

# Calculating Cost of Use - A Simple Solution to the Buy vs. Rent Choice

One of the interesting ways that I have come to look at things is by using the concept of the “Cost of Use.” Today I want to apply this concept to answer the ever controversial question of buying vs. Renting. As you have probably witnessed firsthand, like just about every topic in personal finance there is always a polarized stance on these types of topics. On the one hand you have the camp that believes you should buy a house no matter what and on the other side there is the camp that says you should never buy and rent for the rest of your life.

But in reality, where you and I live, the answer to whether you should buy or rent really is “it depends.”

The illustration I am about to walk you through is just how I like to look at things. There are many other ways to look at home ownership vs. renting, but personally I like to distill it down to a matter of pure numbers using the concept of “Cost of Use.”

## The Assumptions

It should be pointed that there are an unlimited amount of permutations of assumptions you can use to set up a mathematical model to answer any personal finance question. That is why the answer of “it depends” is so applicable to almost any personal finance question. Let’s be honest, everyone’s circumstances and goals are different. Please keep in mind that this illustrations sole purpose is to give you another tool to help make important financial choices.

Now onto the assumptions...

This example is based on my own personal situation and experience.

### Assumptions

1. Purchase price plus closing costs = \$376,000
2. Interest rate of 3.675%

3. Property Tax Rate of 1.89%
4. Property taxes are assumed to increase based on a maximum appreciation rate on the property of 2% a year (California)
5. Effective Income Tax Rate = 30%
6. Real Estate Appreciation is assumed at 3% (basically the long term average inflation rate)
7. Comparable rental based on size and location of the house \$2,200
8. We Don't plan to sell the house
9. We plan to live here for at least 10 years
10. Assume \$10K/year in Home Improvements/Repairs & Maint.

## Comparable Rental

★ \$2200 / 5br - 3450ft<sup>2</sup> - Gorgeous 5 bedroom Home for Rent in



5BR / 3Ba 3450ft<sup>2</sup> available oct 01

house

attached garage

**Houses for rent that are comparable in size and location go from between \$2,200 and \$2,500.**

**I chose to go with the low end.**

The math on the cost of use for a rental is rather easy, since you really don't have to take into consideration property taxes, home improvement costs, repairs, and income tax benefits. In this example, it is also assumed that costs for things like utilities and landscaping are comparable and paid by the tenant.

Year	Cost of Use	COU/Year	COU/Mon
1	\$ 26,400	\$ 26,400	\$ 2,200
2	\$ 52,800	\$ 26,400	\$ 2,200
3	\$ 79,200	\$ 26,400	\$ 2,200
4	\$ 105,600	\$ 26,400	\$ 2,200
5	\$ 132,000	\$ 26,400	\$ 2,200
6	\$ 158,400	\$ 26,400	\$ 2,200
7	\$ 184,800	\$ 26,400	\$ 2,200
8	\$ 211,200	\$ 26,400	\$ 2,200
9	\$ 237,600	\$ 26,400	\$ 2,200
10	\$ 264,000	\$ 26,400	\$ 2,200

*Notes: Cost of Use is Cumulative, COU/Year is an average, COU/Mon is an average.*

As you have noticed from the schedule above, I have kept the rent flat at \$2,200/month with no assumed increases. In the real world I think we can all agree that this is highly unlikely that the rent would stay flat. Here is what it looks like when we assume an average increase of 3% a year (again the average long term rate of inflation).

Year	Cost of Use	COU/Year	COU/Mon
1	\$ 26,400	\$ 26,400	\$ 2,200
2	\$ 53,592	\$ 26,796	\$ 2,266
3	\$ 81,600	\$ 27,200	\$ 2,334
4	\$ 110,448	\$ 27,612	\$ 2,404
5	\$ 140,161	\$ 28,032	\$ 2,476
6	\$ 170,766	\$ 28,461	\$ 2,550
7	\$ 202,289	\$ 28,898	\$ 2,627
8	\$ 234,758	\$ 29,345	\$ 2,706
9	\$ 268,200	\$ 29,800	\$ 2,787
10	\$ 302,646	\$ 30,265	\$ 2,871

*Notes: Cost of Use is Cumulative, COU/Year is an average, COU/Mon is an average.*

Over the course of 10 years we would incur \$38,646 in additional rental expenses related to an annual 3% rent increase (\$302,646 - \$264,000 = \$38,646).

Wow! That is a lot of money to be spending on rent. But before we draw any conclusions, let's compare this to buying a similar home.

## The Numbers on the House We Bought



Thank you Google Street View!!!

The math for the purchase of a home does get a bit more involved because of more moving pieces that an owner has to deal with like property taxes, maintenance, home improvements, etc. But that is what all those assumptions were for at the beginning of this post. I would like to point out assumption number 8 above, that states that we currently have no intention to sell the house, therefore we are not factoring in any agent commission (which would run about 5% of the sales price) at the end of our 10 year horizon. We are actually planning to turn it into a rental if it makes sense. Even so, it only adds a couple hundred bucks to the monthly cost of use (\$884 jumps to \$1,094).

**Let's take a look at the numbers:**

Year	Purchase Price	Sales Price	Improvements	Interest Exp	Property Taxes	Tax Savings	Cost of Use	COU/Year	COU/Mon
1	\$ 376,000	\$ 387,280	\$ 10,000	\$ 12,786	\$ 7,114	\$ (5,970)	\$ 12,650	\$ 12,650	\$ 1,054
2	\$ 376,000	\$ 398,898	\$ 10,000	\$ 12,538	\$ 7,256	\$ (5,938)	\$ 24,887	\$ 12,443	\$ 1,037
3	\$ 376,000	\$ 410,865	\$ 10,000	\$ 12,281	\$ 7,401	\$ (5,905)	\$ 36,697	\$ 12,232	\$ 1,019
4	\$ 376,000	\$ 423,191	\$ 10,000	\$ 12,015	\$ 7,549	\$ (5,869)	\$ 48,066	\$ 12,016	\$ 1,001
5	\$ 376,000	\$ 435,887	\$ 10,000	\$ 11,738	\$ 7,700	\$ (5,831)	\$ 58,977	\$ 11,795	\$ 983
6	\$ 376,000	\$ 448,964	\$ 10,000	\$ 11,451	\$ 7,854	\$ (5,792)	\$ 69,414	\$ 11,569	\$ 964
7	\$ 376,000	\$ 462,433	\$ 10,000	\$ 11,154	\$ 8,011	\$ (5,749)	\$ 79,360	\$ 11,337	\$ 945
8	\$ 376,000	\$ 476,306	\$ 10,000	\$ 10,845	\$ 8,171	\$ (5,705)	\$ 88,798	\$ 11,100	\$ 925
9	\$ 376,000	\$ 490,595	\$ 10,000	\$ 10,525	\$ 8,335	\$ (5,658)	\$ 97,711	\$ 10,857	\$ 905
10	\$ 376,000	\$ 505,313	\$ 10,000	\$ 10,193	\$ 8,501	\$ (5,608)	\$ 106,079	\$ 10,608	\$ 884

*Notes: Cost of Use is Cumulative, COU/Year is an average, COU/Mon is an average. Sales price is equivalent to market value.*

Now that really puts the \$302,646 in to context, doesn't it? Even after spending \$100,000 in improvements/repairs, \$115,525 in interest expense, and \$77,891 in property taxes renting still cost almost 3X more over a 10 year period.

I should point out that the COU in this example is calculated by the following formula [Sales Price - Purchase Price - Improvements - Interest Exp - Property Taxes + Tax Savings]. The idea behind this, is that in the owning scenario, you have actually built up equity in an asset. In the event of a sale, you would capture a lot of the costs that you paid for housing.

One thing this doesn't really compare is the actual cash flow during the 10 year period.

## Cash Flow Comparison

As you could imagine the first year of home ownership is going to require substantially more in terms of cash flow when you factor in a down payment and the closing costs of buying a home. In the example below \$21,000 is the total for our down payment and closing costs.

Buy Home			
Year	Cash Flow	CF/Year	CF/Month
1	\$ 48,516	\$ 48,516	\$ 4,043
2	\$ 76,034	\$ 27,518	\$ 2,293
3	\$ 103,556	\$ 27,521	\$ 2,293
4	\$ 131,080	\$ 27,524	\$ 2,294
5	\$ 158,607	\$ 27,527	\$ 2,294
6	\$ 186,138	\$ 27,531	\$ 2,294
7	\$ 213,672	\$ 27,534	\$ 2,295
8	\$ 241,210	\$ 27,538	\$ 2,295
9	\$ 268,752	\$ 27,542	\$ 2,295
10	\$ 296,298	\$ 27,546	\$ 2,295

Rent Home		
Cash Flow	CF/Year	CF/Month
\$ 26,400	\$26,400	\$ 2,200
\$ 53,592	\$27,192	\$ 2,266
\$ 81,600	\$28,008	\$ 2,334
\$ 110,448	\$28,848	\$ 2,404
\$ 140,161	\$29,713	\$ 2,476
\$ 170,766	\$30,605	\$ 2,550
\$ 202,289	\$31,523	\$ 2,627
\$ 234,758	\$32,469	\$ 2,706
\$ 268,200	\$33,443	\$ 2,787
\$ 302,646	\$34,446	\$ 2,871

Overall the cash flow out over the 10 year period for buying a house in our example is \$6,348 cheaper than renting a similar house (it's probably even a bigger gap if you include the increased taxes the renter is likely to pay without the deduction for interest and property taxes, assuming they don't have the equivalent deductions elsewhere). Besides the first year with the down payment and closing costs, buying a house comes with a lower cash flow out, and that gap in cash flow between buying vs. renting continues to widen over time (assuming a fixed interest rate).

I will admit that although cash flow is important it was not something we even considered when buying the house. Because we bought a house that was half as much as the bank said we could afford, cash flow was not really an issue based on our income. But I wanted to point it out because I know cash flow is an important consideration and because this community is so smart, I wanted to get ahead of that question.

## Conclusions

I think we all knew that from a cash flow perspective that the first 1-3 years was likely going to require a higher cash flow out in the buy scenario then in the rent scenario. But to some it may be surprising that the cash flow over the 10 year period for buying vs. renting is actually less. That is one of the other added benefits of buying a house, you have the opportunity to "Fix" your housing expenses. I put fix in quotations because you still have property taxes that can adjust with the market value of your house and of course, the home improvement costs can be variable as well.

Personally, when looking at the buy vs. rent question I prefer to use Cost of Use. Especially if you follow the rule of buying less house than you can afford. When you buy less house than you can afford, cash flow shouldn't really be an issue (I recommend buying 50% of what the bank says you can afford). If you look at the average COU/month it is about 69% cheaper to buy vs. own (\$884 vs. \$2,871).

Every situation is unique and I urge you to run your own numbers.

But in this case I say **BUY, BUY, BUY, UNTIL YOU'RE BLUE IN THE FACE!!!**

If you are a numbers and spreadsheet junkie like me than you would immediately realize how fun it would be to set up this same Cost of Use analysis up for other big purchases in your life. Like a car perhaps? Or what about a hot tub (I mention it since we recently bought one)?

*What say you intelligent readers? Do you like the concept of Cost of Use? How do you decide whether it is better to buy vs. rent?*

-Gen Y Finance Guy

p.s. In the example I used a comparable house in the neighborhood from which we purchased our home. I also took the low end of the rental market to be conservative in this analysis. However, in reality, when were actually making this decision we were living in a different market all together [paying \\$3,100/month in rent](#). It made this move and purchase a no brainer. But I wanted to use a real example to convey the concept of Cost of Use.



**Gen Y Finance Guy**

**Hey, I'm Dom** - the man behind the cartoon. You'll notice that I sign off as "Gen Y Finance Guy" on all my posts, due to the fact that I write this blog anonymously (at least for now). I like to think of myself as the *Chief Freedom Officer* here of my little corner of the internet. In the real world, I'm a 30-something former C-Suite

executive turned entrepreneur turned capital allocator. I am trying to humanize finance by sharing my own journey to Financial Freedom. I believe in total *honesty* and *transparency*. That is why before I ever started blogging, I decided that I would share all of my own [financial stats](#). I do this not to brag, but instead to inspire motivate, and also to hold myself accountable. My goal is to be a beacon of hope, motivation, and inspiration for *you*, the reader, by living life by example and sharing it **all** here on the blog. My sincere hope is that you will be able to learn from me - both from my successes and my failures! [Read More](#)