Zeppelin's Real Estate Tech

3Q 2018: A Real Estate Newsletter by Zeppelin Real Estate Analysis Limited
Phone (852) 37576388 Fax (852) 37576399 E-mail stephenchung@zeppelin.com.hk Web: www.Real–Estate-Tech.com

Trade War! Say the major media publications. Salvos are being exchanged between China and the USA who also fires salvos at other countries to its north, east, and south crossing mountains and oceans. Interesting academic stuff perhaps but challenging if one is in the firing line. The Hong Kong Hang Seng stock index is dropping amid an ever-still-rising residential real estate index. Meanwhile, the Korean nuclear weapon issue has seemingly taken a back seat after the Trump-Kim summit in Singapore.

In this issue:

- **Hong Kong: where you can buy tons of international real estate in one afternoon**
- **Toronto residential condo investment: where, what, and why**
- **Leverage up when prices are down, deleverage when prices are up**

"Imperfections make life interesting and challenging, perfect!"

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 **88th** 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

We welcome enquiries from interested parties and could be reached as follows:

Email: StephenChung@zeppelin.com.hk
Office Phone: 852-37576388
Office Fax: 825-37576399
Office Address: Unit 07, 10/F CCT Telecom Building, 11 Wo Shing Street, Fo Tan, Hong Kong
Website: www.Real-Estate-Tech.com

Our services can be obtained and delivered via a) tailor-made professional consultation; b) online report purchases; c) emailed discussions and advice; and / or d) phone discussions.

Hong Kong: where you can buy tons of international real estate in one afternoon

Real Estate Tech, 3Q 2018

Stephen Chung BS BBldg (HKU) MS in Real Estate Development (MIT) MRICS MHKIS FPFM PQS RPS(QS)
Zeppelin Real Estate Analysis Limited - Phone (852) 37576388 / Fax (852) 37576399 stephenchung@zeppelin.com.hk

Buy them all? (Courtesy of amazon.com)

Hong Kong is a very densely populated metropolitan and as such, is also very convenient in terms of shopping, dining, traveling, sight-seeing, and … real estate buying.

And not just local properties, one can acquire real estate from almost all corners around the globe. You name it, we've mostly got it…including the usual such as Australia, Canada, New Zealand, the USA, and the UK, the exotic such as Thailand, Malaysia, Vietnam, the Philippines, and Indonesia, and the recent hots such as Germany, Hungary, Japan, the Netherlands, and Portugal. Most if not all are first hand developers' sales of which many are presales too.

While many such global property projects are promoted individually by their local representative agents in hotel meeting rooms, others are marketed via spacious exhibition platforms hosted in one of the larger exhibition centers in town. Your humble author has over the years visited some of these events and at times was also an invited guest speaker. Here are a few observations from these events:

1) There is a real strong demand for overseas real estate in Hong Kong = culturally, local investors have a bias for real estate which involves land which in turn gives people a feeling of "being on solid ground" literally. Financially, many families have some spare cash and with bank deposits yielding meaningless returns, they will have a strong inclination to invest such idle money. However, Hong Kong real estate prices are now so sky high that even US$500K can't fetch you a (tiny) apartment. Thus, this drives them to consider overseas properties.

2) Some buy overseas real estate in order to diversify their investment risk = this used to be a viable investment risk reducing tactic but since the world started to QE in 2008, many real estate markets (cities) have become quite correlated i.e. their price trends rise and fall more or less together. This implies geographically spreading one's real estate investments might not bring about any meaningful reduction in market (price) risk as before, though many investors do not seem to be aware of this.

3) Some buy overseas real estate to satisfy their crave to become homeowners = especially when Hong Kong real estate prices have become out of reach for many households, the young in particular. It feels good to own a home, even if it is out of your home town.

4) While English speaking countries remain attractive to investors, non-English-speaking countries are getting popular too = such as Germany and Japan; the former offers new apartment developments in Berlin and the latter involves secondary small apartment properties in larger cities such as Tokyo and Osaka.

5) Apartment condos dominate = while there are some 'house' projects, most are apartment condominium projects offering usually studio to three bedroom units.

6) Buying is made easy and on the spot at the exhibition = in most cases, it involves signing on a piece of sales document and dishing out a small deposit sum – using credit or bank card - in Hong Kong currency. Naturally, further deposit payments are required later and more documents might need to be completed in some representative or legal offices in Hong Kong.

Assuming it takes no more than 30 minutes on average to execute the initial purchasing process on the spot at the exhibition, one can easily grab around 10 properties from 10 different promoters (and thus in 10 different places on Earth) in one afternoon.

You might even have time left for afternoon tea…

And you can surprise your better half when you get home…"Darling, guess what I've bought this afternoon?"…☺

Toronto residential condo investment: where, what, and why

Real Estate Tech, 3Q 2018

Stephen Chung BS BBldg (HKU) MS in Real Estate Development (MIT) MRICS MHKIS FPFM PQS RPS(QS)
Zeppelin Real Estate Analysis Limited - Phone (852) 37576388 / Fax (852) 37576399 stephenchung@zeppelin.com.hk

Toronto at dusk from the lake (courtesy of thedavies.com)

Some investors are keen to know more about the Toronto residential condominium apartments, in particular the rental rates and yields, and where and what they may buy.

As such, your humble author has dug up some data from the Toronto Real Estate Board (TREB) website www.trebhome.com and analyzed the 1Q 2018 rental data (the latest quarter found as of the day of writing this article) and compared them to the March 2018 price data (there is no comparable quarterly price data, though the slight time period mismatch is unlikely to affect the results disproportionately i.e. the results are fine for rough reference). We shall focus mostly on the City of Toronto and for an idea of the various TREB regions (the ones coded by W, C, or E followed by a numeric), here is a link to the TREB map:

http://www.trebhome.com/buying/district_map/index.htm
Click "Toronto" and the detail TREB regions will be shown

A) First, the rental rates across TREB regions and unit types (studio, 1Bed, 2Bed, 3Bed):

Apartment Condos 1Q 2018 GTA TREB Regions	Total Listed Number of Units	Total Leased Number of Units	Bachelor Leased Number of Units	Av Lease Rate C$ per month	One-Bedroom Leased Number of Units	Av Lease Rate C$ per month	Two-Bedroom Leased Number of Units	Av Lease Rate C$ per month	Three-Bedroom Leased Number of Units	Av Lease Rate C$ per month	Overall Av Lease Rate C$ per month	Leased to Listed Ratio %
GTA overall	**10,128**	**6,171**	**244**	***1,657***	**3,608**	***1,995***	**2,183**	***2,653***	**136**	***3,344***	***2,244***	**61%**
Halton	255	144	1	*1,350*	77	*1,685*	66	*2,070*	0	*0*	*1,859*	56%
Peel	843	564	2	*1,525*	251	*1,790*	294	*2,150*	17	*2,318*	*1,993*	67%
York	999	577	2	*1,450*	369	*1,730*	195	*2,139*	11	*2,627*	*1,884*	58%
Durham	41	20	0	*0*	7	*1,600*	12	*1,917*	1	*1,600*	*1,790*	49%
City of Toronto	**7,983**	**4,866**	**239**	***1,662***	**2,904**	***2,055***	**1,616**	***2,836***	**107**	***3,597***	***2,329***	**61%**
Toronto West	**950**	**610**	**14**	***1,435***	**359**	***1,853***	**225**	***2,467***	**12**	***3,208***	***2,097***	**64%**
Toronto W01	74	43	1	*1,900*	23	*1,987*	19	*2,687*	0	*0*	*2,294*	58%
Toronto W02	56	44	0	*0*	26	*2,034*	14	*2,519*	4	*3,113*	*2,286*	79%
Toronto W03	9	5	0	*0*	2	*2,050*	3	*2,150*	0	*0*	*2,110*	56%
Toronto W04	50	34	1	*1,200*	22	*1,648*	10	*2,138*	1	*2,250*	*1,797*	68%
Toronto W05	89	68	10	*1,395*	39	*1,730*	18	*1,974*	1	*2,100*	*1,751*	76%
Toronto W06	383	226	2	*1,525*	120	*1,906*	102	*2,689*	2	*6,750*	*2,299*	59%
Toronto W07	5	2	0	*0*	1	*1,800*	1	*2,900*	0	*0*	*2,350*	40%
Toronto W08	233	154	0	*0*	102	*1,845*	50	*2,259*	2	*2,150*	*1,983*	66%
Toronto W09	7	4	0	*0*	0	*0*	3	*2,100*	1	*2,100*	*2,100*	57%
Toronto W10	44	30	0	*0*	24	*1,675*	5	*1,811*	1	*1,800*	*1,702*	68%
Toronto Central	**6,572**	**3,952**	**217**	***1,684***	**2,395**	***2,102***	**1,262**	***2,985***	**78**	***3,972***	***2,398***	**60%**
Toronto C01	3,064	1,906	118	*1,705*	1,199	*2,189*	551	*3,222*	38	*4,687*	*2,507*	62%
Toronto C02	265	116	11	*1,760*	60	*2,386*	41	*4,227*	4	*5,375*	*3,080*	44%
Toronto C03	62	37	1	*1,200*	20	*1,937*	15	*2,650*	1	*3,100*	*2,238*	60%
Toronto C04	36	22	0	*0*	14	*1,996*	7	*3,173*	1	*5,750*	*2,541*	61%
Toronto C06	33	19	0	*0*	14	*1,739*	5	*2,130*	0	*0*	*1,842*	58%
Toronto C07	318	180	1	*1,600*	79	*2,050*	86	*2,538*	14	*2,683*	*2,330*	57%
Toronto C08	1,289	739	74	*1,664*	438	*2,107*	224	*3,028*	3	*3,817*	*2,349*	57%
Toronto C09	57	31	0	*0*	18	*2,155*	11	*3,045*	2	*7,525*	*2,817*	54%
Toronto C10	285	158	2	*1,625*	94	*2,019*	62	*2,822*	0	*0*	*2,329*	55%
Toronto C11	58	39	0	*0*	23	*1,726*	12	*2,140*	4	*1,974*	*1,879*	67%
Toronto C12	26	10	0	*0*	5	*2,260*	5	*3,180*	0	*0*	*2,720*	38%
Toronto C13	98	45	0	*0*	28	*1,836*	16	*2,428*	1	*2,100*	*2,052*	46%
Toronto C14	552	352	6	*1,571*	192	*1,921*	148	*2,528*	6	*3,080*	*2,190*	64%
Toronto C15	429	298	4	*1,550*	211	*1,856*	79	*2,357*	4	*2,213*	*1,990*	69%
Toronto East	**461**	**304**	**8**	***1,459***	**150**	***1,785***	**129**	***2,024***	**17**	***2,149***	***1,898***	**66%**
Toronto E01	42	31	1	*1,650*	24	*2,106*	5	*2,830*	1	*3,700*	*2,259*	74%
Toronto E02	30	19	1	*1,500*	9	*1,958*	9	*2,305*	0	*0*	*2,098*	63%
Toronto E03	12	6	0	*0*	2	*1,700*	4	*2,270*	0	*0*	*2,080*	50%
Toronto E04	26	18	0	*0*	6	*1,621*	11	*1,836*	1	*1,900*	*1,768*	69%
Toronto E05	75	41	0	*0*	15	*1,733*	19	*2,049*	7	*1,921*	*1,912*	55%
Toronto E06	1	0	0	*0*	0	*0*	0	*0*	0	*0*	*na*	0%
Toronto E07	78	59	0	*0*	23	*1,681*	32	*1,892*	4	*1,970*	*1,815*	76%
Toronto E08	10	9	1	*1,200*	4	*1,638*	4	*1,994*	0	*0*	*1,748*	90%
Toronto E09	167	109	5	*1,465*	63	*1,735*	38	*2,050*	3	*2,500*	*1,853*	65%
Toronto E10	2	0	0	*0*	0	*0*	0	*0*	0	*0*	*na*	0%
Toronto E11	18	12	0	*0*	4	*1,500*	7	*1,650*	1	*2,100*	*1,638*	67%

Items:	City of Toronto Listed % of Toronto	City of Toronto Leased % of Toronto	Bachelor Leased % of Toronto	Av Lease Rate % of Toronto	One-Bedroom Leased % of Toronto	Av Lease Rate % of Toronto	Two-Bedroom Leased % of Toronto	Av Lease Rate % of Toronto	Three-Bedroom Leased % of Toronto	Av Lease Rate % of Toronto	Overall Av Lease Rate % of Toronto
City of Toronto	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Toronto West	12%	13%	6%	86%	12%	90%	14%	87%	11%	89%	90%
Toronto Central	82%	81%	91%	101%	82%	102%	78%	105%	73%	110%	103%
Toronto East	6%	6%	3%	88%	5%	87%	8%	71%	16%	60%	82%

Apartment Condos 1Q 2018 GTA TREB Regions	Bachelor % of Leased %	% of Overall Av lease rate %	One-Bedroom % of Leased %	% of Overall Av lease rate %	Two-Bedroom % of Leased %	% of Overall Av lease rate %	Three-Bedroom % of Leased %	% of Overall Av lease rate %
GTA overall	**4%**	**74%**	**58%**	**89%**	**35%**	**118%**	**2%**	**149%**
Halton	1%	73%	53%	91%	46%	111%	0%	0%
Peel	0%	77%	45%	90%	52%	108%	3%	116%
York	0%	77%	64%	92%	34%	114%	2%	139%
Durham	0%	0%	35%	89%	60%	107%	5%	89%
City of Toronto	**5%**	**71%**	**60%**	**88%**	**33%**	**122%**	**2%**	**154%**
Toronto West	**2%**	**68%**	**59%**	**88%**	**37%**	**118%**	**2%**	**153%**
Toronto W01	2%	83%	53%	87%	44%	117%	0%	0%
Toronto W02	0%	0%	59%	89%	32%	110%	9%	136%
Toronto W03	0%	0%	40%	97%	60%	102%	0%	0%
Toronto W04	3%	67%	65%	92%	29%	119%	3%	125%
Toronto W05	15%	80%	57%	99%	26%	113%	1%	120%
Toronto W06	1%	66%	53%	83%	45%	117%	1%	294%
Toronto W07	0%	0%	50%	77%	50%	123%	0%	0%
Toronto W08	0%	0%	66%	93%	32%	114%	1%	108%
Toronto W09	0%	0%	0%	0%	75%	100%	25%	100%
Toronto W10	0%	0%	80%	98%	17%	106%	3%	106%
Toronto Central	**5%**	**70%**	**61%**	**88%**	**32%**	**124%**	**2%**	**166%**
Toronto C01	6%	68%	63%	87%	29%	128%	2%	187%
Toronto C02	9%	57%	52%	77%	35%	137%	3%	174%
Toronto C03	3%	54%	54%	87%	41%	118%	3%	139%
Toronto C04	0%	0%	64%	79%	32%	125%	5%	226%
Toronto C06	0%	0%	74%	94%	26%	116%	0%	0%
Toronto C07	1%	69%	44%	88%	48%	109%	8%	115%
Toronto C08	10%	71%	59%	90%	30%	129%	0%	163%
Toronto C09	0%	0%	58%	76%	35%	108%	6%	267%
Toronto C10	1%	70%	59%	87%	39%	121%	0%	0%
Toronto C11	0%	0%	59%	92%	31%	114%	10%	105%
Toronto C12	0%	0%	50%	83%	50%	117%	0%	0%
Toronto C13	0%	0%	62%	89%	36%	118%	2%	102%
Toronto C14	2%	72%	55%	88%	42%	115%	2%	141%
Toronto C15	1%	78%	71%	93%	27%	118%	1%	111%
Toronto East	**3%**	**77%**	**49%**	**94%**	**42%**	**107%**	**6%**	**113%**
Toronto E01	3%	73%	77%	93%	16%	125%	3%	164%
Toronto E02	5%	71%	47%	93%	47%	110%	0%	0%
Toronto E03	0%	0%	33%	82%	67%	109%	0%	0%
Toronto E04	0%	0%	33%	92%	61%	104%	6%	107%
Toronto E05	0%	0%	37%	91%	46%	107%	17%	100%
Toronto E06	na	na	na	na	na	na	na	na
Toronto E07	0%	0%	39%	93%	54%	104%	7%	109%
Toronto E08	11%	69%	44%	94%	44%	114%	0%	0%
Toronto E09	5%	79%	58%	94%	35%	111%	3%	135%
Toronto E10	na	na	na	na	na	na	na	na
Toronto E11	0%	0%	33%	92%	58%	101%	8%	128%

The two charts above are in fact one chart divided and shown separately for better viewing. Collectively, they offer some insights:

1) The average rent per month per unit in the Greater Toronto Area (GTA, blue colored row) is (Canadian) C$2244 = technically, this average rent reflects the weighted average among the various unit types, and more specifically, a studio averaged $1657, a one-bedroom $1995, a two-bedroom $2653, and a three-bedroom $3344.

These rents are usually “all-in”, meaning expenses such as condominium management fee (condo fee) and realty tax are included therein and borne by the landlords. And since condo fees may include some of the utilities provided to individual units (e.g. water, gas, and / or electricity, and different buildings can differ in what utilities they include), some tenants need not worry about all or some of the utility bills.

There were a total of around 10K listed units for rent and close to 6,200 were leased successfully. The overall leased to listed ratio is 61%.

For the uninitiated, GTA includes the City of Toronto – which occupies roughly 1/10 of the GTA land area - plus various suburban regions such as York, Peel, Durham etc. Overall, it has around 6.60M people of whom close to 3M live inside the City of Toronto. GTA is around 7 times Hong Kong’s land area and the City of Toronto is around 70% as large as Hong Kong.

2) The average rent per month per unit in the City of Toronto (green colored row) is $2329 = and the average figures for studio, 1 bed, 2 bed, and 3 bed units are $1662, $2055, $2836, and $3597 respectively. These rents are, unsurprisingly, slightly higher than the GTA’s.

3) 79% of the leased units are in the City of Toronto = or 4866 out of a total 6171 leased units in the GTA.

4) 81% of the leased units in the City of Toronto are located in the "Central" neighborhoods (TREB regions marked by C plus a numeric behind) = or 3952 / 4866.

This is rational given that many, not all, of these central neighborhoods are served by the subway system and the metro bus service, not to mention being along or near the major North-South artery road, namely Yonge Street (sort of akin to the Fifth Avenue in New York City). Thus, higher density residential developments hover in these neighborhoods which in turn lead them to become dominant in the condo and rental markets.

5) While Central neighborhoods dominate the leased statistics across unit types, the percentages decrease going from studio units to three bedroom ones = studios occupied 91% of total studios leased, 1 bed 82%, 2 bed 78% and 3 bed 73%.

The downtown and midtown neighborhoods, including the CBD, are within the larger central portion. And it is in these neighborhoods which could use many of the smaller / smallest unit types, especially the studio units. Further away from central, the major demand would be in 1 bed and 2 bed units which non-central neighborhoods can supply as well.

6) 60% of the leased units in the City of Toronto are 1 bed units = 33% are 2 bed units, while studios and 3 bed units occupy only 5% and 2% respectively.

Compared to the average monthly rent of $2329 in the City of Toronto, studios in general can command around 71% of the average, 1 bed 88%, 2 bed 122%, and 3 bed 154%.

Readers are encouraged to explore the above charts for more interesting details.

B) Second, now to the (gross) rental yields:

1Q 2018 Apartments GTA TREB Regions	Overall Av Lease Rate C$ per month	Average Apartment Condominium C$	(A) Estimated Gross Total Annual Rental C$	Estimated Gross Annual Rental Yield %
--------------------	--------------------	--------------------	--------------------	--------------------
City of Toronto	**2,329**	**590,184**	**27,948**	**4.74%**
Toronto West	**2,097**	**494,402**	**25,158**	**5.09%**
Toronto W01	2,294	595,979	27,531	4.62%
Toronto W02	2,286	566,478	27,437	4.84%
Toronto W03	2,110	453,714	25,320	5.58%
Toronto W04	1,797	431,600	21,560	5.00%
Toronto W05	1,751	321,530	21,009	6.53%
Toronto W06	2,299	551,856	27,587	5.00%
Toronto W07	2,350	555,000	28,200	5.08%
Toronto W08	1,983	524,930	23,801	4.53%
Toronto W09	2,100	336,342	25,200	7.49%
Toronto W10	1,702	328,267	20,422	6.22%
Toronto Central	**2,398**	**656,836**	**28,775**	**4.38%**
Toronto C01	2,507	687,700	30,090	4.38%
Toronto C02	3,080	986,568	36,965	3.75%
Toronto C03	2,238	630,714	26,851	4.26%
Toronto C04	2,541	907,000	30,494	3.36%
Toronto C06	1,842	492,363	22,103	4.49%
Toronto C07	2,330	611,313	27,959	4.57%
Toronto C08	2,349	677,435	28,185	4.16%
Toronto C09	2,817	765,875	33,807	4.41%
Toronto C10	2,329	721,561	27,949	3.87%
Toronto C11	1,879	384,159	22,546	5.87%
Toronto C12	2,720	1,016,500	32,640	3.21%
Toronto C13	2,052	498,900	24,628	4.94%
Toronto C14	2,190	588,729	26,280	4.46%
Toronto C15	1,990	509,330	23,874	4.69%
Toronto East	**1,898**	**410,909**	**22,778**	**5.54%**
Toronto E01	2,259	668,572	27,114	4.06%
Toronto E02	2,098	616,767	25,179	4.08%
Toronto E03	2,080	437,247	24,960	5.71%
Toronto E04	1,768	356,965	21,215	5.94%
Toronto E05	1,912	366,964	22,938	6.25%
Toronto E06	na	320,000	na	na
Toronto E07	1,815	399,551	21,780	5.45%
Toronto E08	1,748	407,159	20,971	5.15%
Toronto E09	1,853	406,824	22,242	5.47%
Toronto E10	na	306,250	na	na
Toronto E11	1,638	359,281	19,650	5.47%

Some interesting traits have been observed:

1) The average gross rental yield in the City of Toronto is 4.74% = and this is before the deduction for rental expenses such as condo fee and realty tax. Technically, this is done by a) 12 times the average monthly rent and b) divided the result by the average price.

2) The central neighborhoods offer the lowest gross rental yields overall at 4.38% = whereas the West neighborhoods collectively offer 5.09% and the East ones offer 5.54%.

3) Looking deeper, the neighborhood C12 offers the lowest gross rental yield at 3.21% = while W09 provides the highest at 7.49%. The gap between them can't be described as insignificant.

4) The colored blue figures = your humble author has compared the average rents to the City's average and the average prices to the City's averages for all the City neighborhoods. Wherever the figures are above the City's averages, they would be colored blue.

By so doing, an interesting pattern emerges: <u>many, but not all, of the higher than average rent neighborhoods also have higher than average prices</u> (and vice versa). It is also assumed that their higher rents and / or higher prices tend to reflect upon their presumably better or more sought after neighborhood characteristics, such as daily convenience, amenities, schools, safety, education level, and so on.

In any event, these presumably more desired neighborhoods also offer some of the lowest gross rental yields. As such, from a total investment return perspective, investment in their condo apartments would require a confidence that the relative lag of rental return would be (more than) made good by their capital (price) appreciation potential!

5) The colored orange figures = gross rental yields which are higher than the average are colored orange.

Another pattern emerges: <u>none of these neighborhoods have higher than average rent or higher than average price</u>.

6) Take your pick = go for higher rental yields but lesser properties OR go for presumably better properties but for lesser rental yields?

There is no right or wrong answer here and it depends on one's investment goal and circumstance. Need more regular income, go for higher rental yields. Want wealth accumulation, go for the better neighborhoods.

What's your preference, humble author? Blue colored neighborhoods.

<u>C) Third, to the estimated net rental yields:</u>

As mentioned, because the rents are all-in, landlords are responsible for settling the condo fees and realty tax, in addition to proper and required unit maintenance, equipment replacement, renovation etc. Not to mention paying the realtor the rental commission which is generally equal to one month's rent.

That is, gross rental yields are not too meaningful given there are such deductions to make. We need to look at the (estimated) net rental yields.

However, because different apartment buildings are managed and operated differently, some more efficient, others less so, in addition to differences in what unit utilities are covered by the condo fee, it is impossible to offer a one-size-fits-all net rental yield.

At best, we can only guess. Here, we have done three scenarios; the first one assumes such landlord expenses to occupy 30% of the gross rents, the second one 40%, and the third 50%.

Here are the results:

1Q 2018 **Apartments** **GTA** **TREB Regions**	Deduction 30% Estimated Net Annual Rental Yield for (B)	Deduction 40% Estimated Net Annual Rental Yield for (C)	Deduction 50% Estimated Net Annual Rental Yield for (D)
--------------------	--------------------	--------------------	--------------------
City of Toronto	**3.31%**	**2.84%**	**2.37%**
Toronto West	**3.56%**	**3.05%**	**2.54%**
Toronto W01	3.23%	2.77%	2.31%
Toronto W02	3.39%	2.91%	2.42%
Toronto W03	3.91%	3.35%	2.79%
Toronto W04	3.50%	3.00%	2.50%
Toronto W05	4.57%	3.92%	3.27%
Toronto W06	3.50%	3.00%	2.50%
Toronto W07	3.56%	3.05%	2.54%
Toronto W08	3.17%	2.72%	2.27%
Toronto W09	5.24%	4.50%	3.75%
Toronto W10	4.35%	3.73%	3.11%
Toronto Central	**3.07%**	**2.63%**	**2.19%**
Toronto C01	3.06%	2.63%	2.19%
Toronto C02	2.62%	2.25%	1.87%
Toronto C03	2.98%	2.55%	2.13%
Toronto C04	2.35%	2.02%	1.68%
Toronto C06	3.14%	2.69%	2.24%
Toronto C07	3.20%	2.74%	2.29%
Toronto C08	2.91%	2.50%	2.08%
Toronto C09	3.09%	2.65%	2.21%
Toronto C10	2.71%	2.32%	1.94%
Toronto C11	4.11%	3.52%	2.93%
Toronto C12	2.25%	1.93%	1.61%
Toronto C13	3.46%	2.96%	2.47%
Toronto C14	3.12%	2.68%	2.23%
Toronto C15	3.28%	2.81%	2.34%
Toronto East	**3.88%**	**3.33%**	**2.77%**
Toronto E01	2.84%	2.43%	2.03%
Toronto E02	2.86%	2.45%	2.04%
Toronto E03	4.00%	3.43%	2.85%
Toronto E04	4.16%	3.57%	2.97%
Toronto E05	4.38%	3.75%	3.13%
Toronto E06	na	na	na
Toronto E07	3.82%	3.27%	2.73%
Toronto E08	3.61%	3.09%	2.58%
Toronto E09	3.83%	3.28%	2.73%
Toronto E10	na	na	na
Toronto E11	3.83%	3.28%	2.73%

Making a long story short, one can expect net rental yields to typically range from around 2.xx% to around 3.xx%. Perhaps these reflect how high prices have become versus rents.

D) Correlations:

Some correlations were done to test whether certain perceptions hold true or to explore hidden patterns if any.

Correlations between:				
1st item		2nd item		R
Total Listed		Total Leased		1.000
Total Listed		Overall Av Lease Rate		0.229
Total Leased		Overall Av Lease Rate		0.220
Leased to Listed Ratio		Overall Av Lease Rate		(0.588)
Bachelor	Av Lease Rate	One-Bedroom	Av Lease Rate	0.758
	Av Lease Rate	Two-Bedroom	Av Lease Rate	0.638
	Av Lease Rate	Three-Bedroom	Av Lease Rate	0.500
One-Bedroom	Av Lease Rate	Two-Bedroom	Av Lease Rate	0.884
	Av Lease Rate	Three-Bedroom	Av Lease Rate	0.699
Two-Bedroom	Av Lease Rate	Three-Bedroom	Av Lease Rate	0.761
Av Apartment Condominium C$		Est Gross Annual Rental Yield %		(0.877)
Est Gross Total Annual Rental C$		Est Gross Annual Rental Yield %		(0.660)
Est Gross Total Annual Rental C$		Av Apartment Condominium C$		0.907

Observations:

1) There is little correlation between the number of listings and the rental rates = i.e. neighborhoods with lots of listings do not necessarily offer lower rents.

2) There is little correlation between the number of leased units and the rental rates = i.e. neighborhoods with many leased units do not necessarily command higher rents.

3) There is a significant but opposite correlation between the leased-to-listed ratios and the rental rates = i.e. neighborhoods with higher leasing success tend to see lower rents! Perhaps it is the lower rents which attract renters and thus boosting up the leased ratios.

4) There is significant / strong correlation between the unit types across neighborhoods = i.e. neighborhoods with higher than average rent studios tend to have higher than average rent 1 bed units, 2 bed units, and 3 bed units, and the reverse holds too.

5) The correlation between unit types tend to stronger when the two types are next to one another = e.g. studios correlate more with 1 bed units at 0.758 than with 2 bed units at 0.638, or 1 bed units tend to correlate more with 2 bed units at 0.884 than with 3 bed units at 0.699.

6) The higher the average rents and / or the higher the average prices, both tend to have lower rental yields = this is borne out in the earlier section but the correlations further confirm it.

<u>E) Where and what to invest?</u>

When? Had already been covered in previous quarterly newsletters and so please excuse your humble author for not addressing this again. We should just focus on where, what, and why in terms of condo apartments in case one decides to invest. Here are some suggestions based on the foregoing analysis and your humble author's humble investment experience:

1) The minimum budget = C$360,000. There are condo apartments selling for less but unless the investor is your enemy, quality demands a certain minimum price.

2) Decide which is more important to you, rental yields or price appreciation? = for rental yields, go for the orange colored neighborhoods but get the better buildings and districts. For price appreciation, go for the blue colored neighborhoods.

3) For broad rental market appeal = buy 1 bed or 2 bed units, and if the location is in downtown or some major road intersections served by the subway, studios may also be fine. 3 bed units are good only if the neighborhoods are of superb quality e.g. C12.

4) Typical rentals range from $1600 to $3600 per month = many renters can afford these rates and once one enters the $4K to $5K ranges and upwards, one needs patience to seek suitable tenants.

5) Lockers = better acquire lockers (usually located in the basement levels of the apartment buildings) if you can (though some buildings don't sell these i.e. you can only rent them from the building management) because Canadians tend to have lots of stuff.

6) Parking = is a must for most suburbs and non-subway-accessible locations. That is, unless the unit is located in some transport-wise well-served downtown area, it is better to have an exclusive parking spot attached to the unit for the tenant's use.

Note the provision of lockers and / or parking enables the landlords to seek higher market rents i.e. their extra costs are recoupable.

7) To play safe, stick to central neighborhoods = especially those along the subway system and / or major arteries and intersections such as (from south to north) Yonge Street x Dundas, x Bloor, x St Clair, x Eglinton, x Lawrence, x Sheppard, and x Finch.

Alternatively, neighborhoods along the east-west subway network can also be considered.

8) If buying condo apartments near the subway stations, select the ones as close as possible to the stations = and best if the condos are right on top of them, especially those which offer direct access to the stations. Strolling downtown in the spring, summer, and fall could be enjoyable, but probably not so much in snowy winter.

There is also an underground pedestrian and commercial network called PATH in downtown Toronto connecting numerous downtown office, retail, and residential hot spots. Condos with easy access to it can command better rents.

9) Check out the condo fee, maintenance reserve fund, and the utilities included in the condo fee = as these will affect the rental yields and the market rents. Roughly, condo fees now hover around 45 cents to 75 cents per ft2 net per month.

Also, if the condo maintenance reserve fund is insufficient (usually based on an independent professional's estimate), the owners will then need to pay more in condo fees to make up the required reserve fund.

<u>F) Letting the units produces higher IRR and NPV</u>

Last but not least, many investors tend to leave vacant their invested condo units after purchase. While certainly this is within the landlords' right to do so, your humble author generally does not recommend such practice.

For one thing, condo units not lived in for long periods tend to smell funny. Another thing is that the unit components such as flooring, paint, and appliances will still deteriorate even if left untouched, not to mention the potential waste of accommodation resources from a societal angle. Yet the most vital factor is that by leaving the units vacant, one is giving up a few percentages of the total investment return which basically consists of two components; a) rental return and b) price appreciation.

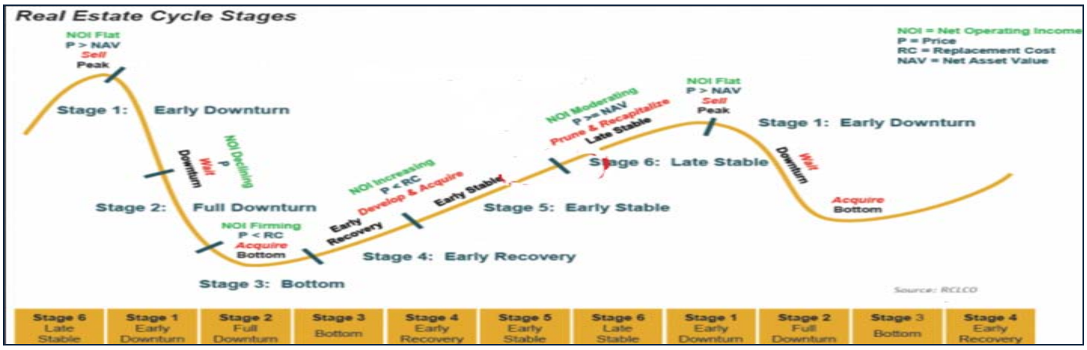
Perhaps a year of vacancy won't be felt too much, but a ten year intended vacancy means an IRR of 21% now becomes 18%, or 15% becomes 12%, and the forfeited sum can exceed hundreds of thousands Canadian dollars.

There is no need to self-create a (as if) haunted condo unit.

Leverage up when prices are down, deleverage when prices are up

Real Estate Tech, 3Q 2018

Stephen Chung BS BBldg (HKU) MS in Real Estate Development (MIT) MRICS MHKIS FPFM PQS RPS(QS)
Zeppelin Real Estate Analysis Limited - Phone (852) 37576388 / Fax (852) 37576399 stephenchung@zeppelin.com.hk



A typical real estate cycle (courtesy of biggerpockets.com)

Many know the saying “buy low sell high”. Yet, your humble author wonders how many have done that, or at least some of the time.

This is because the saying is easier said than done. When the market is at a low point, prices are down, and market sentiment is bad because the economy generally sucks. Being social animals, not too many of us can or dare behave too differently from the crowd. Even if one wants to take a big plunge buying into a down market, bank financing might be scarce or expensive. Or your investment partners might have second thoughts. Or even you might start to doubt if the low point is really the low point etc. The reverse is true when the market is trending up…and casting market doubts makes you an unwelcomed guest at parties.

In short, buy low sell high requires not just a strong market conviction and confidence on your part, but also accompanying capital and financing sources which are just as convicted as and confident at least in you if not in the market. Read Michael Lewis’ book “The Big Short” or watch the movie…such convictions can be lonesome.

Nonetheless, big gains await those who can manage to do it.

Here your humble author wishes to make a point about leverage building upon the buy low sell high motto. Borrow as much as possible (on whatever real estate still unsold or acquired) when the market is down or bottoming, and pay back as much debt as possible (on whatever real estate still unsold) when the market is up or peaking. Generally, this applies even if the mortgage rates are higher in a down market and lower in an up market, unless the gap between the rates is unreasonably huge.

By so doing, one’s overall IRR might be enhanced while the (financing) default risk is pretty much reduced. That is, one does not just focus on maximizing the IRR and NPV, but on optimizing the return to risk ratio. Perhaps you won’t get the limelight of being the investment guru of the year producing the highest IRR, but then again you will likely survive, even thrive, during a downturn because the debt level is manageable, leaving you with cash to acquire low-priced but good quality assets.

You sleep better too.

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; 4) Deciding which corporate strategies, tactics, priorities, properties, and projects to pursue; 5) Getting a INDEPENDENT SECOND OPINION on which you can trust…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

- Contact us:

Mr. Stephen Chung stephenchung@zeppelin.com.hk
Address: Unit 07, 10/F CCT Telecom Building, 11 Wo Shing Street, Fo Tan, Hong Kong
Phone: 852-37576388 Fax: 852-37576399 Web: www.Real-Estate-Tech.com

Zeppelin **Partners Limited**
Zeppelin **Real Estate Analysis Limited**

Associated operations in China and access to professional networks worldwide