

Are you thinking of buying a house? The house across from mine is for sale. It's a little over 100 years old and it needs a lot of work. But it's expensive to live in the Bay Area and you're going to have to hurry. I just noticed this morning there's already a sale pending. My neighbor's house is for sale. There are similar size houses for rent in our neighborhood. However, the ones I looked at are newer and in better shape. Whoever buys the house will need to spend quite a bit of money on repairs and renovations. That makes the comparison of buying and renting complicated. Let's work through a simple example of how to compare the financial costs and benefits of buying and renting. As you'll see, one of the biggest considerations when deciding whether to buy or rent is how long you expect to stay in the house or apartment before moving. The shorter the time, the costlier and riskier it is to buy. The longer you stay, the better buying looks.

Let's say you are married and you and your spouse are deciding whether to buy or to rent one of two nearly identical houses, like these. But these are a little too big. Let's go with something a bit smaller and cheaper, like these here. The selling price for one of the houses is \$600,000. And for the nearly identical house next door, the rent is \$2,250 a month, or \$27,000 a year. You have \$120,000 in the bank. If you buy, you're going to use the \$120,000 for a down payment. If you rent, you'll invest it. The house costs \$600,000. You make a down payment of \$120,000 or 20%, and you take out a 30-year mortgage for \$480,000 with a fixed interest rate of 4.5%. Nationally, housing prices have appreciated about a 0.5% a year more than inflation over the last many years, with a lot of variation from place to place. Rents have gone up not quite that fast. For this example, we're going to assume that housing prices and rents are both going up 3% annually. That implies an inflation rate of around 2.5% a year. We'll assume you earn 6% per year on your \$120,000 investment if you rent. And to keep things simple, we're going to ignore the taxes on the interest or capital gains your investment earns. Now you may notice I'm assuming that your investment return is higher than the expected price appreciation of real estate. On average, investments of similar risk earned similar returns. Real estate earns returns both from the price appreciation and from the rents paid to the owner or alternatively the benefits of having a place to live. So on average, the price appreciation alone from real estate should be less than the total return on other investments of similar risk. Usually, the longer you plan to stay in one place, the more financial sense it makes to buy.

We're going to compare renting and buying when you stay in the house for one, six, and 10 years. Let's look first at what it costs to rent for one year. The first year, you pay \$27,000 in rent, \$500 in renters insurance, and you earn 6%, or \$7,200, on your \$120,000 investment. I'm going to use red ink for things that are costing you money and green ink when you're making or saving money. So what you pay in rent and renters insurance is in red and the earnings on your \$120,000 investment are in green. The total cost of renting for the first year is \$27,000 plus \$500 minus \$7,200. That's \$20,300. Now let's look at what it costs to buy and sell one year later. You'll use your \$120,000 for a down payment and borrow \$480,000. I'm going to assume that you pay 1%, or \$4,800, in loan fees and title insurance. To learn more about these, watch the video on how to shop for a mortgage. Your monthly mortgage payments

will be \$2,432. At the beginning of the loan period, most of your payment will go towards paying interest on the loan. The rest will pay down principal.

The first year, you'll pay interest of \$21,442 and principal of \$7,744. The principal payments are savings, not an expense. One advantage of owning is that it may help you save more. But that isn't going to enter into today's analysis. I'm going to assume that your property taxes are 1% and go up 3% a year. So the first year property taxes are \$6,000. Property taxes vary greatly from state to state and even county to county. Most households, and certainly most renters, take the standard federal tax deduction, which in 2014, is \$12,400 for couples filing joint tax returns. In this example, first year property taxes and mortgage interest payments total \$27,442. So if you buy, you're going to want to itemize your deductions. In addition to property taxes and interest on your mortgage, you'll be able to deduct state income taxes and charitable giving. Let's assume that these additional deductions add up to \$2,400 and increase annually with inflation. So you'll be able to deduct \$27,442 plus \$2,400. That's \$29,842 when calculating your taxable income. But you won't be able to take the standard deduction of \$12,400. So your taxable income will be \$29,842 minus \$12,400 which equals \$17,442. Lower than if you were renting.

How much does that save you in income tax? Well that, of course, depends on your tax bracket. It also depends upon whether mortgage interest payments and property taxes are deductible on your state's income taxes. I'm going to assume that you and your spouse make \$80,000 a year, that your marginal federal tax rate is 25%, your marginal state tax rate is 5%, that your state allows you to deduct mortgage interest payments and property tax payments. So you've got a combined marginal tax rate of 30%, lowering your taxable income by \$17,442, saves you \$5,233 in taxes your first year of owning. You're going to need homeowner insurance. We'll assume that's \$2,500 the first year and goes up 3% a year after that. You're also going to have to pay for maintenance and upkeep. I'm going to assume that costs you 1% a year, that's \$6,000 the first year and goes up 3% annually. The first year, the value of your house appreciates by 3%, from \$600,000 to \$618,000 maybe. Remember that is a big maybe. Nobody knows how much real estate prices are going to go up or go down next year. When you sell, you're going to have to pay real estate commissions, transfer taxes and fees. I'm going to assume that these are 7% of the selling price. So that's \$618,000 times 7%, which is \$43,260. That takes a big bite out of what you get when you sell the house. And even though the house appreciated, you get back less money than you paid for the house.

So as a first year owner, you pay \$4,800 in loan fees and title insurance, \$21,442 in interest payments, \$6,000 in property taxes, \$5,233 are saved in your taxes. You pay \$2,500 for homeowners insurance, \$6,000 for maintenance, and your house appreciates \$18,000. Finally, when you sell it, you pay \$43,260 in selling costs. Adding everything up, the one year cost of owning is \$60,769 and the one-year cost of renting is \$20,300. So renting beats buying by \$40,469.

Let's see what might happen if you were to stay in the house for six years. Back to renting, we're assuming the rent will go up 3% a year, you'll earn 6% on your \$120,000 with annual compounding, and renters insurance will go up 3% a year. Over six years, you'll pay \$174,647 in rent, \$3,234 in renter's insurance and you'll earn \$50,222 on your investment. The net cost of renting for six years is \$127,659. What about buying? Over six years, things get better when you buy. You pay \$4,800 in loan fees and title insurance. You pay \$122,975 in interest payments, \$38,810 in property taxes, you save \$29,372 in taxes. You pay \$16,171 in homeowners insurance, \$38,810 in maintenance, your house

appreciates by \$116,431, maybe, and your selling commissions, transfer taxes, and fees are \$50,150. In total, six years of owning the house costs you \$125,913. The cost of renting, \$127,659. Owning beats renting by a mere \$1,746. Tweak a couple of our assumptions, and that could easily go the other way.

What if you were to stay in the house for 10 years? The 10-M year cost of renting would be \$220,355. The 10-year cost of owning, \$171,492. Owning beats renting by \$48,863. But these calculations assume that \$1 in 10 years is worth the same as \$1 today. If we adjust for inflation and put everything in this year's dollars, the one-year calculations are the same. After six years, owning beats renting by \$1,543. And after 10 years, owning beats renting by \$39,126. Either way, the message is clear. The longer you go without moving, the more attractive buying looks.

I made up these numbers. And I kept the example pretty simple. You can put in your own numbers using the New York Times buy-red calculator listed in the courseware. One thing to remember, though, is that no matter what number you use for the home price growth rate, this is only an estimate. Home prices could go up more than you expect, less than you expect, and even go down. In this example, renting and buying had about the same cost over a six-year horizon. Changing some of the assumptions could move that break even period out to seven years or shorten it to five. Obviously, raising the house price favors renting. Raising the rent favors buying. If you're in a high tax bracket, you'll benefit more from the interest rate tax deduction. But unless the real estate market goes through the roof, you'll lose money buying for only one year. And unless real estate does unusually poorly, you'll be better off buying if you can do so without moving again for 10 years or longer.

As an owner, you benefit from rising real estate prices and you're hurt by drops. If you have a fixed interest rate mortgage and you don't plan to sell, short term price changes won't affect your life much. However, if you do need to sell and sell for a loss, you may not be able to buy even though prices of other properties have also dropped. Suppose you make a \$120,000 down payment on a \$600,000 house. If the price of the house drops 10%, that is by \$60,000, and you sell, you've lost half the value of your down payment right there. Furthermore, if you sell for \$540,000, you may not get back any your down payment after you pay for loan cost, real estate commissions, and transfer taxes.

The bottom line is that buying your home makes financial sense if you can afford the mortgage payments, the property taxes, and maintenance, if you expect your income to be stable and if you don't expect to move for many years. My neighbor lived in her house for over 60 years. For her, buying was an excellent decision.