Montana Department of Revenue

Dan Bucks
Director

Brian Schweitzer
Governor

MEMORANDUM

To: Dan Bucks, Director

From: Larson Silbaugh, Economist, Tax Policy and Research

Date: February 17, 2010

Subject: Value Trends of Residential Property

This memo describes trends in the value of residential property in Montana. It uses data published by the federal government and a report prepared by the Department to show what has happened with the value of residential property in the state (Measuring the Quality of Reappraisal – Residential 2009). Notably, the 2009 report is the first such report that has been independently verified – in this case by Mr. Robert Gloudemans, an internationally recognized expert on property valuation and assessment sales studies.

Ratio Studies – "Measuring the Quality of Reappraisal"

After each reappraisal cycle, we produce a report titled "Measuring the Quality of Reappraisal." Our report for 2009, distributed to the Revenue and Transportation Interim Committee at the December 2009 meeting, gives valuable insight into the accuracy and validity of our work.

The main statistic in the report is the *assessment ratio,* which is calculated by dividing reappraisal value by the sale price. When the sales price equals the assessed value, the ratio is equal to 1.00. The median assessment ratio for the state as a whole is 0.9751, which means the assessed values are 2.49 percent below the market values. The report also shows the following median assessment ratios: Yellowstone County – 0.9675, Missoula County – 0.9840, and Cascade County – 0.9873.

Federal Statistics – Federal Housing Finance Agency Housing Price Index

Another important statistic comes from the Federal Housing Finance Agency (FHFA), which produces a repeat transactions housing price index (HPI). The key to the HPI is that it uses observations of multiple transactions on the same property. Prices from different time periods are combined to create "matched pairs," providing a direct measure of price changes for a given property over a known period of time. This type of index is superior to other measures of the housing stock because it controls for the quality of homes that are sold. The data can be downloaded from the FHFA website at http://fhfa.gov/Default.aspx?Page=87.

Other widely used statistics regarding home values, like median price and average price, depend on a mix of properties that sold in a certain period. The advantage of the FHFA HPI is that it is released quarterly and is the only repeat transactions index that includes data from Montana.

The index includes a statewide total and indices for three metropolitan statistical areas: Billings, Great Falls and Missoula. **Figure 1** shows the FHFA HPI from the first quarter 2005 to the third quarter 2009, the most recent data published. The Y axis is the value of the index. The base period is the first quarter of 1991, when the index = 100. So, if the index for Missoula was 250 it means that housing has appreciated by 150 percent ((250 – 100) /100) since the first quarter of 1991. Also, the index in Billings and the state as a whole is above Missoula. This does not mean that the value of homes in those areas are above the value of homes in Missoula, just that they have appreciated more since the first quarter of 1991.

The index is just like any other index, like the Dow Jones Industrial Average or the Consumer Price Index; it shows the change from period to period. There are not units, but if the index goes up the value increases; if it goes down the value of homes decrease.

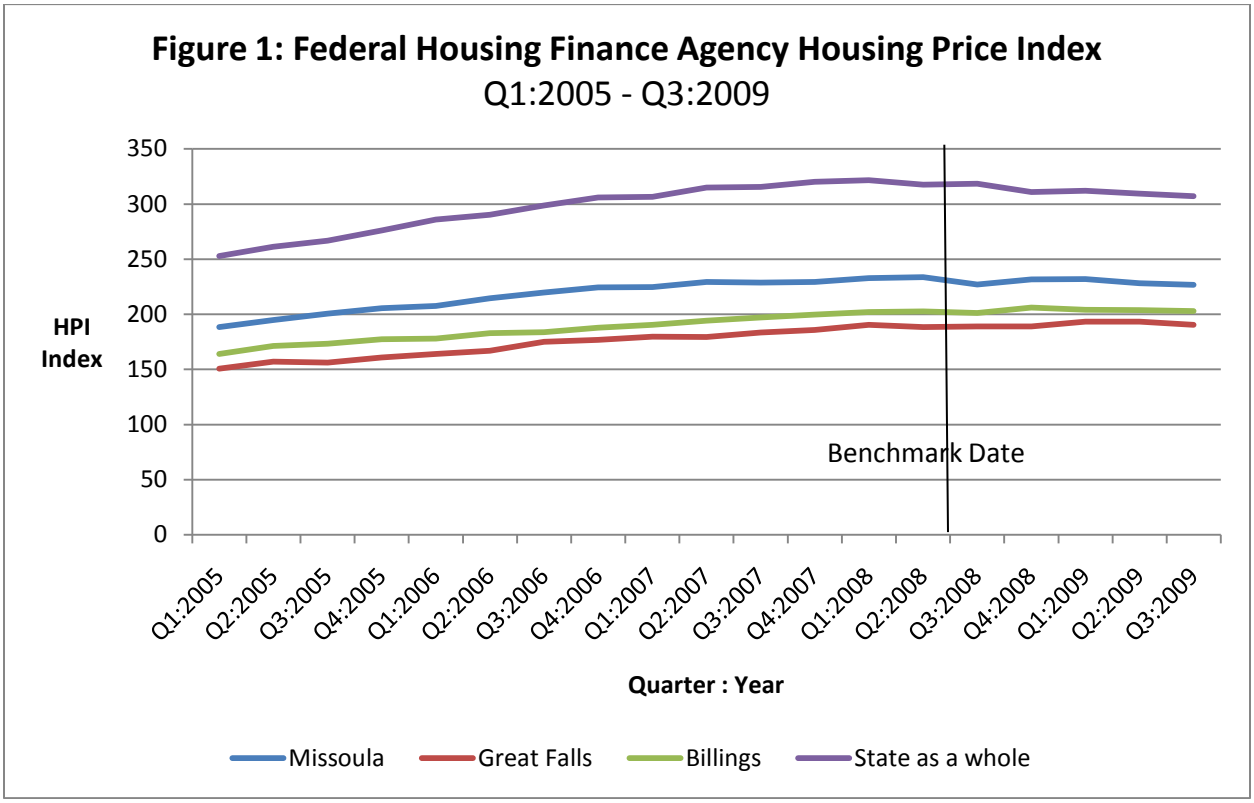

Table 1 shows four instances of percent change in value based on the FHFA HPI:

- From the benchmark date of the last reappraisal cycle (1/1/02 – 9/30/09)

- From the benchmark date of the current reappraisal cycle (7/1/08 – 9/30/09)
- The change over the last year (9/30/08 -9/30/09)
- The change over the last quarter (7/1/09 – 9/30/09)

The state as a whole has seen a decrease of 3.32 percent since the benchmark date, a very small decline. Missoula had a slight decrease, Billings and Great Falls have appreciated slightly.

Table 1: Change in Residential Value - FHFA HPI

	State	Billings	Great Falls	Missoula
Since 1/1/02	58.38%	53.38%	46.88%	61.18%
Since 7/1/08	-3.32%	0.22%	1.02%	-2.97%
1 year	-3.57%	0.90%	0.67%	-0.19%
Quarterly	-0.73%	-0.34%	-1.59%	-0.61%

In an effort to compare the HPI to the assessment level in the "Quality of Reappraisal Report," the HPI was re-indexed to the base period. The average price level[1] for the third and fourth quarters of 2008 is reported in **Table 2** for the state and the three metropolitan statistical areas in Montana. We used these quarters because they cover the same time period as the sales that we used to calculate the assessment level in the "Quality of Reappraisal Report."

The largest difference is in Billings, where the assessment level is 3.80 percentage points lower than the price level calculated with the HPI. Our assessed values are remarkably similar to the change in market values measured by the HPI. As you can see, comparing the two methodologies reinforces the quality of the 2009 Reappraisal.

Table 2: Comparing HPI to Quality of Reappraisal Report

	State	Billings	Great Falls	Missoula
HPI Average Price Level	0.9898	1.0055	1.0034	0.9821
DOR Assessment Level	0.9751	0.9675	0.9873	0.9840
Difference	0.0147	0.0380	0.0161	-0.0019

References: Measuring the Quality of Reappraisal Residential Property 2009
HPI housing calculator - http://fhfa.gov/Default.aspx?Page=86

[1] The price level is in relation to the 2nd quarter of 2008, the base period.