

**Letters to Mycroft #56:  
Interest Leverage  
by Klarise Yahya**

To My Dear Nephew Mycroft,

There are two kinds of leverage: Mortgage and Interest. Everyone understands the concept of Mortgage Leverage. It permits you to control an asset using at least *some* borrowed money.

If you put \$25,000 down on a \$100,000 purchase and borrow the difference, you are benefiting from \$75,000 of Other People's Money. If, at the end of the year, the property has appreciated \$10,000 (10%), that \$10,000 goes to you. It amounts to a 40% equity gain on the \$25,000 you've invested (\$10,000 divided by \$25,000).

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Flash forward several years. The property value has risen to \$300,000 and the mortgage is paid down to \$50,000. Assume the property again appreciates 10% that year to \$330,000. You've just made a \$30,000 equity gain on an accumulated equity of \$250,000 (\$300,000 minus existing mortgage of \$50,000). *Your equity has grown only 12% that year.* The more of your own money you have invested, the lower will be your Return on Investment (ROI).

That's one of the basic keys of Mortgage Leverage: *as your equity grows, your annual return on equity (ROI) erodes.* Eventually, you will have paid off the mortgage and own the building free and clear. Now, if it appreciates 10% you'll only make 10%. There is a time to own a building debt-free, but it is later in life when income becomes more important than growth.

The only way for your ROI to recover to earlier levels is to refinance your property. If, in the above example, you had refinanced and your loan was up to \$225,000 and your equity only \$75,000 you would have returned to making 40% equity gain that year. (Appreciation of \$30,000 divided by equity of \$75,000). Refinancing (using more Mortgage Leverage) works wonders on your ROI. It takes you back to the sweet spot.

Clearly, a basic investment rule is to arrange your affairs so your Return on Investment is as high as you can comfortably manage. While all sentient beings have been introduced to Mortgage Leverage, very few people have given even a thought to Interest Leverage.

Interest Leverage is either *positive* or *negative*. A simplified example of **negative** Interest Leverage would be where you borrow money at 6% and invest it at 4%. This most often happens when folks buy a house as a rental. There is a big negative cash flow, but they expect to eventually come out alright when they hope to sell the house for a much appreciated value in a couple of years.

**Positive** Interest Leverage is when you borrow money at 6% and invest it at 8%. You're making two percent on Other Peoples Money. Sounds pretty good, huh? In investment real estate, the opportunity to achieve Interest Leverage is very pleasing.

If you could buy a \$100,000 property at a true 8% cap rate, you would receive \$8,000 a year Net Operating Income (NOI). Assume you can mortgage \$75,000 of the purchase price at 6%. Your annual debt service is \$5,400 (rounded).

*Net Operating Income is the gross income minus all expenses (including reserves) necessary to operate and maintain the building. What it amounts to is that NOI is the money you could put in your purse if you owned the building free and clear.*

*To get the capitalization rate, simply divide NOI by purchase price. The cap rate is the yield (percentage return) you would make on the purchase if you paid all cash for the property.*

Subtract the \$5,400 from the property's \$8,000 net operating income and you find you'll be earning \$2,600 in cash flow on a your \$25,000 down payment. That's a little over 10% cash return on your investment.

Think about that. You buy a building at an 8% cap rate, pay for it with a 6% interest mortgage, and earn 10% cash on cash on your down payment. You are benefiting from Interest Leverage.

How can you tell if the times are suitable for Interest Leverage? You determine your Mortgage Constant (the abbreviation for this is "K"). Then you multiply K by your Loan to Value (LTV) ratio. Whatever number comes up, if you can purchase the building at a higher cap rate you will benefit from Interest Leverage. Nothing to it.

The Mortgage Constant is the Annual Debt Service divided by the remaining Loan Principal. With a hypothetical \$75,000 mortgage at 6% interest, the payments are about \$450 a month. That \$5,400 annual expense is divided by the loan balance of \$75,000 to find K of 7.2%. Really, all this means is that annual mortgage payments are 7.2% of the loan balance.

*Of course, many things will cause K to vary. A lower (or higher) LTV will affect K, as will lower (or higher) interest rates and shorter (or longer) amortization schedules. It's best to compute K for the specific transaction you are contemplating.*

Now that we've determined the Mortgage Constant (K) for our hypothetical purchase, we will want to compute the Loan to Value (LTV) ratio. The LTV is found by dividing the loan by the purchase price (or present value, if you've had the building for a while). A \$75,000 loan on a \$100,000 purchase price indicates a LTV of 75%.

To determine the sweet spot, multiply K by the LTV. In this example, 7.2% times 75% is 5.4%. If you can buy a building with a true cap rate greater than (in this example) 5.4% you will be making a cash flow override on the borrowed money.

To repeat our example, you will recall that the NOI was \$8,000. Subtract the annual debt service of \$5,400 from the NOI and we have a cash flow of \$2,600. You're making \$2,600 annual cash flow on a down payment of \$25,000 and you are back to the 10% (+) cash on cash we illustrated earlier.

*Why K is 7.2% when the interest rate is only 6%? In addition to paying the interest every month, you're also paying a bit towards the principal. All together, principal plus interest, it comes to 7.2%.*

Clearly, if your cap rate is greater than K, you will have a positive cash flow and life is good. So how do you get a positive cash flow in the present environment, when cap rates are remarkably low? You make a larger down payment.

Remember, to get a positive cash flow K has to be less than your cap rate. A significant component of K is mortgage balance. If you borrow less of the building's price, the annual debt service will be lower and your cash flow greater.

The way banks address the issue of K is by limiting the mortgage to an amount that can be serviced by a portion of the NOI. If you are quoted a loan based on a Debt Coverage Ratio (DCR) of 1.25, you know that the maximum annual loan payments permitted by the bank are no more than 80% of the NOI.

If your NOI was \$10,000 a year, the maximum amount permitted for debt service would be \$8,000. The remaining \$2,000 would constitute your cash flow. If interest rates are at 6%, that \$8,000 will service a mortgage of \$110,000 (rounded). *"But,"* you say, *"I'm paying \$200,000 for the property!"*

That's fine. You can do with your money whatever you wish, but the most the bank will lend is \$110,000. You will have a \$2,000 annual cash flow. If you put \$90,000 down, it means you'll be earning a 2.2% yield on your down payment. You'll be earning a yield comparable to the 6 month C.D. As we saw last month, that's probably about right in the current market.

*Why are you only getting a 2.2% yield when the cap rate is 5% (\$10,000 divided by \$200,000)? This is an example of negative interest leverage. Your cap rate is less than the mortgage constant (K), so you'll be earning less than the cap rate.*

Remember, you only get a *positive* mortgage constant (K) when your cap rate is higher than K. Properly used, Mortgage Leverage allows your money to grow faster than if you paid all cash. Properly used, Interest Leverage permits higher cash flows. In combination, it's the best of all possible worlds. Rather like marrying a boy who owns a shoe store *and* is a good dancer.

Cordially,

Aunt Klarise

*Klarise Yahya is a Commercial Loan Broker. If you are thinking of refinancing or purchasing five units or more anywhere in the U.S.A., **Klarise Yahya** can help. **Find out how much you can borrow!** For a complimentary mortgage analysis, please call her at **(818) 500-9966**.*