

Myth Busting

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The Hypothesis

Recently, I've heard people suggest that as more homes fall vacant to foreclosure, the local apartments will see an upswing in occupancy because "people still need somewhere to live, so they'll become renters". They argue the obvious result of this will be "rents will at least stabilize if not climb due to increased demand". Now, I wonder about many things, but in this case I wonder if the initial assumption is true. Let's call this the "they have to live somewhere" or THLS theory and see if there's any data supporting it. After all, as a real estate investor, don't you want to know whether to expect an increase in rental income or not?

I'm a real estate investor and a "spreadsheet guy". That is, an investor who believes in tracking, charting and analyzing a wide range of data about the markets I'm invested in. This often leads to deep and time consuming data dives from multiple resources but, in turn, gives me many views into the information needed to manage my investments. Recently, when working on data for the Los Angeles market, I came across a source to add to my collection that allows me to test the THLS theory. Ever watch the Discovery Channel show MythBusters? If they were running this test, they would probably remind us that a problem like this is tackled in three parts, the "Hypothesis", the "Analysis" and the "Conclusion". In this case the hypothesis is that when people move out of foreclosed houses, they move into local apartments. The next step is the analysis, where we'll walk through some of the data comparisons. Finally, we'll evaluate the comparisons and draw a conclusion.

Here's what we need for our test

Before we can jump into the analysis stage, we need to review the data collected for comparison. At first glance, we should only need to two sets; foreclosure rates and vacancy rates. Actual foreclosure data is relatively hard to find as banks and lending institutions don't seem to publish regional data, so instead we'll substitute a much more readily available metric, "Notice of Default". Notice of Default is the first step in the foreclosure process and doesn't always result in a foreclosure, but it's a good indicator. The NOD data comes from DQNews.com and is reported on a quarterly basis for the Los Angeles region for nearly every period dating back to 2000. That seems easy enough. The tougher part is finding data for vacancies. Why is it so hard? Investors like you and me may know our own vacancy rates, but there is no central reporting. Sure, some trade associations track vacancies for large apartment complexes, but this data leaves out properties such as duplexes, triplexes and other privately owned buildings. So, without a direct measure of vacancies, we need to agree upon a substitute. But what? Thanks to the good people at the Los Angeles Housing Department, I believe I've found it.

It goes like this. There are a known number of residential power meters in the Los Angeles Department of Water and Power service area. The area is fairly fixed over time, and they understand something very important about each meter, which is: "Is power being used?" The consumption of power is translated into vacancies based on two things. First, if service has been turned off, it's a pretty good bet the house is empty. At least there aren't any *paying* tenants. Second, the DWP measures power usage and if it has dropped to a level that suggests vacancy they count it as well. In their words "Due to the interpretation of whether a meter's activity represents vacancy as described, the actual total number of vacant housing units is an estimate rather than an actual count of known vacant units." As I mentioned, it may not seem perfect, but I believe it is a reasonable measurement. The DWP data is available on a monthly basis back to 2000 and the best part is they break it out by single family homes and multi-family homes. For a spreadsheet guy, this is about as good as it gets.

Another consideration we must take into account is the period over which our measurements took place. In both cases, the data reaches back to the January, 2000. I believe this should be good enough to test the THLS theory, as we've seen some significant cycle swings in that time frame here in Los Angeles. A concern here is to validate that the data was collected for the same geographic area. In this case Los Angeles NOD data from DQNews is listed for the "County/Region" and the Housing Department data is only for the areas served by DWP, so I'm going to make a small leap here and assume that the sample size of 769,615 units measured by DWP is representative of the larger area.

The analysis

First let's look at how to do this type of analysis. If the technical stuff bores you, you can skip to the next paragraph, but I believe you'll find this very interesting. When assessing the relationship between two data sets, the result is called the *correlation coefficient* and it ranges between **-1.0** and **+1.0** and it reflects how the data is related. For example, a correlation closer to -1.0 means that as "A" gets larger, "B" gets smaller. They are related, but move in opposite directions. This is called an *inverse* or *negative* relationship and it's what we're looking for to prove the THLS theory. A correlation coefficient closer to 1 means that as "A" get larger, "B" also gets larger. That's a *mutual* or *positive* relationship. A correlation of zero means that there is basically no connection between "A" and "B". Of course, rarely does the result come back exactly, -1.0, zero or +1.0, instead it comes back as a decimal somewhere in between. To simplify, the closer to zero, the less related the two data sets, the closer to either -1 or 1, the more related. Here's a chart to show the variations:

Correlation	Negative	Neutral	Positive
None		-0.09 to 0.09	
Small	-0.29 to -0.10		0.10 to 0.29
Medium	-0.49 to -0.30		0.30 to 0.49
Large	-1.00 to -0.50		0.50 to 1.00

If we can call the rest of this “less technical”, let’s get back to it. Let’s test some things that should be obvious, and see what the data tells us. That is, let’s test for an expected result. This one should give us an inverse relationship. Hypothesis: When sales of single family homes rise, vacancies in single family homes should move in the opposite direction and go down. Sales up; Vacancies down. Using a standard mathematical function in Excel (the formula for which is shown below), we can examine the data for a correlation between these two data sets. That combination of data results in a correlation coefficient of **-0.5**. As expected, a large negative relationship. When people buy homes, they move in and the home is no longer vacant.

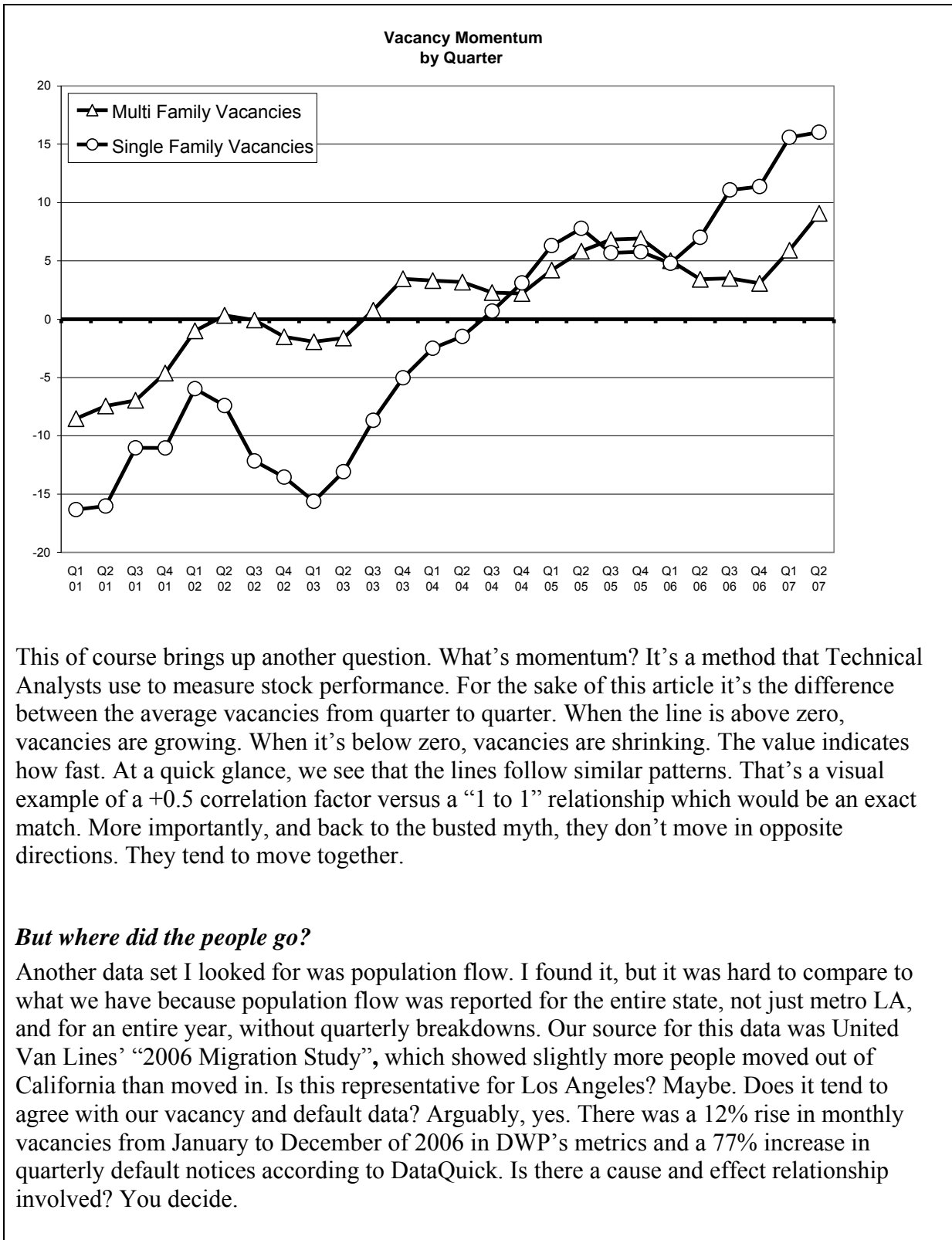
Next we’ll test the relationship of vacancies to default notices. Our hypothesis is: When defaults on single family homes and condos rise, vacancies for single family homes should rise. Defaults up; Vacancies up. Guess what. We get a correlation value of **+0.7**. That is a large positive relationship, meaning that as defaults and single family vacancies are strongly related. A more in depth analysis would reveal if this is actually a cause and effect relationship at work.

$$\text{Correlation (X, Y)} = \frac{\sum(x_1-x_2)(y_1-y_2)}{\sqrt{\sum(x_1-x_2)^2(y_1-y_2)^2}}$$

The final test

So, here it goes. To restate the hypothesis in terms of the data we have collected; when single family home vacancies rise, apartment vacancies should drop. Single family home vacancies up; Apartments vacancies down. We’re looking for an *inverse* relationship. Guess what. It comes back as **+0.5!** That’s a large POSITIVE relationship. According to our numbers, when people leave their single family homes, they don’t move to nearby apartments. They go somewhere else. When one goes up, so does the other. Not the opposite, as suggested by our original statement. If we look at a more direct relationship, apartment vacancies and defaults, we find another confirmation. This returns a **+0.3**. Not as strong, but still positive. Defaults rise, apartment vacancies rise. THLS myth BUSTED!

But I’m a visual person; can we see it on a chart? Because the difference in volume of vacancies for apartments versus homes is so large (about 9.5 times more apartments), the relationship isn’t visible when the raw numbers are plotted. Instead, when we chart the momentum, the relationship becomes obvious. Though not a direct one to one relationship, both single family and apartment vacancies tend to rise together as shown below.



Cause and effect

Here's a bit of interesting information . . . just because two things are related does not mean one caused the other. If, over time, home gym equipment and SUV sales both rise, it does not mean people are buying SUVs just to lug the exercise bike home. It simply means they move in the same direction. Single family home vacancies do not *cause* apartment vacancies. But, they do tend to happen at the same time. Does this mean there isn't a "cause and effect" to be concerned with? We have to go back to the opening argument that if people moved from foreclosed homes to apartments, rents would rise. That myth is likely also "busted". It's a standard high school economics question of supply and demand. What our analysis shows is that supplies in both homes and apartments are growing at the same time, *right now* and it's *accelerating*. What do you expect to happen to rental rates?

Maybe now you're asking "So what?"

So, why is this type of investigation important to the average investor? Specifically, if you own investment property in areas that are being affected by increasing defaults or vacancies, make a list and *take immediate action*. At a minimum, attend your local investment club or association meetings and find out what it takes to retain tenants in today's market. It may be time on the calendar to raise the rent, but find out if your local submarket really supports it and how much. Find out if other property managers are offering rent up or lease renewal incentives. Are there maintenance items in the building you've been putting off? Fix the leaky faucets. Show the tenants you care and want them to stay. In short, take active measures *now* to keep those units full.

Toward the end of the list would be selling the property through a 1031 tax deferred exchange then reinvesting the equity in a different part of the country or different property type. Why would an owner want consider that? First, a recent Business Week article titled "Where Are All the Real Estate Deals?" suggests markets that haven't participated in the recent run up in prices and are still showing job growth have the potential for appreciation. Second, I believe when factoring in depreciation and other items, there is an optimum period to hold each investment property, but that's a subject for a future article. Third, other property types like office, retail or hospitality have different relationships to the various economic cycles. This provides diversity, which is a common way to manage overall portfolio risk. Where do we find these properties? There are many attractive 1031 replacement options via "Tenants in Common" or TIC properties. These are typically professionally managed, so eliminate the common landlord headaches like toilets, trash and the dreaded phone calls at two in the morning. TICs also enable individuals to purchase higher quality or larger properties than might otherwise be attainable, often resulting in improved monthly cash returns.

In the long run, whether the decision is to buy, hold or sell, investigate the myths by examining the facts. This will take the emotion and guess work out of the decisions on rental increases, purchases and sales. But, which are the *right* metrics? The individual investor must decide if they are buying for cash flow, appreciation, stability, diversity, location or some other reason. Next, they must determine which metrics best relate to those objectives and triggers for the exit strategy. And finally, track the metrics like the golden years of retirement depend on it!

Data Sources:

Data Quick

www.DQNews.com

Business Week

www.BusinessWeek.com

Los Angeles Department of Housing

www.lacity.org

United Van Lines

www.unitedvanlines.com

U.S. Census Bureau

www.census.gov

U.S. Department of Labor, Bureau of Labor Statistics

www.bls.gov

About the Author

Jim Adams is a Senior Consultant with **Midpoint Financial Services**, a securities brokerage firm specializing in real estate based investment opportunities. Mr. Adams is an experienced business executive with over 20 years in various industries as well as an active real estate investor since 1989. Jim currently holds series 22 & 63 licenses with Financial Industry Regulatory Authority (FINRA) and can be reached at Jim@MidpointFinancial.com or by calling the Midpoint offices at 800-409-1031. More information can be found on the web at www.MidpointFinancial.com.