Zeppelin's Real Estate Tech

2Q 2015: A Real Estate Newsletter by Zeppelin Real Estate Analysis Limited

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The whole world seems to be embarking on seeing who has the best QE program in town and nobody, least of all the central bankers, appears to want to be the first to be accused of letting the economy down – literally – by not loosening the financial screws. Make hay while the sun shines while at the same time shorting the daylight hours. This issue will deviate from the norm and will focus on USA residential real estate, rental apartment complexes included.

- **If Americans were unhappy, it has nothing to do with their homes**
- **12 USA residential markets: which is > than which in investment terms?**
- **Residential apartment complexes: cash cows and where they are**

"Location is important but not so important that it needs saying 3 times in a row."

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**, **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 **19th year** and **75th** 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 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.

Who? Me?

Stephen Chung
Managing Director, Zeppelin Real Estate Analysis Limited
Founder and Editor, 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
- 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 3 real estate books in Chinese published to date as follows:

Online book = Easy Real Estate Lectures

Hard copy = Real Estate Investment Know-How above 101

Most recent and hard copy = The Real Estate Market Turning Point

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

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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.

If Americans were unhappy, it has nothing to do with their homes

Real Estate Tech, 2Q 2015

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If this home is located in Hong Kong, it would fetch at least US$5M

Americans appear a generally happy and fun seeking lot notwithstanding the occasional shoot outs and civic commotions. IF there was any significant unhappiness in the USA, it is unlikely that it is due to dissatisfaction with their homes in general. Here's why (based on the American Housing Survey 2014):

A) The majority of American households are happy with their homes = using a simple rating system from 1 (worst, least satisfied) to10 (best, most satisfied), nationally 70% of households give an '8' or above. If '6', i.e. a fair or just passed rating, or above is used as the threshold, then 88% of households are included.

	Northeast	Midwest	South	West	ALL
Overall Opinion of Present Structure					
1 (worst)	120	121	238	93	572
2	61	42	119	74	296
3	117	128	231	132	608
4	206	226	443	289	1,164
5	961	1,162	1,962	1,192	5,277
6	1,012	1,164	1,993	1,262	5,431
7	2,678	3,510	5,451	3,775	15,414
8	5,509	6,810	10,775	6,849	29,943
9	3,166	3,895	6,249	4,043	17,353
10 (best)	6,252	7,583	13,188	6,971	33,994
Not reported	1,029	1,282	2,331	1,202	5,844
ALL	**21,111**	**25,923**	**42,980**	**25,882**	**115,896**
8 or above %	**71%**	**71%**	**70%**	**69%**	**70%**
6 or above %	**88%**	**89%**	**88%**	**88%**	**88%**

B) The majority of American households also like their neighborhoods = while one's home may be a mansion, it means little if the family does not like living in the neighborhood. Using the same rating and threshold criteria as in (A), nationally 67% of households find their neighborhoods (please note this is not necessarily 100% correlating to 'neighbors') being '8' or above, and 85% of households are included if a rating of '6' or above is used as the threshold.

	Northeast	Midwest	South	West	ALL
Overall Opinion of Present Neighborhood					
1 (worst)	201	193	349	176	919
2	152	159	229	137	677
3	185	233	398	286	1,102
4	308	412	680	384	1,784
5	1,105	1,337	2,524	1,535	6,501
6	1,052	1,351	2,189	1,423	6,015
7	2,634	3,170	5,465	3,801	15,070
8	5,281	6,481	10,134	6,518	28,414
9	3,262	3,936	6,126	4,069	17,393
10 (best)	5,857	7,280	12,437	6,318	31,892
No neighborhood	27	44	57	17	145
Not reported	1,048	1,326	2,392	1,216	5,982
ALL	**21,112**	**25,922**	**42,980**	**25,880**	**115,894**
8 or above %	**68%**	**68%**	**67%**	**65%**	**67%**
6 or above %	**86%**	**86%**	**85%**	**86%**	**85%**

C) Why choose the current home? = there are numerous reasons yet the more significant ones include financial concern, home layout, home size, and the neighborhood it is situated.

	Northeast	Midwest	South	West	ALL
Choice of Present Home[2]					
Financial reasons	1,718	2,755	4,815	3,284	12,572
Room layout/design	1,490	2,247	3,864	2,844	10,445
Size	1,647	2,385	4,245	2,958	11,235
Exterior appearance	1,130	1,676	2,972	2,099	7,877
Yard/trees/view	998	1,512	2,654	1,979	7,143
Quality of construction	1,095	1,578	2,674	1,944	7,291
Only one available	619	827	1,583	1,064	4,093
Neighborhood	1,537	2,166	3,702	2,634	10,039
Other	202	300	387	392	1,281
Not reported	127	140	326	211	804
ALL	*10,563*	*15,586*	*27,222*	*19,409*	*72,780*
Financial reasons %	*16%*	*18%*	*18%*	*17%*	*17%*
Room layout/design %	*14%*	*14%*	*14%*	*15%*	*14%*
Size %	*16%*	*15%*	*16%*	*15%*	*15%*
Exterior appearance %	*11%*	*11%*	*11%*	*11%*	*11%*
Yard/trees/view %	*9%*	*10%*	*10%*	*10%*	*10%*
Quality of construction %	*10%*	*10%*	*10%*	*10%*	*10%*
Only one available %	*6%*	*5%*	*6%*	*5%*	*6%*
Neighborhood %	*15%*	*14%*	*14%*	*14%*	*14%*
Other %	*2%*	*2%*	*1%*	*2%*	*2%*
Not reported %	*1%*	*1%*	*1%*	*1%*	*1%*
Math Checks:	100%	100%	100%	100%	100%

D) Why choose the current neighborhood? = similar to (C), there are again many factors yet the more influencing ones include safety of neighborhood, amenities, convenience, familiarity with the place, and the like.

	Northeast	Midwest	South	West	ALL
Choice of Present Neighborhood[2]					
Convenient to job	1,311	1,904	3,483	2,226	8,924
Convenient to friends or relatives	1,378	1,986	3,352	2,269	8,985
Convenient to public transportatio	1,059	838	1,459	1,313	4,669
Convenient to amenities	1,379	1,883	3,482	2,355	9,099
Familiarity of neighborhood	1,271	1,943	3,210	2,263	8,687
Safety of neighborhood	1,509	2,196	3,879	2,688	10,272
Looks/design of neighborhood	1,238	1,804	3,130	2,329	8,501
Good schools	864	1,361	2,311	1,707	6,243
Other public services	1,087	1,267	2,168	1,698	6,220
House was most important consid	1,694	2,633	4,495	3,249	12,071
Other	289	440	712	662	2,103
Not reported	126	134	311	194	765
ALL	*13,205*	*18,389*	*31,992*	*22,953*	*86,539*
Convenient to job	*10%*	*10%*	*11%*	*10%*	*10%*
Convenient to friends or relatives	*10%*	*11%*	*10%*	*10%*	*10%*
Convenient to public transportation	*8%*	*5%*	*5%*	*6%*	*5%*
Convenient to amenities	*10%*	*10%*	*11%*	*10%*	*11%*
Familiarity of neighborhood	*10%*	*11%*	*10%*	*10%*	*10%*
Safety of neighborhood	*11%*	*12%*	*12%*	*12%*	*12%*
Looks/design of neighborhood	*9%*	*10%*	*10%*	*10%*	*10%*
Good schools	*7%*	*7%*	*7%*	*7%*	*7%*
Other public services	*8%*	*7%*	*7%*	*7%*	*7%*
House was most important conside	*13%*	*14%*	*14%*	*14%*	*14%*
Other	*2%*	*2%*	*2%*	*3%*	*2%*
Not reported	*1%*	*1%*	*1%*	*1%*	*1%*
Math Checks:	100%	100%	100%	100%	100%

E) When did they move to the current home and neighborhood? = Nationally 54% of households moved during the last 10 years, and 77% of households moved in the last 20 years (note this 77% include the 54% who moved in the last 10 years).

	Northeast	Midwest	South	West	ALL
Year Householder Moved Into Unit					
2010 to 2014	5,860	8,098	14,693	10,010	38,661
2005 to 2009	4,262	5,289	9,394	5,394	24,339
2000 to 2004	2,897	3,595	5,828	3,662	15,982
1995 to 1999	2,107	2,446	3,829	2,229	10,611
1990 to 1994	1,469	1,789	2,728	1,428	7,414
1985 to 1989	1,102	1,284	1,798	1,028	5,212
1980 to 1984	834	756	1,090	481	3,161
1975 to 1979	726	939	1,248	650	3,563
1970 to 1974	605	573	907	365	2,450
1960 to 1969	754	769	944	428	2,895
1950 to 1959	365	316	399	186	1,266
1940 to 1949	95	54	86	11	246
1939 or earlier	33	14	36	11	94
Median (year)	**2004**	**2005**	**2006**	**2007**	**2006**
ALL	**21,109**	**25,922**	**42,980**	**25,883**	**115,894**
Within last 10 years from 2005	**48%**	**52%**	**56%**	**60%**	**54%**
Within last 20 years from 1995	**72%**	**75%**	**79%**	**82%**	**77%**

F) Police protection = despite being a touchy subject of sort lately, and notwithstanding the media images, nationally 91% of households are satisfied with the police protection they have.

	Northeast	Midwest	South	West	ALL
Police Protection[1]					
Satisfactory police protection	19,220	23,792	39,406	23,239	105,657
Unsatisfactory police protection	1,671	1,727	3,183	2,284	8,865
Not reported	254	313	416	362	1,345
ALL	**21,145**	**25,832**	**43,005**	**25,885**	**115,867**
Satisfactory police protection %	**91%**	**92%**	**92%**	**90%**	**91%**

Given the current demographic and ethnic mixes, the 91% who are satisfied with police protection would have included non-white households.

Granted that the typical American home offers 1,500 ft2, folks from Hong Kong – where the typical home is around 500 ft2 - can only look forward to such spacious accommodations...in their dreams.

12 USA residential markets: which is > than which in investment terms?

Real Estate Tech, 2Q 2015

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One of the Twelve: Busy city, scenic sunset, and interesting nightlife

Using data obtained from www.zillow.com , we have compiled and analyzed the residential single family and condominium price trends for overall USA and 12 of her cities: New York City, Boston, San Francisco, Los Angeles, Chicago, Denver, Seattle, Washington DC, Las Vegas, Miami, Dallas, and Honolulu.

In the process, we have not only observed the price changes and indexed them, but also calculated the price gain (or loss if any) during the period from start till finish, and the related price volatility – deemed here as a measure of risk. We also plotted such price return and price risk combination for overall USA and the 12 cities mentioned above.

A word on reading the charts: for each of the 2 sectors, namely single family and condominium, there are 3 charts each. The first one shows the actual median prices for overall USA and the 12 cities mentioned during the period. The second one contains their price indexes and the start date is usually deemed as "1.00". These two charts are easy to comprehend and even self-explanatory. The third chart, perhaps a bit less easy to comprehend for some, shows the price gain during the period [simply by dividing the end date price by the start date price and then minus one, and then shown in %] AND the price fluctuation value [or volatility, and technically treated as a measure of (price) risk] for overall USA and each of the 12 cities.

On the third chart, and from an investment angle, one would want the return to be as high [high up on the vertical Y axis in the chart] as possible, and the risk to be as low [toward left to '0' value on the horizontal X axis] as possible. It would be ideal if a city where its return is highest yet its risk is lowest – or even zilch – could be found. Yet normally this is not the case.

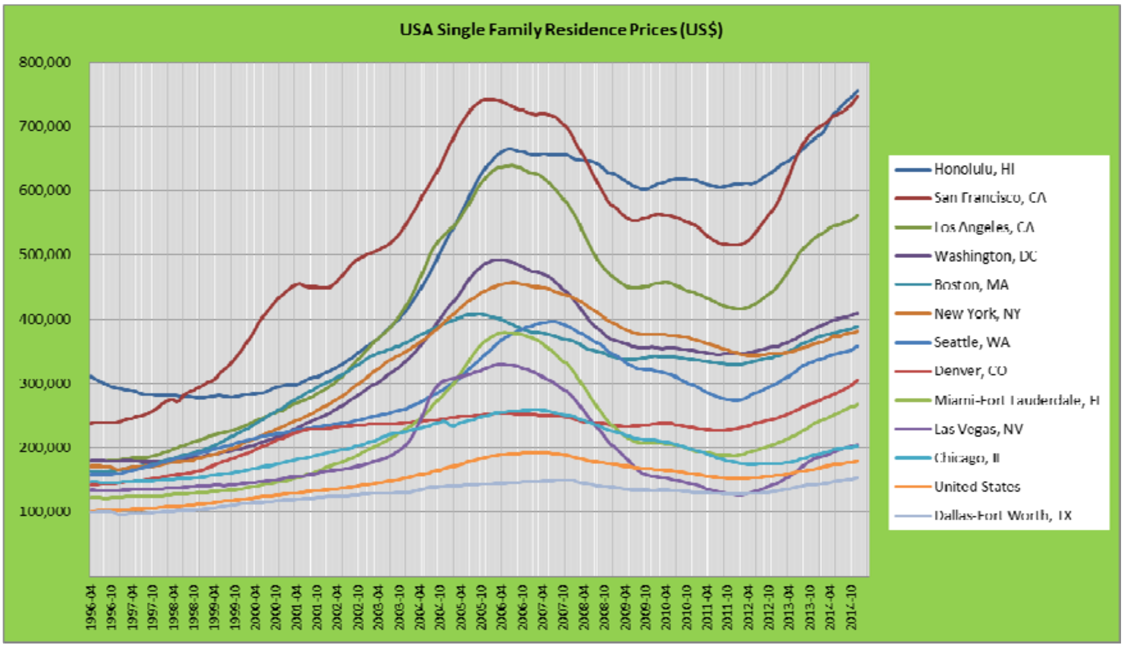
Return and risk appear to go together i.e. higher return higher the risk. Sometimes, one may even see lackluster (low) return with higher risk, and this is worse. As such, the key is not risk elimination or even reduction, but seeking the best possible and highest return for any given accepted level of risk. Alternatively, one may also seek the lowest possible risk for any given return level.

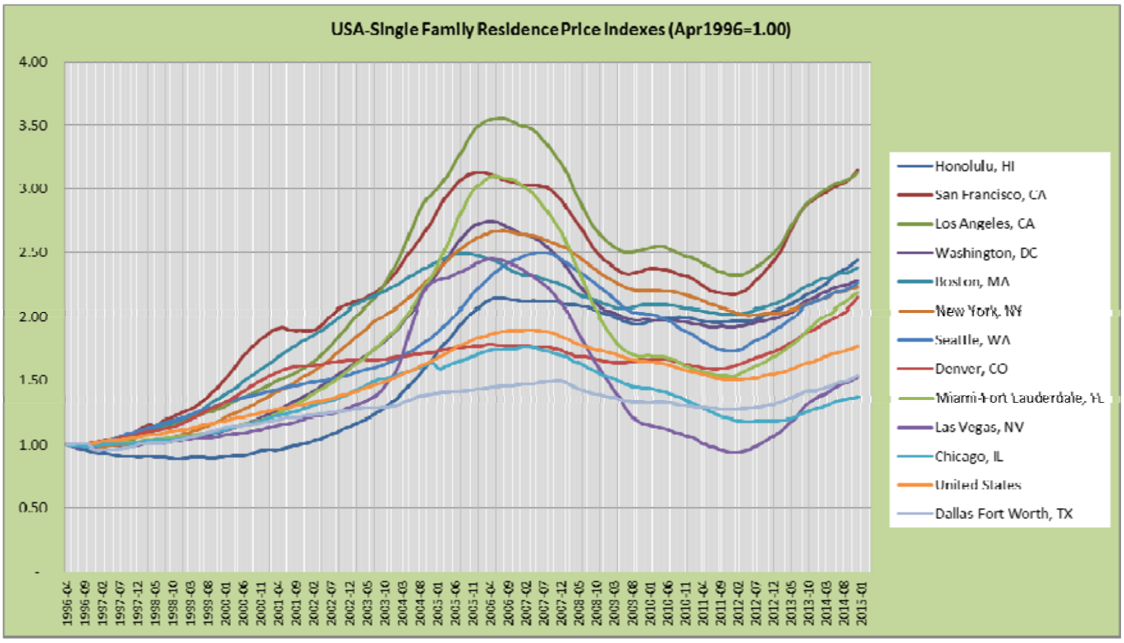
Given the above, and assuming the return and risk combination and price behavior to stay more or less the same in future, then we may wish to focus investment on those cities for which any given level of risk, they offer the highest possible return.

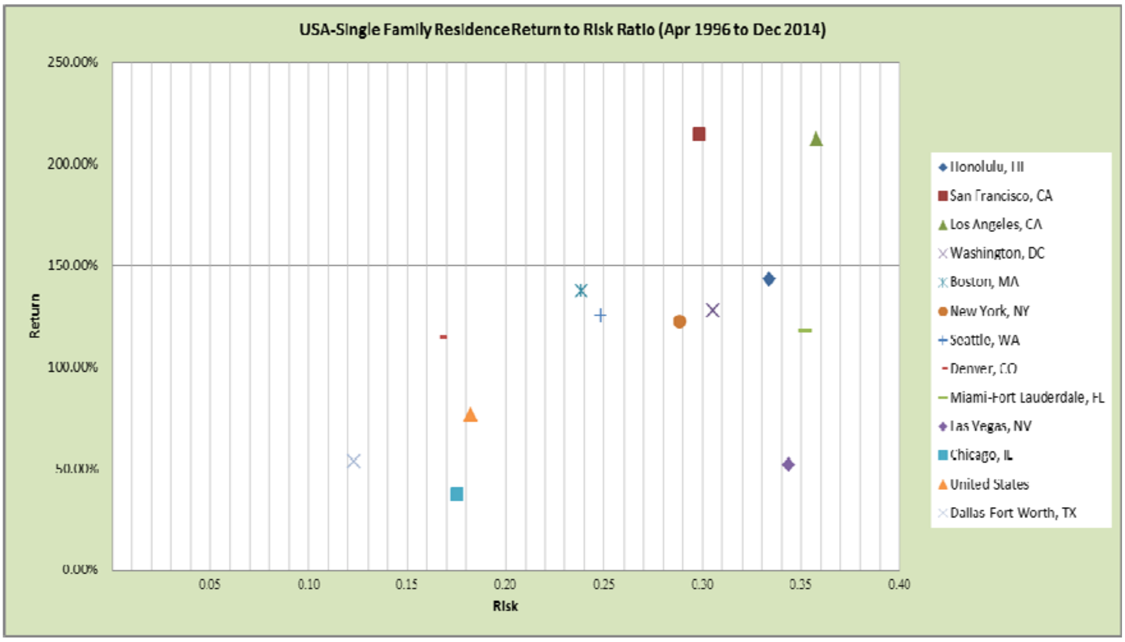
For instance, using the single family return to risk chart [3rd chart] as example, San Francisco seems a better choice than Los Angeles in the “high return high risk” group because while the returns are similar, San Francisco harbors less risk. For those in the “middle return middle risk” group, Boston and Denver seems better choices, and for those in the “low return low risk” combination, Dallas is the better choice. Technically, if one is to draw a line linking all the better choice cities suggested above, an “efficient frontier” curve would be formed. Any cities below such a curve would not be the better choices. Now do note the above ‘results’ are restricted to these 12 cities i.e. if other or more cities are included, the conclusion might have been different. The same goes for different time periods, be these shorter or longer, or have different start and end dates.

Now, deeming you, the reader, up to this point, are able to follow and comprehend the above descriptive chattering, then here are the charts:

A) Single Family

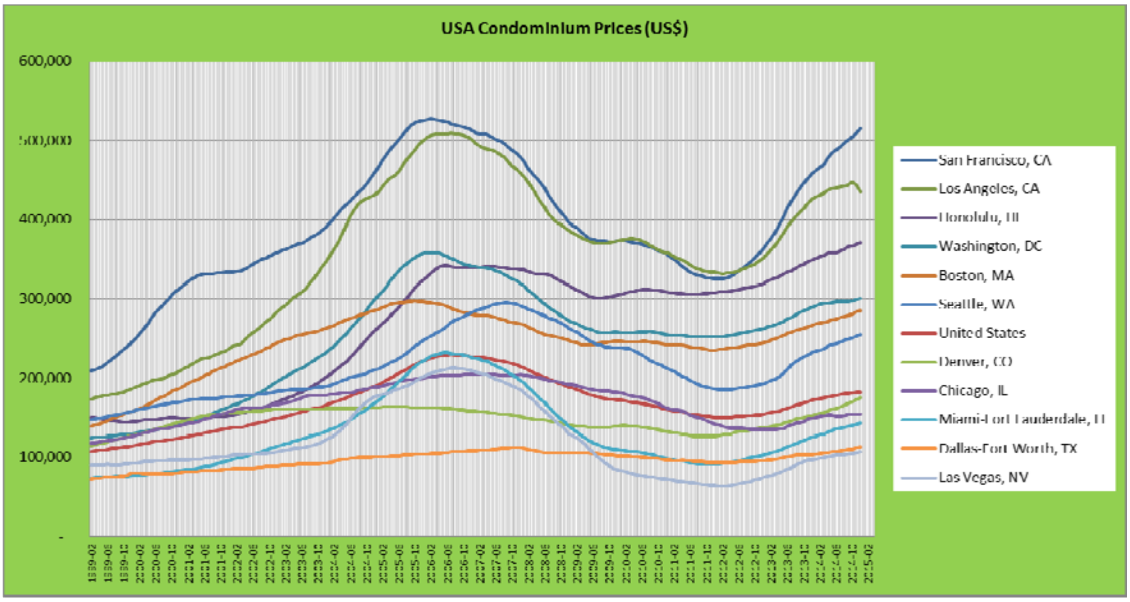


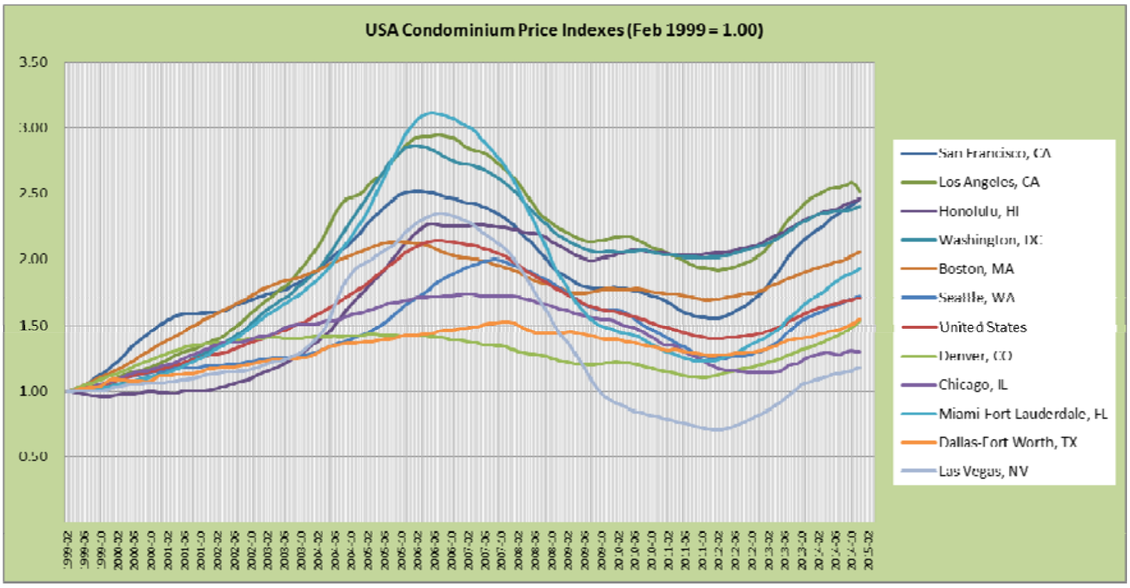

USA-Single Family Residence Price Indexes (Apr1996=1.00)
Honolulu, HI
San Francisco, CA
Los Angeles, CA
Washington, DC
Boston, MA
New York, NY
Seattle, WA
Denver, CO
Miami-Fort Lauderdale, FL
Las Vegas, NV
Chicago, IL
United States
Dallas Fort Worth, TX

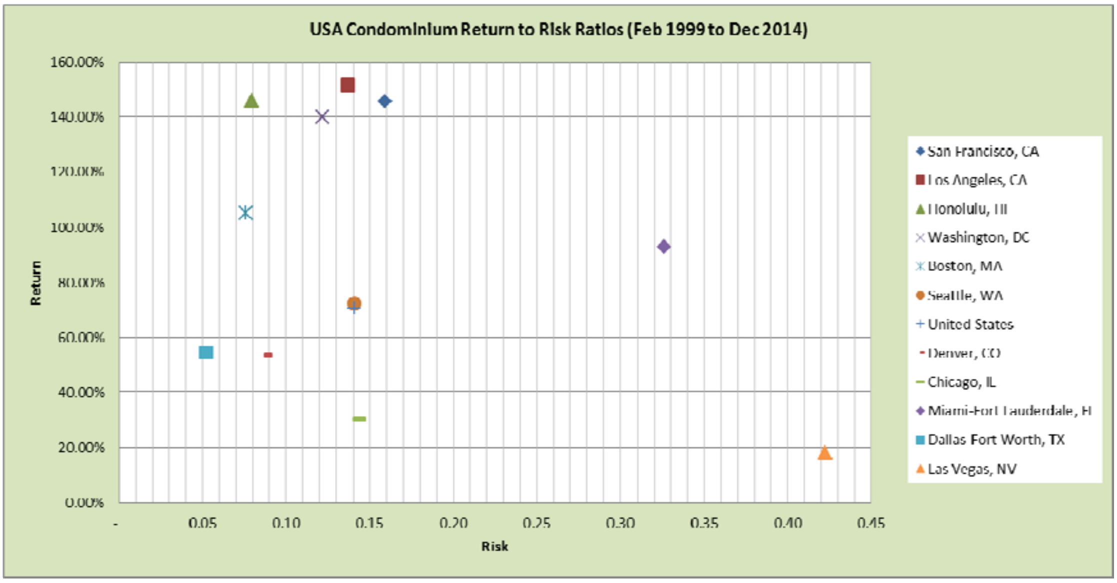

USA-Single Family Residence Return to Risk Ratio (Apr 1996 to Dec 2014)
Return
Risk
Honolulu, HI
San Francisco, CA
Los Angeles, CA
Washington, DC
Boston, MA
New York, NY
Seattle, WA
Denver, CO
Miami-Fort Lauderdale, FL
Las Vegas, NV
Chicago, IL
United States
Dallas Fort Worth, TX

B) Condominium

Same procedures for the residential condominium sector, and here are the charts (note New York City is excluded for incomplete data, and yes, a shame ☹):







Very briefly, Honolulu is the clear winner for residential condominium during the period. And Miami and Las Vegas would be best to avoid given their much higher risks but for no better gains (and in the case of Las Vegas, the poorest gain among the twelve cities). Again, note the results could be different if different cities are involved and / or if the different time periods are used. [A hint is the prices of some of the worse markets have also rebounded better than most since 2012 when overall the USA residential market appeared to have reached a bottom. But then again the question is if such performance would hold up for a longer period similar to the 15 years or so from 1999 to 2014].

In any event, and from a long term perspective and assuming the price behavior of the cities are to remain more or less constant, the 'generally proven' markets – among these 12 – are San Francisco, Honolulu, Los Angeles [the high return high risk group], Boston [the middle return middle risk group], and Dallas [the low return low risk group].

Rental apartment complexes: cash cows and where they are

Real Estate Tech, 2Q 2015

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Yours humble author owns a tiny portion of all these (Courtesy of Ashmore Apartments, Texas)

Disclosure: your humble author has invested in a bit of USA rental apartment complexes and so he has every interest and desire to see them as profitable and blossoming. That is, read the following with a grain of salt.

Your humble author thinks USA rental apartment complexes offer good opportunities for a) capturing a nice recurrent rental income typically of around 6% [or more] on a net basis; and b) gaining from improved asset value via enhancing rental operational efficiencies and property features.

Why? There are several reasons based on demographic, social, financial, political, and economic trends [some inspired by the book "The Philosophical Investor" written by Gary Carmell of CWS Capital] such as a) people marrying later in life; b) women bearing first child later in life, or even not at all; c) young people burdened with hefty student loans when graduating from college; d) many baby-boomers retiring with little assets other than their homes, and if they are lucky, some company pensions; e) many cities and towns are financially constrained and might not be able to develop sufficient low income or affordable housing; f) growing and prosperous cities, on the other hand, may see influxes of job seekers and workers who need to be housed, and quickly; g) the getting old baby-boomers, like their fathers before them, may want to spend the winters in a warmer location even if not relocating to it permanently.

Items [a] [b] [c] collectively mean the younger population tend to stay 'single' and 'renter' for longer periods owing to reduced need and capacity to buy a home. Item [d] is a push factor i.e. some boomers have no choice but to sell their homes and use the proceeds for retirement and become renters. Items [e] and [f] imply the capacity of most cities and towns to build affordable housing for both the needy and the middle class renters could be hampered, $-wise and / or time-wise. That is, the private sector can play a larger role, especially existing rental apartment complex operators. Item [g] means increasing demand, even only if seasonally.

Where? Based on a paper titled "America's Rental Housing" published in 2013 by the Joint Center for Housing Studies of Harvard University, your humble author has abstracted the statistics related to multi-family properties which contain 10 or more housing units (apartments). Briefly, there are around 11,255,000 such apartment units across the USA. While not all these fall under the investment radar, here are their collective profiles:

10 or More Units	In thousands	Totals	Percentages %
Northeast	2,890		25.68%
Midwest	2,124		18.87%
South	3,352		29.78%
West	2,889	11,255	25.67%
Neighborhood:	**In thousands**		
Central City	6,188		54.98%
Suburbs	4,229		37.57%
Non-Metro	838	11,255	7.45%
Year built:	**In thousands**		
Pre 1940	1,359		12.07%
1940–1959	1,016		9.03%
1960–1979	4,488		39.87%
1980–1999	2,891		25.68%
2000 or Later	1,502	11,256	13.34%
Rent per month:	**In thousands**		
Less than $400	1,396		12.40%
$400–599	2,028		18.02%
$600–799	2,485		22.08%
$800 or More	5,038		44.76%
No Cash Rent	101		0.90%
Other Rental / Rent Not Paid Monthly	208	11,256	1.85%
No. of bedrooms:	**In thousands**		
0	612		5.44%
1	5,530		49.13%
2	4,322		38.40%
3	678		6.02%
4	95		0.84%
5 or More	19	11,256	0.17%
Unit Size ft2:	**In thousands**	*Note the total is less than 11,255	
Under 800 Sq. Ft.	4,748		49.64%
800–1,199 Sq. Ft.	3,690		38.58%
1,200 Sq. Ft. and Over	1,126	9,564	11.77%
Rental Assistance:	**In thousands**		
Without Rental Assistance	9,049		80.40%
With Rental Assistance	2,206	11,255	19.60%

Which ones are under the investment radar then? So far, the rental apartment complexes in which your humble author owns a tiny fraction usually have 100 or more apartments, are professionally managed in both bricks-and-mortar and financial terms, and use leverage to enhance the yield. They are also well located in the city or suburb.

Also, like the title of one long-running and popular American TV gameshow, “The Price is Right”.

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

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