

## **Ruminations on Paying Off the Mortgage**

Whether considering immediately paying off a million-dollar mortgage from a portfolio or simply adding an extra \$100 per month to the mortgage payment, the issue is the same. In both cases, the funds could either be invested or be used to reduce the mortgage, in effect “earning” the applicable interest rate. The easy answer here is, “Keep your mortgage...you’ll get a higher return on a larger portfolio,” but it isn’t that simple.

Note that we are not addressing real estate exposure. The actual exposure to real estate is identical in both cases unless defaulting on the debt is an option, and this decision merely affects the financing. To clarify, imagine that instead of having a mortgage, there is debt identical in every way but unsecured – the real estate exposure is unchanged.

### **Analytical Perspective**

At its root, the question involves the asset allocation. Reducing the mortgage is effectively the same as purchasing bonds (technically it is a reduction in a short bond position). Conversely, taking out or increasing a mortgage is, in effect, issuing bonds. If the overall asset allocation already includes exposure to fixed income (as almost every portfolio does), what is the optimal way to determine that allocation?

Suppose Pat has a portfolio of \$1 million allocated 60/40 to stocks and bonds, along with a \$200,000 mortgage. Pat thus has \$600,000 exposed to equities. But while there is \$400,000 long in fixed income, there is also \$200,000 short in fixed income via the mortgage, for a net of \$200,000. So, although the investment portfolio has a 60/40 mix, the allocation is 75/25 when looked at from a broader perspective.

Worse, people are frequently paying on the spread. The long rate (bonds) is lower than the short rate (mortgage). When most people pay off the mortgage, what they really do is adopt a more conservative asset allocation.

When determining whether to pay off the mortgage, it is important to keep the desired aggregate asset allocation unchanged. The asset allocation should have been determined earlier in the planning process. In addition, the comparison should be with the rate of return on Treasury bonds with similar duration.

This calculation may seem strange at first. But remember that a mortgage, although risky to the issuer, is a risk-free opportunity for the investor. If Pat pays off the mortgage, Pat is guaranteed to save the interest that would have been paid. Also, the duration of the mortgage is shorter than the duration of a bond with the same maturity since a portion of each payment is principal in the case of the mortgage. For simplicity, the yield on a 10-year Treasury will generally be close enough in duration to a 30-year mortgage for comparison.

Tax considerations, *if the taxpayer itemizes* even without the mortgage, are not relevant. If Pat has a mortgage at 6%, and is in the 25% tax bracket, the after-tax cost is 4.5%. For a bond yielding 6%, the after-tax return would also be 4.5%. If Pat does *not* itemize however, the comparison is 6% cost for the mortgage vs. 4.5% on the bond investment. Paying down the mortgage is clearly a superior option.

## Psychological Perspective

The emotional implications of the mortgage-payoff decision are equally important. How an individual *feels* about having a mortgage is significant, yet more difficult to quantify. Many people are happy to be debt-free; others might feel a little diminished because their portfolio was correspondingly smaller. (Those feelings seem to break a little on gender lines – on average, not in every case.) There are a few other issues too.

*Perceived volatility.* If an investor pays off the mortgage yet keeps the global asset allocation unchanged (reducing fixed-income exposure by the same amount as the mortgage payoff), the portfolio will appear riskier even though the total risk has not changed. This is a problem; people do not intuitively grasp that while the portfolio appears more volatile, the volatility of their net worth is unchanged.

Going back to our earlier example, Pat, with a 60/40 portfolio now has a 75/25 portfolio though the aggregate asset allocation has not changed. Since investment portfolios (but not mortgages) are “marked to market,” the position will probably feel more precarious. For people who anxiously examine every monthly statement, this shift could be an important factor in the payoff decision.

Some people will react to the increased portfolio volatility by panicking in poor equity markets and improperly reducing their exposure to stocks. Others may feel more secure knowing that, no matter what happens, they have their home paid for and will be more willing and able to tolerate volatility and an appropriate equity exposure.

*Propensity to save.* People may feel poorer after reducing their portfolios to pay off the mortgage, and be motivated to save to get their portfolio back to where it was. But more often people with larger portfolios become more motivated to save. (The causality runs both ways. People with higher propensity to save have larger portfolios, obviously. But seeing a portfolio grow also *creates* a higher propensity to save, which is why retirement plan contributions increase in bull markets and decrease in bear markets even though, rationally, the reverse should be true.)

More significant is the fact that an individual without a mortgage must still save the amount of the mortgage payment to remain in the same financial position. Thus, a mortgage is a type of forced savings plan. If the person simply spends the monthly amount that was previously being spent on the mortgage, the savings rate has effectively declined. For example, in one real-life case, while the investor understands this analysis perfectly, he prefers to keep a relatively large mortgage to restrain household spending.

## Other Issues

There are several other issues that may influence this decision too.

First, investors should almost never take funds from tax-advantaged (i.e. retirement) accounts to pay off the mortgage. They should also maximize their contributions to these accounts before increasing their mortgage payments to pay down principal.

Second, an individual with a great deal of inflation risk (such as a retiree with a very large pension that has no COLA) may be well served by a long-term, fixed-rate mortgage to function as an inflation hedge.

Third, paying off, or down, a mortgage reduces liquidity. Taking out a HELOC (Home Equity Line Of Credit) can mitigate this.

Fourth, a minister who needs housing expenses to preserve the tax-free treatment of the housing allowance should probably keep a mortgage.

Finally, most financial advisers have a conflict of interest in giving advice on this issue and should fully disclose that conflict. Advisers, whether they receive commissions on investment transactions, or fees for assets under management, will reduce their compensation by recommending the mortgage be paid off from the assets in the portfolio. The reduction in fees, in my opinion, is eliminated in the long run as the adviser gains a reputation for doing the right thing regardless of the personal cost and thereby garners more than enough business to compensate for losing managed assets initially.

To recap, the traditional advice to keep the mortgage and collect a higher return from the portfolio is too simplistic; it compares a risk-free return with a risky return. Reducing the portfolio by paying off the mortgage is usually the correct answer from an analytical perspective because the rate of return on the mortgage is frequently (though not always) higher than the equivalent fixed-income investment opportunity. However, psychological considerations and other considerations are important.

#### **Notes:**

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