From Our Readers

"Principles for Calculating AVM Performance Metrics"

To the Editor

I read with interest the authors' response to my Fall 2020 letter to the editor on "Principles for Calculating AVM Performance Metrics" (*The Appraisal Journal*, Winter 2020), by Hans R. Isakson, PhD, Mark D. Ecker, PhD, and Lee Kennedy. In that response, the authors made some erroneous assumptions and continued to highlight details of measuring appraisal inaccuracy. I wish to emphasize, however, that my concerns are not with the fact that there are some variations in how we measure forecast standard deviations. Instead, I object to the article's total reliance on selling price as a measure of a good appraisal, and I reassert that there is indeed a significant range of prices over which property can sell. Some buyers overpay compared to a most probable price and some get bargains.

Although the authors comment that "the out-of-town buyer who hires a local buyer's agent can avoid overpaying for a house," the research indicates otherwise. Empirical evidence in studies from 1978 through 2019 has consistently revealed that out-of-town buyers, with local agents, pay more on average than local buyers.[1]

In the current market, where fairly priced homes sell in a matter of hours, out-of-town buyers have even less chance of securing a reasonably priced home, so these differentials are not disappearing but perhaps are increasing. The out-of-town buyer, like all slower players in the market, may end up buying from a stubborn seller who "over prices" the home (relative to most probable price in the market) but waits patiently and gets lucky with that frustrated out-of-town buyer. At the same time, we may witness a bargain transaction after the passing of a homeowner and the listing for sale by an estate with several heirs. The local buyer may make a lowball offer, but the heirs do not care since the offer differential is spread over a number of individuals, and no one wants to maintain the home. The lucky or smart buyer gets a bargain. Without providing more examples, the point remains that similar homes can sell for a range of prices, and to assume that appraised values that match the selling price are perfectly accurate is a problem.

Imagine 100 homes and 100 appraisals, and all 100 appraisals exactly match the selling prices. Then according to the authors, these appraisals would have no error and be perfect. I would instead call such appraisals useless. If appraisals always hit the mark (selling price), then the 10 to 20 or so buyers that significantly over paid will not be held in check by being unable to secure financing at the transaction price. I applaud the appraiser who values the property without over-reliance on selling price. This sometimes prevents a buyer from paying too much. Such a professional appraiser with high integrity will save the lender and buyer from a situation where they discover that the anticipated equity in the home is not present, but rather is zero at its true market value. We need to encourage such professional appraisers, not penalize them as they are by some lenders that want the loan approved or by models like those utilized in the article that

1. For the most recent of these studies, see Katrin Kandlbinder, Norman G. Miller, and Mark Sklarz, "Leveling the Playing Field: Out-of-Town Buyer Premiums in US Housing Markets over Time," *International Journal of Housing Markets and Analysis* 12, no. 3 (2019): 377–404, available at http://bit.ly/BuyerPremiums. For a summary of earlier studies on out-of-town buyers and sale prices, see Barrett A. Slade, "The Influences of Buyer and Seller Motivations on Sale Price," *The Appraisal Journal* (Winter 2004): 50–56.

only measure accuracy with the benchmark of selling price. With respect to my suggested test of how well appraisals will do, ex post, in terms of defaults and foreclosure losses, we do not need to look into the future and wait to see such results. We can use the history of appraisal accuracy and the history of foreclosure losses, as provided by a number of studies,[2] and see that selling price is not the only measure of appraisal accuracy, although it is certainly a valid first comparison.

My fear is that by espousing accuracy based on hitting the selling price mark, we are dooming residential appraisers to obsolescence. Clearly, there are pressures to hit the selling price or risk not being rehired. We should sympathize and applaud appraisal practices that bind less-informed buyers and protect lenders. Arguments and assumptions about a lack of price dispersion are antithetical to the usefulness of professional appraisers.

Norman G. Miller, PhD
San Diego, California

Authors' Response

We thank the editor for the opportunity to respond to Dr. Miller's second letter regarding our article, "Principles for Calculating AVM Performance Metrics" (*The Appraisal Journal*, Winter 2020). Overall, we believe that Dr. Miller is misinterpreting our article as a normative work that prescribes how appraisal errors should be calculated, when in fact our article is a positive work that describes how the AVM industry assesses the accuracy and precision of its AVM valuations, by comparing its value estimates to selling prices, via AVM performance metrics.

Specifically, Dr. Miller makes three points in his letter. While none are directly relevant to our article, we nevertheless will briefly comment on each.

First, Dr. Miller observes that sometimes selling prices are not representative of market values, because they do not meet the well-known *ceteris paribus* assumptions built into the definition of arm's-length transactions that produce selling prices representative of market values. Dr. Miller gives an example of a desperate buyer or seller to illustrate this well-known point. Appraisers are well aware to avoid using these types of sales as comparable properties. Most generally, if the *ceteris paribus* assumptions behind the arm's-length transactions condition are violated, then of course selling price may not be representative of market value. When this occurs, we have a tainted sale. However, if selling price is representative of market value, then Dr. Miller should not object to it being used as a benchmark to measure the accuracy of an AVM valuation, as described in our article. Moreover, as we had originally reported in our article (p. 21, fn. 49), the AVM industry routinely excludes non-arm's-length sales when assessing the accuracy and precision of AVM valuations. We also refer the reader to the International Association of Assessing Officers (IAAO) document on this topic for further details.[3]

Second, Dr. Miller revisits his foreclosure-error basis for appraisal accuracy that was presented in his previous letter (Fall 2020, *The Appraisal Journal*). Again, we note that our article (together with its sister paper, "An Exposition of AVM Performance Metrics"[4]) represents a positive analysis of the current, state-of-the-art methods in the

2. See, for example, Paul S. Calem, Lauren Lambie-Hanson, and Leonard I. Nakamura, "Information Loses in Home Purchase Appraisals," FRB of Philadelphia Working Paper No. 15-11 (2015-03-06), available at http://bit.ly/FRBappraisals.

3. See IAAO, "Sales Validation Guidelines," Appendix A in *Standard on Ratio Studies* (Kansas City, MO: International Association of Assessing Officers, April 2013), available at http://bit.ly/IAAO-RatioStudies.

4. Mark D. Ecker, Hans R. Isakson, and Lee Kennedy, "An Exposition of AVM Performance Metrics," *Journal of Real Estate Practice and Education* (forthcoming); currently available at http://bit.ly/ExpositionAVM.

AVM industry. We simply report, after a rigorous review of the literature, that within the AVM industry, AVM valuations are routinely calibrated to selling prices. Specifically, we refer the reader to our reply to Dr. Miller's previous letter in which we cite authorities who establish that the industry standard to assess the accuracy and precision of AVM valuations employs arm's-length transactions with selling prices representative of market values. To further illustrate, CoreLogic reports that they internally value 90 million residential properties on a rolling basis using each of their AVMs, resulting in over 1 billion property valuations per month; they state, "We compare valuations every day against that day's recorded purchase prices."[5] Yet, CoreLogic makes no mention of comparing their AVM valuations to any type of "foreclosure-loss error," which according to Dr. Miller, can be used to calculate the appraisal error in the appraisal for any property that sold today.

Third, Dr. Miller repeats the refrain that appraisers should not strive to match their appraised value to the contract price in a pending real estate transaction. This point is outmoded in light of codification of the Home Valuation Code of Conduct, creation of the Appraisal Institute's Code of Professional Ethics, and the required use of Appraisal Management Companies, and while it is an important issue for appraisers, our article simply does not address it.

Lastly, we reiterate that the AVM industry routinely tests and calibrates AVMs using selling prices, because the selling price in an arm's-length transaction, meeting all of the requisite requirements, represents the best indicator of the market value of a property.

Hans R. Isakson, PhD
Cedar Falls, Iowa

Mark D. Ecker, PhD
Cedar Falls, Iowa

Lee Kennedy
Simi Valley, California

5. Susan Allen, *Innovation in AVM Testing*, CoreLogic white paper (September 2009), available at http://bit.ly/CoreLogic-AVM.