Zeppelin's

Real Estate Tech

3Q 2006: A Real Estate Newsletter by Zeppelin Real Estate Analysis Limited
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One more REIT Champion REIT debuted during the period yet its share price dropped on the first day of trading along with downward adjustments on stock markets worldwide. China announced more measures to cool real estate speculation and overinvestment plus the contemplation of rules limiting foreign capital that targets real estate. Nonetheless, the Hong Kong economy continues to grow and sentiment remain positive, notwithstanding slower residential sales. The famous UK scientist Stephen Hawking visited Hong Kong and delivered a talk on cosmology and the stars, definitely a much more interesting and enlightening subject than real estate number-crunching.

In this Issue:

We would also like to hear from prospective readers / writers who wish to share their real estate experience with us.

This quarterly (generally published in January, April, July and October) newsletter is circulated freely via email to over thousands of readers comprising real estate developers, investors, fund managers, financiers, owners, users, top executives, senior managers, prominent academics and related professionals from Hong Kong and abroad. Our content is / has also been published in newspapers and web portals such as **China Daily**, **Hong Kong Economic Journal** (a Chinese daily), **21st Century Business Herald** (China), **The Standard** (a Hong Kong English Daily), **MITCRE Alumni Newsletter**, the **Surveying Newsletter** of the Hong Kong Institute of Surveyors, **Centanet.com, Netvigator.com, Hongkong.com, E-finet.com, Red-dots.com, Realtradex.com, FrogPondGroup.com, Icfox.com**, **PacificProperties.net**, **Soufun.com** and **House18.com**. We had also been quoted in the **Asian Wall Street Journal** and interviewed by **Radio Hong Kong**. We also publish monthly articles and analyses in the months in between. This newsletter is now into its **11th year** and **40th** issue.

We also operate a website www.real-estate-tech.com through which we intend to share some of our real estate knowledge and ideas with interested parties. There are close to 1,000 content items, in English or Chinese, including analyses, articles, charts, and tables, plus spreadsheets, tutorials, e-books, and the like, the majority of which is free with some requiring a token fee. The website is regularly visited by thousands from all over the world and should be of interest to people interested in China real estate markets.

Zeppelin Real Estate Analysis Limited is involved in real estate development, investment, and management with a focus on **independent real estate analysis**. Together with Zeppelin Property Development Consultants Limited, we offer services related to real estate asset management [analysis, investment strategy, and portfolio assessment], project management [architectural design, cost control, and contract administration], facility management [facility utility assessment, facility strategy, and building maintenance], and marketing management [campaign coordination, leasing, and sales]. We are part of the Zeppelin Group headquartered in Hong Kong with office operations in Beijing, Shanghai, and Shenzhen and we have access to networks covering China / Asia, North America, and Europe.

China Real Estate: Some Interesting Computations

Real Estate Tech, 3Q 2006

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Your humble author has recently been invited as a keynote real estate speaker for a real estate expo and conference and China real estate was one of the topics focused. While the space here cannot accommodate a comprehensive version of the said talk, it does contain part of the highlights as follows:

A) **In 2005, some 1,580,000,000,000 Yuan was invested in real estate** = the bulk probably in commodity (private) real estate, with the residential sector grabbing some 2/3 of it. The office occupies around 4%, the retail 11%, and the rest 17%. Geographically, the eastern region attracts 68% of the said sum with the remainder split evenly between the central and western regions. The developers were quite dependent on pre-sales in terms of funding.

B) **In 2005, the residential sector has some 1,300,000,000 m2 under construction** = plus another 400,000,000 m2 being completed, the office sector has 66,000,000 m2 under construction and close to 13,000,000 m2 being completed, and the retail sector 210,000,000 m2 + 53,000,000 m2. Between these three sectors, residential occupies 82%, office 4-5%, and retail 13%.

Now, the above figures do sound huge, but then again, exactly how huge? Astronomical numbers are sometimes hard to grasp. The following may help a bit:

1) **The Residential Sector is LIKE having 14,000,000 units of 1,000 ft2 each in construction in 2005** = note the word “like” because the actual number of units may differ since units come in different sizes. This includes around 5,800,000 units commenced in 2005 and some additional 4,300,000 units were completed during the year as well.

2) **The Office Sector is LIKE having 1,400 grade A tower blocks of 500,000ft2 each in construction in 2005** = including 359 blocks started in 2005 in addition to some 271 blocks completed.

3) **The Retail Sector is LIKE having around 1,120 retail complexes of 2,000,000ft2 each in construction in 2005** = again including 414 newly started complexes plus 285 completed complexes.

Now these sound really huge and perhaps even quite worrying to some, or are they? Let’s do some simple (but theoretically less than complete) math to find out:

a) **Residential** = while 4,300,000 completed units sound like a lot, it constitutes around 1.32% of total households. By contrast, Hong Kong completes around 25,000 (private market) residential units during the past decade or so each year and this means around 1.25% of total households. Hence, the 4,300,000 figure does not seem that outrageous anymore. Another angle would be look at the population ratio between Mainland China and Hong Kong and this is roughly (1,300,000,000 to 7,000,000 =) 186. Divide the 4,300,000 units by 25,000 units and you get 172. Again, this does not look overly disproportionate. Still another angle is to use how many square feet of floor area were constructed for each person and each person in Mainland China has around 3.30 ft2 while each Hong Kong person has 2.30 ft2, or a ratio of 1.43. This seems worrying but behold, the average Mainland China unit is larger, say around 1,000ft2, while the counterpart Hong Kong unit is around 650ft2, i.e. a ratio of 1.54. Thus, 1.43 appears reasonable and less alarming. Notwithstanding supply and demand mismatches and overbuilding in some markets (cities), the overall situation does not appear to be too out of hand looking from a production angle.

b) **Office** = the Mainland China GDP is around 10 times that of Hong Kong and assuming (a big assumption here) that office demand has something to do with the GDP level (more economic activities, trade etc thus the need for more office, whatever grade), no real macro problem exists as long as supply ratio between the Mainland and Hong Kong is by and large around 10. However, the total stock figure is somewhat lacking for Mainland China thus as a substitute, we use the completed floor area. This works out to be 1.35 that of Hong Kong's total private office stock in terms of floor area i.e. 1 year office production in the Mainland already outstrips the overall Hong Kong office stock. Is this too much? Probably but then again it is difficult to draw a firm conclusion, and then again, maybe not, because 10.00 / 1.35 = 7.40 years, and better quality offices have only been springing up in any significant numbers since the new millennium began. Using another angle of GDP US$ / per ft2 of office, the Mainland has around US$1,848 / ft2 of office in progress and completed, contrasting the Hong Kong figure of US$1,680 / ft2 of existing office stock. While the two rates are not entirely comparable, and certainly the Mainland figure would be lower IF the total stock figure (for the whole country and including even old or less than modern but still viable stock) was used, the office supply situation may not be as alarming (not that it means it is not alarming at all) as it appears because the high growth economic growth rate (especially in the major cities) might compensate for some portion of oversupply (if any).

c) **Retail** = as in the office sector, the same comparisons were made yet this time, instead of completing 1.35 the floor area that Hong Kong has, the completed floor area in 2005 outstripped the private retail stock of Hong Kong by 5 times. Also, the GDP US$ for each ft2 of retail being built and completed is only US$555 versus Hong Kong's US$1,527 for each ft2 of overall stock. There is of concern and investors may do themselves favor by looking hard at each project and its feasibility. Despite the apparent immense retail property production on a macro scale, retail properties sometimes may exhibit (versus residential and office sectors) a "winner takes all" phenomena i.e. some retail properties can be almost dead while at the same time and in the same city (or even neighborhood) other retail complexes may have a tenant waiting list. Hence, the less than favorable rates do not spell immediate doom to each and every retail property, just that the competition is likely to be so keen that only very competitive properties will make the grade. The risk appears larger than either the residential or retail sector looking from a macro viewpoint.

In summary, while we are optimistic of the long term real estate prospects in China, we would suggest investors to have some fall-back strategies and tactics in the even there are market adjustments, which may be significant given certain circumstances if past data is any indication. Also, investors may need to look at non-real estate aspects and factors, including economic, capital, demographical, social, and administrative ones to come up with plans and actions that enhance return and / or reduce risk.

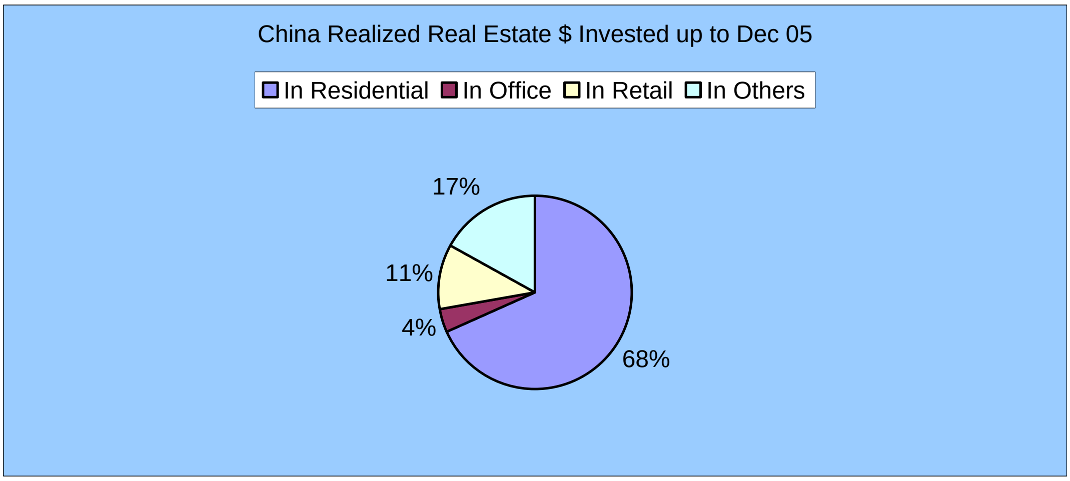
Note: some of the relevant charts are listed below

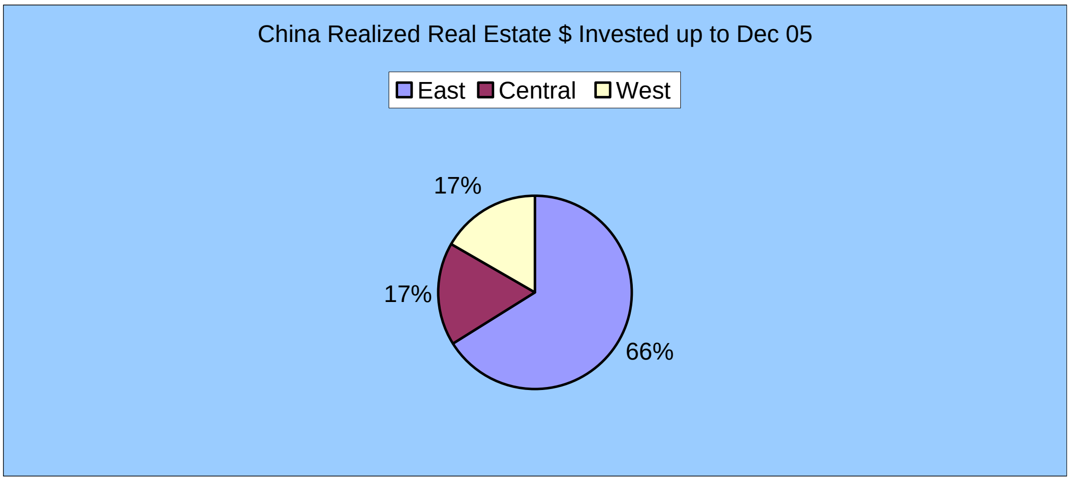
Sectors:	RE $ Invested	In Residential	In Office	In Retail	In Others
Units:	Yuan '100M	Yuan '100M	Yuan '100M	Yuan '100M	Yuan '100M
Regions:	15,759.30	10,768.20	632.29	1,676.96	2,681.85
East	10,428.77	7,160.84	na	na	na
Central	2,682.19	1,869.54	na	na	na
West	2,648.34	1,737.82	na	na	na

Residential Floor Areas:		Construction In Progress		
		Total In Progress	Newly Started	Completed
Units:		0,000 m2	0,000 m2	0,000 m2
Regions:	Total	127,747.66	54,033.97	40,004.49
East		76,371.83	29,646.86	23,540.71
Central		24,435.97	12,253.84	8,185.02
West		26,939.86	12,133.27	8,278.76

Office Floor Areas:		Construction In Progress		
		Total In Progress	Newly Started	Completed
Units:		0,000 m2	0,000 m2	0,000 m2
Regions:	Total	6,587.09	1,669.75	1,258.96
East		4,595.35	1,064.21	815.90
Central		901.61	338.55	187.31
West		1,090.13	266.99	255.75

Retail Floor Areas:		Construction In Progress		
		Total In Progress	Newly Started	Completed
Units:		0,000 m2	0,000 m2	0,000 m2
Regions:	Total	20,825.16	7,702.01	5,289.81
East		10,997.23	3,841.44	2,515.66
Central		4,494.50	1,929.90	1,317.65
West		5,333.43	1,930.67	1,456.50





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Residential, Office, or Retail = Apple, Orange, or Pear?

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Often real estate investors will ask the following question: should I invest in residential, office, or retail (substitute any or all of the foregoing with industrial, warehouse, hotels etc if you like)? The typical answer to this may involve looking at the then market condition, the sector performance, the yield, the expected or actual price appreciation, the demand, the supply, interest rates, CPI, economic sentiment and health, and so forth before coming to any possible inclination toward any one sector.

<u>Nonetheless, using a longer term perspective, asking which sector offers better prospects may not be overly meaningful</u>, because while all these sectors are classified under the big heading of "Real Estate", their similarities probably stop at this macro level. The analogy is that while apples, oranges, and pears are categorized as "Fruits", each of them has its own characters and uniqueness. So too are the residential, office, and retail sectors.

Here are some observations to throw a light on the above hypothesis (limited to the residential, office, and retail sectors):

A) **Ease of comprehension** = generally, the residential sector is the easiest to understand, in part because most everyone if not everyone needs a shelter (home). Gauging the market price or rent of a residential property is not too difficult, rare residences notwithstanding, as market comparables exist in abundance. The office sector is a bit more difficult to comprehend though not to a great extent as office tenants around the world require more or less similar attributes, the difference being mostly in location (CBD or Non-CBD), grade or quality of design and construction (grade A, B, C etc), building amenities (state of the art or otherwise), image (prestige or otherwise), and the like. Market data is usually plentiful. Of the three, retail is probably the hardest to comprehend, in part because different retailers could have vastly different requirements for the retail spaces. For instance, a convenience store usually requires a street-level shop while a famous fashion brand wants a classy indoor arcade or mall. Also, the (maximum) rent paying ability between different types of retailers could also be very different. Sometimes, two corner stores in the same intersection may harbor very different rental rates with somehow one corner store being more frequented by pedestrians. <u>Unless one is prepared to spend time and effort in understanding the retail sector, it may be prudent for an investor to focus on the other two</u>.

B) **Occupant / Tenant types** = for residential, the unit is households or families. For office, it is businesses while for retail, it is retailers. In some ways, they all share certain common requirements for security, safety, cleanliness, maintenance, and so on. However, they could have different emphasis or focus. For instance, modern residential developments would generally contain a recreational-gym club facility to provide relaxation and entertainment for residents after work, while retailers would focus on the accessibility and pedestrian flow in the mall and office occupants on having the best possible internet and telecommunication systems etc. <u>Investors need to contemplate which category of occupants they could serve best based on available resources and preferences</u>.

C) **Rental curves and fluctuations** = generally speaking, residential offers the least volatile rental trend while office and retail could vary vastly within any one investment period. For instance, based on price indexes published by Frank Knight Petty (formerly Chesterton Petty) for the period since 2000 (2000 = 100 index), the luxury rental index has gone up to 120 points and treaded down to 75 points i.e. an increase of 20% and a decrease of 25% within the period. At the same time, the office index since 2000 (2000 = 100 index) exhibits greater volatility, having gone up to 160 points and treaded down to 60 points, i.e. +60% and -40% within the same period. <u>Hence, investors looking for steady rents should consider more of the</u>

residential sector while investors looking for greater return (or excitement) can contemplate the office or retail sector.

D) **Effects of “strata-titled” ownership** = to readers from North America, strata-title is equal to the concept of condominium i.e. the ownership of a building tower has been fragmented among numerous individual owners. Given all things being equal, a single-owner property is easier to manage than a multi-ownership property. Not that the single-owner property will have exceptional management, it tends at least to be consistent (consistently good or bad). Multi-owners mean multi-preferences, though the mechanism and setting up of an owners' corporation plus a competent property management team would help resolve much of the trouble associated with multi-ownership. Generally, the effects of having strata-titled ownership in residential and office properties (perhaps excluding the best grade A offices) would not be overly detrimental as the occupants share many common interests and goals. However, for retail properties, this may be a different story because different tenants would have different wishes in terms of display, signage, traffic flow direction, and so on. In short, there could be competing conflicts. If the property is owned by one owner, who can set up management rules and regulations for all to follow (thus more or less creating a level playing field), the conflict would probably be less. However, if the property is multi-owned with each owner seeking to maximize its utility (either for themselves or their tenants), the conflict if any may not be easily resolved.

In summary, the various real estate sectors can also be likened to different industries, i.e. each has its own operational modes and business models, though they all share the goal of value (and / or profit) maximization. **The question that should be asked is: which real estate sector best fits my investment return, risk, and resource parameters?**

Hong Kong Residential: No Point in Diversifying by Location or Grade

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We have randomly selected some popular residential properties and complexes across Hong Kong and we looked at their reported price per gross floor area (HK$ / ft2) over the past 10 or more years. Simple correlations were then performed between them to see if there was a point in diversifying one's residential real estate investment properties across town and grade. **The simple finding was that there seemed to be no point in doing so, as these random correlations showed R2 of 0.50 and higher**. A few caveats and notes though:

A) **Data source** = based on Centanet.com and its Centa-City Index database at http://www.centanet.com/cci.htm

B) **Sampled properties** = were selected to cover a wide spectrum of residential properties covering Hong Kong Island, Kowloon, and the New Territories geographically and representing mass private and luxury grade residences

C) **Subjectivity and randomness** = notwithstanding the above, the sampled properties may harbor an element of subjectivity and randomness

D) **A good hint but not a comprehensive conclusion** = as such, the results obtained herein may offer a good hint of the wider situation yet further studies are required to establish more conclusive and comprehensive findings

Here are a summary of the findings:

Comparison theme	**Property 1**	**Property 2**	**R2 since mid 90s**	**R2 since 2003**
Mass HKE to Mass HKE	Taikoo Shing	Heng Fa Chuen	0.92	0.93
Mass HKS to Mass HKS	Baguio Villa	South Horizons	0.58	0.89
Mass KL to Mass KL	Mei Foo Sun Chuen	Telford Garden	0.86	0.91
Mass NTN to Mass NTN	Fanling Center	Sheung Shui Center	0.92	0.77
Mass NTE to Mass NTE	Ma On Shan Center	Shatin Center	0.85	0.90
Mass NTW to Mass NTW	Kingswood Villa	Sun Tuen Mun Center	0.94	0.61
Mass HK to Mass KL	Mei Foo Sun Chuen	Chi Fu Fa Yuen	0.85	0.89
Mass HKE to Mass KLE	Heng Fa Chuen	Laguna City	0.93	0.88
Mass HK to Mass NT	Taikoo Shing	City One Shatin	0.92	0.94
Mass KL to Mass NT	Telford Garden	Fanling Center	0.90	0.89
Mass NTE to Mass NTW	Ma On Shan Center	Kingswood Villa	0.82	0.86
Mass NTW to Mass NTN	Kingswood Villa	Sheung Shui Center	0.87	0.70
Luxury HKE to Luxury HKW	Robinson Place	HK Parkview	0.84	0.90
Luxury HKC to Luxury HKW	Robinson Place	Dynasty Court	0.88	0.82
Luxury HKE to Luxury HKC	Cavendish Heights	Tregunter	0.81	0.94
Luxury HKE to Luxury KLN	Beverly Hill	Parc Oasis	0.85	0.93
Luxury HKE to Mass NTW	Cavendish Heights	Sun Tuen Mun Center	0.54	0.60
Luxury HKC to Mass NTW	Dynasty Court	Kingswood Villa	0.75	0.74
Luxury HKC to Mass KL	Dynasty Court	Telford Garden	0.74	0.85
Luxury HKC to Mass HKE	Dynasty Court	Taikoo Shing	0.75	0.86

As can be observed in the table above, the correlations are generally high being generally 0.75 or higher with the figures below this threshold still being above 0.50. Hence, our overall inclination is that it makes little sense to dwell too much when allocating one's residential real estate investment across different locations and grades in Hong Kong as there seems to be little risk reduction effect. **Please note however this relates only to price** and its appreciation or depreciation and has no bearing on rental income which is not dealt with herein.

Nonetheless, there are also a few interesting points:

1) **In some of the comparison themes, the correlation values for the period since the mid 1990s and the period since 2003 could differ immensely**. For instance, the theme Mass NTW to Mass NTW is one such example. Nonetheless, this may not reflect all of NTW as the figure might have been skewed by the sampled properties used.

2) **With few exceptions, the correlation values for like-grade comparisons, e.g. Mass to Mass, are generally higher** than those for unlike-grade comparisons e.g. Mass to Luxury. Nonetheless, the values on a nominal basis are still quite high implying significant correlation.

3) **Conversely, the correlations values for like-location and unlike-location appear not to be overly different**.

In summary, investors wanting to diversify and reduce the inherent risks in residential real estate should look elsewhere.

Legend:
HK = Hong Kong Island
KL = Kowloon Peninsula
NT = New Territories
N, E, S, W = North, East, South, West
Mass = mass private residential
Luxury = luxury grade private residential