Berkeley Investment Advisors

Real Estate Brokerage/Retirement Planning

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Managing Home Equity to Build Wealth - Part I

One of my goals as an investment advisor is to help my clients maximize growth of their capital while controlling risk so that they can retire early and well. Because home equity constitutes such a major part of peoples' capital, management of this capital is essential to managing financial risk and achieving long term goals. Therefore this month's newsletter begins a series about managing home equity to build wealth and reduce risks.

Many if not most people aspire to owning their home outright with no mortgage payments to make. Conventional wisdom is that debt is bad and should be paid off as soon as possible. As is often the case with financial matters, conventional wisdom is wrong. This newsletter explains why debt is good and demonstrates the benefits of reducing home equity using mortgage debt.

Taxes

In analyzing any financial decision, we must take into account taxes if we want to come up with the right answer. We only get to spend money after paying taxes and therefore this is the only measure that makes sense when evaluating financial decisions. Mortgage interest is generally tax deductible; the resulting reduction in taxes payable reduces the effective interest rate we pay. In effect, the government subsidizes our interest payments by reducing our taxes. The actual effect depends upon our marginal tax rate. This is not your overall tax rate (average). Rather it is the tax rate paid on last part of your taxable income.

For example, if a married couple has taxable income of $100,000 in California, their marginal combined state and federal marginal tax rate is 32%. For every dollar of interest paid, they receive $.32 back in the form of tax relief. Thus the after-tax cost of the mortgage is 6% * (1 - .32) = 4.08%. Principal payments are not deductible from taxes – you bear the full cost.

Likewise, when evaluating alternative investments we must estimate returns on an after-tax basis in order to compare the various possible uses for cash in a meaningful way. Note that investments in bonds or bank certificates of deposit are taxed at the same ordinary marginal tax rates as apply when deducting mortgage interest but investments in stocks incur taxes at the lower rates on dividends and capital gains.

Mortgage Principal Payment as a (low yield) Investment

The "debt is bad" mentality leads people to take out mortgages that require principal payments during the term and then to prepay principal when extra cash is available. When they do this, they save on interest payments and this seems like a good thing. But how good is it? In order to answer this question you need to shift your thinking a bit and realize that paying off principal is financially equivalent to investing in a bond whose interest rate and payments correspond to the mortgage. For example if your mortgage has an interest rate of 6% then principal payments earn 6% before taxes and a lower rate after tax (4.08% if your marginal tax rate is 32% as in the example above). This is a bit better than a certificate of deposit but, compared to the full range of investment possibilities, it is a low yield investment. What about risk? At first glance the reduction in loan balance (which increases home equity) looks risk free. This is not correct. If the mortgage is ever foreclosed, this equity buildup will be lost. Later we will discuss this further.

This analogy of the mortgage as an investment applies equally to decisions about how large a mortgage to take out in the first place – either at purchase or when refinancing.

Alternative Investment Returns and Risks

If we do not use our money to "invest" in our mortgage, we can use it to invest in various other types of investment. Clearly there is a whole range of risk that one could take on in pursuit of higher returns. Treasury yields are about 4.80% pre-tax and 3.6% after tax (no state taxes apply). A low risk portfolio of equity income securities could yield 6.95% before tax and 5.35% after tax. Over the long run, we can reasonably expect to earn after-tax returns of 8% with a conservatively managed stock portfolio. (Our Long Term Value Portfolio, which is rather conservative, is up more than 50% over the last 2 years). As I will illustrate later, these differences really do matter when they compound over a long enough period.

Liquidity

As important as increased returns are to your wealth, liquidity can be even more important. By this I mean having the ability to use cash as needed to cope with unexpected expenses or drops in income. (It is also useful when an amazing investment opportunity comes along). When you make a large down payment and/or use excess cash to pay down principal faster, you are converting a liquid asset (cash) into an illiquid asset (equity). Sometimes this may be partially offset using an equity line of credit. But this is not really the same as having cash because the line of credit can be reduced or even withdrawn completely due to a drop in the house's value or a drop in your income (i.e. just when you need to borrow most). A recession that causes a drop in income can simultaneously reduce home values - thus reducing cash available from equity credit lines just when the liquidity is needed most. In contrast, investments in liquid securities provide the safety of instant conversion to cash regardless of your employment or home value.

Safety

Most people consider the equity in their home as a safe asset, meaning there is low risk of losing it. The truth is that the safety of this asset is strongly related to its liquidity or lack thereof. If times are difficult and you cannot make your mortgage payments, you will need to sell your house to avoid losing all your equity to a bank foreclosure. If others are in similar situations, home prices may be driven down just when you need to sell – thus destroying your "safe" asset. Equity is really only "safe" when you have sufficient liquid assets to avoid payment difficulties for as long as troubled times may last. This means investing your excess cash in liquid securities rather than debt repayment.

Ironically the more equity you have in your home, the less safe it becomes. This is because a large amount of equity increases the likelihood of a bank foreclosing when you don't make your payments. The bank will not hesitate to foreclose a property where they can be sure to make a profit on resale. On the other hand if there is barely enough equity to cover sales costs, the bank will have an incentive to work with the borrower to help them keep their house and stay to pay the mortgage later.

Case Studies

Let's compare two brothers with identical income and $160,000 in savings buying identical houses for $800,000 at the same time. Brother A follows conventional wisdom and seeks to eliminate his mortgage debt as quickly as possible. He does this by using all his savings for the down payment, by taking out a 15 year fully amortizing loan, and by using his monthly savings to prepay mortgage principal. Brother B follows an opposite course to maximize his mortgage debt and minimize capital tied up in the house. His makes a down payment of just $40,000 (5% of value) and takes out a 30 year interest only loan so he doesn't need to make any principal payments. He invests all his excess cash in a conservative portfolio of stocks.

The 15 year amortizing mortgage can be had at a rate of 5.90% while the interest only loan rate will be 6.90%. These two strategies lead to differences in taxes because brother B has higher interest expenses and therefore more tax savings. In order to make things strictly comparable, we assume that each brother starts with a monthly budget of $4,800 for mortgage and investing and that this amount rises 3% each year. Brother A uses any extra cash to prepay principal; in the first month this is $441. Meanwhile brother B uses all cash left over after making his mortgage payment (net of tax savings), to invest in his stock portfolio. As in the tax section above, we assume each brother pays a marginal tax rate of 32% so that the tax benefit of each extra dollar of interest expense is $.32.

Let's compare their situations at the purchase date:

Time: At Purchase	**Brother A**	**Brother B**
Equity	160,000	40,000
Liquid Investments	0	120,000
Net Worth	160,000	160,000
Monthly Payment	5,366	4,370
Monthly Tax Savings	1,007	1,398
Payment net of tax	4,359	2,972
Monthly investment earnings	0	772

Note that brother A has no available savings to tide him over in case he loses his job or has unexpected expenses. Brother B has sufficient savings to make his payments for years. Also note that the tax benefit advantage for brother B is $391 per month and this will rise as brother A pays down his principal.

Going forward brother A is using all his cash to reduce principal; i.e., he is investing in his mortgage with an after-tax return of 4.01%[1]. In contrast, brother B is investing his excess cash in his stock portfolio each month. His excess cash is equal to the amount his brother is using to prepay his mortgage plus the after-tax loan payment difference of $1,387. The stock portfolio is earning 8% after-tax, roughly double the "return on the mortgage "investment" of brother A.

Now, let's compare the brothers' financial situations 11 years after purchase. We'll ignore changes in the house's value since this benefits both brothers equally.

Time: 11 Years Later	**Brother A**	**Brother B**
Mortgage Remaining	79,693	760,000
Liquid Investments	0	795,707
Cumulative Tax Savings	83,512	184,591
Monthly Tax Savings	135	1,398
Payment net of tax	5,231	2,972
Monthly investment earnings	0	5,065

While brother A has almost paid off his mortgage, brother B is clearly in a much better financial position. His investment balance exceeds his mortgage so he could pay it off at any time if he wanted to. He doesn't pay it off because he doesn't want to lose the tax benefits or the investment income that now exceeds his net

[1] Calculated as (100% - 32%) * 5.90% = 4.01%

mortgage payment by $2,093 per month. It is worth noting once again that a job loss would put the lie to the safety of brother A's equity. He would have a few months to sell his house or lose it to foreclosure since he has no savings and he would not be able to get a new loan without a job or cash reserves. Currently the average time on the market in many parts of the U.S. exceeds 8 months. In such an environment, brother A could easily be forced to sell at a substantial discount or possibly lose everything in a foreclosure. Brother B would not be bothered by a job loss at all: his investment earnings exceed his mortgage payment.

In reality the houses are appreciating and brother B can increase the speed of capital growth even further by refinancing. Let us suppose that the house appreciates 3% per year and that brother B refinances at the 11 year point to pull out 95% of value as cash to invest in his portfolio. Meanwhile brother A will finish paying off his mortgage in year 13 and start building his own investment portfolio. Here's how things look after a full 30 years.

Time: 30 Years Later	**Brother A**	**Brother B**
Home Equity	1,941,810	889,810
Liquid Investments	1,921,268	6,740,128
Net Worth	3,863,078	7,629,938
Cumulative Tax Savings	84,350	625,924
Payment net of tax	0	4,113
Monthly investment earnings	12,289	43,043

Brother B has not only increased safety and liquidity but he comes out way ahead in terminal wealth – roughly double the amount of brother A. Even after paying his monthly mortgage payment, his investment earnings are three times those of brother A. In the end brother B has more income to live on in retirement and more assets to pass on to his heirs.

Conclusion

Rules of thumb passed down by our parents are sometimes just wrong when it comes to financial management. Mortgage debt is useful for building wealth for retirement and, contrary to our intuition, can decrease our risk by allowing our savings to be kept in liquid form to guard against financial trouble. Berkeley Investment Advisors can help analyze these types of decisions and show you how to invest long term in a conservative portfolio that will significantly outperform an "investment" in paying off your mortgage.

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