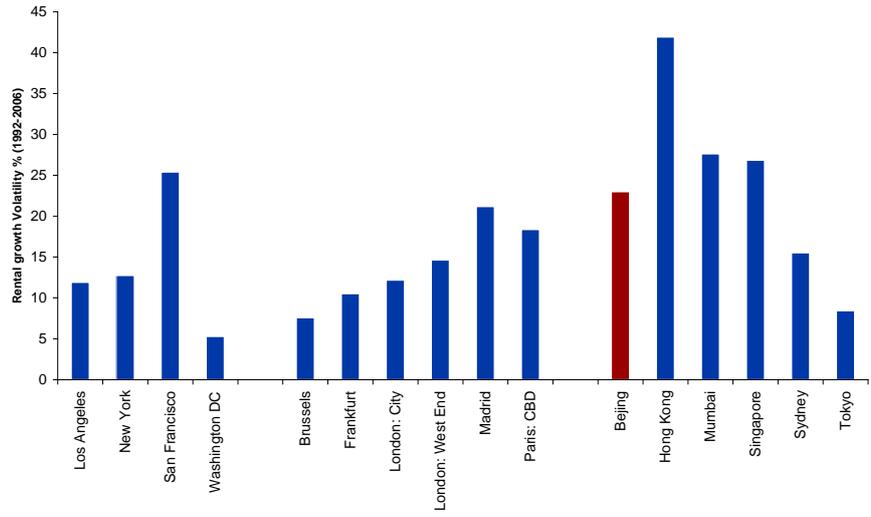
Chart 18: Scale of key Asian Pacific Real Estate Market



Source: RREEF Research

Closely related to these “institutional” factors, “market” risks are also critically important in terms of performance volatility and susceptibility to supply shocks. Although long term performance series are not available for many Chinese markets, it is likely that they behave in a similar way to other emerging markets, with far higher performance volatility compared with more mature markets. As explained earlier, much of this volatility is due to the emergence of real estate markets across the country, with new construction accounting for a high proportion of the existing inventory. As the markets grow in scale and critical mass, it is likely that the volatility of rental growth will be reduced. Over the longer term, the increase in the number of domestic and international investors will lead to deeper and more broad-based investor market, with a likely reduction in overall market volatility. Although this is likely over the longer term, considerable cap rate volatility can be expected over the short term as the investment market grows in scale and critical mass.

Chart 19: Global Office Market Volatility, 1992 – 2006, %



Source: RREEF Research

5. Conclusions and Further Research

Huge potential in the market...

...but important steps need to be taken for the country to evolve into a mature, liquid and transparent market.

This brief overview of the Chinese real estate market demonstrates the significant changes underway as the market matures and becomes more institutional. As concluded in RREEF's Global Insights report, "China and India are particularly attractive as emerging real estate markets given the pace of growth of these economies"³⁰. The strong growth and the structural changes underway throughout the economy, coupled with the relative shortage of all types of good quality real estate mean the medium to long term prospects for market fundamentals remain very good. Despite the huge potential for the market, a number of important steps need to be taken for the market to evolve into a mature, liquid and transparent investment, as illustrated in the table below.

Table 2: China Real Estate Market Assessment

Dimension	Component	China Real Estate Market Assessment	
		Overall Assessment	Explanation
Economy	Economic Growth	Very Strong	Strong long term potential, as the economy shifts from being export and investment-led to more "consumer-driven"
	Economic Status	Improving	Relatively low GDP per capita, high business regulation, low transparency
Real Estate Performance	Fundamentals	Strong	Despite short term oversupply in a number of office markets, the shortage of modern real estate coupled with the strength of demand underpin strong medium and long-term prospects
	Pricing	Attractive	Cap rates have compressed over recent years, but have stabilized in recent months making current levels of cap rates relatively attractive compared with other global markets
Real Estate Risks	Institutional Risks	Relatively Weak, but Liquidity Improving	Low liquidity and limited availability of market information and performance measurement. Despite the weaknesses, the increasing liquidity provides greater depth and transparency to the market.
	Market Risks	Relatively Weak	Volatile rent and cap rate performance increases risks for institutional investors

Source: RREEF Research

For institutional investors, the table demonstrates that improvements need to be made to the transparency and discipline of the real estate market, and much of the responsibility for this lies with the real estate profession in China. A key aspect of the maturing of the real estate market relates to more detailed research and understanding on the dimensions of change within the market.

Further research is needed into the dimensions of economic change ...

This research needs to be conducted on a series of dimensions and at different levels. In terms of **further research into economic change**, key issues relate to:

- The changing nature of economic growth and the implications of this for the real estate market. As the economy shifts from being export and investment-led to being more "consumer-driven", this will generate a different set of demand drivers for real estate across the country.
- A related area for further research involves the process of urbanisation and the implications for social and economic infrastructure provision, and for labour availability.
- A third set of macroeconomic issues relate to the transformations underway in specific economic sectors, whether relating to the retail, industrial, residential or office markets. The structural changes in each of these sectors will shape both the level and the spatial patterns of demand for real estate.

In terms of further research into more specific real estate issues, there is an equally broad set of factors that need to be addressed:

³⁰ RREEF (2006), "Global Real Estate Insights", August, p. 33.

... and research into specific real estate issues... to help the market continue to mature.

- On the one hand, this relates to data and information on market activity in terms of supply, demand and performance, at asset-specific and market levels.
- On the other hand, greater research is required on the liquidity of the real estate market, and the way in which changing regulations will impact the ability of both domestic and foreign investors to hold Chinese real estate as an investment asset.

A series of government and industry bodies, and commercial organisations such as RREEF, is engaged in research in these broad areas. Together, this research will help improve understanding of the changes underway in the Chinese real estate market, and will help the market become established as an integral part of China's maturing economy and capital market.

ANALYST CERTIFICATION

The views expressed in this report accurately reflect the personal views of the undersigned lead analyst. In addition, the undersigned lead analyst has not and will not receive any compensation for providing a specific recommendation or view in this report.

(Signed) Peter Hobbs

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Main Offices

London

1 Appold Street
Broadgate
London, EC2A 2UU
United Kingdom
Tel: +44 20 7545 8000

Eschborn

Mergenthalerallee 73-75
65760 Eschborn
Germany
Tel: +49 69 71704 906

San Francisco

101 California Street
26th Floor
San Francisco, CA 94111
United States
Tel: +1 415 781 3300

Chicago

875 N. Michigan Avenue
41st Floor
Chicago, IL 60611
United States
Tel: +1 312 266 9300

New York

280 Park Avenue
40th Floor
New York, NY 10017-1270
United States
Tel: +1 212 454 3900

Publication Address:

RREEF Limited
1 Appold Street
Broadgate
London EC2A 2UU

Internet:

www.rreef.com

Additional information is
available upon request

RREEF Real Estate Research

A member of the Deutsche Bank Group

1 Appold Street, Broadgate, London EC2A 2UU Tel: +44 20 7545 8000

Peter Hobbs

Global Head of Research
+44 20 7547 4855

Europe

Brenna O’Roarty

Director
+44 20 7545 6099

Maren Väth

Vice President
+49 69 717 04 204

Henry (Wei) Chin

Assistant Vice President
+44 20 7545 6611

Ermina Topintzi

Assistant Vice President
+44 20 7545 6674

Lonneke Löwik

Assistant Vice President
+44 20 7545 6328

Susannah Hunter

Assistant Vice President
+44 20 7547 3305

The Americas

Alan Billingsley

Director
+1 415 262 2017

Hope Nadji

Director
+1 415 262 2022

Stephen Newbold

Vice President
+1 415 262 2040

Brooks Wells

Vice President
+1 212 454 6437

Hong Kong

Tan Yen Keng

Vice President
+852 2203 8062