

House Purchase Case Study

This is a case study I worked up to see whether owning a house is indeed a better strategy than renting. The outcome will vary according to the assumptions made, of course. This case study presents only one house price, one mortgage rate, and one interest rate on money invested.

-- Paula B.

Assumptions

Purchase price: \$500,000

Purchase terms: 20% down (\$100,000). \$400,000 30-year fixed interest rate 5% loan.

Monthly/yearly payments: \$2147.29/\$25,767.48

Monthly/yearly property tax: \$520.83/\$6250

Property tax rate: 1.25% per year (with assessment increasing each year). This is the California rate.

Rate of appreciation: Value of house increases at 3% per year compounded annually. This is the historically normal house appreciation rate. The double-digit increases of the last decade are anomalous; they are not expected to return.

If you own the house for 30 years

Interest paid over 30 years: \$373,023.14.

Property tax over 30 years, not allowing for increases in assessed value: \$187,500

Lost interest on your down payment of \$100,000 over 30 years (assume 5%): \$332,194.24

If you own the house for the full thirty years, you have paid:

\$873,023.14 for the house

\$187,500.00 in property tax (more, really)

\$332,194.24 in lost interest

Total paid over 30 years: \$1,392,717, not including maintenance (that's \$46,424 per year).

Appreciated value at 3% per year: \$1,213,631—less than you've spent. If you never sell this house, you never get that money back.

If you sell after five years

What you've paid

If you sell after five years, you've paid \$94,619 in interest and \$32,068 in principal for a total of \$126,687. You've also paid \$31,250 in property tax. Without maintenance, you've spent \$157,937.

What you'd get for your house

Assuming 3% per year appreciation on the property, you'd get \$579,637, a profit of \$79,637. However, let's subtract your selling costs:

Principal: \$367,932

Commission 6%: \$34,778

Closing costs: \$10,000

Moving: \$2000

Total: \$414,710

You paid more than you sold the house for

Add interest and property tax paid to the total, and it's cost you \$572,647 to live in that house, not counting maintenance, insurance, and increases in property tax. But wait—there's lost interest on your down payment, which comes to another \$27,628, **so it's actually cost you \$600,275 to own this house—more than your selling price of \$579,637.**

If you sell after ten years

What you've paid

If you sell after ten years, you've paid \$181,682 in interest and \$73,839 in principal for a total of \$255,521. You've also paid \$62,500 in property tax. Without maintenance, you've spent \$318,021.

What you'd get for your house

Assuming 3% per year appreciation, you'd get \$671,958, a profit of \$171,958. However, let's subtract your selling costs:

Principal: \$326,169

Commission: \$40,317

Closing costs: \$10,000

Moving: \$2000

Total: \$378,486

You paid more than you sold the house for

Add interest and property tax to the total, and it's cost you \$622,668 to live in the house, not counting maintenance, insurance, and increases in property tax. Add in the lost interest on your down payment (\$62,889), and **it's cost you \$685,557 to own this house—again more than your selling price of \$671,958.**

You have not made a profit on this house.

Renting

Let's contrast these numbers with the alternative: renting.

Let's say you rent for 5 years at an average rent of \$2500 per month (\$30,000 per year). At the end of that time, you will have paid \$150,000. But your \$100,000 will have been earning compound interest in the bank, and you will have made \$27,628. Subtract that from your rent and you've paid **\$122,372**, or \$24,474 per year (roughly \$2000 per month). Contrast that with the **\$157,937** you paid to own the house.

If you rent for 10 years at an average rent of \$3000 per month (\$36,000 per year) you will have paid \$360,000, but your \$100,000 will have made \$62,889, so you will have a net outgoing of **\$297,111**, or \$29,711 per year, or about \$2475 per month. Contrast that with the **\$318,021** you paid to own the house.

Don't forget when contrasting renting with owning a house that even though it seems like you've paid a lot of money to your landlord, not only have you been making compound interest on the \$100,000 you haven't put down on the house: you also still have the \$100,000!

Remarks

I did not take the mortgage interest/property tax deduction into account when calculating the benefit of owning a house because 1) It's too complicated for me to figure out, and 2) Everyone is in a different situation. Allowing for the deduction does make owning a house a bit more financially attractive than my figures suggest.

If the return on your savings is higher than the interest rate on your mortgage, you're doing better than most people have been able to achieve. If you can do this, owning a home is more attractive than my figures suggest. However, history shows that usually you pay a higher rate of interest on your mortgage than you make on your savings and other investments. If that's true, and it usually is, my figures exaggerate the benefit of owning a house.