Zeppelin's Real Estate Tech

4Q 2017: A Real Estate Newsletter by Zeppelin Real Estate Analysis Limited
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Mr. Trump and Mr. Kim continued with their squabble and probable future missile exchanges notwithstanding, hurricanes have been hitting the US East Coast badly while forest fires were rampaging the West Coast including the fine wine producing counties (buy California fine $$$ wines!). Meanwhile, Catalonia wants to leave Spain with a yes vote referendum but Madrid thinks otherwise. And the Nobel Prize in economic sciences went to Professor Richard Thaler who questioned the assumption that humans, and thus investors, are rational.

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- **High real estate costs: a sign of 'attractive' cities**
- **Hong Kong: is "parents helping kids with home purchases" risky?**

"History is a story of common uncommon sense vs uncommon common sense."

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 spring, summer, fall, and winter) 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**, **21st Century Business Herald**, **Apple Daily**, **Sing Tao**, **Quamnet Magazine**, **The Standard**, **MITCRE Alumni Newsletter**, **Surveying Newsletter**, **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 **USA Today**, **i-Money**, **Ming Pao, Radio Hong Kong**, **Cable TV (Money Café), DBC Radio,** and **Commercial Radio**. We also publish monthly articles and analyses in the months in between. This newsletter is now into its **22nd year** and **85th** 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 / Hong Kong 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 Partners 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 based in Hong Kong with associated operations in Mainland China and we also have access to regional and global professional networks.

Who? Me?

Stephen Chung
Managing Director, Zeppelin Real Estate Analysis Limited
Creator and Writer, Real Estate Tech Quarterly Newsletter
Real Estate Website Developer, www.Real-Estate-Tech.com

Stephen is an independent real estate analyst – number cruncher 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 regular real estate writer - columnist 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, Sing Tao 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 an honorary adjunct professor of the 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 written 4 real estate books in Chinese to date as follows:

Online book = Easy Real Estate Lectures
Hard copy = Real Estate Investment Know-How above 101
Hard copy = The Real Estate Market Turning Point
E-Report = USA Residential Real Estate Analysis

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Toronto residential real estate prices bounced back

Real Estate Tech, 4Q 2017

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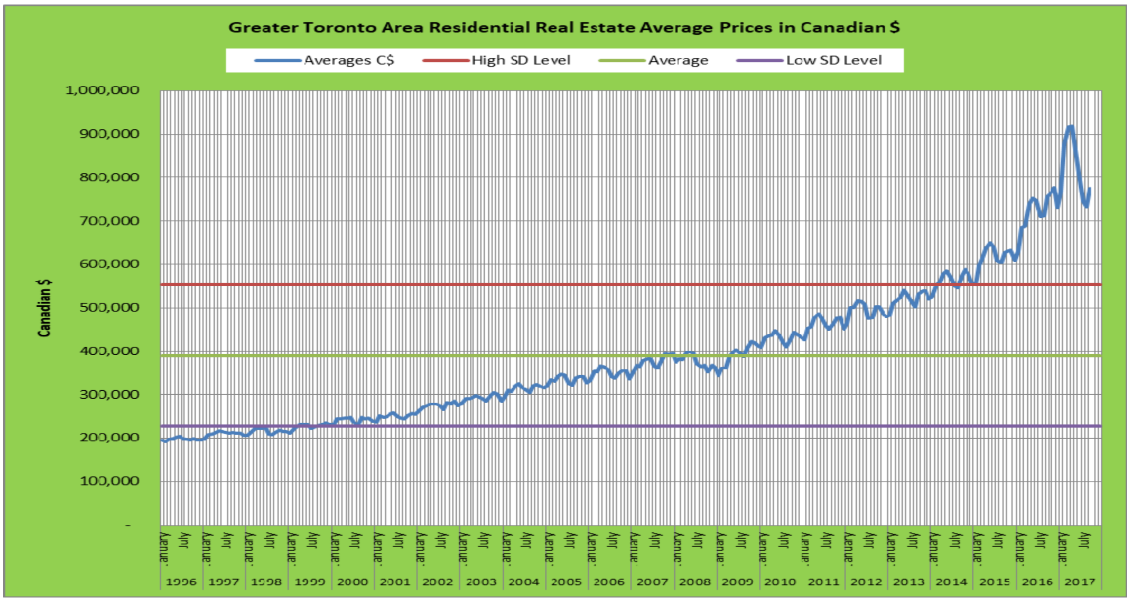
Condos in Toronto (your humble author's)

According to the latest - September 2017 - market report published by the Toronto Real Estate Board (www.trebhome.com), the Toronto average residential real estate price have rebound despite still being below the peak observed in April 2017.

We have assembled the published data – monthly average and median prices encompassing all residential house forms - from January 1996 to September 2017 and done some number-crunching to produce the graphs below.

Note here we are focused on the Greater Toronto Area (GTA) which embodies both a) the City of Toronto with a population of around 3M and b) the surrounding regions and suburbs such as York, Peel, Halton, and Durham with another 3M people. The GTA is roughly 7 x Hong Kong in land area.



GTA average residential real estate prices January 1996 to September 2017

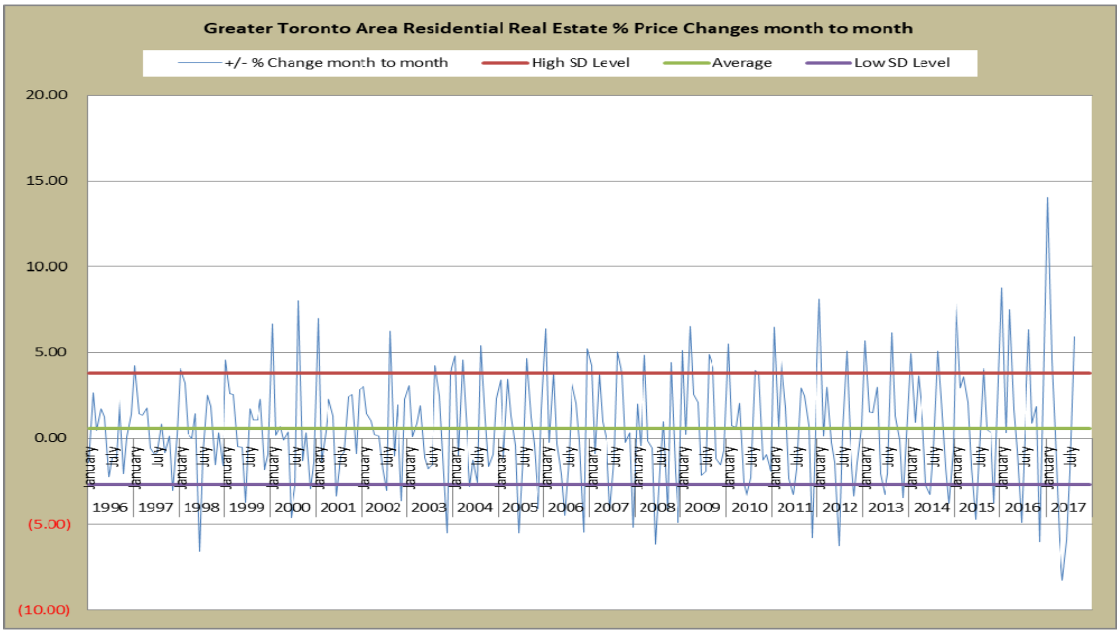
The GTA average price has gone from slightly less than C$200k in January 1996 to around C$780k in September 2017 with a peak of C$918k in April 2017. Roughly, the average price in September 2017 is 3.90 times that in January 1996. Not bad in terms of price appreciation but not too brilliant either [though, as a side note, it is interesting to realize that a Hong Kong homeowner who bought an average Hong Kong residential property in January

1996 and has held on to the property till September 2017 would see – on average – only a price factor of 2.70 i.e. the long term investor-homeowner would have done better in Toronto than in Hong Kong when counting from January 1996].

We observe the rate of price gain to have been gradually speeding up given time in three phases; i) from 1996 to 2009 going from rounded C$200k to C$400k; ii) from 2009 to 2015 going from C$400k to C$600k; and iii) from 2015 to 2017 going from C$600k to C$780k reaching almost C$920k in April 2017.

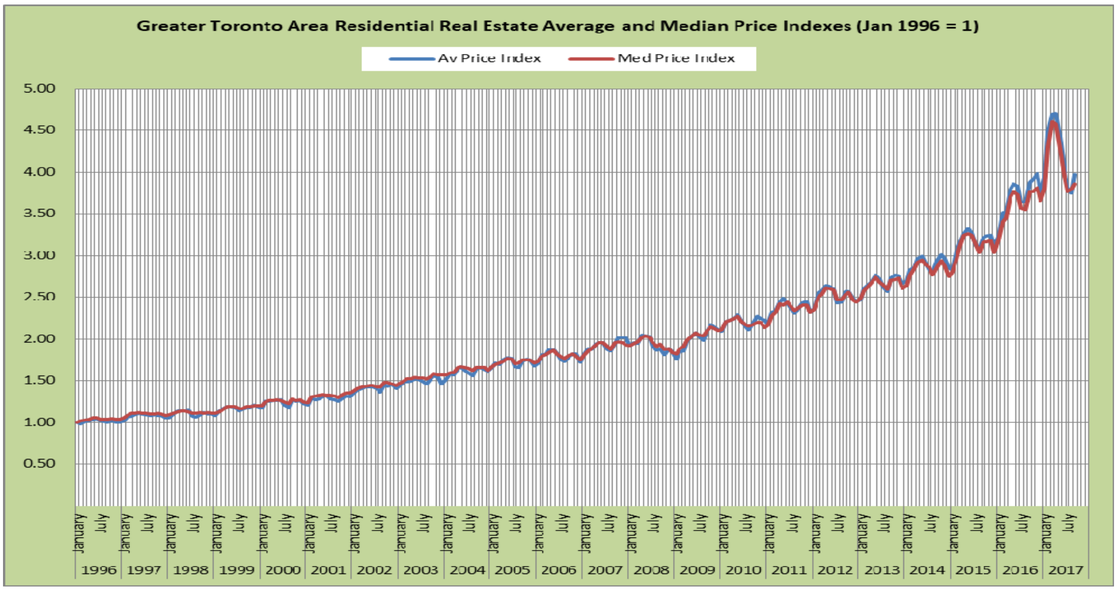
What are the three horizontal lines? The middle one [green] is the average of the average prices observed during the period. The upper line [red] and the lower line [purple] are respectively the high standard deviation (HSD) level and the low standard deviation (LSD) level. “Most” of the average prices during the period tend to fluctuate within the high and low standard deviation levels. But there are exceptions; the average prices in the beginning years are below LSD while those in more recent years are above the HSD level. The latter may indicate increased price risks i.e. a higher probability for a downward price correction.

We also observe that the price fluctuations – as reflected in their monthly % changes - have intensified somewhat in the last two years. The following graph demonstrates it:

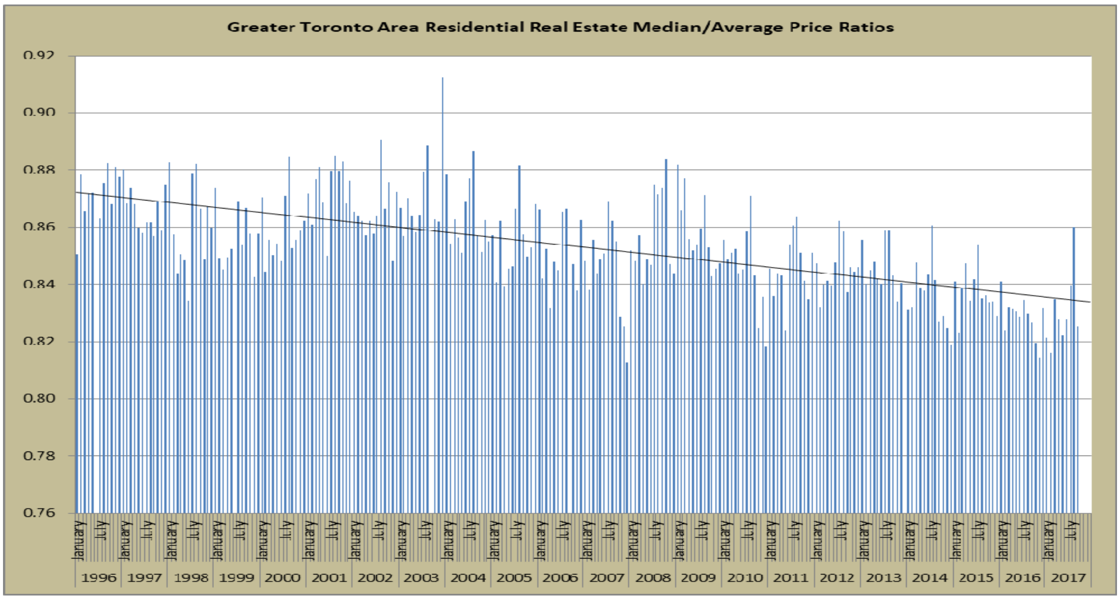


Technically, average prices could – not must – have been skewed by some exceedingly pricey (or low priced) transactions though given the market-wide averages herein they are unlikely to have been skewed significantly or for long.

Nonetheless, for surety’s sake, we have also compiled the average residential price index and the median price index, and compared them. Here is the graph [January 1996 = 1.00]:



The two indexes closely resemble one another i.e. they indicate largely the same story although in recent years, there could have been more pricey transactions which lead to an increasing gap between the 'average' price and the 'median' price – the latter has always been below the former during the period. Here is the chart [note the slanting down trend line of the Median to Average Price Ratio]:



Prices up or down next? Don't know but the trend does not suggest another shot up to an even higher peak anytime soon given decreased transactions. It may stagger for a while. Investors who are 'quite' leveraged might wish to consider offloading part of the portfolio.

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High real estate costs: a sign of 'attractive' cities

Real Estate Tech, 4Q 2017

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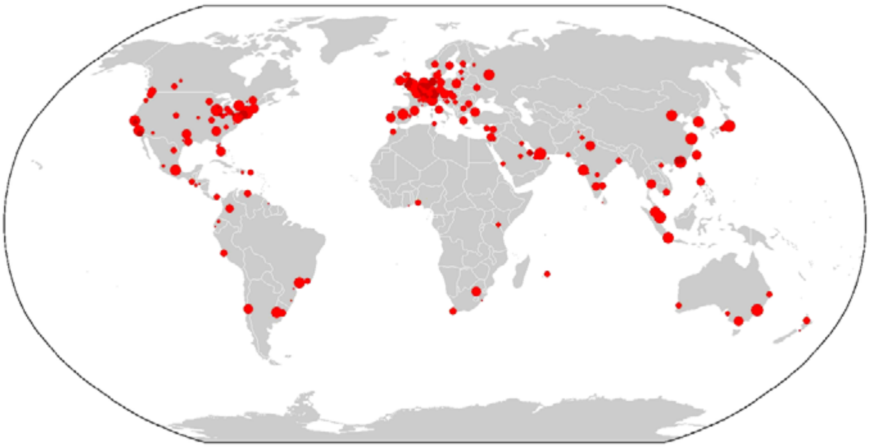

World Cities (Public domain, Courtesy of Wikipedia.org)

Buying a home has always been a 'big ticket' item. It requires disciplined familial savings via postponement and control of other expenditures, even if this is just for the initial 10% equity of a desired-targeted-budgeted home purchase. While the path to homeownership might not be extremely difficult for all, it is almost certain that it won't be described as a breeze.

While there have always been housing issues for many cities around the globe, be these in the form of a price and / or supply challenges, they appear to have gotten more acute ever since the world central bankers (and their respective governments) started to QE (quantitative easing i.e. creating easy money). While the intention of QE was perhaps to induce economic growth, the effect seen to date seems to be mostly on pushing asset prices up globally, be these stocks, bonds, or real estate.

In the latter, the jumps in home prices – in particular in cities of global 'intrigue' - have left many (local) aspiring homeowners biting dust. Thus, not surprisingly, some such city governments have been slapping additional transaction taxes, buyer restrictions, and rent regulations on residential properties in order to cool rising prices and rents, notwithstanding their effectiveness and probable unintended consequences at times.

Examples of home prices leaving homebuyers – especially the first time buyers – far behind are plenty. Hong Kong, where your humble author currently resides, is one. Home prices have been going up and strong despite all the added taxes, restrictions, and regulations, and despite Trump vs Kim. One can attribute this to out-of-town buyers from Mainland China. But then again local parents have also been more than helpful toward their children's home purchases via remortgaging their own homes or familial financing. Not to mention the low-low mortgage rates and the aggressive real estate developers' second mortgage-financing when traditional bank mortgages cannot foot the entire bill.

The high residential price (cost) phenomena described above have also been observed in many cities around the world too. San Francisco, New York City, Los Angeles, Toronto, Vancouver, Sydney, Melbourne, Auckland, Boston, London, Shanghai, just to name the obvious. Naturally, there are significant price differences even among the cities named e.g. while Toronto inhabitants regard the city home prices to be outrageous, a visitor from Hong Kong will find them very affordable and inexpensive.

There seem to be some common features among the cities with the most acute housing issues:

1) The price to income ratio, a crude but handy home affordability measure, tends to be historically high and in some instances 10 or higher = it takes a homebuyer's ten year's (or more) income to offset the price of the purchased home.

2) Global 'intrigue' = they do not just appeal to local inhabitants, but also to people from other cities or provinces within the same country, and people from other countries as well.

3) They tend to have relatively open economies, largely efficient financing and banking networks, mostly trusted legal systems, general ease of communications and transportation, comparatively richer and more up to date urban amenities, and so on.

4) Reputable universities and research institutes = which attract the best and brightest from the country and the world to seek enlightenment and knowledge therein, thus helping in a way to maintaining the city's competitive edge.

5) Urban and social-cultural sophistication = there are folksy eateries and finer diners, not to mention a broad range of cuisines from local and abroad. There are soccer, baseball, football, basketball, golf, tennis, and hockey, and there are also movies, operas, and symphonies. There are entrepreneurs and CEOs, and there are artists and writers. There are state of the art gadgets and tools, and there are the finer traditions…

The point is such cities are 'attractive' from a number of angles, be this career-business opportunity, technology, urban conveniences-amenities, socializing-networking, fun and play, customs and traditions, and the like. Not that they are perfect – no city is – but their location, scale, character, history, population size, and so on, all blended in to give them edges over other cities and towns.

In short, one can dispute whether the homes in such world cities are worth $X, but there is no doubt that they can and do command a "premium" – including the cost of accommodation as reflected in home prices and rents.

By the way, forgot to mention the probable fantastic city view from a high-floor apartment unit in such world metropolitans…☺

Courtesy of your humble author

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Hong Kong: is "parents helping kids with home purchases" risky?

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Hong Kong $$$ shoebox-like apartment units (your humble author's)

The simple answer is = it depends.

As to why there are so many cases where parents have been found to help their children (mostly of adult age) with home purchases via direct cash financing or in some instances re-mortgaging their own homes, the reason is home prices in general have gone out of their children's reach. In addition, the banks have been regulated to limit the mortgage leverage ratios thus heightening the need for either parents' assistance or developers' second mortgages, or both.

Recently, concern was raised by the authorities that parents-children have been so eager to pursue homeownership seemingly at all cost. They think such behavior might be risky.

As such, your humble author had contemplated the issue briefly and came up with the simple answer above. Assuming the concern for risk is that some parents-children home-buying action might lead to some (potential) familial financial distress or even ruin (if there is a negative black swan) sometime in the future, let alone their impact on banks and creditors, then the following factors are to be taken into account:

a) The overall [mortgage] leverage ratio = e.g. person A and person B buy a $10M home each, yet A takes out a mortgage of $3M while B takes out one of $7M. B has a riskier financial profile assuming all else being equal.

b) The financial capacity of the investors-homebuyers = e.g. person A whose net worth is $100M (in cash, stocks, bonds, real estate, derivatives, you name it) and annual income is $5M, buys a $10M home and mortgages it to the tilt , say, for $9M. Person B also buys a $10M home and mortgages it for $5M but his net worth is just this $5M in the home and earns $1M annually. Assuming no other debts for both A and B, A has a stronger financial profile despite the 90% leverage on the $10M home.

Thus, say there are two parents-children home-buying teams, A and B. Team A parents own a $30M home without mortgages and their son wishes to buy a $10M home. Team B parents own a $10M home without mortgages and their daughter also wants to buy a $10M home for herself. For ease of illustration, we shall assume both teams have no other assets or cash savings.

Team A = whether it is the parents taking out a new mortgage on their own home for $10M so that their son can buy his $10M home with total cash or the parents taking out just $5M on their own home with the son taking out another $5M mortgage to make up the $10M price tag is immaterial, the fact remains this team will own a total property portfolio of $40M ($30M + $10M) of which $10M is financing, or 25% of the total value.

Team B = assuming the parents mortgage their own home for $5M and the daughter taking out a $5M mortgage to make up the price tag of $10M, this team will at the end of the day own a portfolio of $20M of which $10M is financing, or 50% of the total value.

Needless to say, if there was to be some kind of black swan, e.g. home prices diving by 50%, Team A would be very unhappy ($40M total value reduced to $20M) but will still be afloat financially ($20M - $10M mortgage = $10M equity). But Team B is a different story because they will lose all their equity and be stuck still with a $10M mortgage. If they were pressed to sell and pay off (redeem) the mortgage, they would end up with $0 (all related fees, taxes etc are ignored herein for ease of illustration).

Team B is a concern and if there are many of them, it is hard to blame the authorities for sounding out caution.

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