A long term lesson in residential property as an investment

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The only thing new in the world is the history you don't know.

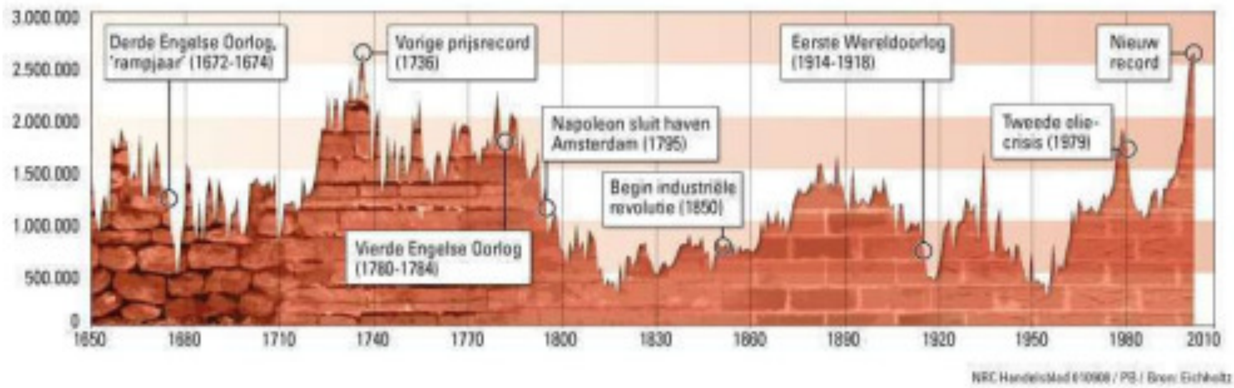
Harry Truman

In Amsterdam, just on the outskirts of the medieval city, lies a canal. On the edge of that canal sits Herengracht, one of the most prestigious neighbourhoods in the city, built in the 1600s at the start of the golden age of Holland. Over time it has housed wealthy financiers, slave traders, diamond cutters and the like. It has always been considered a premium area, in one of Europe's most prosperous cities.

Dr Piet Eichholtz, a professor at Holland's Maastricht University, had a novel idea. As the Dutch are such meticulous record keepers, he should be able to construct a time series going back 350 years which showed the change in the value of housing, adjusted for inflation, using the neighbourhood of Herengracht as the basis.

We've all heard the refrain, adopted as fact, that property is a great investment. With that in mind, what do you think the 350 year investment return on housing in Herengracht has been? Over the complete 350 year period, housing in Herengracht has achieved a total return of (drum roll please) 250%! That's a mere 0.2% real return per annum.

Below is a picture of Dr Eichholtz's Herengracht Index.



In an interview with the New York Times[1] Dr Eichholtz said, "There is a myth which says that real estate values go up significantly over time, and that this is especially true for central city locations. When I began to study the Herengracht, I didn't know what I would find, but the data ended up challenging that myth."

Perhaps this is simply a Dutch problem. Maybe in other, newer economies, we would find a different result.

Actually, no.

Dr Robert Shiller won the Nobel Prize in Economic Sciences in 2013, in part for his work on a long run housing index for the United States going back to 1890. Apparently, Americans aren't as meticulous record keepers as the Dutch so he couldn't go back further. However, that still provides us with 125 years of data.

What did Shiller find? In the 100 years from 1890 to 1990, property prices in the United States were virtually unchanged on an inflation adjusted basis. Then things got interesting. The graph of his index tells the story[2].

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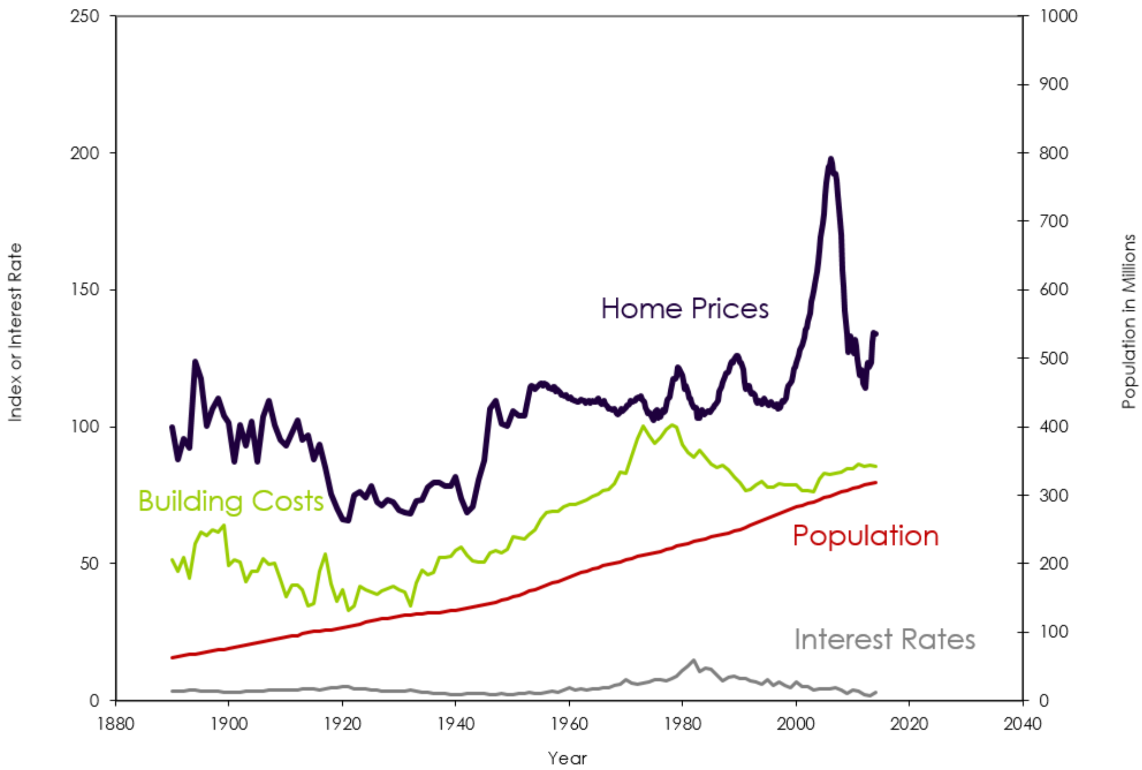
[1] http://www.nytimes.com/2006/03/05/magazine/305tulips_shorto.1.html?pagewanted=all&_r=0

[2] Source: http://www.irrationalexuberance.com/index.htm



From around 1995 through to the mid 2000s prices went up sharply, and then dropped back to the inflation adjusted point one might have naturally anticipated.

Looking at the chart, you'll notice that, in real dollar terms, the price of housing declined from 1900 until roughly the end of World War II. Economists at the time felt that was perfectly normal. Shiller explains in an article in USA Today[3],

"Well, I think you have to reflect on the fact that it's done it before. Home prices declined for the first half of the 20th century [adjusted for inflation]. Economists discussed that back then. Why are they going down? The conclusion was...of course home prices go down. There's technical progress. They are a manufactured good. Back in 1900, homes were handmade, you know, [by] craftsmen. But now, in 1950, we can get all kinds of power tools and prefab."

[3] http://www.usatoday.com/story/money/personalfinance/2014/05/10/why-your-home-is-not-a-good-investment/8900911/

Reflecting on the 100 plus years of data his housing price index represents, Nobel Laureate Robert Shiller concludes, “To me, the idea that buying a home is such a great idea is just wrong. They may very well decline for the next 30 years in real terms."

Could that possibly be true? Here are a few of Shiller’s reasons for thinking so:

1. It’s happened before. Anytime, anywhere we have enough data, we’ve seen it happen.
2. Homes go out of style. In USA Today he comments, “What kind of houses will they be building in 20 years? They may have lots of new amenities. They will be computerized or something in some way that we can't anticipate now. So people won't want these old homes."
3. By just owning a home, you are not adding real value. What adds value is building a new home or improving a home; leaving a home simply sitting on a section isn’t adding new economic value. If that worked, why would any business bother to innovate, engineer and improve their products and services? Instead, they would just buy old stuff and hold on to it.

Of course, Shiller’s index tries to take account of the two key points that confuse most of us when thinking about the value of housing. The first is the improving nature of the housing stock. The average home in New Zealand just keeps getting bigger. According to the New Zealand Treasury[4], new dwelling floor area has increased from about 110m² in 1974 to just under 200m² now. You have to pay more for a much larger living space, but we shouldn’t confuse that with an investment return.

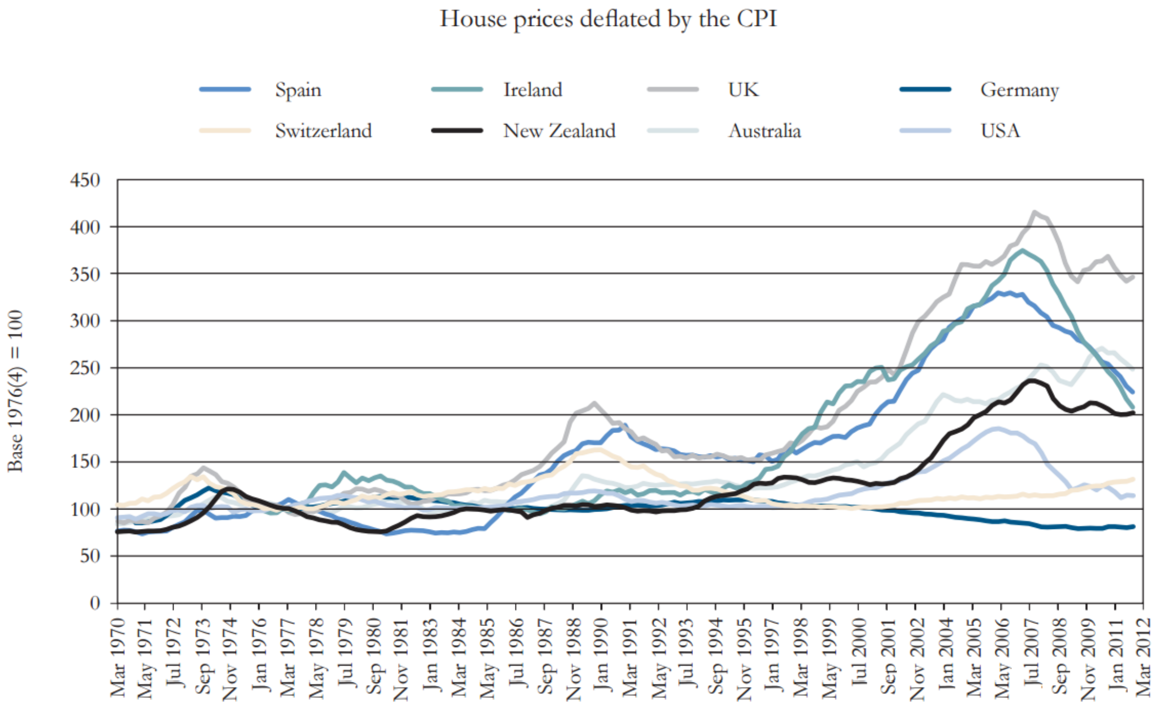
The other factor Shiller accounts for is inflation. Sure, Grandma may have bought her two bedroom home for £3,000 in 1955. £1 in 1955 would have bought what $50 buys today[5], so, all things being equal, that home should be worth $150,000 today just accounting for inflation

[4] http://www.treasury.govt.nz/publications/research-policy/wp/2014/14-11/04.htm

[5] http://www.rbnz.govt.nz/monetary_policy/inflation_calculator/

alone. Of course, this doesn't account for the significant money Grandma poured in over the years, into new roofing, flooring, paint, carpet, etc. It also assumes she didn't have to address any major structural issues.

Nevertheless, what Shiller's data does show is that over short periods of time there can be very large increases in the value of property. That's what has been experienced recently in New Zealand, as well as around the world (see chart below from The New Zealand Initiative[6]). The problem is that it just doesn't last long term.



The chart shows that New Zealand property has boomed recently, just like in the rest of the developed world. However, it also shows that, for 18 years from 1976 to 1994, housing in New Zealand showed very little (or no) price appreciation after accounting for inflation. That's a long time for an investment not to perform.

[6] Source: New Zealand Initiative, Bank for International Settlements.
http://nzinitiative.org.nz/site/nzinitiative/Priced%20out.pdf

Since the early 2000s housing has performed spectacularly. Unfortunately, the long term data tells us that this is an aberration, and not the rule.

This is essentially the warning that economists such as Reserve Bank Governor Graeme Wheeler have been highlighting. In a presentation to members of parliament recently, Wheeler said[7],

"The house price to income ratio for Auckland is at nine. It's twice that for the rest of the country. A ratio of nine puts you, according to Demographia figures, in the top ten most expensive cities in the world. This is just dangerous territory."

Wheeler's comments aside, is housing a great investment? Let's do the numbers.

Long term, you may expect a 0.5% annual real increase in the value of residential property.

What about the rental yield? That varies depending the region, but the average looks to be in the range of 4% to 6%[8]. For this exercise, we'll assume the mid-point yield of 5%. Unfortunately you don't get that 5% free and clear. As a home owner you have depreciation and maintenance to contend with. A paper in the Journal of Urban Economics suggested that houses depreciate at a rate of 2.5% per year[9]. If you maintain the house, this number improves to 2% per year, but then of course you have to factor in the cost of that maintenance. What does that mean? It means we need to offset the rental yield by the real cost of maintaining the property.

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[7] http://www.radionz.co.nz/news/business/283784/auckland-market-in-danger-zone-rb

[8] http://www.interest.co.nz/saving/rental-yield-indicator

[9] http://www.sciencedirect.com/science/article/pii/S0094119006000763

What about other costs like rates, tax, insurance and vacancy. They all matter too. A conservative estimate of these costs would be around 1.5% per annum, but they could be higher.

So, our real (expected) return is:

Long term expected real increase in value		0.5%
+	Gross rental yield	5.0%
-	Depreciation	2.5%
-	Rates, tax, insurance, vacancy	1.5%
Long term expected real return		1.5%

That's actually not bad. A 1.5% real return is workable. But there is still one more cost we haven't considered - the value of your time. This is the value you put on not having to deal with tenant issues, cleaning up properties, organising maintenance and so on. What is that worth? The way to value that is by working out the amount you'd have to pay someone else to take that pain away. According to Consumer[10], the cost of a property manager is about 8.5% of gross rents. That reduces our 5% yield by 0.425%.

So our real (expected) return, factoring in the cost of your time, is the sum above, minus 0.425% = 1.08%.

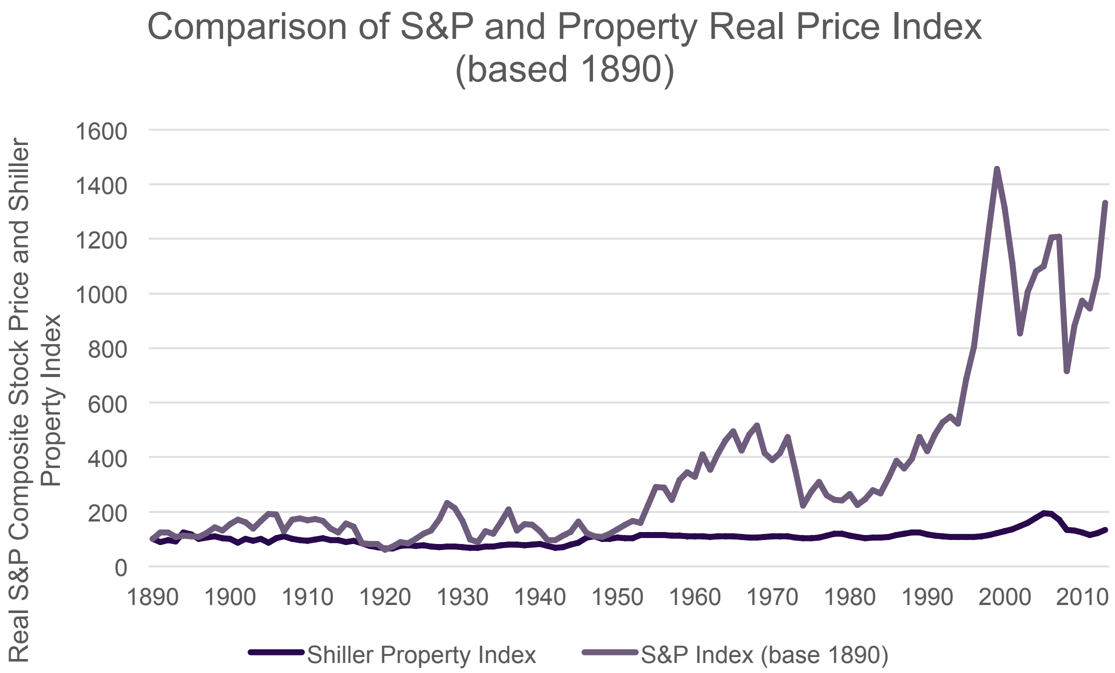
Is residential property a great investment? It is if you don't count the costs and you factor in inflation. Perhaps it is if it turns into a forced savings scheme. It certainly is you are fortunate enough to live in a golden era of sharply climbing real property prices. But if you are on the other side of that climb, it will likely be an unhappy experience.

[10] https://www.consumer.org.nz/articles/property-managers

Recently, a 30-something living near Auckland remarked angrily that overseas buyers were pumping up prices. If this is the case, then it represents a huge transfer of wealth to New Zealand. Overseas buyers are purchasing property at top market prices, bringing a lot of money into the economy as a result. When prices go down these buyers are likely to have the least amount of stickability. As they sell back to New Zealanders, the difference between what they paid and what they sell at is nothing more than New Zealanders (legally) 'picking the pocket' of these speculators.

Coming back to Dr Robert Shiller's long run US housing index, which suggests that US property has achieved only very minimal real return gains since 1890, it begs the question, what returns did the US share market produce over the same period? According to a calculator located here http://dqydj.net/sp-500-return-calculator/ the real return of the S&P 500 Index (not including dividends) was 1153% from September 1890 to September 2015, or about 2.04% on an annualised basis. If you reinvested dividends, the return was 236,053%, or about 6.41% on an annualised compound basis.

The graph below shows how Shiller's housing index and the S&P Composite Share Market Index compare over time.



Source: http://www.econ.yale.edu/~shiller/data.htm, http://www.irrationalexuberance.com/index.htm & author's calculations

Why are the return series so different? Property is a passive investment, but shares are an active investment. A property will simply sit there unless an owner improves it at their cost, but ownership in shares represents businesses that are innovating, creating, improving and making our lives more efficient and comfortable. As a whole, these businesses add new economic value on a continuous basis. There are better benefits for investing in that.

Does any of this contradict the experience of the many New Zealanders who have built wealth by borrowing, buying a house, gaining some capital appreciation, borrowing more and buying another house, etc? No. Those investors took big risk, and it paid off. The purpose of this paper is simply to provide some historical context to the true long term nature of the game they are playing, and to caution investors that there is really no long term precedent for housing to deliver more than a 0.5% to 1.0% real return. Given the recent boom in property prices, both here and abroad, investors should consider very carefully before doubling down on property investments in the coming years. For, as the Spanish philosopher Santayana said, "Those who cannot remember the past are condemned to repeat it."