Zeppelin's Real Estate Tech

3Q 2010: A Real Estate Newsletter by Zeppelin Real Estate Analysis Limited

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☺ = World Cup 2010 still being played out in South Africa. ☹ = the recent financial crisis in PIIG (Portugal, Italy, Ireland, and Greece) and a Hungarian suspect. China residential real estate prices have come down a bit and inflation appears on the horizon:

- **Shanghai GDP will be 50% Higher than Hong Kong GDP in 10 Years**
- **Hong Kong-based REITS Beat the HSI and Popular Real Estate Stocks**
- **Hong Kong: Residential Price Trend and Household Income Distribution**

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 the **South China Morning Post, China Daily**, **Hong Kong Economic Journal** (a Chinese daily), **21st Century Business Herald** (China), **Apple Daily** (Hong Kong), **Quamnet Magazine**, **The Standard** (a Hong Kong English Daily), **MITCRE Alumni Newsletter**, the **Surveying Newsletter** of the Hong Kong Institute of Surveyors, **Reidin.com, 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 **14th year** and **56th** 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 allocation], project management [architectural design, cost control, and contract administration], and facility management [facility utility assessment, facility strategy, and building maintenance. We are part of the Zeppelin Group headquartered in Hong Kong with office operations in Mainland China and we also have access to networks covering Asia, North America, and Europe.

About the Author(s)

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Founder and Editor, Real Estate Tech Quarterly Newsletter
Real Estate Website Developer, www.Real-Estate-Tech.com

Stephen is an independent real estate analyst and chartered surveyor and has been involved in real estate development, investment, and management in Hong Kong / China / Asia and North America.

Stephen provides relevant real estate market insights and macro-micro assessments to real estate developers, investors, owners, financiers, funds, and civic organizations, and possesses many years of experience in building economics, project management, facility strategy, marketing, and research.

Stephen is also a real estate writer and his articles have been published in both English and Chinese media including the following:

- China Daily
- Hong Kong Economic Journal
- South China Morning Post
- Apple Daily
- Quamnet Magazine
- Real estate and finance websites such as Soufun.com, Finet.com etc
- Journals of professional institutes such as the Hong Kong Institute of Surveyors

Stephen is also an honorary adjunct professor with the University of Hong Kong and the City University of Hong Kong and has been invited to speak to audiences from:

- Universities: such as the University of Hong Kong, City University of Hong Kong, York University
- Professional Institutes: such as the Hong Kong Institute of Surveyors, Canadian Institute of Quantity Surveyors, Royal Institute of Chartered Surveyors
- Business Associations: such as the Rotary Clubs

Stephen has to date compiled 2 books; one online and one in hard copy format. Both are published in Chinese (with the titles translated into English below):

Online book = Easy Real Estate Lectures
http://www.real-estate-tech.com/eBook/zeppelin_ebook.htm

Hard Copy = Real Estate Investment Know-How above 101
http://www.edpress.com.hk/Product.asp?id=6282

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Shanghai GDP will be 50% Higher than Hong Kong GDP in 10 Years

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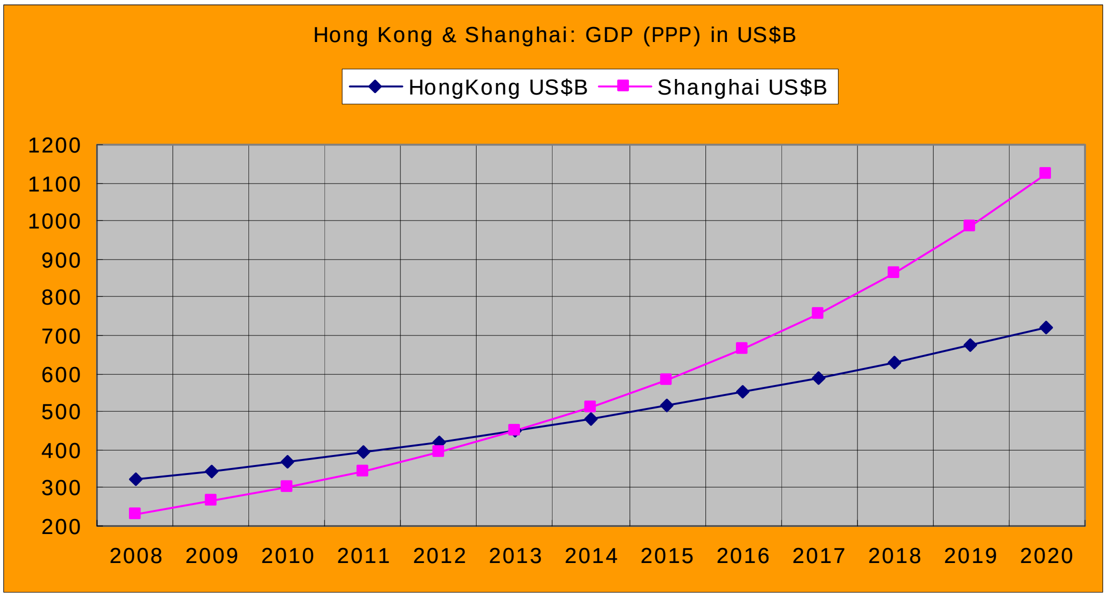
Alas!! Some readers may see the title for this article as one more proof that Hong Kong is destined to decline with the emergence of Shanghai. However, there is NO intention to infer such an opinion here.

Your humble author has always maintained that the rise or demise of Hong Kong has very little to do with the rise or demise of another city or region. It is NOT a zero-sum game i.e. there could be enough to go around for both and it is possible that both may prosper together (or fail together, or one up and one down) albeit in differing patterns and natures. Read our past article:

http://www.real-estate-tech.com/articles/Simple_read_stuff_200100205.PDF

One popular question is "When will Shanghai overtake Hong Kong?" and presumably this means economically. As such, we have taken a brief look at the GDP (PPP) of both cities and done a bit of broad-brush calculations with the data, abstracted mostly from the web including www.wikipedia.org, www.citymayors.com etc:

A) **Shanghai GDP (PPP) will match that of Hong Kong around 3 years from now** = Hong Kong is now 20% or so above Shanghai but this is likely to be a match in 2013. Thereafter in roughly 2020, Shanghai GDP will be 50% or so above that of Hong Kong. Naturally, such guesses are always based on historic data and the error margins are high plus the assumption that Shanghai will grow at twice the rate of Hong Kong. Do also realize that we are talking about a city-to-city comparison, not that an individual from Shanghai will have 50% or more purchasing power than a typical individual from Hong Kong in 2020 [see chart below].



B) China cities, Hong Kong included, are likely to occupy a higher portion of the overall GDP (PPP) = currently, 10 of the major cities, including Shanghai and Hong Kong, collectively occupy close to 13% of China GDP. In 2020, this percentage may increase to around 20%. Again, these figures are no better than educated guesses and they serve to point out possibilities for contemplation rather than predict the future [see tables below, note the rank change for Hong Kong].

China 2008	% of China GDP	Cumulative %	China 2020	% of China GDP	Cumulative %
Hong Kong	3.65%	3.65%	Shanghai	5.49%	5.49%
Shanghai	2.66%	6.31%	Hong Kong	3.53%	9.02%
Beijing	1.89%	8.20%	Beijing	2.84%	11.86%
Guangzhou	1.63%	9.83%	Guangzhou	2.45%	14.31%
Tianjin	0.91%	10.75%	Tianjin	1.89%	16.19%
Chongqing	0.65%	11.40%	Chongqing	1.34%	17.54%
Wuhan	0.58%	11.97%	Wuhan	0.96%	18.50%
Shenyang	0.41%	12.38%	Shenyang	0.69%	19.19%
Chengdu	0.32%	12.70%	Chengdu	0.53%	19.72%
Xian	0.29%	12.99%	Xian	0.48%	20.20%

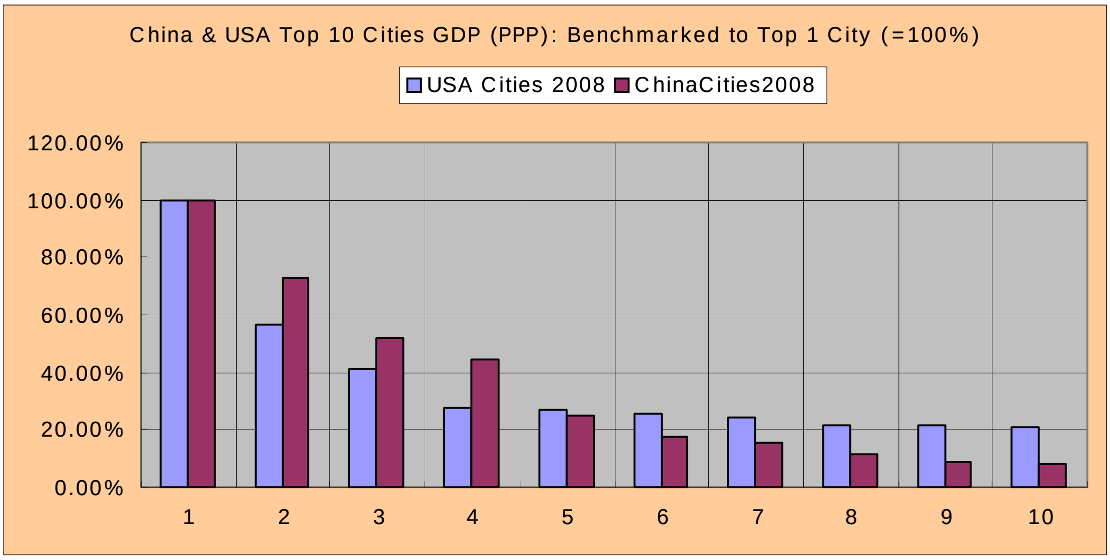
C) Compared to the USA, China is less dependent on the cities from a GDP angle = the 10 major cities in the USA add up to covering around 36% of the overall GDP. Moreover, New York City alone occupies close to 10% (hmm…perhaps this was why Wall Street had to be rescued?!), contrasting the 3 to 4% range which Shanghai and Hong Kong hold [see table below].

USA 2008	% of USA GDP	Cumulative %
New York	9.86%	9.86%
Los Angeles	5.56%	15.42%
Chicago	4.03%	19.44%
Philadelphia	2.72%	22.17%
Washington DC	2.63%	24.80%
Boston	2.55%	27.34%
Dallas-Fort Worth	2.37%	29.71%
Atlanta	2.11%	31.82%
San Francisco	2.13%	33.96%
Miami	2.05%	36.01%

D) Contemplation of city scale and urban efficiency = city scale here refers to the GDP type, not population. Given all things being equal, a bigger scale city tends to attract not only more talent and money but also enhances economies of scale and thus efficiency (up to a certain optimal point).

If New York City is taken out of the list, the remaining cities in the USA are not disproportionately different from one another. An analogy is that while there is an extremely well paid CEO (NYC), there are also a sufficient number of well paid executives and managers under him. Such an arrangement appears steadier.

While neither Shanghai nor Hong Kong is as dominant as New York City, the difference between even the 3rd or 4th place city and the 9th or 10th place city is more profound. This is like having some extremely well-paid CEO and executives without a core of well compensated managers to back them up. Naturally, China is still an emerging economy and given recent developments in the 2nd and 3rd tier cities, plus the urbanization plan, a stronger core of metropolitans, beyond the current few, is not impossible [see chart below].



Taking a long term guess and no liability is assumed here, and irrespective of the eventual urbanization moves, Shanghai seems to be still a good investment bet given its head start, complimentary government policy, predestined role as a financial city, international appeal, and the like. Perhaps we haven't seen anything yet…

Hong Kong-based REITS Beat the HSI and Popular Real Estate Stocks

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If one has invested in the Hong Kong-based REITS (Real Estate Investment Trusts) in recent times, then one is likely to have beaten the average investor who had gone for actual bricks and mortar, popular real estate stocks, or the Hang Seng Index in investment return.

To recap, Hong Kong-based REITS comprise a) Champion (stock code 2778); b) GZI (405); c) the LINK (823); d) Prosperity (808); e) Regal (1881); f) Sunlight (435); g) RREEF (625, de-listed recently owing to property sale), and Fortune (779, dual-listed now in Singapore and Hong Kong).

Here are the reasons:

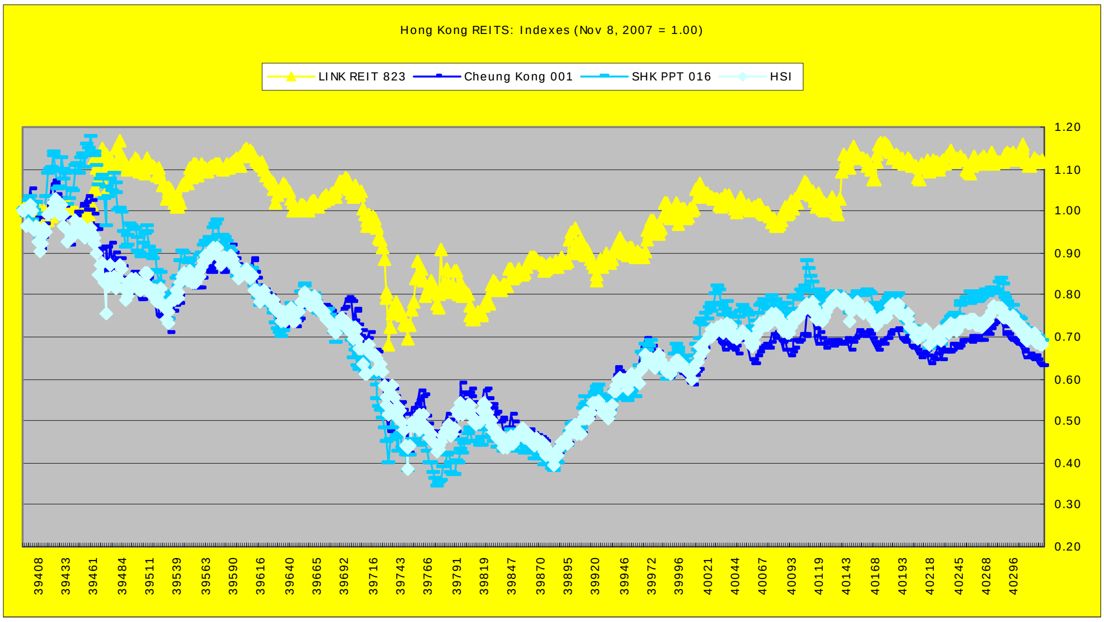
1) **Higher recurrent income-dividend yields** = collectively, the REITS offer dividend income ranging from 5% to more than 10%. Such a range generally outflanks property rental yields, mostly below 5% and some even less than 4%, and other stock dividend yields, even those of utilities. We have compiled a table below showing the reported dividend yields of REITS and a few popular stocks.

REITS	Recent reported yields	Popular stocks	Recent reported yields
The LINK	4.82%	Cheung Kong (001)	3.08%
Champion	7.68%	SHKP (016)	2.51%
GZI	7.94%	Henderson Land (012)	2.14%
Prosperity	8.07%	Hang Lung (101)	2.47%
Regal	9.94%	CLP (002)	3.58%
Sunlight	11.54%	MTR (066)	2.00%

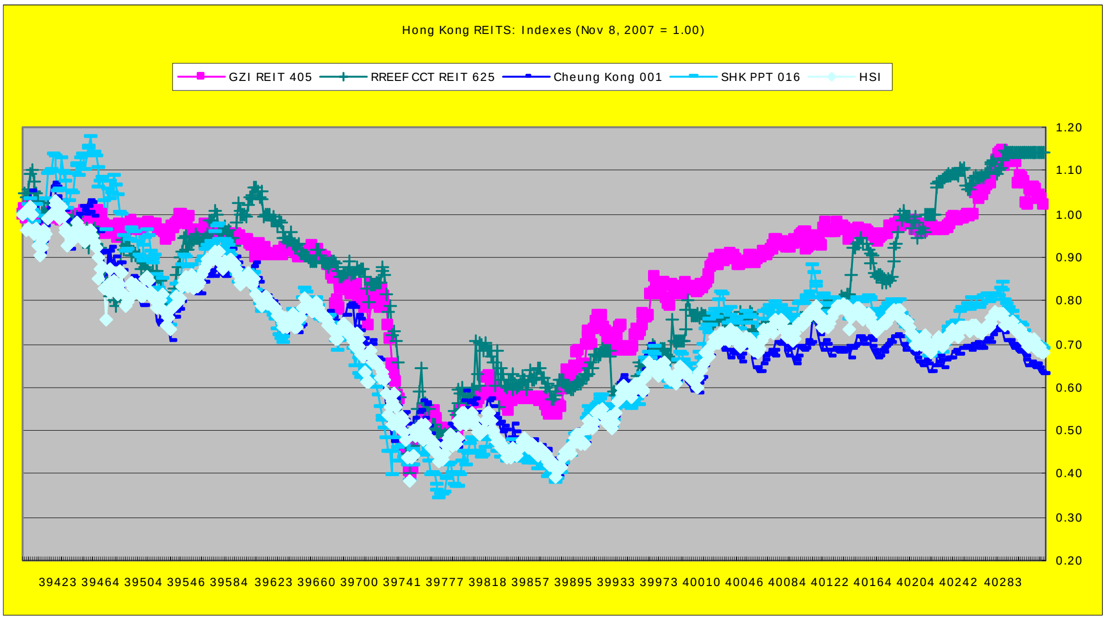
2) **Higher price appreciation compared to the overall stock market as represented by the Hang Seng Index and some popular real estate stocks** = when REITS were first contemplated in Hong Kong, some thought they would be relatively boring stocks offering lackluster value appreciation. Boring they are not and the charts below prove it. Some even have volatilities higher than the overall stock market.

We have used horse-racing analogies to categorize the REITS performance to the popular real estate stocks and Hang Seng Index.

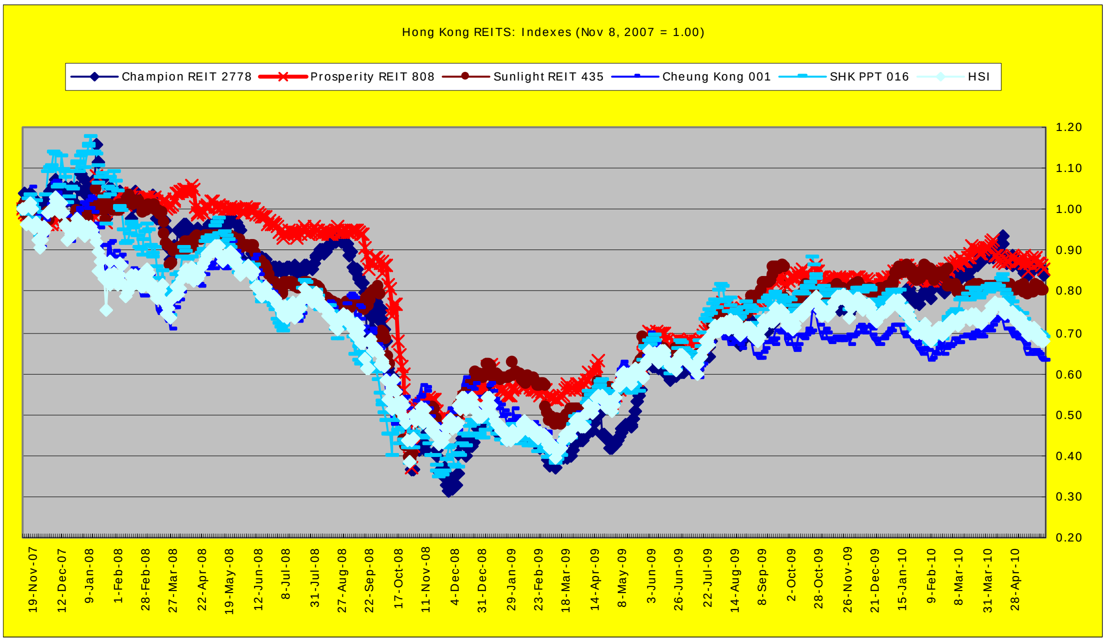
a) Led by a wide margin all the way = the LINK. Like a horse race, the LINK is the lead horse throughout the process and wins by being a mile ahead of competitors.



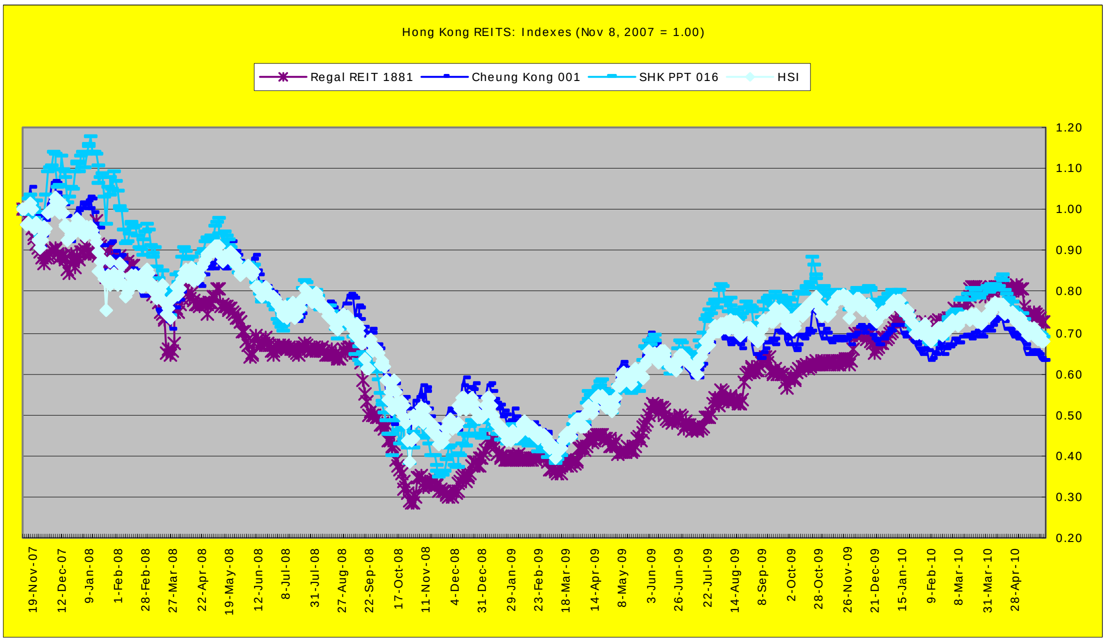
b) Explosive stamina run toward the finish line = GZI and RREEF, both being involved in Mainland China properties.



c) Won by a nostril = Champion, Prosperity, and Sunlight. Although the difference is small, it is still a win.



d) A matching pass across the finish line = Regal REIT.



3) **Most REITS even performed better than the typical residential bricks and mortar** = we have compared the various REITS stock price appreciation to the average bricks and mortar price performance (based on the Centaline index) in the recent price surge.

Centaline	Champion	GZI	LINK	Prosperity	Regal	Sunlight	RREEF
40%	54%	65%	45%	39%	64%	29%	67%

Except for Sunlight, most outperformed the real thing.

With a graying population which in turn implies a greater need for recurrent income to maintain certain desired lifestyle and quality of life, REITS can foot the bill nicely provided proper utilization. And this is despite their awkward and poor start dating back to 2004.

Hong Kong: Residential Price Trend and Household Income Distribution

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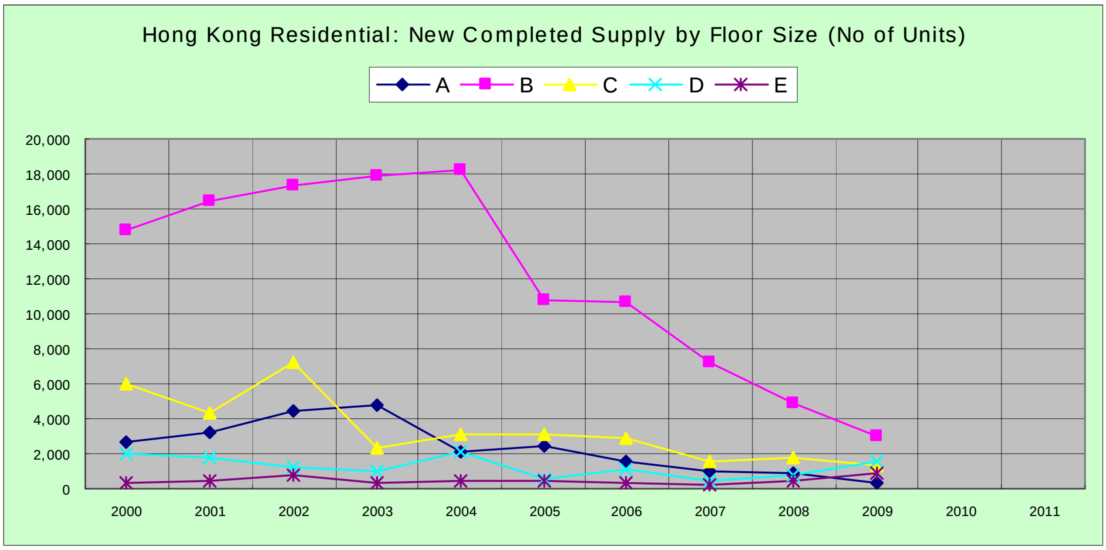
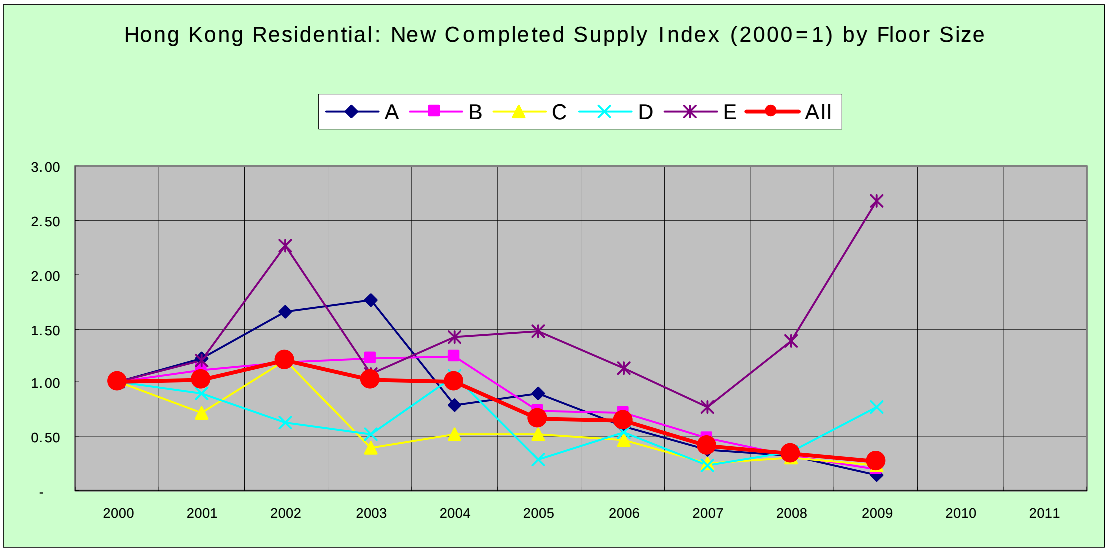
We believe there is a relationship between the recent residential real estate market (price) trend and the evolving household income distribution pattern. First, let us look at some recent patterns in the residential real estate market:

A) **Except for the larger residential units, home production has been declining** = there are the usual suspects, e.g. slower population growth, stringent government land sales, and the like. Regardless, except for units larger than 1000 ft2 net, all other categories have gone down in numbers. Here are the charts and we have followed the ABCDE classification used by the government authorities with A being the smallest and E the largest.



Note the upsurge in supply for categories D and E. In case it is too small to tell in the above chart, perhaps this following one would help. Note especially the E category.



B) **The larger units now occupy higher percentages of total unit production** = while the smaller categories of A and B have seen their previous shares slashed. Put simply, the smaller categories, A and B in particular, have been sharing the bulk of the decline in numbers which in turn means the real estate developers are building less of them.

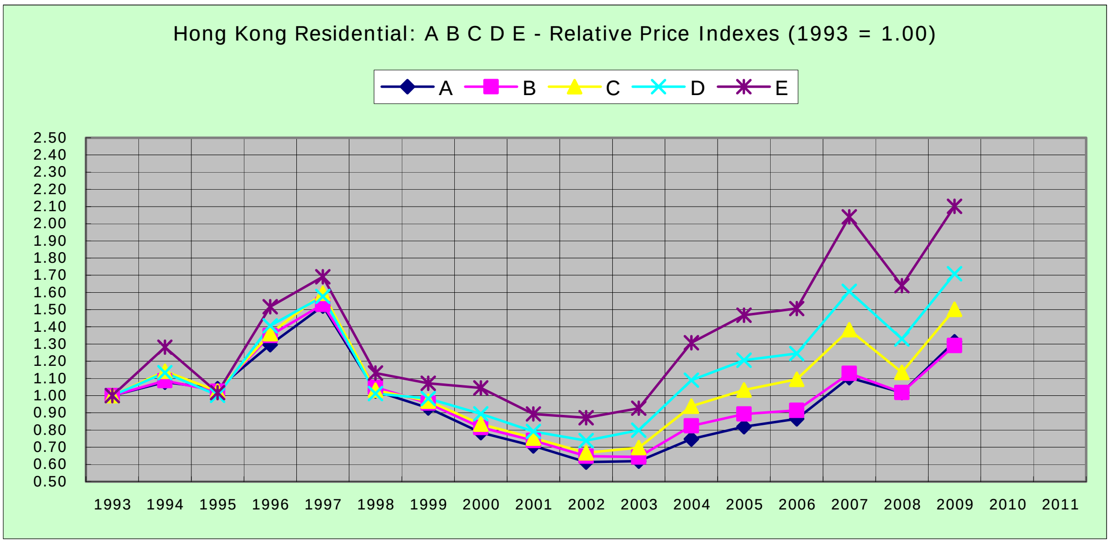
2000=1.00	Residential Categories: New Completed Supply - Indexes					
Year	A	B	C	D	E	All
2000	1.00	1.00	1.00	1.00	1.00	1.00
2001	1.21	1.12	0.72	0.91	1.21	1.02
2002	1.66	1.18	1.20	0.64	2.27	1.20
2003	1.77	1.21	0.39	0.52	1.08	1.02
2004	0.79	1.24	0.52	1.06	1.41	1.01
2005	0.90	0.73	0.51	0.29	1.47	0.67
2006	0.60	0.72	0.48	0.54	1.13	0.64
2007	0.38	0.49	0.25	0.24	0.78	0.41
2008	0.32	0.33	0.30	0.36	1.39	0.34
2009	0.14	0.20	0.23	0.77	2.68	0.28

Based on the above table, except for category E which sees a (2.68-1.00) 168% increase over its 2000 figure, all other sizes have declined production, e.g. category A has only 14% of its 2000 production volume, or B with 20% of its former self.

Furthermore and based on the table below, the smaller categories now occupy lesser portions of total supply-production per year. For instance, A now occupies just 5% of total production and B 42%, which seems dominant still yet pares when the year 2000 figure is considered. Note also how the larger sizes D and E have increased in proportions i.e. from single-digit percentages to double-digit percentages.

% of total	Residential Categories: New Completed Supply					
Year	A	B	C	D	E	
2000	10%	57%	23%	8%	1%	100%
2001	12%	63%	16%	7%	2%	100%
2002	14%	56%	23%	4%	2%	100%
2003	18%	68%	9%	4%	1%	100%
2004	8%	70%	12%	8%	2%	100%
2005	14%	62%	18%	3%	3%	100%
2006	10%	64%	17%	6%	2%	100%
2007	10%	69%	14%	5%	2%	100%
2008	10%	56%	21%	8%	5%	100%
2009	5%	42%	19%	21%	12%	100%

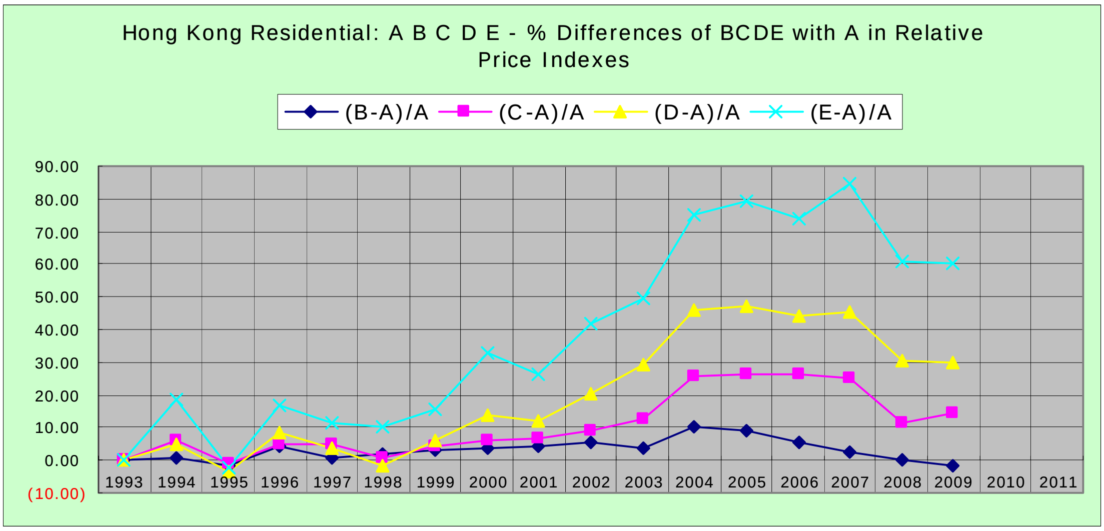
C) **The larger the unit, the pricier the $ per ft2 of floor area** = not too long ago in the last few decades in the past century, a larger unit cost more to buy mostly because it was larger, i.e. the $/ft2 rate is not disparagingly different between smaller and larger residential units. Now, a larger unit could easily be tens of times more expensive and floor size alone cannot explain the whole thing because its unit price ($ / ft2 floor area) would also be many times higher than those of smaller units. These charts help tell the story.



Purely from an investment angle, buying the largest E category residences (in 1993) would fetch the most in terms of price appreciation and return and the bigger the units, the better the appreciations and returns.

Moreover, and using the smallest category A as a benchmark, the larger the category is, the better the price performance will be.

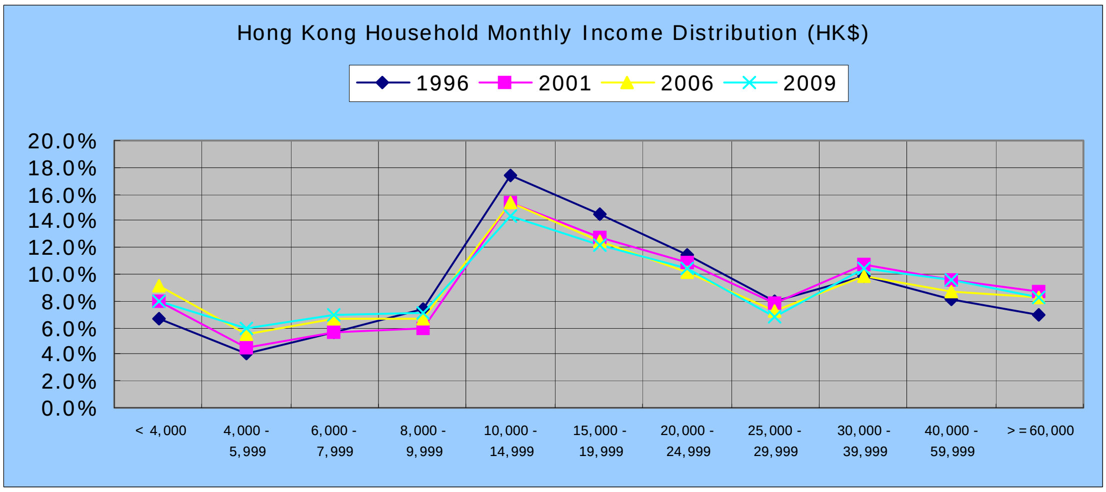
In short, the larger unit categories, E in particular, are increasing in production volumes, occupying higher portions of the new supply, offering better returns, and beating the smaller categories by a mile.



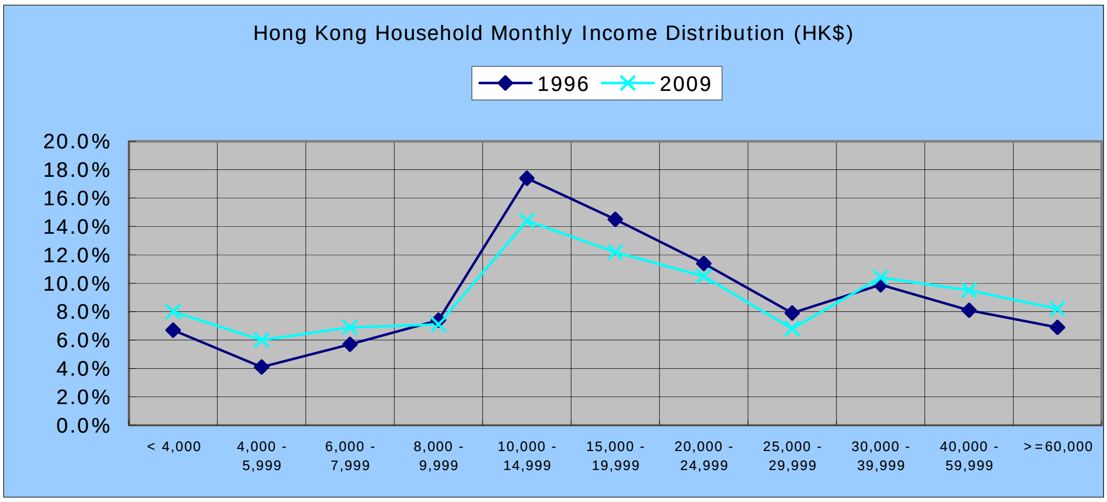
Thus leading to our second consideration; what has / have caused these market patterns?

While there could be plenty of factors, we think the evolving household income distribution may offer a clue and perhaps is one of the more important ones. Let us look at some figures:

1) **Compared to 1996, household income distribution has been moving toward both ends** = that is, the lower income bandwidth and the higher income bandwidth gained households while the middle spectrum lost households in relative proportions [see charts below]. Roughly, we define household income of less than HK$10,000 per month as belonging to the lower bandwidth, HK$30,000 or more as being higher, and anything between HK$10,000 and HK$29,999 as being in the middle.



Or if you find the chart above being a bit difficult to review, the one below should clear things up. It compares 2009 to 1996 and one can easily spot the movements toward the lower and higher spectrums.



2) **The private residential market by and large caters to the top 50% of households with higher income*** = and the minimum household income to 'join this club' hovers close to HK$20,000 with the median of these households making a bit more than HK$30,000. Naturally, it does not follow that individual households earning these much will automatically be able to afford a private home as family and individual conditions could be different. For instance, someone single making HK$30,000 per month is more likely to be able to afford a home than a 6-member family with 1 bread winner earning the same income.

3) **It makes sense, from a real estate development angle, to build pricier residential units** = because in terms of actual increase in the number of households during the period from 1996 to 2009, the middle household income bandwidth [monthly income of HK$10,000 – HK$29,999] gained only around 68,000 households while the higher bandwidth [HK$30,000 or more] increased close to 190,000#. In short, IF you were a developer, which income strata would you target?

**Household Income: HK$/mo	Number	Number	2001 / 1996	Number	2006 / 2001	Number	2009 / 2006
<4000 to 9999	443,477	494,872	12%	621,206	26%	649,264	5%
10K to 30K	950,043	963,050	1%	1,006,399	5%	1,017,953	1%
30K to =>60K	462,033	595,489	29%	598,941	1%	651,583	9%
Number +/- :							
<4000 to 9999			51,395		126,334		28,058
10K to 30K			13,007		43,349		11,554
30K to =>60K			133,457		3,451		52,642

Summing up, the market preference to build pricier and fancier residential units does not simply arise out of developers' wish to make an extra buck and the relative restricted land supply by government, intentional or otherwise.

There is also a demographics reason for this.

*Note: Naturally the division line between private home residents and public home dwellers would not EXACTLY match that between the lower 50% percentile and the higher 50% percentile of households in terms of income. Also, the data only counts who is living in a private property and who is not i.e. a private home dweller could be a renter while a public home resident may own one or more private properties. Nonetheless, it is felt that most private home dwellers do own their own homes. Thus, the data may be a rough yet sufficient reflection of the overall situation.

#Note: the lower income bandwidth [HK$9,999 or less] gained a bit more than 200,000 households yet these households are generally not in the private residential development radar.

**Note the interesting phenomena: from 1996 to 2001, there were more higher-income households being created than lower-income ones yet this trend reversed from 2001 to 2006. In the last 3 years, higher-income households beat the lower ones in numbers.

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