

# Fighting Fire with Fire

The Residential Appraiser, Collateral Underwriter and Regression Analysis

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Fannie Mae released its risk-based scoring tool, Collateral Underwriter, to the lending community in January 2015. Collateral Underwriter (CU) evaluates the overall risk of the underlying collateral being sold to Fannie Mae. This web-based system assigns a risk score to appraisals based on a graduated scale between 1 (the lowest risk) and 5 (the highest risk). As part of assigning the score, the system identifies and ranks potential comparable properties to compare with the subject property. Further, CU uses regression analysis to identify and quantify adjustments for differences between the subject and potential comparables.

Many appraisers have been intimidated by Collateral Underwriter. There are 3 main reasons appraisers are concerned with Fannie Mae's technological tool. First and foremost, appraisers are disturbed about the scoring system. Many appraisers fear they could lose business if they have too many high-risk scores on their electronic report card. Second, appraisers are uneasy about the CU model suggesting potential comparables. Statistical analysis inside of collateral underwriter ranks comparables based on their similarity, date of sale and distance, suggesting which comparables might be best. Finally, appraisers are being challenged to support the adjustments they make for differences between the subject and the comparables. The regression analysis within CU uses big data to determine whether adjustments are reasonable or not, most typically evaluating market change, land size, age, condition, quality and gross living area differences.

Professional and competent appraisers do not need to be overly concerned with Collateral Underwriter's scoring system. Fannie Mae has reiterated that CU is a risk scoring system not an appraiser scoring system. The software is intended to focus the attention of underwriting, not score appraisers. Fannie Mae has repeatedly stated that they will accept a mortgage with a rating of 5 as readily as a rating of 1 provided that the risk issues are addressed in the appraisal. When professional appraisers provide good reconciliation commentary, they need not fear a higher risk score; some properties are just more difficult than others to appraise.

Comparable selection is best done by the appraiser with local market knowledge. While collateral underwriter utilizes sophisticated modeling to identify the best properties for comparison, a well-trained appraiser innately uses the same methodology. Appraisers are accustomed to selecting the most similar properties that are closest in proximity and have recent dates of sale. While Fannie Mae's modeling can emulate this process, competent appraisers research and verify properties that a potential purchaser of the subject would truly consider as an alternative. Big data is good for "rough framing" comparable selection but the "finish carpentry" must be done by the appraiser. Appraisers who follow standard comparable selection methodology, and who narrate why comparables were selected, will not be bested by statistical modeling intended to emulate their behavior.

Supporting comparable adjustments is not a new requirement for residential appraisers. Uniform Standards of Professional Appraisal Practice (USPAP) have always required appraisers in their reports to "summarize the information analyzed, the appraisal methods and techniques

employed, and the reasoning that supports the analyses, opinions, and conclusions [2016-17 USPAP Standard 2-2(a)(viii)].” Every appraiser remembers learning various methods to identify and support their adjustments. The most common method residential appraisers use in the sales comparison approach is matched pair analysis. Regardless of what technique an appraiser uses, it is important that they narrate how their adjustments are supported by their methodology. What is new is that Collateral Underwriter has provided underwriters a tool for analyzing the adjustments provided by professional appraisers.

Collateral Underwriter utilizes multiple regression analysis to quantify estimated adjustments for differences between the subject and comparables. Regression analysis is a common statistical tool used in a number of professions. Basically, a regression model predicts how a set of independent variables will impact one single dependent variable. In residential appraisals, the dependent variable is the sales price of a property and the independent variables are the attributes that affect the value. In essence, regression analysis is very similar to match pair analysis only on a larger scale.

Regression analysis is not new to the valuation profession. For decades, regression analysis has been the primary backbone of Automated Valuation Models (AVMs). These automated models use regression analysis to predict a final value for an individual property. While appraisers can use regression analysis in the same way, they can also apply it in the sales comparison approach to identify and support items for adjustment. Appraisers are not required to understand the high level math behind the regression analysis. Appraisers must have a basic understanding of how regression analysis works, be able to use it properly, determine whether it is appropriate given the intended use of the assignment, and most importantly, whether regression results are credible and reliable.

For most appraisers, large data stores are available like never before. Many Multiple Listing Services allow subsets of data to be downloaded for analysis. Public record files (which fuel many AVM's) are also readily available to appraisers. Hardware and software are also at their fingertips. Every appraiser has a personal computer that is more than sufficient for regression analysis. There are numerous off-the-shelf regression software packages that are specifically designed for residential appraisers. Individual appraisers have the tools necessary to perform regression analysis at their desktop. The only thing that remains is gaining competency in using methodology.

Collateral Underwriter has awakened residential appraiser to has regression analysis. As a result, there is a proliferation of textbooks, continuing education courses and online resources appraisers can use to gain competency. There is a different level of competency required when appraiser uses regression analysis to predict the final value for property versus using the same tool to identify and quantify starting points for adjustments in the sales comparison approach. Residential appraisers can use regression analysis for making adjustments in the sales comparison approach and determine whether those adjustments are credible and reliable based on their experience and other methodologies they commonly use. Regression analysis used this way is an additional tool, not a determiner of value.

By adopting regression analysis, residential appraisers will be well-equipped to support their adjustments, using the same tools Collateral Underwriter employs to evaluate the veracity of adjustments made in an appraisal report. Regression analysis will not work for every appraisal

assignment. There are times when the data is just not available or the property is just too unique. If this is true for the local appraiser, it is most likely true for the CU model as well.

Now is the time for residential appraisers to embrace regression analysis.