Letters to Mycroft #55:
Estimating Future Prices
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To My Dear Nephew Mycroft,

Is it possible to forecast future apartment values? Well, it's a little bit technical, but really not too awfully difficult.

The key is to understand that as interest (i.e., capitalization) rates go up, the amount of loan a given payment will support goes down. As interest rates go down, the same payment will support the installments on a larger loan.

This is the idea we're working on: if your payments are fixed at $1,000 a month for 30 years, and the interest rate is 24%, you obviously aren't going to borrow very much. If the interest drops to 7%, you can borrow a much larger amount for the same $1,000 payment.

As a further example, if you are offered a $10,000 per year stream of net income and want that sum to represent a 2% return on your purchase price, how much would that stream of income be worth to you? Well, $10,000 divided by 0.02 is $500,000. (Test: two percent of $500,000 is $10,000).

If interest rates increase to 5%, then that same $10,000 stream of income is only worth $200,000, because five percent of $200,000 is $10,000.

Capitalization is the approach we employ to estimate what our buildings are currently worth … and what they might be worth in the future. It works because the only value to income property is its income. That's important enough to repeat: *the only value to income property is its income*.

You see, if history is any guide, the market value of a building will continue to be the sum of the underlying financing **plus** the down payment. So to forecast apartment values, we have to capitalize two different streams of income. When we add them together, we'll have the projected value of our apartment building.

The *first* stream of income is the portion of the NOI the banks allow for debt service. Then we use our financial calculators to determine the maximum loan *that* particular portion of the Net Operating Income will support.

The *second* stream of income is whatever remains from the NOI *after* debt service. This is the buyer's cash flow. It's what she can put in her purse every year.

We capitalize this at (normally) a lower figure. In high demand areas of California, my experience has been that a property is sellable if the buyers' initial cash-on-cash return is equivalent to the competing short term C.D. rate. In other parts of the country, it might very well be different.

For our discussion, let's suggest our two projected interest rates will be (a) mortgage rates at 5.0% and (b) six month C.D. at 2.0%.

For illustrative purposes, we'll work with a single hypothetical 10 unit building generating $120,000 annual income. After all fixed and variable expenses (*but before mortgage payments*), our annual Net Operating Income is $85,000.

This amount is all that is available to (a) service the debt on the building and (b) generate a cash flow to the owner. The question is, if the only value to income property is the income, could we capitalize these two streams of income to project what this building might be worth?

We know that the Debt Coverage Ratio used by most lenders is typically 1.20. Thus, if we divide the NOI by the DCR we will have the annualized amount permitted for loan payments. Well, $85,000 divided by 1.20 is $71,000 annually (rounded). Further divided by 12 months, that means the maximum monthly payment the building will support is $5,900 (rounded).

How much can we borrow if our mortgage payments are limited to $5,900? It depends, of course, on the interest rate:

Mortgage Pmt.	$5,900	$5,900	$5,900	$5,900
Interest Rate	5.0%	6.0%	7.0%	8.0%
Mtg. Amount	$1,099,000	$984,000	$886,000	804,000

We've determined that the value of our little 10-unit will be somewhere between the mortgage amounts of $1,099,000 and $804,000 **plus** whatever down payment we can squeeze out of the buyer. *Notice that as interest rates go from 5% to 8% (still low by historical standards), the amount of mortgage that can be serviced by our hypothetical $5,900 monthly payment drops 26%.*

As mentioned earlier, we are forecasting that the buyer will expect a cash-on-cash return at least equal to what she could get on a short term Certificate of Deposit. That means we can easily project how much down payment the market will support simply by capitalizing the available cash flow *(NOI minus mortgage payments)* by the local C.D. rate. Nothing could be simpler.

Remember our NOI of $85,000? That amount had to cover the mortgage payments plus give the new buyer a cash return at least equal to what she could get if she just put her money in a C.D.

We divided the NOI by 1.20 to determine how much the bank will permit for loan payments, and found it was approximately $71,000. After mortgage payments, the remaining $14,000 (rounded) is available as cash flow to the buyer. How much down payment this will support is a function of local C.D. rates.

Cash-on-Cash	$14,000	$14,000	$14,000	$14,000
C.D. Rates	2.0%	3.0%	4.0%	5.0%
Down Pmt	$700,000	$466,000	$350,000	$280,000

Notice that as C.D. rates rise from 2% to 5%, the amount of down payment a typical buyer might be willing to pay drops 60%.

Now, lets put 'em together and see what might happen to our hypothetical 10 unit apartment building under a scenario of increasing interest rates.

Bank %/CD %	5% / 2%	6% / 3%	7% / 4%	8% / 5%
First Mortgage	$1,099,000	$984,000	$886,000	$804,000
Down Pmt	$ 700,000	$466,000	$350,000	$280,000
Market Value	**$1,799,000**	**$1,450,000**	**$1,236,000**	**$1,084,000**

Under our hypothetical scenario, when bank loans are available at 5% interest and short term C.D.'s are offered at 2%, a given building is worth $1,800,000 (rounded).

If mortgage rates rise to 8% and C.D. rates go to 5%, that same building, with the same NOI, projects a future market value of $1,100,000 (rounded). That is a 39% hit.

That, Mycroft, is why, if you possibly can, you should refinance right now, before rates climb more. Pull out as much cash as you can. Put the money in a safe place. Use it to buy another building when rates go up two or three points or even more.

The longer you wait, the less cash-out you'll probably get and the smaller the building you'll be able to buy in the future.

Cordially,

Aunt Klarise