Zeppelin's Real Estate Tech

1Q 2009: A Real Estate Newsletter by Zeppelin Real Estate Analysis Limited
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Happy New Year! While customarily we would all wish for a better 2009, we need to prepare for the worst and hope for the best this year. If things do turn out to be as bad as expected, then at least we would have our swimsuits on when the tide recedes, if not, all the better and we could keep swimming. WWII Analogies for pondering current economic conditions: Europe = 1940 Dunkirk Retreat [Allied soldiers were saved but all equipment were lost, except the British fighter planes]; Asia = 1941 Calm before the storm [i.e. pre-Pearl Harbor Attack]; USA = 1942 Battle of Carol Sea just fought and sort of tied [and soon to engage in Battle of Midway]. Victory is still some time away though it is likely to prevail in the end, as in WWII.

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, PacificProperties.net**, **Soufun.com** and **House18.com**. We had also been quoted in the **Asian Wall Street Journal** and interviewed by **Radio Hong Kong** and **Commercial Radio**. We also publish monthly articles and analyses in the months in between. This newsletter is now into its **13th year** and **50th** 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 focuses on 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 and Shenzhen and we have access to networks covering China / Asia, North America, and Europe.

Do you need our services? You DO when…

- **In Real Estate Development:** you encounter overestimated proceeds, cost overruns, underestimated time schedules, design and quality issues, construction contractual disputes, joint venture conflicts, or the like…you need an experienced project manager like us

- **In Real Estate Investment:** you encounter challenges in 1) Selecting which markets (cities), sectors (residential, office, retail etc), and properties-projects to invest; 2) Striving for the best possible risk-adjusted portfolio return; or 3) Sensing the volatility of a market or sector…you need an independent real estate analyst like us

- **In Real Estate Management:** you encounter questions on 1) if it is more economical to buy or rent the real estate facilities and assets, and if so where and what; 2) how best to manage and maintain such facilities and assets; 3) what level of human resources are required, all with a view to maximize their utility to help achieve the corporate objectives… you need a seasoned facility strategist like us

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For details: please download our group introduction at http://www.real-estate-tech.com/ZPG-Group%20Introduction-sOct07.pdf

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Hong Kong Residential: New Territories West Gives Bigger Bang for Buck

Real Estate Tech, 1Q 2009

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Bang for buck herein measures the typical amount of residential floor area which a typical household can buy with their typical monthly household income in any (particular) neighborhood in Hong Kong.

Essentially, representative residential properties on Hong Kong Island, Kowloon, New Territories East, and New Territories West were selected and their related data, such as residential unit prices (HK$/ft2 GFA), median monthly household income, household size, education level, employment status, and the like, were abstracted.

Simple compilations and computations followed. The data were obtained visually from the visual maps in www.centanet.com and are thus good for rough reference only. The results are interesting:

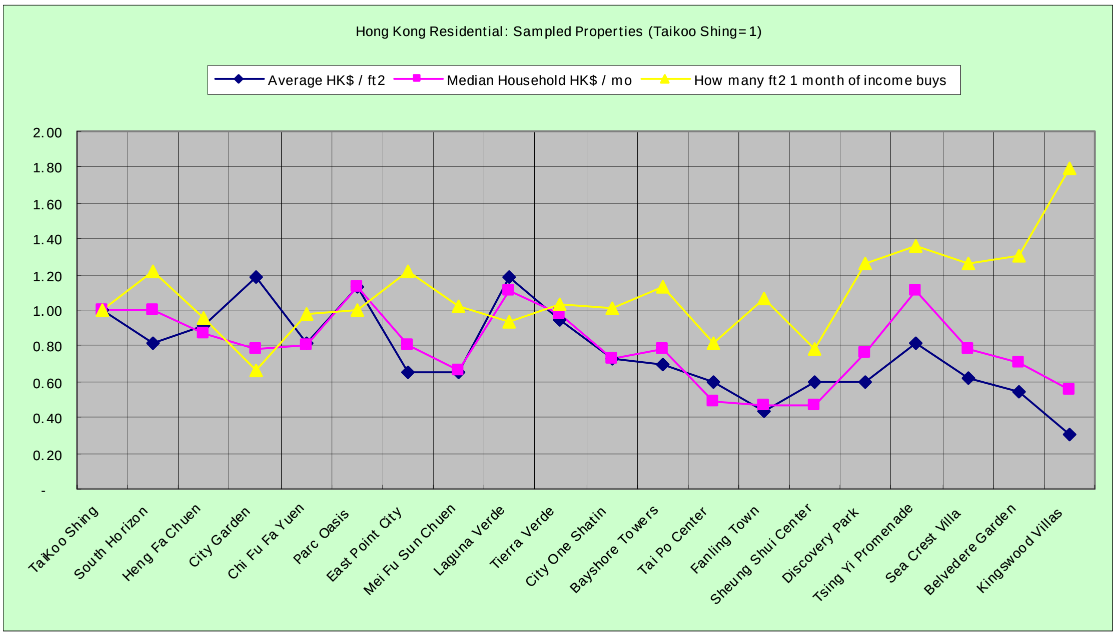
Districts	Neighborhood / Residential Complex	Average HK$ / ft2	Median Household HK$ / mo	How many ft2 1 month of income buys
HK	TaiKoo Shing	5,500	45,000	8.18
HK	South Horizon	4,500	45,000	10.00
HK	Heng Fa Chuen	5,000	39,000	7.80
HK	City Garden	6,500	35,000	5.38
HK	Chi Fu Fa Yuen	4,500	36,000	8.00
KL	Parc Oasis	6,200	51,000	8.23
KL	East Point City	3,600	36,000	10.00
KL	Mei Fu Sun Chuen	3,600	30,000	8.33
KL	Laguna Verde	6,500	50,000	7.69
KL	Tierra Verde	5,200	44,000	8.46
NTE	City One Shatin	4,000	33,000	8.25
NTE	Bayshore Towers	3,800	35,000	9.21
NTE	Tai Po Center	3,300	22,000	6.67
NTE	Fanling Town	2,400	21,000	8.75
NTE	Sheung Shui Center	3,300	21,000	6.36
NTW	Discovery Park	3,300	34,000	10.30
NTW	Tsing Yi Promenade	4,500	50,000	11.11
NTW	Sea Crest Villa	3,400	35,000	10.29
NTW	Belvedere Garden	3,000	32,000	10.67
NTW	Kingswood Villas	1,700	25,000	14.71

A) **Median Monthly Household Income HK$ / Average Price per floor area ft2** = The neighborhoods (representative properties) on Hong Kong Island, Kowloon, and New Territories East seldom reach a ratio of 10 and even if so, they do not exceed 10. However, all the selected neighborhoods in New Territories West are above 10. In short, these New Territories West households can buy more floor space on average in where they live.

B) **The Average Price per floor area ft2** = does have some correlation (R = - 0.56) with the number of floor area ft2 bought i.e. the higher the average price per ft2, the lower amount of floor area ft2 which could generally be acquired.

C) **The Median Monthly Household Income HK$** = bears no or little correlation (R = 0.02) i.e. how much money a household makes appears to have little consequence on how many ft2 of floor space the household may buy.

D) **Using the ratio of HK-Taikoo Shing residential complex, a very popular private housing estate, as a benchmark of 1.00** = then we can plot the others against it. Please refer to the chart below.



E) **Most neighborhoods on Hong Kong Island, Kowloon, and New Territories East fluctuate between 0.80 to 1.20** = the neighborhoods in New Territories West [NTW] all range above 1.20 with Kingswood Villa in Tin Shui Wai reaching 1.80, which is also much higher than the other 4 counterparts in NTW. That is to say, despite the median monthly household income in Kingswood Villa is just a bit more than half of that of HK-Taikoo Shing, the households in the former can buy more floor area with their income in their NTW neighborhood.

While one may suspect this price-quantity pattern may reflect land economics principles related to urban–suburban sprawl, there are perhaps other neighborhood characteristics which contribute to such a pattern.

Nonetheless, we shall leave such further research to the experts and academics.

Hong Kong: Some Homeowners of Older Pricier Properties Need to Cash In

Real Estate Tech, 1Q 2009

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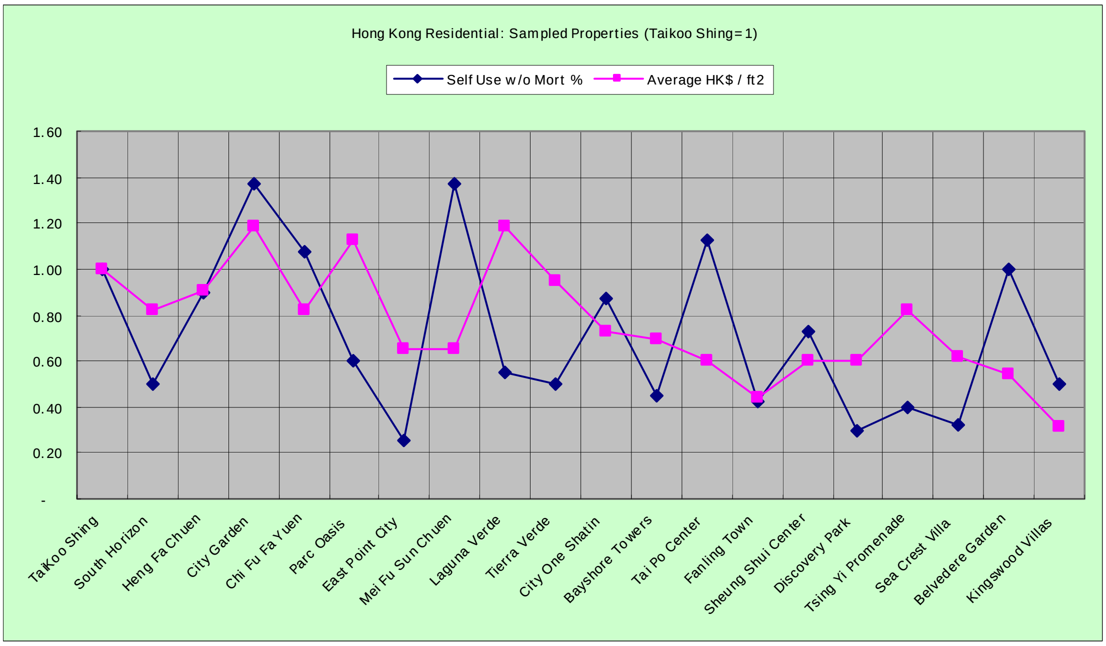
Here we look at the proportions of "homes with mortgages" and "homes without mortgages" in various residential neighborhoods-complexes of Hong Kong.

Essentially, representative residential properties on Hong Kong Island, Kowloon Peninsula, New Territories East, and New Territories West were selected and their related data, such as residential unit prices (HK$/ft2 GFA), median monthly household income, household size, education level, employment, mortgage status, and the like were abstracted.

Simple compilations and computations followed. The data were obtained visually from the visual maps in www.centanet.com and are thus good for rough reference only. The results are interesting:

1) **Price per floor area has a slightly reversed (negative) correlation with the "homes with mortgages" proportion** = i.e. the higher the price per floor area, the lower the proportion of homes with mortgages, which in turn implies, the lower the price per floor area, the higher the proportion of homes with mortgages. The correlation R is -0.33. [Refer to the chart below, note the chart uses "homes without mortgages"].

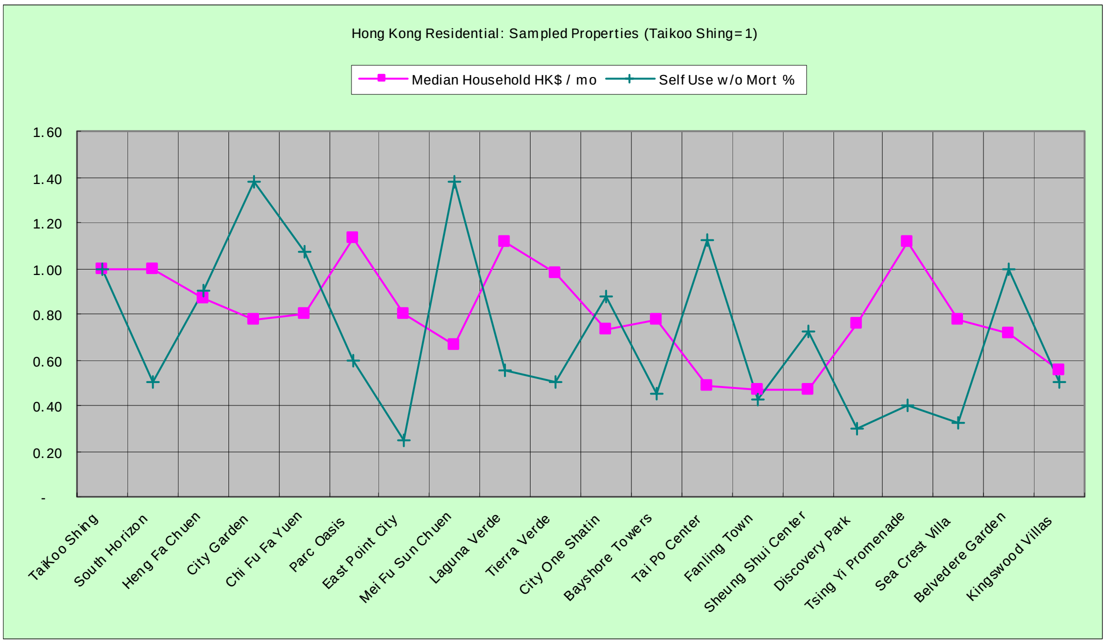


2) **The older the residential neighborhoods-complexes, the lower the proportions of homes with mortgages** = this is not surprising, as older neighborhoods mean older properties in general which in turn mean fewer of them may carry mortgages, especially if they are still occupied by the original homeowners. The other side of the coin is that the newer the neighborhoods-complexes are, the higher proportions of homes with mortgages will be. [Refer to the table below, note some of the lower percentages tend to be in older residential neighborhoods or complexes].

Neighborhood / Residential Complex	Self Use w/ Mort %
TaiKoo Shing	40%
South Horizon	50%

Heng Fa Chuen	45%
City Garden	25%
Chi Fu Fa Yuen	47%
Parc Oasis	51%
East Point City	70%
Mei Fu Sun Chuen	25%
Laguna Verde	50%
Tierra Verde	60%
City One Shatin	45%
Bayshore Towers	65%
Tai Po Center	40%
Fanling Town	60%
Sheung Shui Center	49%
Discovery Park	60%
Tsing Yi Promenade	62%
Sea Crest Villa	61%
Belvedere Garden	50%
Kingswood Villas	55%

3) **The median monthly household income has a slightly reversed correlation with the proportion of homes without mortgages** = although the R is only a -0.20. Given that homes without mortgages could be older but pricier properties, this means some homeowners, not all, of such properties have a lower than average monthly income owing to a variety of reasons, perhaps with retirement being a common one. As such, this may also mean the owners of some of these older but pricier properties may need to cash in their equities in the homes in order to retire more comfortably in the financial sense. [Refer to the chart below].



Perhaps real estate agents and developers may take note of the above while spotting for real estate opportunities.

To Some China Real Estate Developers: You Have NOT Seen Anything Yet!

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Your humble author had recently attended a few real estate conferences collectively featuring real estate developers, investment funds, consultants, and the like involved in China real estate. Summarizing the salient viewpoints which range from the ☹ to the ☺:

1) **All expected 2009 to be a very tough and challenging year** = although the optimistic ones cited the downtime to last 1 year while the more pessimistic thought it would last up to 3 years. 1.50 years was the average roughly.

2) **One or two investment managers described 2009 to be a good year for vultures** = i.e. $$$-loaded corporations and funds would find real estate a dime a bucket and could make some excellent kills.

3) **A banker or two expected no major bankruptcies among China real estate developers** [who apparently were having a hard time financially] = because there would be policies to help ease the tight monetary condition and they could always sell their properties via price reduction or buy less land etc.

4) **A few real estate developers thought 2009 would be a good time for carrying out needed improvements** = in managerial operation, in corporate system, and development (real estate) production in terms of design, cost control, value for money etc.

5) **A few real estate developers blamed the immense attention given by the (news) media on (the depressed) real estate market conditions to be a catalyst for the current depressed market conditions** = i.e. in their minds, if there were fewer media reporting, the markets would not have been so poor.

6) **Many contemplated the availability of short term financing** = such bridging loans and apparently the banks had not been overly generous with dishing out such loans now. Thus, developers who rely on them to complete new projects were having very tough if not critical times and they wondered if the investment funds could fill the gap in part. The fund managers mentioned this might not be feasible as their investment mandates-processes might forbid that.

7) **A few developers described the current market as a severe winter** = with storm and snow on the horizon.

The above is listed purely for reference and it is up to individual readers to interpret them. However, your humble author does have a few (biased) things to say:

A) **IF 1-2 years is all the developers expect the downtime will last = AND still think this means a severe economic winter with heavy snowstorm, he or she had not seen anything** yet! Every of the several economic downtimes which your humble author had endured through to date (locally and abroad) lasted 4 years or more with real estate prices going down the drain in between (not another 20% or so).

Putting it bluntly, real estate operations which crumble under a 1-2 year downtime scenario and a 20% drop in prices SHOULD crumble.

B) **A tendency still to underestimate the risks in China markets** = IF the stock markets could drop some 60% or so value within a year, why can't the real estate markets, or at least some of them? The point is that we are not saying nor are we certain that real estate prices will see similar drops, yet brushing the risks aside citing huge financial reserves, relaxed austerity policies, and the 4T Yuan package appears to be jumping to conclusions.

C) **Unknown impact force but known defense** = while it seems the initial stage of global financial panic might have been controlled, no one appears to have any solid idea what the worldwide eventual impact will be. Likewise, while there were many commentaries on how China may thrive through this current saga, no one can say with any definitive quality what the eventual impact will be, both in terms of the length of time and the degree of the impact force, not to mention where, what, who, and when.

Using a military analogy, say there is a strong defensive force of 100,000 soldiers well dug-in (4T Yuan, huge reserves etc), yet if the offense (economic impact) has 800,000, the formidable defense will still be overwhelmed. On the contrary, if the offense has only 200,000 attackers, there is a good chance that the defense may hold.

The problem is no one appears to know for sure how many attackers the offense has, and as such, this is NOT the time to let down guard and downplay the risks.

Better find oneself over-prepared for battle and then smile when none comes than be filled with confidence to the point of unfound optimism.

Who Says Hong Kong REITS Offer a Safe Haven?

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Several months ago, when the Hong Kong stock market started its way down, some bankers and investment managers suggested the Hong Kong REITS (Real Estate Investment Trusts and there are 7 in Hong Kong, all publicly listed) as a safe haven from the brewing storm.

Your humble author was then arguing that was NOT necessarily the case as only some REITS appeared to offer any safety (meaning the share price not going down as much) via having little or no correlation [or a negative 1 correlation for that matter] with the overall Hong Kong stock market as represented by the Hang Seng Index. Refer to this previous article = http://www.real-estate-tech.com/articles/RET3Q08.pdf [1st article].

But lo and behold, recent studies* suggested that ALL 7 Hong Kong REITS have significant / strong correlations with the overall Hong Kong stock market and in the same direction i.e. they go up and down together by and large. Here are the findings:

1) **Data sources** = mainly from the internet e.g. Yahoo! Finance and the data series started from early November last year (2007).

2) **The 7 REITS and the Hang Seng Index** = the R2 correlations range from a low of 0.58 for the LINK REIT to a high of 0.92 for the Regal REIT, with most in between hovering about 0.80. This means there is little point in buying REITS to diversify the stock portfolio risk.

3) **The 7 REITS and 2 popular real estate listed stocks Cheung Kong and Sun Hung Kai Properties** = correlations with these 2 listed real estate companies range generally from 0.60 to 0.90. This implies using REITS to diversify one's real estate stock portfolio is also rather meaningless.

Correlation R2: using closed $	Cheung Kong	SHKP	HSI
Champion	0.85	0.88	0.88
GZI	0.81	0.83	0.88
LINK	0.55	0.57	0.59
Prosperity	0.69	0.70	0.76
Regal	0.91	0.94	0.92
Sunlight	0.84	0.90	0.88
RREEF	0.76	0.67	0.82

4) **The 7 REITS among themselves** = show significant / strong correlations too ranging from 0.60 to 0.90 in general. Thus, buying all 7 REITS in order to reduce the REIT portfolio risk could be somewhat delusional.

Correlation R2: using closed $	Champion	GZI	LINK	Prosperity	Regal	Sunlight	RREEF
Champion	1.00	0.94	0.73	0.91	0.93	0.93	0.79
GZI		1.00	0.74	0.94	0.88	0.94	0.85
LINK			1.00	0.81	0.61	0.73	0.65
Prosperity				1.00	0.78	0.86	0.82
Regal					1.00	0.93	0.72
Sunlight						1.00	0.75
RREEF							1.00

5) **The volatilities of the 7 REITS** are comparable to those of the 2 listed real estate stocks and the Hang Seng Index = i.e. even the story of 'stable REIT share prices' may not hold.

Items / REITS	Champion	GZI	LINK	Prosperity	Regal	Sunlight	RREEF	Cheung Kong	SHKP	HSI
IPO Nominal Price	5.10	3.08	10.30	2.16	2.68	2.60	5.15	-	-	-
Maximum	4.86	3.15	19.96	1.72	2.43	2.49	4.20	152.00	172.80	29,708.93
Minimum	1.31	1.23	11.66	0.59	0.69	0.92	1.53	60.00	50.70	11,015.84
Maximum / Minimum	**3.71**	**2.56**	**1.71**	**2.92**	**3.52**	**2.71**	**2.75**	**2.53**	**3.41**	**2.70**
Standard Deviation	0.93	0.54	1.99	0.29	0.48	0.43	0.63	22.83	33.02	4,623.43
Average	3.53	2.64	17.13	1.42	1.61	1.96	3.25	109.84	115.37	21,924.68
Standard Deviation / Average = (Volatility)	**0.2639**	**0.2042**	**0.1162**	**0.2047**	**0.2967**	**0.2187**	**0.1944**	**0.2078**	**0.2862**	**0.2109**
Maximum as a % of IPO Price	95%	102%	194%	80%	91%	96%	82%			
Minimum as a % of IPO Price	26%	40%	113%	27%	26%	35%	30%			

Hmm...does that mean REITS are dysfunctional investment-wise? Of course not, let them earn dividends for you!

And read this earlier article on “A Dividend Economy” = http://www.real-estate-tech.com/articles/SRS070601.htm.

*The studies are done together with the Department of Real Estate & Construction of the University of Hong Kong.