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Trulia's Rent vs. Buy Index: Fun With Numbers

About a week ago, the good folks at Trulia released their "Rent vs. Buy Index" of the largest 50 U.S. cities by population. The full list of the 50 cities is available here as a PDF. Given the current economic trends, and the rising interest by consumers for rentals, this is a great time for people in real estate to be talking about renting vs. buying.

Trulia didn't post their full methodology but it does look like they did a good deal of work. From the blogpost describing the Rent vs. Buy Index:

Total costs of home ownership include mortgage principal and interest, property taxes, hazard insurance, closing costs at time of purchase and ongoing HOA dues and private mortgage insurance, where applicable. Total costs of homeownership include an offset for the tax advantages of homeownership, including mortgage interest, property tax and closing cost deductions.

Total costs of renting include rent and renter's insurance.

Based on these factors, Trulia concludes:

Price-to-Rent Ratio of 1-15: It is much less expensive to own than to rent a home in this city

Price-to-Rent Ratio of 16-20: It is more expensive to own a home in this city are The total costs of ownership of a home in this city are greater than the costs of renting, but it might still make financial sense depending on the situation.

Price-to-Rent Ratio of 21+: The total costs of owning a home in this city are much greater than the costs of renting.

The analysis was for 2BR apartments, condos, and townhomes — so the rent/buy for single family residences might be different. But the index is a useful tool nonetheless.

Since I've written on the rent vs. buy decision before, I thought it would be interesting to look a bit closer at the ratios — although I don't have the actual numbers that Trulia used — to see what, if anything, might pop out.

The Ratios & Findings

In all cases, I used this rent-buy analysis worksheet (XLS) to take a look, making all sorts of assumptions about property tax rates, HOA or condo fees, maintenance costs, income tax rates, and the like. I used pretty close to the numbers on the Trulia Rent vs. Buy Index (e.g., if the median price was \$298,621 as was for San Jose, I used \$300,000) for the sale price and the rent price.

I used 4.81% as the 30-year fixed mortgage rate, which was the latest I could find as of this writing, and assumed that all buyers would make a 20% down payment.

What I was looking for is the savings (if any) of renting vs. buying over a 10-year and 5-year period, as well as the present value of owning vs. renting over 10 years and 5 years. For a 2BR condo, which is more of a first time homebuyer's initial property, it didn't really make sense to go

beyond 10 years. Chances are, people are going to move up within those 10 years. 5 years also made a lot of sense for such properties.

Using those assumptions, here's what I'm finding:

The lowest Price-to-Rent Ratio on Trulia's index is 8:1 for cities such as Miami and Minneapolis (one hot, one cold... weird). At a PTR of 8, it makes little sense to rent. Buying vs. renting Miami, for example, has a present value of nearly \$150,000 over 10 years. Renting in Miami, at \$2,000 a month, means you lose nearly \$116,000 over 10 years. Even over 5 years, you'd lose almost \$20,000 by renting over buying in Miami.

Trulia says that 15 to 16 PTR is sort of the breakpoint between renting vs. buying. Chicago is a 15 PTR market, with median sale price of about \$300K, and median rent of \$1,700 a month. I'm showing a 10-year present value of about \$22,000 for the buyer in Chicago; it's a net gain. However, over a 5-year span, the buyer loses out slightly (\$1,462), which to me is a wash since the variable data (like maintenance costs, etc.) would vary widely. The Chicagoland buyer/renter can plug his own actual numbers in and see for himself.

At a PTR of 21 and above, Trulia suggests it's much cheaper to rent than to buy. Portland falls into this category with a PTR of 22, median sale price of \$308K, and median rent of \$1,145. Indeed, the buyer in Portland has a present value of negative \$70,000 over 10 years, and negative \$39,000 over 5 years. The renter would save, respectively, \$194K over 10 years, and \$122K over 5 years in Portland.

As one might expect, the PTR at the 'cusp' markets get a little weird. Denver, for example, has a PTR of 18 according to Trulia, which would make it a "neutral" market. I'm showing that renting in Denver nets a savings of \$129K over 10 years, and \$92K over 5 years, with buyers having negative present value in either case. Given the squishiness of the assumptions, it isn't clear to me whether a PTR of 18 is neutral or not. Being conservative, I'd suggest that anything with a significant (say over \$10K) in negative present value is probably a rent rather than buy situation because there is real value to liquidity, but again, the underlying data is squishy.

Personally, I'd peg the line at around 18 or 19, rather than 21+, but again, that's me working with the incomplete data I have.

Index Should Shift With Interest Rates

The first thing that pops out at me is that the Rent vs. Buy Index should move with interest rates — which also means creditworthiness of the buyer.

Take a positive market, like say Baltimore with a PTR of 12. At 4.81% interest rate, the buyer has a present value benefit of \$42K over 10 years, and \$10K over 5 years. At 6% rate, that goes to \$29K and \$4.5k respectively. And that's not taking into account the likelihood that house price appreciation (which I've assumed to be basically flat at 0.5% annually) might stall as the pool of buyers shrink due to higher rates.

The impact of rates, however, is not reflected in simply the price-to-rent ratio as the impact doesn't necessarily show up in the purchase price (at least not immediately). In fact, two buyers — one with excellent credit, one one with so-so credit — might end up in rather different places even in the same city, with the same PTR index, because one can get the better mortgage. I know this is common sense, but it's interesting nonetheless.

Again, at the extremes, I don't know if much changes — I can't imagine the interest rate at which

renting would be better than buying in Miami (at least, if you're going to get a mortgage at all). Similarly, in New York, with its PTR of 33, I doubt there is a low enough rate to make buying a better economic decision than renting (although, to be fair, Manhattan is a weird market, and a 2BR condo might be someone's home for 30 years no problem).

Inflation is another big factor. I had assumed a flat 3% annual inflation. But if the world's central banks continue to print money to prop up various sectors of the economy (particularly the banking sector), then one can't rule out far higher inflation in relatively near term. That, of course, makes buying far more attractive than renting, especially with a fixed rate mortgage, since rents will rise with inflation (unless you're in rent control markets, but that creates other serious distortions; see, e.g., New York City), while homeowners would be paying back fixed loans with depreciated dollars.

Watch both key numbers for significant movements. They seriously impact the buy vs. rent decision.

A Suggestion

I do think that the current economic environment means that renting is going to become far far more important. There are signs that American consumers — particularly the younger, less-employed, more-saddled with debt Millennials — are no longer enamored with the idea of homeownership.

Real estate professionals, particularly in the higher PTR markets, are going to have to do more to explain not just the emotional benefits of homeownership but the financial impact as well if they hope to be seen as trusted advisors. The Trulia index is a really nice shorthand, but I rather think that realtors should familiarize themselves with running the rent-buy analysis for a particular client, on a particular property, given his/her particular credit rating, financial status, and the like.