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Should You Pay Off Your Mortgage or Hold Stocks?

By Gil Hanoch, February 1, 2008

Updated February, 2011

The previous article, "When should you own your Home?" (Hanoch, December 2007) provides guidelines for determining if you can afford owning a home. The next step is to determine the size of mortgage you should take.

After putting a down payment that the lender required, you may be left with extra money. You have to decide whether to use it to pay off some of the mortgage or put it in an alternative investment. This article discusses the option of investing the excess in the stock market.

You may view this option as: (1) paying off the mortgage no faster than the required pace or (2) borrowing to invest – both statements are correct. Whatever your perspective, having a large loan combined with stock investments has led many to lose their homes and declare bankruptcies. This is the result of counting on the stock investment to grow enough to help pay the interest on the loan, while in reality the investment can decline in value for many years. When combined with a loss of job for an extended period, the results can be devastating.

You should be very careful, and review important requirements for considering this idea:

1. **Conservative stock investing: Diversification, No stock picking, No market timing**. Most investors (including professional money managers) underperform the S&P 500 (10.5% in the long run), due to concentration in certain stocks or asset classes, stock picking and/or trying to avoid decline periods. In many cases, they underperform their mortgage rates, resulting in high risk combined with negative returns.

   In order to limit the decline periods of your portfolio, you have to diversify it globally, and include large and small stocks. You should avoid trying to predict which stocks will go up or when the portfolio will go up. Stay diversified using passive investments like index funds and hold onto them for the long run. This is true for any stock investor, but an absolute must when you have a mortgage to pay – you should not gamble with borrowed money.

   Note that stock diversification reduces risks without reducing returns. You cannot use bonds or any other low return investment for risk reduction, because it will reduce your overall returns, significantly increasing the risk of underperforming your mortgage rate in the long run.

   To be clear, you should have some money in bonds or money market, to carry you through recessions, but not as part of a long-term investment.

2. **Be prepared for a very bad combination of events**: Make sure that you can handle many things going wrong at once, including no less than the following:

   a. **Extended loss of your ongoing sources of income**: Losing your job or clients from your business for a long period, during a severe recession.

   b. **Extended decline of your stock portfolio**: A decline of your stock portfolio, longer than all declines in recent decades (for Long-Term Component: nearly 3-years; for the S&P 500: 6 years; with stock picking or market timing: 10 or more years).

   c. **Rising interest rates**: A significant increase in the interest on your variable-rate mortgage. As mentioned in the previous article, you should be prepared for a prime rate of no less than 8%-9%. Alternatively, stick with fixed rate mortgages.

d. **Real estate recession**: A very long real estate recession. Property values have declined for a full 10 years before recovering their peak value, as recently as the 90's in many places. Be prepared for even longer declines. This means that you will not be able to refinance your loan to get a higher mortgage, lower interest rate, or fix the rate on the loan.

e. **Unexpected costs**: A large combination of the following occurring at once: All home expenses not covered by your insurance, like home damage from earthquakes, floods or ongoing repairs like a roof replacement. All deductibles for insurance, including homeowner's, health, car, etc. Car repairs and replacements. Uncovered medical expenses, including long-term care (or consider long-term care insurance).

Make sure you can handle the above events occurring at once, as unlikely as it may seem to you. You should be able to handle the events in two ways:

a. **Financially**: Make sure you can handle your ongoing living expenses when a combination of the events above occurs.

b. **Emotionally**: Make sure you are unshakably confident about your stock investments, so you will never even consider selling your investments at a decline unless you have no other financial choice. If you stick to the conservative investment approach presented above, you have a good reason for being confident.

If the requirements above seem too harsh, you might be getting yourself into trouble. When borrowing to invest you choose to take certain risks in hopes for increased long-term returns. If you are not prepared for everything that can go wrong on the way, you might end up with much lower returns and even face bankruptcy. This would be very unfortunate since you *chose* to take the risks – you were not forced into the situation.

A Tradeoff. Note that there is a clear tradeoff between paying off a mortgage and continuing to carry it while investing the excess in a stock portfolio. The following table summarizes it:

Option	**Short-Term Security**	**Long-Term Security**
Pay off mortgage	**Higher Short-Term Security**: lower mortgage payments	**Lower Long-Term Security**: forgone growth of stocks beyond interest on mortgage
Invest in stock market	**Lower Short-Term Security**: higher mortgage payments	**Higher Long-Term Security**: extra stock growth minus mortgage interest

Example 1a. John has $4,000,000 in savings and qualifies to purchase a $1,000,000 home with 100% mortgage based on his assets. He is retired, and has only social security income.

He requested that his broker balance his current financial security with future growth, since he is 65 and wants to prepare for the possibility of a long life. His money is invested as follows: 60% in selected high quality Large US stocks and 40% in Bonds.

Low Potential Returns: Since his stock investments are concentrated in Large US stocks, his risk level is very high. This is exaggerated by the stocks being actively selected. The bonds reduce the volatility of his portfolio, but also reduce the long-term returns. He pays high fees for an actively managed portfolio (could be 2%-4% or more). Based on this information, we can expect his long-term returns to be 5%-8% at best. Since this is just about what he would pay on mortgage interest, there is no potential long-term gain on holding a mortgage.

Conclusion: Given the low potential returns, despite his high financial means, he should buy the house with cash (no mortgage).

Example 1b. See example 1a + John realizes that his actively managed, concentrated investments, are too risky for him. He decides to diversify them globally, and eliminate the risks and costs of active stock selection by focusing on index funds. Whenever a severe decline is expected, he can shift some of his investments to more conservative places like the virtually risk-free government bonds.

A simulation of his portfolio returns going back to 1970 results in annual growth of 17%, while he qualifies for a 30 year fixed mortgage at 7%. He also learns that he can conservatively withdraw 4% annually without a real risk to the long-term viability of his investments.

> **High Potential Returns**: Since this long-term return is significantly higher than the interest rate he might pay on a mortgage, he has the potential for significant gains by not paying off his mortgage. Specifically, on a $1,000,000 mortgage, he can make (17% - 7%) x $1,000,000 = $100,000 per year to supplement his social security income.
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> **Low Financial Risk**: His $4,000,000 savings can supply him with $200,000 income per year (at a conservative 4% withdrawal rate), enough to cover his full mortgage payments, property taxes, repairs and other living expenses.
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> **High Investment Risk**: When stating that he is open to shifting some of his investments to bonds when a decline is expected, he intends to engage in market timing. He would change his investment strategy based on predictions of future returns. When wrong, he would miss out on growth periods, and reach lower lows during declines with higher overall risk.
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> **Conclusion**: Despite his excellent financial situation and globally diversified indexed investment, he chose to incur the risk of timing the market. In this case, he should still buy the house with cash.

Example 1c. See example 1b + John understand the risks of any type of market timing. He decides to have a written investment plan and to stick to it at all times. Knowing that he might not be strong enough at times of financial turmoil and severe recessions, he uses the services of an investment advisor that specializes in disciplined investing.

> **High Potential Returns**: See example 1b.
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> **Low Financial Risk**: See example 1b.
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> **Low Investment Risk**: By holding globally diversified investments during all recessions, and sticking to the plan with a low withdrawal rate, he is likely to recover future severe recessions.
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> **Conclusion**: With the combination of high potential returns, low risks and discipline, John should maximize his mortgage loan and enjoy extra potential income of $100,000 per year.

Example 2. Mary is 45 years old and works as the CEO of a public company. She has a private jet, 3 houses, a large yacht and clothes designed by top designers that are updated regularly to meet with recent trends. She tends to spend her $2,000,000 income (including salary and bonuses).

She is about to buy a $2,000,000 house and is committed to disciplined investing in a globally diversified portfolio, avoiding stock selection or market timing.

> **High Potential Returns**: See example 1b, resulting in $200,000 extra potential growth.
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> **High Financial Risk**: Mary has very high fixed costs for maintaining her private jet, 3 homes, yacht and designer clothes. Being a CEO, she can lose her job for many reasons well beyond her control, leaving her with very large fixed expenses and no income or liquid assets to cover them. After liquidating some of her assets, she might be miserable getting used to a much lower standard of living.
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> **Low Investment Risk**: See example 1c.
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> **Conclusion**: Despite the high potential returns and high income, Mary is already under great financial risk. She should avoid new mortgages, and consider significantly scaling back her spending until she has substantial savings to carry her through severe recessions without being so dependent on her job.

Example 3. Lisa is a 70 year old retired high school teacher, with pension payments to cover her expenses. She is currently renting, and would like to buy a $200,000 house. She has savings of $400,000 and can qualify for a 100% mortgage at 7% fixed interest. She is a disciplined investor, working with a written plan and committed to a globally diversified portfolio of index funds, held through all market cycles. Given her limited assets, she carries long-term care insurance, and other insurances to protect her from all common risks.

> **High Potential Returns**: See example 1b, resulting in $20,000 extra growth.
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> **Low Financial Risk**: Lisa has guaranteed pension payments to cover her expenses. Her $400,000 savings can supply her with $16,000 income per year (at a conservative 4% withdrawal rate), enough to cover her full mortgage payments, property taxes and repairs.
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> **Low Investment Risk**: See example 1c.
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> **Conclusion**: Lisa has low income and low assets for a retiree. But her expenses and house cost are also low. In fact low enough to allow her to take a 100% mortgage, enjoying an extra long-term growth of $20,000, to increase her financial security over the years and leave a larger inheritance to her children.

Disclaimer about the examples: Note that the examples demonstrate the ideas of this article, and do not represent a full analysis of each of the cases. A full analysis with a clear written plan should precede any of these investments.

Summary

Most people would do best if they paid off their mortgage as quickly as possible, other than maintaining reserves for recessions. This is true for many reasons, including: concentrated investments, risks of active stock selection or market timing, panic during recessions, and most importantly not having enough assets to carry them through severe recessions without a job.

If you are one of the rare people with iron discipline, investing responsibly and with enough assets to carry you through recessions, you can grow your financial security substantially by carrying a large mortgage and investing the proceeds, regardless of your age. When done right, your risk level should be lower than an investor with 60% Large US Stocks, 40% Bonds and no mortgage.

Due to the complexity of this activity, it is recommended to hire an investment advisor that has experience with the task and is very comfortable with it.