Top 5 Problems With Automated Valuation Models (AVMs)

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Automated valuation models, most commonly referred to as AVMs, are computer-generated property valuations that use mathematical algorithms to determine a home's worth. The algorithms typically analyze comparable sales, property characteristics, tax assessments, and price. The data is drawn from public record, so typically the only information needed to order/receive an AVM is the subject (home) address.

AVMs are often used by lenders because they are a cheap and quick way to get an estimated valuation, but publicly available AVMs (like those found at Zillow.com) are often used by potential borrowers and homeowners to aid lending and selling decisions. The problem is, in all forms, AVMs can have some major limitations.

Error Rate

In a recent online chat with Bill King, the Director of Valuation Services at Veros, he told WCCI that the average variation between Veros AVMs and actual appraisal values tends to be about eight percent. I had the opportunity to also ask the Chief Technology Officer of Zillow, Dave Beitel, about their margins and he too stated that, on average, their "Zestimates" tend to have an average of an eight percent margin of difference from full appraisal values.

Now eight percent may not sound like much, but when you're talking about hundreds of thousands of dollars, it can be significant. We also have to keep in mind that these are *averages*, meaning some properties may have a lower error rate, (we had some comparisons that were dead-on) whereas other automated valuations have shown us a difference of up to 53% in value. I'm not saying that AVMs are evil, but users should be aware of these types of statistics prior to weighing major decisions on these valuations. Sure, they are a good starting point for those who lack other resources and are looking for an "idea" of their value, but even Mr. King and Mr. Beitel emphasized that in no way should an AVM ever replace an official appraisal report.

During our chat, Mr. King also stated "We need to inform the public about the limitations of AVMs and the importance of the elements of market value." So that is the goal of this article. The following is a list of the top AVM issues everyone should be aware of before using automated valuations as a means for decision-making.

1. They Draw from County Data.

And the county could be wrong. In an AVM audit of recently appraised properties I found multiple cases where the AVM had recorded the wrong amount of livable square footage for its model, drawing that information from county records. The records can be off for a number of reasons – the most common (especially in the Northwest) is a case where the homeowner(s) finished basement space without reporting the update to the assessor. Similar results can also occur with remodels. Without completing a physical interior inspection, there is often no way for the county assessor's office to know that the gross living area (GLA) has increased, therefore the records can be off, bringing in inappropriate comparables for the AVM. In other instances, it appears to be a simple case of human error. I recently saw a $1.2 million home compared with a home appraised at $255,000 simply because its square-footage was incorrectly recorded at 1,940 SF instead of its actual size which was 3,339 SF.

2. Computers Can't Inspect Your Home.

In many cases, an AVM's comparable properties can differ greatly from the subject in quality of construction, updates, and marketability of the home. I have noticed in some reports that AVM comps may have similar square footage, but lack any other common features with the subject. For example, in one particular instance we had an appraisal come in at the mid $200s. The AVM said the home's worth was in the mid- $500s. Needless to say, that's a significant difference. The subject was a dilapidated home, obviously suffering from poor upkeep and lack of updates to maintain a recent effective age. The AVM comps, however, were beautifully updated homes with brand new stainless & granite kitchens, new floors, the works. They may have been within a mile of the subject, but in no way were they even remotely comparable in overall quality and marketability.

3. They Don't Know Your Neighborhood.

Everyone knows the most important factor in real estate is 'location, location, location.' It's cliche, but it's the truth. AVMs typically try to keep their comparables within a mile radius, but sometimes multiple neighborhoods can exist within that mile. This means the AVM runs a risk of drawing comps from a superior or inferior neighborhood to the subject's simply because it's following a predetermined, automated algorithm, without any familiarity of the actual market.

4. Comps May Be Outdated.

In a particular AVM order in February 2012, two of the five comparable sales were from 2010. Don't get me wrong, we understand this market can be rough, and sometimes, especially in rural markets, it can be extremely difficult to find recent comps. Nonetheless, in this particular order our appraiser was able to find completely legitimate comparables within a six month time frame, whereas the AVM apparently could not. In today's market, trends change dramatically over a two-year span, so using old comps can be extremely problematic.

5. Some Results Aren't Bracketed.

The Appraisal Institute's Dictionary of Real Estate Appraisal (4th Edition), defines bracketing as "a process in which an appraiser determines a probable range of values for a property by applying qualitative techniques of comparative analysis to a group of comparable sales. The array of comparable sales may be divided into two groups – those superior to the subject and those inferior to the subject." Bracketing is a Fannie Mae requirement as well as a requirement by many mortgage lenders.

In one example of AVM vs. Appraisal, our appraisal valued the subject at $350,000. The AVM said $285,000, yet its comps ranged from $308,000 to $428,000. In other words, all properties were superior to the subject, and none were deemed inferior. While even WCCI's appraised amount was bracketed by the AVM comps; the AVM itself was not. In some cases bracketing may not be possible, but the appraiser is supposed to explain why the subject is basically the most inferior in the entire neighborhood. Unfortunately AVMs cannot provide commentary, so we still have no way of knowing how the AVM came up with such a low number, when the higher-valued properties appeared perfectly comparable.

Conclusion

This article isn't intended to bash AVM creators, as they are simply providing the best information they can based on publicly available data. Nonetheless, it is important to educate borrowers, lenders, and homeowners that the results of their automated valuation models should be taken with a *bag* of salt, and should never replace a full appraisal report.