From: "Austin Jones Jr" <austinjonesjr@gmail.com> on 12/05/2008 12:25:05 PM

Subject: Appraisal and Evaluation Guidelines

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Comments on Proposed Appraisal and Evaluation Guidelines
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From: Austin Jones Jr.
Certified General Real Estate Appraiser
217 Lynn Street Suite 106
Danville, Virginia 24541
austin1@wildblue.net
General Comments to Appendix B "Evaluation Alternatives and Appraisal & Evaluation Guidelines Proposed."
Subject of comments: I will address the relevance of the proposed Appraisal & Evaluation Guidelines in the context of the state of technology and existing conditions. My contention is that the timing and direction of these appraisal and evaluation guidelines as proposed are out of time and out of touch with technology and the future of valuation.
First let me setup this discussion by giving my background on this subject with disclaimers. I have been appraising for about 36 years in general real estate appraisal practice. I have written articles on using multiple regression analysis models of performing appraisals and have been published twice. I have been involved in 100's of hours of discussion on the subject with people from all levels of appraising and was one of 60 people invited to participate in a national online discussion for AVM developers and designers. I do not now nor will I in the future have an AVM for sale or any interest in investing in the industry. I am nearing retirement and not seeking additional business to my practice that is winding down.

I can only hit the high points and speak in general terms in these comments. For over 50 years some of the best minds in the country have been trying to automate the valuation process with little success. I spent many years using multiple regression analysis in an attempt to do so and learned much from this research. My message is not how this can be done but what I learned from the research that relates to the subject specifically and the relevancy of the proposed appraisal and evaluation guidelines.

Can a reliable appraisal be done with statistical modeled algorithms? The answer is yes. Will these models ever come into widespread use? The answer is no! Why? That is the subject of the remainder of these comments.

In my research, I like some others learned the basic nature of the problem of valuing real estate by sales comparison analysis which is not generally understood and agreed upon. Real estate value is determined by a number of independent variables and each assignment has its own set of these variables.
Reason # 1 an AVM will never be a reliable valuation tool is that they are not capable of addressing this process of evaluating significant value variables. This means they can tell you what a new 1,000 square foot home is worth on average in the market but they can not tell you what the value is of a specific dwelling to the degree I would expect for collateral valuation purposes in general and the existing market in particular. AVM's have their place but not in collateral valuation.

The contribution I believe I made to this understanding is the complexity of how these independent value determining variables are related to each other in a valuation model. In order to have an influence on value of a property, an independent value influencing variable, like a carport for example, must be correlated to value meaning it must add to or subtract from value. The most significant example is gross living area in residential properties. Bigger houses cost more than smaller houses in general and houses with carports cost more than one without, but not always and not always to the same degree which will be address later. I did a graphical analysis of the local residential market on houses 30 years old and less and 60% of the value can be explained by gross living area. One dependent variable, price, and one independent variable like size is easy to understand but here is where complications set in and here is why the appraisal profession sets at the cross roads of technology and convention.

Reason # 2 an AVM will never be a reliable valuation tool is that it uses variables that are untested for how they correlate thus injecting variables that may not correlate at all rendering the output suspicious at best. The correct result or what may seem correct when based on bogus reasoning and logic does not equal credibility. For example, if the model says a $200 storm door contributes $10,000 to value would you make a loan decision based on that models output? What would a lender do if an appraiser did this?

When you add two, three, or four independent variables the problem really gets complex. This is the bone of contention in this subject and the one most people can't seem to grasp. When you have a multiple regression equation with multiple variables when each one must be correlated to value this creates a unique problem known in statistics as multicollinearity of variables. This simply means that when you have variables like size, age, basements, garages etc., that are correlated to value then logically they must be correlated to each other the end result being the statistical output may produce a correct value result but again the calculated results are misleading because they are distorted by the fact that they are correlated to each other. This means you can get a correct estimate of value but the model factor values that predict the output values for the value influencing variables are totally bogus. If you are confused by this you should try and explain it to a residential appraiser, lender, or reviewer. Think about this in terms of a general agency rule for regulated institutions trying to evaluate an AVM as outlined in appendix B.

I was just reading appendix B of the proposed guidelines about things like how an AVM should be evaluated by the regulated institutional user; like when it is appropriate for use and how to determine that; the institution testing the AVM for credibility; quality control; data source evaluation; evaluate the modeler's confidence score; my favorite-"evaluate which model has the most credible scores for the institutions activities, etc."

Reason # 3 an AVM will never be a reliable and widely used valuation tool: Because there are no people capable of performing these functions available to hire because as of this moment they do not exists. Then too, if someone has that level of knowledge why don't they write their own model algorithm?

I mentioned in the opening paragraph that I was involved in an online discussion with AVM developers. My contribution to that discussion was something we all agreed on, that is the method of determining the credibility of the valuation model. The model I used, which will never be widely used because it is to complicated for general use which I learned from experience in discussions with others, was highly credible because the model picked the comparable sale data objectively, determined the most significant variables and ordered them according to their contribution, dealt with the problem of correlated variables, and demonstrated the models accuracy by predicting a price of the comparables used in the analysis and evaluated the variance with a confidence level by comparing the actual to predicted values. For example, I could say the estimated most probable value is $200,000 with a 90% confidence interval and the most probable value is in the $190,000 to $210,000 range based on the 20 most comparable sales from the relevant market area. What more could a client ask? I used this model for a while and was requested by two banks to stop using it for two reasons: Excuse # 1: It produced lower value opinions than other appraisers were turning in, the reason being I was addressing the definition of market value which specifies "The Most Probable Value" and not the highest value given by cherry picking sales to get a high value indication. You can not determine the most probable value using three comparable sales. Plus, with this statistical backup who could argue with it and fudge? Excuse # 2: Our reviewers do not understand it. They can understand the model that makes no mathematical sense but they can't understand a model that does make sense.

Reason # 4 an AVM will never be used is that there is a knowledge gap between providers and users that will never be bridged which leads to the next item of concern.

Real estate appraising is at the cross roads of technology and prevailing convention. Let's restrict these comments to residential appraising because that is where the problem lies. The GSE's I believe are only involved in around 25% of all mortgage loans but they control the appraisal process because they are regarded as the industry standard, to wit their appraisal forms and model algorithm. The GSE's along with local reviewers and state appraisal boards form a very complex and informal functional apparatus. The complex consists collectively, but each arm working hand and hand to enforce the system, of the GSE's that provide the format and guidelines on level 1. Level 2 consists of the GSE appraisal reviewers who survive on seeing that no one strays from the guidelines. Level 3: the GSE residential appraisers on the state appraisal boards that see to it that any one caught thinking on their own is burned at the stake. These state boards are more on the order of the Spanish Inquisition-"Do it our way or you burn at the stake." This mindset bleeds into other areas of appraising and other appraisers are judged by this mindset.

That brings us back to what I mentioned earlier of the appraisal profession being at the cross roads of technology and convention. I tried to picture the context of the appraisal situation with the above examples to show where the problem lies and explain why I think Appendix B and the proposed new appraisal and evaluation guidelines can do more harm than good.

The old system being enforced by the GSE complex I explained above is based on an additive or quantitative model. Here is the basic logic of the model and its flaws. To appraise a residential property a number of comparable properties are selected then each adjusted to the property being appraised by adding to or taking away for some supposed feature's contribution. For example, the house being appraised has no carport but comparable sale # 1 does have a carport so the estimated contribution of the carport is subtracted from the value of sale # 1 and so on for other factors. If you do it any other way you are turned in to the state board for violating GSE guidelines and these guidelines have filtered into other areas of appraisal review and enforcement. The problem here is that this model is mathematically flawed because as I explained earlier the market does not react that way. The value contribution of say a carport can not be taken from one data set and used in another because that contributing factor's value number is bogus as I explained because it is biased by the fact that it is influenced by the other correlated value factors like size, basements, etc. That is the problem of multicollinearity I addressed above.

How do you deal with this problem? You must do it with a qualitive model as opposed to an additive or quantitive model. (Don't try this on a GSE appraisal if you want to keep your license) I know this is abstract and complex but that is the essence of the issue. The only way to deal with this is to make the adjustments in the aggregate. For example, you test the data to see which variable most influences value like size then the second most significant variable is added until the variance of the predicted prices to actual prices reaches an acceptable level. In other words, the variables are all correlated and adjusting for one actually results in an adjustment for the others. If you are confused I have made my point. The correct method is being suppressed because to few people can understand it and as I tried to point out the existing system I called the GSE complex is a hindrance to progress. I fear these proposed new appraisal and value guidelines are going to do the same because they are perpetuating the same old mindset. It is time to move beyond all that.

Reason # 6 an AVM will never be widely used is that the inertia of the system won't let it.

Last but not least and in fact the most significant.

Reason # 7 why an AVM and appendix B are in question is the present financial and real estate market crisis rendering market data useless because value determining factors are future event oriented and not past event projections. A crystal ball maybe or Tea Leaves but not an AVM. Actually a market analysis is called for.

The market for the next 5 or more years in the US will be in a state of flux. When the market is in this general state of affairs, appraisal and valuation take a back seat to market analysis. What the situation demands is valuers who can look at the local market, do a supply and demand analysis, evaluate the demand in light of available credit conditions and attempt to re-establish market balance to stabilize values rationally. The problem in my view is that the market is totally out of balance. To restabalize the market the property ratios of income to value must be brought back into balance. Historically 30% of gross income should be the upper limit in determining the affordability of a residential property and rents and values should be in general balance. The definition of a balanced real estate market is one in which there is a house for every person that can afford one and priced based on this income ratio and in balance with prevailing interest rates with a 5% or so frictional vacancy factor adjusted for population growth. This is the reason I say appraisal and evaluation guidelines are a moot point now and for the foreseeable future. I fear they can do more harm than good as they exist and as proposed. We need a new beginning by recognizing the new technologies and a return to sound credit and lending principles. You cannot correct poor credit and irrational lending results with the same old rehashed appraisal and evaluation guidelines. If the old guidelines were worth their salt why would we me where we are today?