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## Assessing the Allegheny Reassessment Accuracy: The Good and the Bad

In mid-2011—when all indications were that the County was on pace to complete the courtordered reassessment and taxpayers would be getting notice of their new values as early as July the Institute obtained two months of sales data on single family homes in order to compare the existing assessments on the homes with the new assessment as soon as it became available. Similar analysis was carried out in 2005 when the County was scheduled to unveil new assessment values for 2006. Unfortunately, the County chose to scrap the 2005 assessments leading to prolonged court cases ending in a Supreme Court order to reassess.

A week ago the County mailed the last of the 2013 reassessment notices out to residents in the north and west parts of the County. For the County as a whole, the new assessments put the total value of properties 35 percent above the assessed value currently in place. Changes in assessments vary widely across municipalities and school districts. The Institute is preparing a report analyzing variation in the changes at the taxing body level.

Here the focus is on the whether the updated assessments on homes actually sold during the reassessment period are more accurate than the current assessments. The data set of home sales contains sales prices for just over 1,600 single-family homes that sold for at least \$10,000 in March and April of 2011. There were 115 municipalities reporting at least one sale in those two months. The combined sales value of the homes in the data set was just over \$216 million and the total assessed value on those sales was \$177 million—18 percent below the total sales value. Using the data from actual sales it is possible to evaluate how accurately the updated, court ordered assessments reflect market prices and to determine if the updated values are superior to the old assessments.

First, the 1,600 home sales were arranged in descending order of sales price. From that list a random, stratified sample of 100 homes was chosen for analysis. Sales prices in the sample ranged from a high of \$850,000 to a low of \$10,000. Total sales value for the sample was \$12.9 million and the total assessment for the sales was \$10.6 million, meaning that, just as the complete 1,600 sales data set, the aggregate assessed value was lower than combined sales value by 18 percent and indicates the sample is a good representation of the homes sold in March and April of 2011.

Updated assessed values on the 100 properties totaled \$13.7 million, about 6 percent higher than the combined sales price. This figure is significantly closer to the aggregate sales value than the 18 percent gap with the old assessments. At first blush, the narrower error gap would appear to suggest that the new assessments are much better than the old. And as the analysis found, a large

percentage of the new assessments are definitely closer to sales prices. Unfortunately, many are worse than before and those tend to be concentrated in the lower value homes.

To proceed, the percentage differences between sales price and both new and old assessments were calculated for each sale in the sample. Those percentage differences were converted to absolute value terms in order to measure the average assessment "error" in which the "too high errors" and "too low errors" do not offset each other in the average. In short, an error is an error and a 50 percent too low assessment must not be allowed to offset an error that is 50 percent too high in evaluating the goodness of the assessment

For 64 of the 100 sales, the new gap between assessment and sales price was smaller than the gap between the current old assessment and sales price—indicating that the bulk of new assessments are more accurate than the ones currently in use. Surprisingly however, the average "error" between assessed values and sales prices rose from 50 percent under the old assessments to 53 percent under the new assessments.

How can improvement in over half of the assessments be consistent with an overall higher average "error" rate? Accuracy of the assessments for homes priced above \$50,000 improved, while lower priced sales saw accuracy worsen considerably. Of 75 homes sold for \$50,000 or more in March-April 2011, the current assessments of 68 homes are too low. With the updated assessments, 55 are too low and the gaps with sales prices are much narrower. On the other hand, for the 25 homes in the sample that sold for less than \$50,000, the current assessments of 23 are too high. The updated assessments of all 25 are too high and by wider margins than with current assessments.

To illustrate more forcefully, the sample of 100 sales were divided into quartiles based on sales price ranges. The average "error" for the sales against the old and new assessments were calculated and are shown in the table below.

Note that for Group 1, which covered a sales price range of \$850,000 to \$160,000, the average "error" dropped from 29 percent using current assessments to the 14 percent with updated assessments. For Group 2, the average "error" fell from 23 percent to 11 percent and for Group 3 the gap slid from 26 percent to 21 percent. Thus, the conclusion reached above is confirmed dramatically by these major improvements in accuracy for the sales of most homes.

Group #	Range of Sales Price	Gap between 2012 Assessments and Sales Price	Gap between 2013 Assessments and Sales Price
1	\$850,000-\$165,000	29%	14%
2	\$160,000-\$100,000	23%	11%
3	\$100,000-\$48,000	26%	21%
4	\$45,000-\$10,000	123%	165%

## **Comparing the Assessed/Sales Price Gap**

Unfortunately Group 4, which had 25 sales from \$45,000 down to \$10,000, saw the average "error" jump from 123 percent to 165 percent—a substantial problem for the overall accuracy of the reassessment. Indeed, the levels of errors in the bottom quartile are so large as to create an overall "error" for the entire 100 home sample that is larger after the reassessment than before the reassessment.

Clearly, a major effort needs to be undertaken to ascertain how such large errors not only continued but got worse for the lower valued homes.

Obviously, there are limitations to the sample in that it only looks at sales from early 2011 and does not cover homes that sold in other months of 2011 or properties that had sold in 2010 or 2009 that were used as recent "comparable sales" by the assessors. Moreover, market values of homes can vary widely even on the same street and on the same block creating difficulties in using comparable sales methodology.

On the other hand there can be no excuse for the reassessment team's failure to get the assessments closer for homes that actually sold during the period the reassessments was taking place.

## Jake Haulk, Ph.D., President

**Eric Montarti, Senior Policy Analyst** 

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> Allegheny Institute for Public Policy 305 Mt. Lebanon Blvd.\* Suite 208\* Pittsburgh PA 15234 Phone (412) 440-0079 \* Fax (412) 440-0085 E-mail: <u>aipp@alleghenyinstitute.org</u>