



Real Estate Investment Newsletter - December 2002

A Quick Test of a Bubble Investment (How to Tell if You're Wylie Coyote)

When I was a child one of my favorite cartoons was the Roadrunner. Roadrunner spent his days running very fast with Wylie Coyote in pursuit. The setting of the cartoon resembled the Grand Canyon – lots of steep cliffs and deep crevices. Invariably Wylie would find himself running in midair during the chase. This was OK - until he looked down and realized there was nothing there to support him. At that moment he would come crashing down. I bring this up because it is amazingly similar to how financial markets sometimes behave. The market runs up as investors chase after fast returns. Then one day they look down and realize that cash flows cannot support the investment values they have bid up. The realization itself brings the market crashing down. In retrospect we call these events market bubbles. This brings me to the question to be answered by this article: how can you tell if you are Wylie Coyote (before you run off the cliff).

At my October presentation in Tokyo, I provided a “back of the napkin” quick test for whether a particular real estate investment showed signs of a “bubble” valuation. My quick test checks whether the property can cover loan payments in its first year assuming you borrow 70% of the purchase price. In the real world the bank would require property income to exceed debt service by 20%. Consequently you could not actually borrow up to the point where debt service equals property income. The 70% leverage ratio is just a convenient rule of thumb that encompasses a whole other layer of more sophisticated analysis. Interested readers can find a more in depth look at valuation analysis (i.e. bubble testing) on the web site at BerkeleyInvestment.com. This article will show how to implement my “back of the napkin bubble test” (also known as the quick test).

Estimating Income and Expense

In seeking to determine “where the ground is” when pursuing a real estate investment opportunity it is useful to measure cash flows as a percentage of property value (price). The starting point for our quick test is gross rents. For our example lets say rents are expected to run 10% of value in the first year. Thus the property’s *gross yield* is 10%.

Next we estimate costs. Some costs are directly related to the value of the property, while others are a function of gross rents. For example, property tax in California is 1% of value while insurance costs range from .5% to 2.0% of value. Since these costs do not change in proportion to gross rents, they represent a larger percentage of gross rents when a property’s gross yield is smaller. On the other hand, vacancy, turnover, credit losses, and management costs are examples of costs that are estimated as a percentage of gross rents.

The First-Cut Rough Estimate of Expenses

Costs as a percentage of gross rents will vary widely across properties, but will generally fall in the range of 40% to 60% of gross rents. We must be careful not to overestimate expenses so as to avoid rejecting properties that deserve a closer look. Therefore, if expenses will not be estimated in detail, the investor can use 40% of gross rents as an overall estimate of expenses. Applying this to a gross yield of 10% results in estimated expenses at 4% of property value and thus the net operating income of the property is estimated at 6% of property value (i.e. its *net yield* is 6%).

We would then compare this to the annual loan payments (as a % of value) to see if the net yield is sufficient. If not, our test indicates a potential bubble in prices. By bubble in prices, I mean to say that the investor would have to count on extraordinary growth in rental income to achieve returns that should be required for the real estate investment contemplated.

Detailed Expense Estimates

Before we move on to the loan payments, lets look at an example of estimating the expenses in detail. Keeping in mind the danger of overstating expenses we estimate the value-related expenses as follows:

	<u>% of value</u>
Property Tax	1.0
Insurance	.8
Maintenance	.5
Capital Expenditures (reserve)	<u>.7</u>
Total Value-Related	3.0

We estimate expenses proportional to gross rents as follows:

	<u>% of gross</u>
Vacancy, Turnover, & Credit Losses	7.0
Property Management	8.0
Utilities & Other Miscellaneous	<u>3.0</u>
Total Gross-Related	18.0

In order to add these costs we must restate the Gross-Related expenses as a percentage of property value. For this example we have gross rents equal to 10% of property value. Therefore the gross-related expenses are $(18\% * 10\% =)$ 1.8% of property value. Thus total expenses estimated in detail are $(3.0\% + 1.8\% =)$ 4.8% of property value and we have a net yield of 5.2%.¹ Here we see that the detailed analysis gives us expenses significantly above the 40% of gross that we estimated without looking at details. This is because the property in our example is priced rather rich; the gross yield is rather low and therefore the value related costs are a higher percentage of gross than would be the case for a higher gross yield property.

Loan Payments

Now we must calculate loan payments expressed as a percentage of property value so that we can see if the property's net operating income covers the debt service. Using a financial calculator or an excel spreadsheet we calculate annual payments for a 6.5% fully amortizing 30 year loan as 7.6% of the original loan amount. Our shortcut test calls for the loan amount to be 70% of property value. Thus debt service will be $(70\% * 7.6\% =)$ 5.3% of property value.

The Test

For this example, the property would fail our "bubble test" because the property's net operating income, 5.2% of property value, is insufficient to cover the required loan payments, 5.3% of property value, when the mortgage is for 70% of value. Note that the test is passed using our first-cut estimate of expenses since the net operating income estimate was 6%.

While this test is simple, it proxies for a more thorough analysis of a property's valuation and likely returns. In a market where rents rise 2% or more annually, this test always rejects the properties with poor expected returns. Unfortunately, because of its simplicity, this test may also

¹ The more standard real estate terminology for net yield is capitalization rate.

sometimes reject good investments.² If the test rejects an investment you believe to be a good one, a more thorough analysis is called for. Likewise investors still need to do extensive analysis of those properties that pass the test. Berkeley Investment Advisors can take the pain out of the number crunching and help you make the right decisions in real time.

Conclusion

Financial analysis is the key to differentiating between ‘bubble values’ waiting to burst and solid investments. Armed with the quick test you can avoid becoming the Wylie Coyote of investing. With Berkeley Investment Advisors helping you find and analyze investment opportunities you become the Road Runner.

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² A situation in which we can confidently predict future rent increases significantly higher than inflation would look like a bubble using this test even though valuations may be justified by the future rent increases.