How Informative Are Home Appraisals?

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We investigate the determinants and potential consequences of bias in home appraisals. After a buyer and seller agree to terms of sale on a property, and before the buyer is issued a mortgage, the lender obtains an appraisal. Such appraisals are required by government sponsored agencies, such as Fannie Mae and Freddie Mac, and by regulators such as the Federal Deposit Insurance Corporation and the Federal Reserve to provide information on the value of the mortgage and the riskiness of bank lending. Lenders cast the appraisal as "an unbiased estimate of the true (or fair market) value of what a home is worth."[1] However, numerous studies dispute this claim (Calem et al., 2015; Conklin et al., 2017; Freybote et al., 2014).

The appraisal is a critical source of information for the lender for determining profitability of the potential loan. However, a home appraised below the price negotiated by buyer and seller can cause problems for underwriting of the mortgage. One such problem is that the low appraisal might run the buyer-seller agreement afoul of standards necessary for selling the loan in a secondary market. This generates a disincentive to appraise homes below the agreed upon price. The empirical distribution of reported appraisals reflects this disincentive by showing that more than 1 in 3 appraisals exactly match the negotiated price and that fewer than 1 in 10 homes are appraised below. Further, existing work has established that market conditions exacerbate or assuage this bias in ways consistent with such incentives. Yet, the literature stops short of explicitly modeling the incentives of the appraisers and quantifying the degree of bias in their reports.

In this paper, we present a formal model of appraisals. In our model, the appraiser knows the negotiated price, is hired by the lender to acquire a signal of the true home value, and chooses a report. The objective of the model is to provide a mapping between signals and reports. We do this in two ways: First, as a benchmark, we assume that the appraiser is perfectly aligned with the lender (Calem et al., 2015). This highlights the countervailing incentives for the lender to bias the appraisal and to be truthful. Second, we consider the case in which lenders repeatedly interact with appraisers who vie for a good reputation. Reputation building can both raise and lower the informativeness of appraisals. On the one hand, appraisers want to express to lenders that they obtain good signals of the home value. They do so by being truthful. On the other hand, appraisers also want to signal that they understand the lenders' incentives by not reporting a low value when it is not in the lender's interest to do so.

We quantify the model using data on all home appraisals in the U.S. between 2013 and 2015. The data is a panel that contains detailed information on homes' buyer-seller negotiated price, reported appraisals, date of appraisal, the condition of the home, its location, and

[1] See https://www.discover.com/home-loans/articles/the-home-appraisal-process.

the unique identity of the appraiser. We verify substantial bias in the reported appraisals. We further show that the likelihood of a low appraisal is non-monotonically related to the future number of appraisals performed by a particular appraiser. Lenders seem to punish either too few low appraisals or too many.

References

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