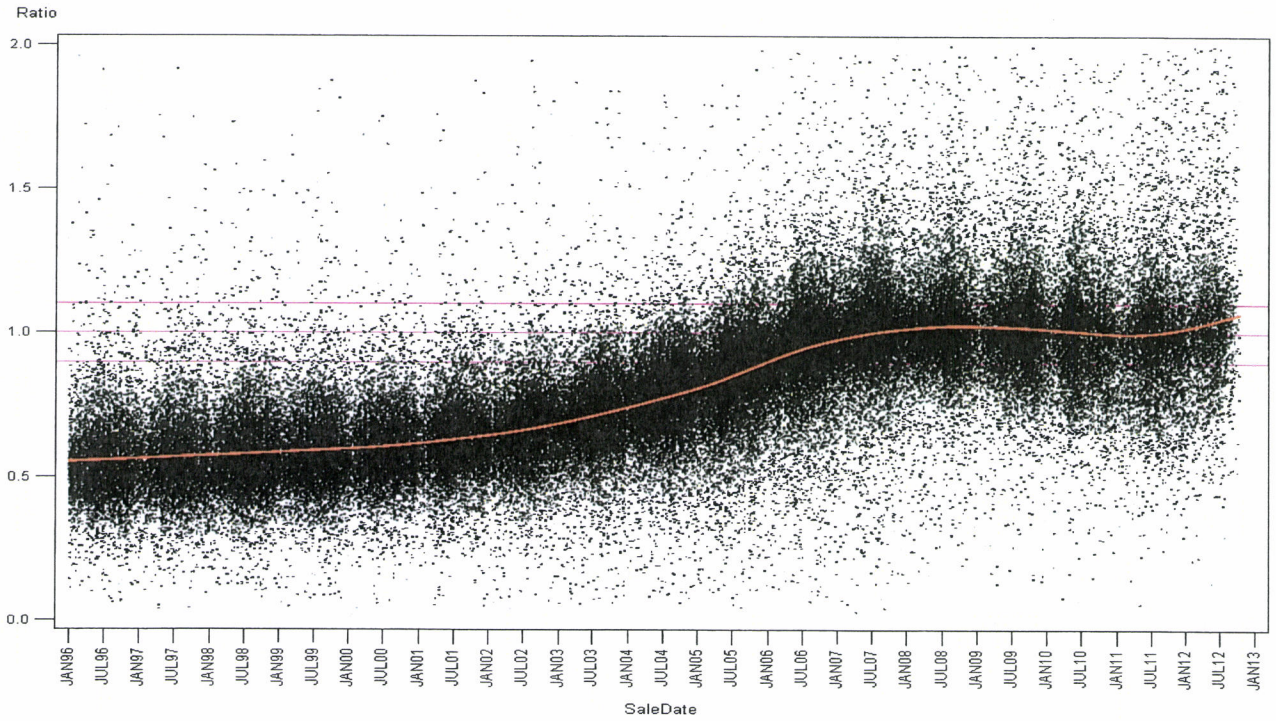
EXHIBIT 7
DATE 1-15-13
HB SJR#2

Montana Department of Revenue

Ratio Study Analysis

A Study of Residential Market Values from 1996 through mid-2012 as Measured Against the 2008 Reappraisal Values

Residential Property Ratios for the State of Montana
From July 1996 to Present



Contents

Executive Summary 4

Context 4

Current Findings 5

Introduction 8

Reference Material 8

Methodology (how to interpret technical ratio analysis information) 8

Use of Sales Ratios to Estimate Changes in Market Conditions 8

Plotting Sales Ratios and the Use of Localized Regression Interpolation 10

Regression Analysis Using Simple Linear Regression 13

Price Trend Analysis 16

Montana (statewide) 16

Sixteen Regions 18

Region 1A: Flathead and Lake Counties 21

Region 1B: Lincoln and Sanders Counties 22

Region 1C: Mineral and Ravalli Counties 23

Region 2A: Glacier, Toole, Liberty, Pondera, and Teton Counties 24

Region 2B: Hill, Blaine, Chouteau, Fergus, and Judith Basin Counties 25

Region 2C: Cascade County 26

Region 2D: Phillips, Valley, Daniels, Roosevelt, and Sheridan Counties 27

Region 3A: Yellowstone County 28

Region 3C: Petroleum, Wheatland, Golden Valley, Musselshell, Sweet Grass, Stillwater, and Carbon Counties 29

Region 3D: Rosebud, Treasure, Big Horn, Custer, and Powder River Counties 30

Region 3E: Garfield, McCone, Richland, Dawson, Prairie, Wibaux, Fallon, and Carter Counties 31

Region 4A: Lewis and Clark, Broadwater, and Meagher Counties 32

Region 4B: Missoula County 33

Region 4C: Beaverhead, Madison, and Park Counties 34

Region 4D: Powell, Granite, Deer Lodge, Silver Bow, and Jefferson Counties 35

Region 4E: Gallatin County 36

Summary 37

Appendix 38

Montana Department of Revenue

Ratio Study Analysis

A Report to the Revenue and Transportation Interim Committee – November 2012

Section *15-7-111(4), MCA - During the end of the second and fourth year of each revaluation cycle, the department shall provide the revenue and transportation interim committee with a sales assessment ratio study of residences to be used to allow the committee to be apprised of the housing market and value trends.*

As required by the statute above, this sales assessment ratio study of residences has been prepared by the Department of Revenue (DOR) to be used to inform the Revenue and Transportation Interim Committee of the housing market and value trends as of the fourth year of the revaluation cycle, 2012. The current reappraisal cycle began January 1, 2009 with the valuation benchmark date on July 1, 2008. In 2011, the department presented a similar report prepared by Almy, Gloudemans, Jacobs, and Denne (AGJD) discussing market conditions as of 2010.

What This Report Is and What It is Not

This report is **not** a report card evaluation of the 2008 property reappraisal values, as that was the function of the initial report prepared under contract by Almy, Gloudemans, Jacobs, and Denne (AGJD) for the department. That report, completed February 15, 2010, concluded that the 2008 residential reappraisal values met the mass appraisal industry standards for accuracy and uniformity at the statewide level.

A subsequent report prepared by AGJD, *Ratio Study Analysis as of July 1, 2010*, provided a sales assessment ratio study to provide market and value trends as of the second year of reappraisal cycle. In 2011, the department presented this report discussing market conditions as of 2010, as required by 15-7-111(4), MCA.

Following up on AGJD's *Ratio Study Analysis as of July 1, 2010*, this report, dated November 2012, **is** a current sales assessment ratio study, prepared by the department, to provide market and value trends as of the fourth year of the reappraisal cycle.

This report is intended to provide the legislature with a snapshot of recent housing prices statewide and in 16 geographic areas, as well as the residential real estate sales trends since the 2008 property reappraisal. To provide additional context, this report expands the timeline to include market and value trends leading up to the reappraisal cycle.

This report illustrates the diversity of the Montana residential market and the fluctuations in housing sales prices across the market. Those diverse fluctuations have an impact upon the uniformity of property appraisal values as time passes during a six-year cyclical reappraisal.

Major Report Finding

As of July 2012, average statewide residential values in Montana have returned to their 2008 levels as indicated by the 99.5% statewide assessment ratio.

Questions may be directed to:

Jerome R. Patton
Economist
Montana Department of Revenue
JPatton@MT.gov

Executive Summary

Context

In 2010, the Montana Department of Revenue commissioned Almy, Gloudemans, Jacobs, and Denne (AGJD), to conduct a series of market price trend and sales ratio studies to monitor assessment levels and related performance measures subsequent to the 2009 statewide property reappraisal, which had a July 1, 2008 valuation benchmark date. These studies were designed to measure both the changes in market conditions and changes in assessment performance levels throughout Montana between January 2007 and June 2010. In 2011, AGJD produced two reports summarizing their findings,

1) *Preliminary Ratio Study Analysis - 2009 Revaluation (February 15, 2010)* and
2) *Ratio Study Analysis As of July 1, 2010* (the 2nd year market analysis).

Preliminary Ratio Study Analysis – 2009 Revaluation (the report card)

AGJD's February report evaluated the quality of the 2009 reappraisal and found that the 2008 residential reappraisal values were very accurate on a statewide basis and in each of nine economic areas, meeting the industry standards for mass appraisal accuracy at these levels. It also found that the 2009 reappraisal met industry standards for uniformity with a 10.0% coefficient of dispersion on a statewide basis.

An equal match between the department's assessment levels and the market sales price is 1.00 (100%). Industry standards for mass appraisal establish a median ("typical") ratio in the range of 0.9 (90%) to 1.1 (110%). The statewide overall assessment level for improved residential property was 99.8% for the 2008 values, clearly within acceptable industry standards for accuracy at the statewide level.

It should also be noted that the established industry standards for residential mass appraisal uniformity require a coefficient of dispersion (COD) between 5% and 15%. The uniformity of reappraisal values is an indicator of the equalization of those property values. Equalization is the constitutional foundation of the Montana property tax system and it is the major component in treating all residential property taxpayers fairly.

Ratio Study Analysis As of July 1st, 2010 (the 2nd year market analysis)

AGJD's July report presented an analysis of market conditions two years after the 2009 reappraisal (July 1st 2008 valuation). That report indicated, in the two years since the 2009 reappraisal, changing market conditions have increased the statewide median ratio only slightly from 99.8% to 1.004%.

That report also concluded that, "While residential values generally changed only modestly in the majority of the state since the 2009 reappraisal (July 1st 2008 valuation), some areas declined significantly, resulting in assessment levels well above 100% of market value." AGJD estimated that residential values fell by more than 10% in two economic areas and in 19 of 66 market areas, while, over the same time period, 8 other market areas experienced modest appreciation. This divergence in appreciation and depreciation led to a 41% deterioration of assessment uniformity as indicated by an increase in the statewide COD from 10% to 14.1% over the first two of the six-year reappraisal cycle.

Therefore, the six-year reappraisal cycle required by law effectively "froze" assessment values for six years, inherently creating uniformity deficiencies, as reflected by a higher statewide COD. This is an expected result given that markets continue to change after the reappraisal values are set as of the established valuation benchmark date.

The Current Ratio Study Analysis (the 4th year market analysis) November 2012

This report is an analysis of residential market conditions four years after the 2009 reappraisal (July 1st 2008 valuation). Similar to the AGJD July report, this analysis compares current market conditions to those at the time of the 2009 reappraisal, to analyze the extent market conditions change since reappraisal. The findings of this report are similar to those previously found by AGJD.

Although current statewide residential market conditions are similar to those at reappraisal (ratio of 0.995), dissimilar changes within the state have continued to deteriorate assessment uniformity (COD of 14.98%).

Current Findings

This report is drawn from the "gold standard" of residential real estate data in Montana as all sales price information comes directly from the Realty Transfer Certificate (RTC) and all sales used in this analysis have been verified by the Department of Revenue (DOR) as valid sales.

The RTC data from 1996 through mid-2012 compared the validated sales prices to the July 1, 2008 valuation date to determine whether the market depreciated or appreciated before and after the valuation date. RTC's are critical to an accurate analysis because real estate sales price is confidential in Montana and the RTC is the official document that transmits that data. The department used the RTC to assist in meeting the foundational requirement of equalization as each RTC is verified for accuracy and used to validate sales that meet the requirement of being an "arm's length transaction."

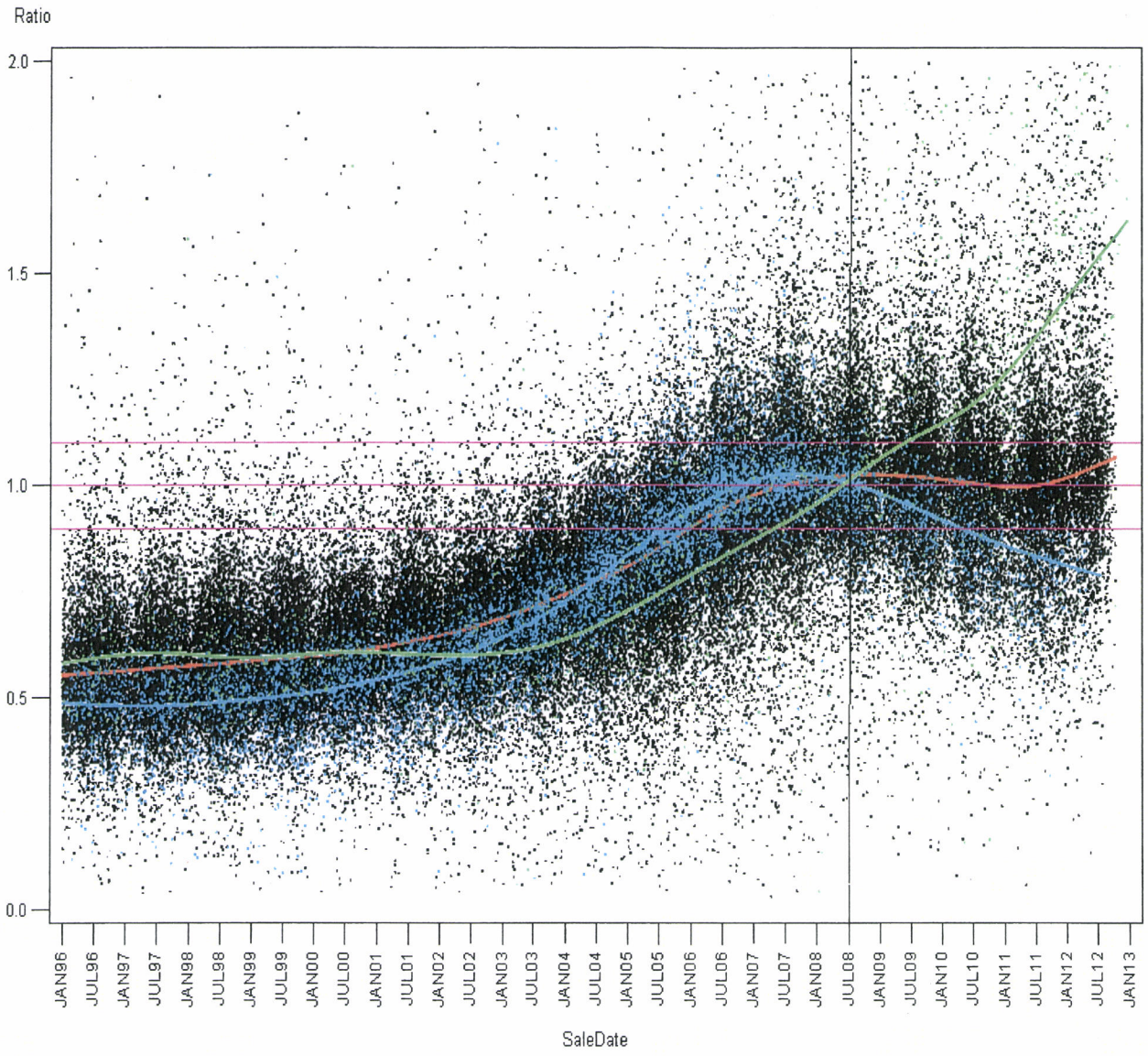
Findings of this analysis include that:

- By 2012 average statewide residential values have returned to the 2008 reappraisal values, an average statewide ratio of .995 (99.5%),
- Individual markets within the state have experienced changing and diverging market conditions,
- This divergence means continuing deterioration of assessment uniformity as recognized by growth in the statewide COD from 10% in 2008, to 14.1% in 2010, to 14.98% in 2012. Again, this is an anticipated result as markets continue to change after the reappraisal values are set for the six-year cycle.

While the current statewide average residential market conditions have increased back to 2008 levels, specific areas in the state have experienced changing and diverging market conditions. The scatter plot that follows provides an example of this issue by providing plots of Richland County (in green) and Flathead County (in blue) superimposed on the statewide plot (in black and orange) to illustrate how values in individual counties have diverged from each other and the statewide average since reappraisal in 2008.

Residential Property Ratios for the State of Montana

From July 1996 to Present



On the scatter plot above, each dot represents a property's verified sale price divided by the property's 2008 reappraisal value, the sale-to-appraisal ratio. The green dots are sales in Richland County. The blue dots are sales in Flathead County. The remaining black dots are sales from other counties in the state. The set of dots for Flathead County and Richland County are accompanied by similar colored lines (statewide is orange) presenting a smoothed (localized) regression line (LOESS) that estimates the average ratio for a given time period. The horizontal pink lines present the ratio values of 0.9, 1.0, and 1.1, respectively. The convergence of the LOESS lines with the sale-to-assessment ratio of 1.0 at July of 2008 indicate average sales prices close to average

assessment values at the time of reappraisal, before diverging in the years to follow. These findings are similar to that found by AGJD.

As discussed later in this report, depreciated market conditions in the Flathead / Lake Region, Mineral / Ravalli Region, and Gallatin County are the lowest in the analysis at 79.2%, 83.1%, and 85.8% of the 2008 reappraisal values, respectively. While market conditions in Cascade County and Yellowstone County have increased steadily to 109.9% and 105.2%, respectively. These conditions are contrasted by the market conditions in the eastern part of the state (Region 3E) which have increased dramatically to 135.6% of the 2008 reappraisal values.

This continued divergence in market appreciation and depreciation levels affects assessment uniformity and creates a situation where two properties with the same current value will be assessed for tax purposes at different values. In Montana, under current law, this issue would be addressed only once every six years when the department reappraises each residential property in the state and provides new assessment values, but current law requiring six year reappraisal and the phase in of assessed values over six years negatively affects assessment uniformity and consequently equity in taxation as measured by current market values.

Divergence of uniformity was an issue raised by AGJD in 2011. In the first and last paragraphs of the July report, AGJD recommended the possibility of indexing values to account for changing market conditions and bring assessment levels into alignment with IAAO standards. Similarly, IAAO addresses this issue on page 28 of their publication *Fundamentals of Mass Appraisal*, "IAAO recommends that properties be physically reviewed at least every six years and **revalued annually** (IAAO 2011). Some jurisdictions reappraise annually. Others reappraise on a fixed cycle. Still others reappraise only when performance measures deteriorate."

As this report illustrates, 2008 reappraisal values continue to meet industry standards on a statewide basis at 0.995 (99.5% of market value), but market fluctuations across the state have resulted in an assessment ratio range between approximately 0.792 (79.2% of market value) and 1.36 (136% of market value) in distinct market areas in 2012; obviously outside the IAAO standards of 0.90 and 1.10.

These diverse market conditions create assessment uniformity problems and are an inherent byproduct of the six-year reappraisal cycle required by law in Montana. At 14.98%, the statewide coefficient of dispersion is nearly outside the accepted range of industry standards.

Following this executive summary is an introduction, followed by a description of methodology discussing how to interpret the technical ratio analysis information presented in the accompanying scatter plots and tables. Following the description of methodology is a statewide market trend analysis as well as sixteen regional market trend analyses. Concluding this report is a brief overview of the technical information provided in earlier sections and an appendix.

Introduction

The DOR source and guidelines for conducting a mass appraisal of all Montana residential property comes from the International Association of Assessing Officers (IAAO) industry standards. IAAO is the internationally recognized leader in property appraisal, assessment administration, and property tax policy.

According to the IAAO publication *Standard on Ratio Studies* (2010), the key uses of ratio studies include the determination of time trends, and measuring and evaluating the level and uniformity of mass appraisal models. This report utilizes a sales ratio trend analysis approach to estimate how residential sale prices have changed between 1996 and 2012 with emphasis on the years since the July 1, 2008 valuation benchmark date for the current six year reappraisal cycle.

Reference Material

The IAAO publication, *Fundamentals of Mass Appraisal* (2011) written by Robert Gloudemans and Richard Almy provides guidance for conducting sales ratio trend analysis in order to estimate changes in market conditions, as does an IAAO publication, *Standard on Ratio Studies* (IAAO, 2010). This report relies heavily on these two sources as well as the *Ratio Study Analysis As of July 1, 2010* prepared under contract with the Montana Department of Revenue by Almy, Gloudemans, Jacobs, and Denne (2011).

Methodology (how to interpret technical ratio analysis information)

Use of Sales Ratios to Estimate Changes in Market Conditions

Sales Data

The sales used in this analysis include:

- Department verified valid land and building sales after January 1, 1995,
- Sales with a price above $10,000, and
- Only sales of residential improvements on either residential city/town lots or rural residential land.

Sales Areas

In some areas and time periods there are sufficient sales to develop precise estimates, while in other areas and/or times there are not. To increase estimation precision in areas with insufficient sales, geographic regions have been combined to encompass additional sales.

Sales-to-Appraisal Ratio

The term sales ratio or, more specifically, sales-to-appraisal ratio denotes the relationship between the sales price of a given property, in a particular time period, and the assessed value (in this case the July 1, 2008 reappraisal value), expressed as a decimal or percentage. For the purpose of estimating changing market conditions, sale-to-appraisal ratios were used because the results can be intuitively interpreted as inflation (upward trend) or deflation (downward trend).

For example:

	Sales Price	/	Reappraisal Value	=	Sale-to-Appraisal Ratio (%)
1)	$100,000	/	$100,000	=	1.0 (100%) → (no change from reappraisal)
2)	$120,000	/	$100,000	=	1.2 (120%) → (appreciation from reappraisal)
3)	$80,000	/	$100,000	=	0.8 (80%) → (depreciation from reappraisal)

As explained in more detail below, this analysis compares sales prices of residential land and improvements with the most current assessment (July 1, 2008), by dividing the verified sales prices of a given property by its 2008 assessment value. These ratios track changes in market conditions across time by tracking changes in sales prices relative to the 2008 assessed value. For example, if a property had a 2008 assessed value of $100,000 and sold for $48,000 in 1996, the ratio for 1996 would be $48,000 / $100,000 = 0.48 (48% of the 2008 assessed value). If that same property (with a 2008 assessed value of $100,000) sold again in 2006 for $88,000, the 2006 ratio would be 0.88 (88% of the 2008 assessed value).

The following table illustrates this example.

Year	1996	2005	2008	2011	2012
Sales Price	$48,000	$88,000	$102,000	$94,000	$100,000
2008 Reappraisal Value			$100,000		
Sale-to-Appraisal Ratio	0.48	0.88	1.02	0.94	1.00
Sale as a Percent of 2008 Appraised Value	48%	88%	102%	94%	100%

It's important to understand the sale-to-appraisal ratio provides an indication of market trends in relation to the 2008 reappraisal's assessed value; it is not an indicator of the quality of reappraisal in that specific year. As indicated by the arrows, the 1996, 2008, and 2012 sales prices, for a given property, are divided by the 2008 reappraisal value to estimate the changing market conditions at different times relative to the 2008 reappraisal.

Please note that what defines a "good" sales ratio depends on the purpose for which it is being used. When using sales ratios to assess the quality of a reappraisal, the ideal would be that every property is assessed at 100% of its market value all of the time (a sales assessment ratio of 1.0 for all properties). Unfortunately, continuously changing market conditions, imperfect information, and other mass appraisal issues mean this ideal is seldom met over time. IAAO prescribes that a good appraisal will have its middle (median) sales ratio near 1.0 (between 0.90 and 1.10) with individual ratios tightly distributed and symmetrically centered on the middle ratio.

Conclusion

When using sales ratios to estimate changing market conditions (one purpose of this report), the analysis relies upon the assumption that the appraised values reflect the market values as of the previous appraisal date (level and uniformity) and use these appraised values as benchmarks to compare actual sales across time and determine changing market conditions. In this instance, high or low ratios are neither "good" nor "bad"; instead they are indicators of changing market conditions relative to the 2008 reappraisal values. The July 1st 2010 Ratio

Study Analysis, completed by AGJD, confirmed the assumption that the 2008 reappraisal values adequately reflected the market values at that time, as does this report.

Plotting Sales Ratios and the Use of Localized Regression Interpolation

This method of interpolation is different from the ordinary least squares (OLS) linear regression method used later in this report because it does not rely upon a specified model structure and therefore allows the interpolation line more freedom to curve.

Relevance of Plotting Sales

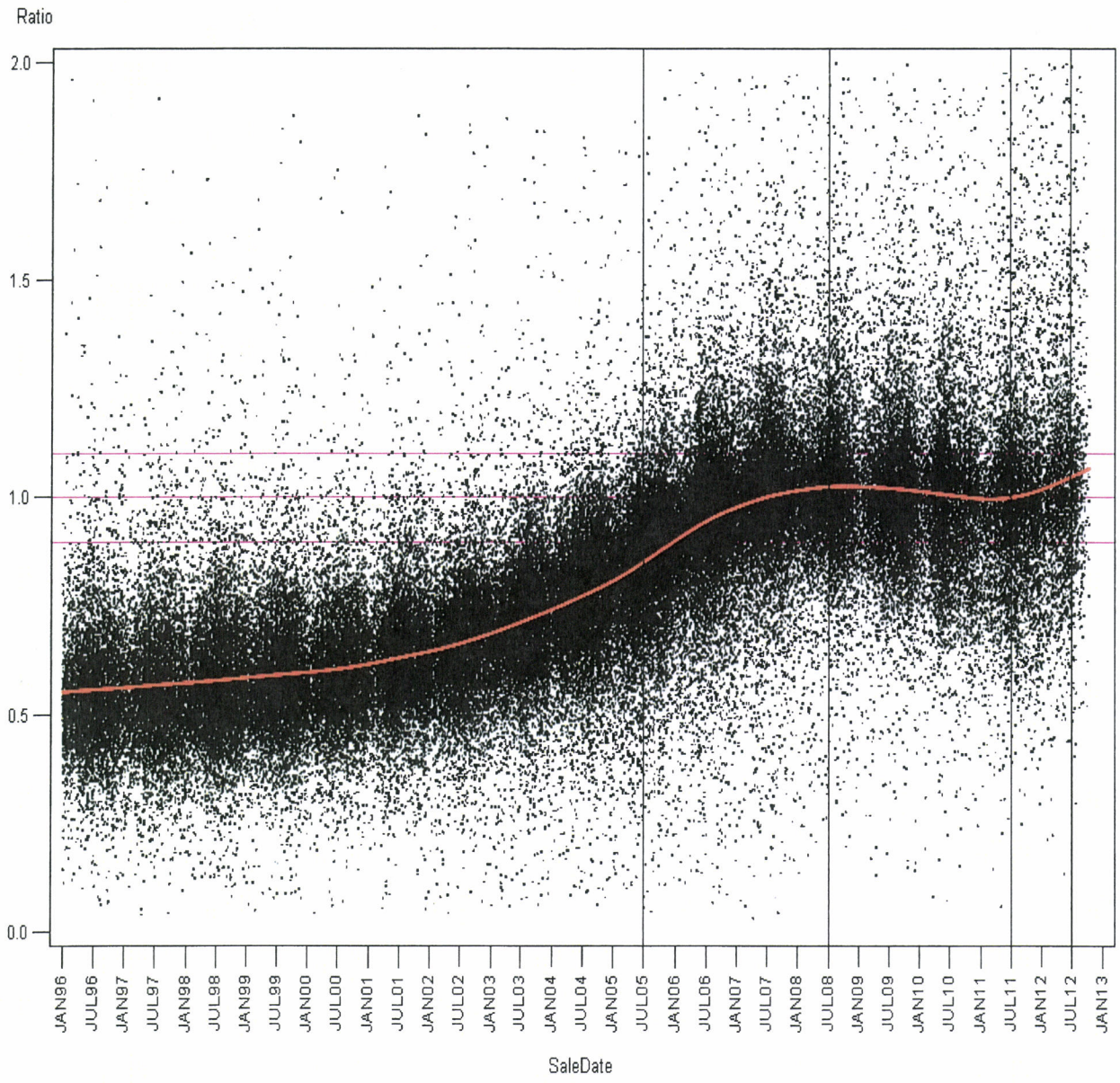
When sales ratios are analyzed over time, market trends can be visualized through the use of scatter plots with interpolation lines and quantified through the use of regression analysis. These plots are typically developed with the sale-to-appraisal ratio on the vertical access and time across the horizontal access. By presenting the data in this manner, increases and decreases in market conditions, relative to the 2008 assessment values, can be visualized as increasing or decreasing ratios as the graph is read from left to right.

Example

As an example, the following graph shows a scatter plot of sale-to-appraisal ratios for residential property in Montana from 1996 to 2012. The left-hand axis has reference lines drawn at ratio values of 0.9, 1.0, and 1.1, depicting the level where the sales, across time, are equal to 90%, 100%, and 110% of the 2008 reappraisal values (the IAAO standards for appraisal accuracy). The bottom axis presents time starting with January 1996 and ending with January 2013. Note the correspondence between the July 2008 reappraisal and the ratio level of 1.0, indicating measurements of appropriate statewide appraisal level (sales prices = appraisal) at the time of reappraisal.

Residential Property Ratios for the State of Montana

From July 1996 to Present



Reading this graph from left to right portrays how the average statewide residential property values have increased at a rapid rate until 2005. From 2005 to 2008 market conditions continued to increase, but at a more moderate rate until the peak of the statewide market in 2008. Market conditions decreased between 2008 and 2011, before turning back up in 2011.

The orange interpolation line helps readers observe how the average ratio changes throughout time. Technically, this line is a smoothed local regression interpolation (LOESS), which is a common statistical tool for

smoothing noisy data by producing a cubic spline that minimizes a linear combination of the sum of squares of the residuals of fit. This method of interpolation is different from the ordinary least squares (OLS) regression method used later in this report because it does not rely on a pre-specified simple model structure and therefore allows additional "curviness" of the line. The regression analysis described in the next section utilizes a semi-log model specification to determine initial average ratios and average compounding monthly growth rates for given time periods. Both analysis tools rely on the same underlying data, but may, appropriately, produce slightly different results.

Regression Analysis Using Simple Linear Regression

Simple Linear Regression

Simple linear regression is the *ordinary least squares* estimator of a linear regression model with only a single explanatory variable. The adjective *simple* refers to the fact that this regression is one of the simplest in statistics. Simple linear regression fits a line through a set of points in a manner that minimizes the squared vertical distance between the observed responses (ratios) in the dataset and the responses (ratios) predicted by the linear approximation. The linear approximation can take a mathematical form of a straight line or through variable transformation can be used to approximate curving lines.

The simplest regression that could be used to estimate how ratios change through time may take the form of:

Sale-to-Appraisal Ratio = Intercept + Sale Date Months (months from beginning of the selected time period).

This regression form would produce results that would be interpreted as an initial average ratio and an average rate of change per month (non-compounding). This can be visualized as drawing a straight line through a scatter plot of ratios across time.

Scatter Plots

Inspection of scatter plots of ratios across time can reveal if the relationship is best described by a straight line or could be better described by a line that curves. For the purpose of this report, a slightly different regression form was selected that allows the line to curve. Specifically, the Sale-to-Appraisal Ratios were transformed by taking their natural log before regressing them on Sale Date Months.

Semi-Log Regression

The regression form used for this report took the form of:

Natural Log of Sale-to-Appraisal Ratio = Intercept + Sale Date Months (months from beginning of the selected time period).

This "semi-log" regression form provides estimates of the natural log of sale-to-appraisal ratio as of the initial sale date for the given time period (the intercept) and an average (monthly compounding) rate of change for the given time period (the curving slope).

Selection of Time Periods

Inspection of the scatter plots of ratios across time can reveal if the relationship is best described by one line with a constant curve across the entire time period or may be better described by a more involved mathematical formula. In an effort to retain the *simple* nature of simple linear regression without using a more involved mathematical formula, the time period between January 1996 and January 2013 was separated into five distinct time periods. This allows the fitting of a *simple* curved line to each of these time periods and also provides an estimate of the average initial ratio in the given time period.

The time periods in this report were selected because they relate to the timing of apparent significant changes in statewide market conditions. As indicated by the preceding scatter plot of statewide ratios, market conditions increased at an increasing rate before 2005. After this time, general market conditions continued to increase, but at a decreasing rate until 2008 when market conditions "peaked" and began to decrease before "bottoming-out" in 2011 and began to increase again.

The five distinct time periods used in this report are:

1)	January 1996	to	June 2005	
2)	July 2005	to	June 2008	
3)	July 2008	to	June 2011	(the reappraisal time period)
4)	July 2011	to	June 2012	
5)	July 2012	to	Current	(the most recent sales available)

The fifth period "From July 2012 to Current" represents the most up to date sales recorded by the department. For the purpose of this report, the data gathered was current as of November 2, 2012.

DOR is continually in the process of verifying realty transfer certificates and sales verification letters from which this sales data is collected. This being said, different DOR regions are able to verify sales at different rates and the sales from the post-2012 time period may not reflect a random sample of sales throughout the state, potentially causing inaccurate conclusions for this time period. Results from this time period should be evaluated with care.

Indicators of Market Conditions Per Time Period

Regression analysis can be used to estimate two important indicators (estimates) of market conditions for each distinct time period:

1) the central (average) ratio at the beginning of a given time period (the intercept) and
2) the average monthly compounding growth rate during the given time period (the slope).

Additionally, regression analysis can provide information for determining the reliability of the estimates it produces as indicators of the "true" market wide values, given the underlying data used in the regression. In some instances the data allows precise estimates with a high level of confidence; in other instances the data is insufficient to precisely estimate the actual market conditions. In either case, the "average" estimate is presented. Additional statistical analysis may be used to determine the level of precision allowed by the data.

Analysis

A 95% confidence level was selected, and for each estimate, the range of values falling within this interval is presented in the body of the report.

A consistent reporting format is used to present the regression results for the entire state and 16 individual areas. For each area, results for five time periods are provided. As discussed above, each time period corresponds to times of major changes in statewide market conditions over the last 17 years. For each of these time periods, the number of sales used in the regression is reported as well as the regression's estimate of the

average ratio at the beginning of the time period and the estimate of the average growth rate (monthly percent change during the time period), as well as the range of values falling within the 95% confidence interval for both estimates.

When the estimates are predicted for shorter time periods, all else equal, there are a smaller number of verified sales that are used in the analysis. In areas with few sales and/or greater variability in the ratios, the available data may not provide estimates with a sufficient degree of statistical significance. This is particularly true for less populated areas and the time period from July 2011 to current. This issue is realized when an estimate has low t-value, high p-value, and a wide range between the lower and upper bounds of the 95% confidence interval.

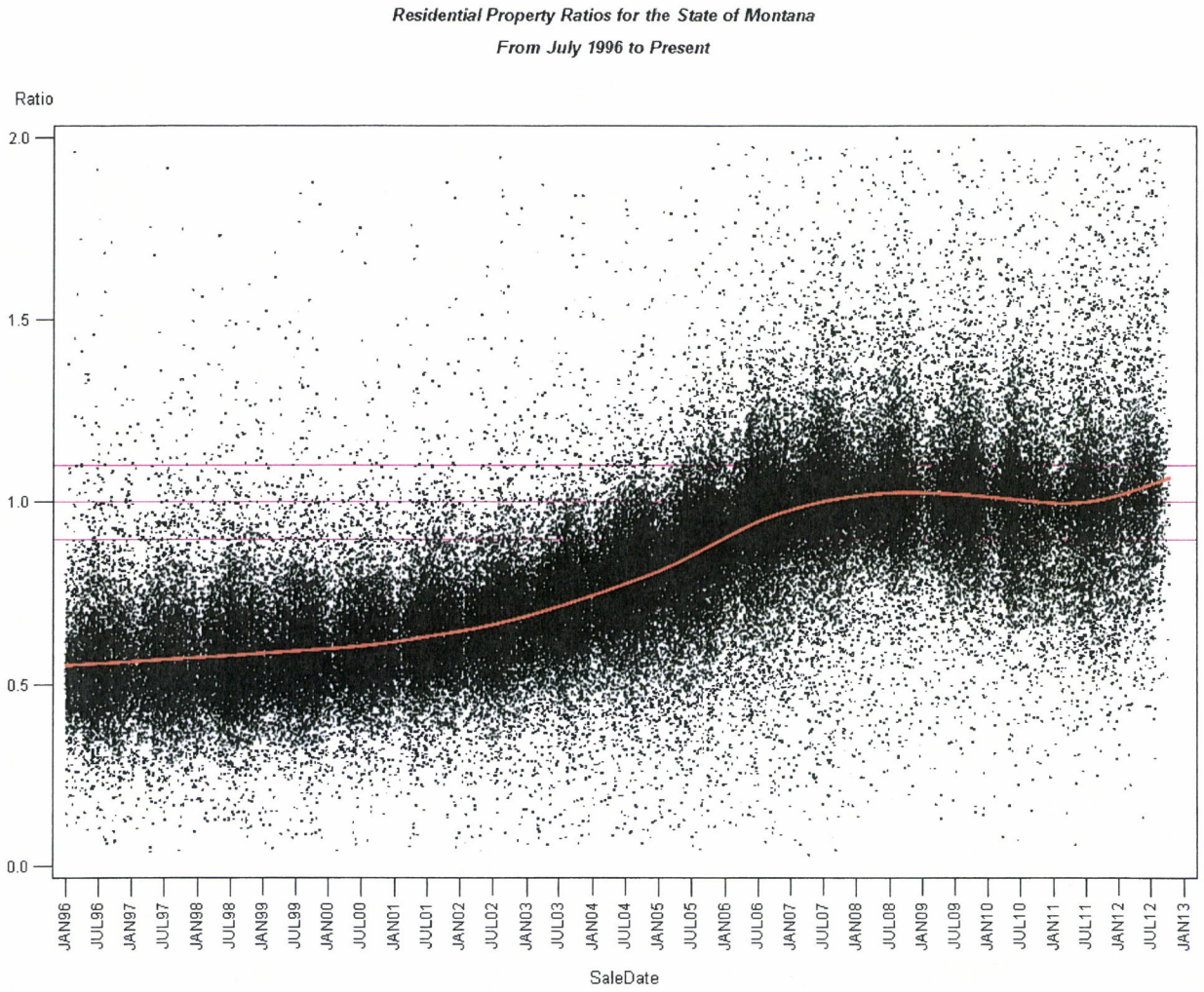
For the average ratio statistics, the p-values can be interpreted as the probability, in repeated sampling, of obtaining an average ratio as extreme (as different from a ratio of 1.0, in this case) as the statistic provided. For example, if the average ratio is 1.02 and the p-value is less than 0.0001, one may choose to reject the "null hypothesis" that the true average ratio in the population is 1.00, in favor of the alternate hypothesis; the true average ratio is 1.02. If the p-value is greater than the selected confidence level of 95% (.05), say 0.06, one may fail to reject the "null hypothesis" that the true average ratio is not statistically different than 1.0, as may be the case after a reappraisal when sales prices equal assessment values or when the underlying data is insufficient to determine a meaningful difference.

For the average growth rate statistics, the p-values can be interpreted to mean the probability, in repeated sampling, of obtaining a growth rate as extreme (as different from a rate of 0.00%, in this case) as the statistic provided. For example, if the average growth rate is -0.20% and the p-value is less than 0.0001, one may choose to reject the "null hypothesis" that the true average growth rate in the population is 0.00%, in favor of the alternate hypothesis; the true average growth rate is -0.20%. If the p-value is greater than the selected confidence level of 95% (.05), say 0.06, one may fail to reject the "null hypothesis" that the true average growth rate is not statistically different than 0.00%, as may be the case when there is no appreciation or depreciation in a given time period or when the underlying data is insufficient to determine a meaningful difference.

Price Trend Analysis

This section provides a statewide price trend analysis for Montana and for the 16 separate geographic management areas used by DOR. Each of the following report sections include a scatter plot of sale-to-appraisal ratios from January 1996 to approximately July 2012, a LOESS interpolation line in orange, OLS regression results for the five distinct time periods, and a brief discussion of the results.

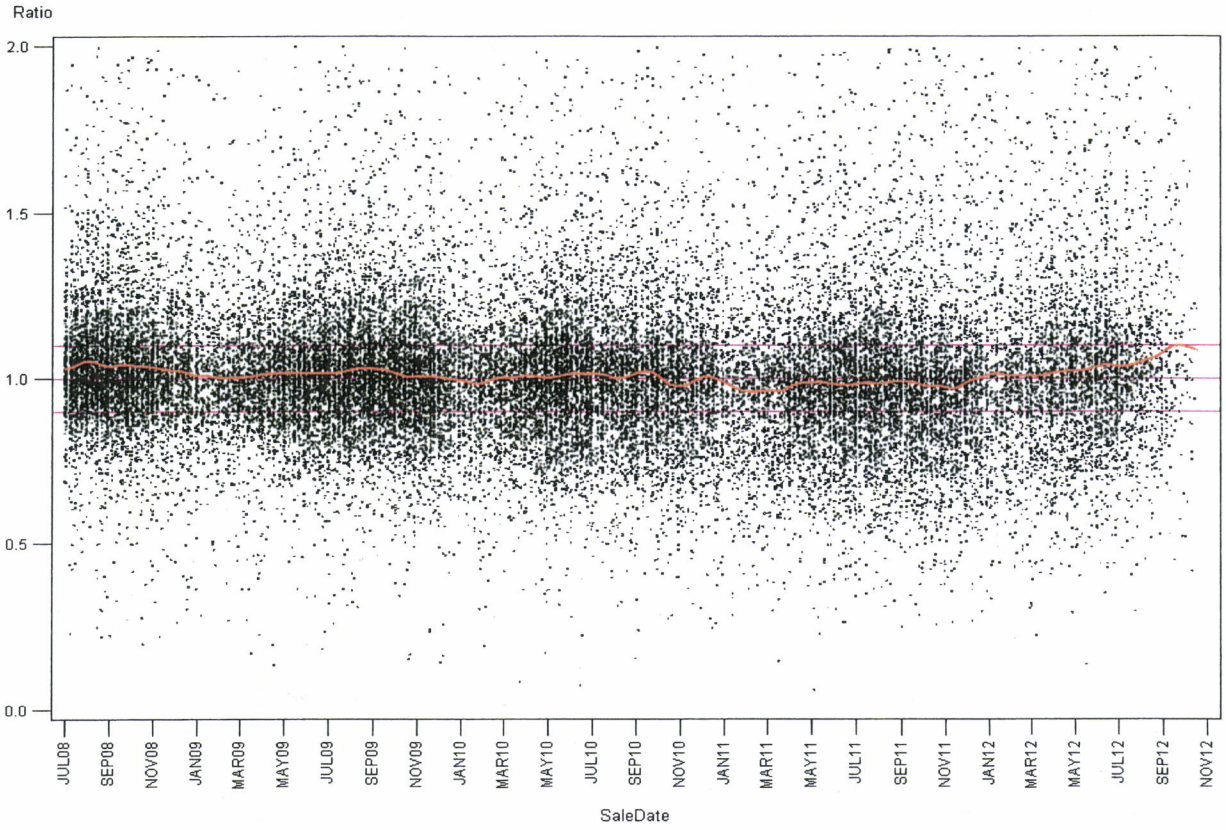
Montana (statewide)



The scatter plot above indicates that the average (Montana wide) residential market conditions roughly doubled between 1996 and the latest reappraisal in 2008, before dipping slightly and turning back up in 2011. While changing market conditions can be eyeballed reasonably well by examining scatterplots and interpolation lines, simple regression analysis can be used to quantify the extent to which changes in market conditions have occurred, by asking two questions for the specified time period: What is the initial average sales-to-appraisal ratio? and What is the average compounding growth rate? The scatter plot below focuses on the time period from July 2008 to 2012 providing a closer inspection of the sale-to-appraisal ratios since reappraisal.

Residential Property Ratios for the State of Montana

From July 2008 to Present



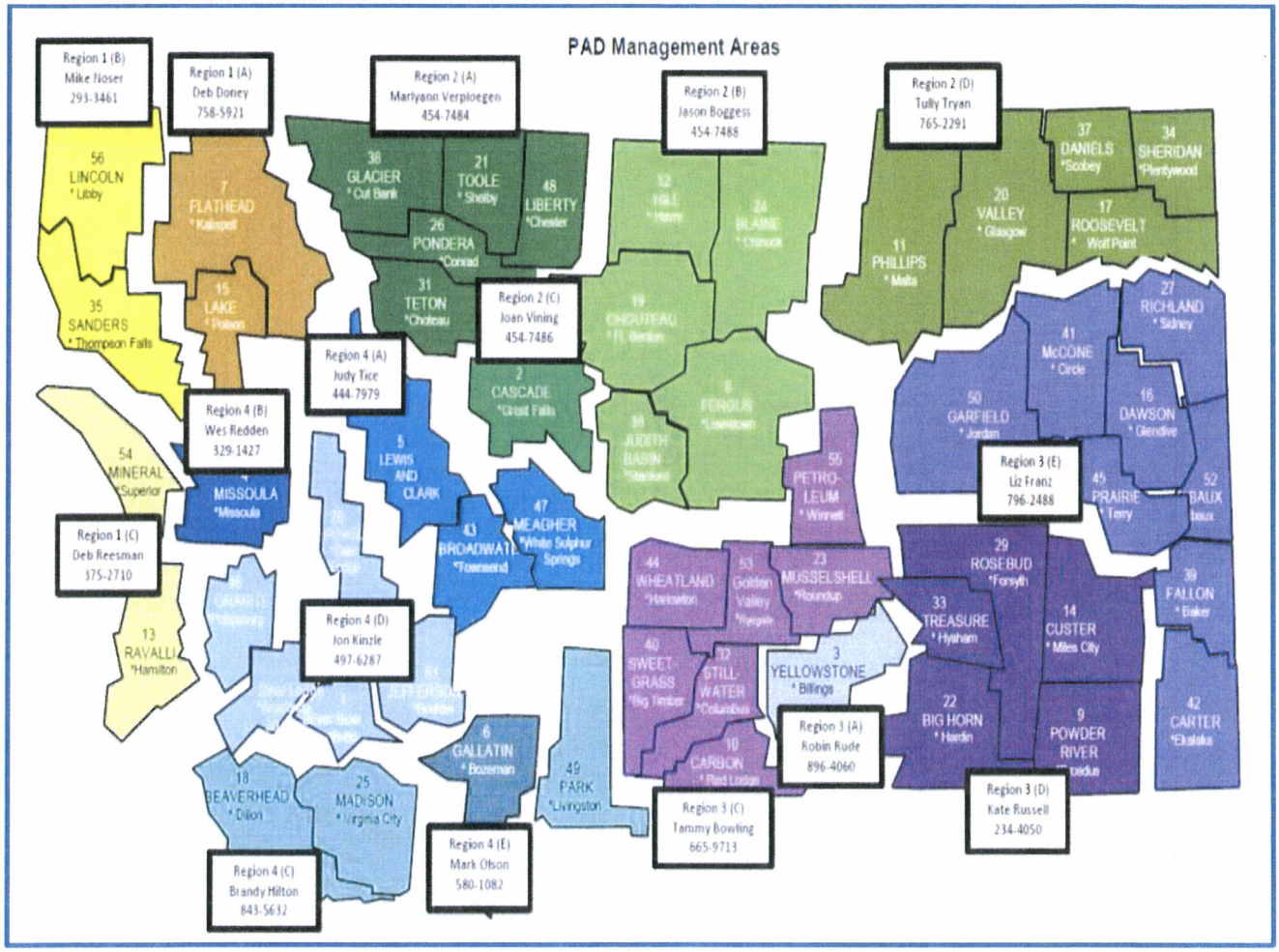
Residential Market Conditions in Montana from 1996 to 2012

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Statewide	January 1996 to June 2005	109,649	**48.4%**	48.2%	48.5%	109,649	**0.41%**	0.41%	0.42%
Statewide	July 2005 to June 2008	48,524	**87.8%**	87.4%	88.1%	48,524	**0.51%**	0.49%	0.53%
Statewide	July 2008 to June 2011	26,818	**102.2%**	101.7%	102.7%	26,818	**-0.20%**	-0.22%	-0.17%
Statewide	July 2011 to June 2012	7,415	**94.5%**	93.5%	95.5%	7,415	**0.47%**	0.31%	0.63%
Statewide	July 2012 to Current	812	**99.5%**	96.6%	102.5%	812	**2.30%**	0.26%	4.38%

As the table and scatter plots above illustrate, beginning in 1996 average sale-to-appraisal ratios grew from 48% of 2008 reappraisal values in January of 1995, to 88% in July of 2006, before peaking at 102% in July of 2008. At this point, the average sale-to-appraisal ratio fell over the next three years to a July 2011 level of approximately 95% before beginning to grow again. Between July 2011 and July 2012, the statewide average sale-to-appraisal ratio grew at an approximate average rate of 0.47% per month to a July 2012 value of approximately 1.0 (100%).

Sixteen Geographic Areas

For the purpose of this analysis, the state is separated into the 16 DOR management areas based on similar market conditions and geographic locations. Each of the 16 regions has a distinct color on the map provided below and a corresponding color on the regional analysis. For ease of comparison, a table of summary statistics is provided. On the map, the Property Assessment Division's regional manager's name and phone number has been provided.



Residential Market Conditions in Montana from 1996 to 2012

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Region 1A	January 1996 to June 2005	15,470	**39.7%**	39.3%	40.1%	15,470	**0.57%**	0.56%	0.59%
Region 1A	July 2005 to June 2008	6,515	**91.1%**	90.4%	91.8%	6,515	**0.45%**	0.41%	0.49%
Region 1A	July 2008 to June 2011	2,471	**101.3%**	99.9%	102.7%	2,471	**-0.57%**	-0.64%	-0.50%
Region 1A	July 2011 to June 2012	479	**81.6%**	78.5%	84.8%	479	**-0.20%**	-0.86%	0.46%
Region 1A	July 2012 to Current	43	**79.2%**	67.7%	92.6%	43	**0.38%**	-9.06%	10.80%
Region 1B	January 1996 to June 2005	1,857	**46.0%**	44.6%	47.4%	1,857	**0.33%**	0.29%	0.37%
Region 1B	July 2005 to June 2008	1,160	**78.8%**	76.6%	81.1%	1,160	**1.16%**	1.00%	1.31%
Region 1B	July 2008 to June 2011	513	**113.8%**	108.4%	119.5%	513	**-0.85%**	-1.08%	-0.62%
Region 1B	July 2011 to June 2012	154	**91.5%**	84.0%	99.7%	154	**-0.05%**	-1.37%	1.29%
Region 1B	July 2012 to Current	13	**98.1%**	68.3%	140.9%	13	**-12.71%**	-39.20%	25.31%
Region 1C	January 1996 to June 2005	4,940	**44.1%**	43.4%	44.9%	4,940	**0.53%**	0.51%	0.56%
Region 1C	July 2005 to June 2008	1,963	**90.8%**	89.1%	92.6%	1,963	**0.44%**	0.34%	0.55%
Region 1C	July 2008 to June 2011	734	**101.5%**	99.0%	104.1%	734	**-0.43%**	-0.55%	-0.30%
Region 1C	July 2011 to June 2012	235	**87.9%**	84.0%	92.1%	235	**-0.52%**	-1.15%	0.13%
Region 1C	July 2012 to Current	40	**83.1%**	73.2%	94.3%	40	**2.06%**	-5.94%	10.75%
Region 2A	January 1996 to June 2005	2,047	**67.6%**	65.6%	69.7%	2,047	**0.15%**	0.10%	0.19%
Region 2A	July 2005 to June 2008	881	**82.7%**	79.2%	86.4%	881	**0.53%**	0.31%	0.74%
Region 2A	July 2008 to June 2011	600	**101.1%**	96.5%	105.8%	600	**0.13%**	-0.10%	0.36%
Region 2A	July 2011 to June 2012	251	**111.0%**	103.8%	118.8%	251	**0.93%**	-0.04%	1.90%
Region 2A	July 2012 to Current	41	**128.9%**	106.4%	156.2%	41	**-2.18%**	-11.62%	8.26%
Region 2B	January 1996 to June 2005	3,503	**58.3%**	57.1%	59.5%	3,503	**0.21%**	0.18%	0.24%
Region 2B	July 2005 to June 2008	1,384	**79.6%**	77.1%	82.1%	1,384	**0.69%**	0.53%	0.84%
Region 2B	July 2008 to June 2011	931	**103.5%**	100.2%	106.9%	931	**0.00%**	-0.16%	0.16%
Region 2B	July 2011 to June 2012	226	**101.5%**	95.4%	108.0%	226	**0.38%**	-0.62%	1.39%
Region 2B	July 2012 to Current	47	**107.3%**	91.4%	125.8%	47	**-0.16%**	-8.43%	8.85%
Region 2C	January 1996 to June 2005	10,250	**56.4%**	55.9%	56.8%	10,250	**0.29%**	0.28%	0.30%
Region 2C	July 2005 to June 2008	4,334	**83.9%**	83.0%	84.9%	4,334	**0.54%**	0.48%	0.59%
Region 2C	July 2008 to June 2011	2,642	**99.9%**	98.8%	101.1%	2,642	**0.12%**	0.06%	0.18%
Region 2C	July 2011 to June 2012	699	**102.7%**	100.9%	104.5%	699	**0.48%**	0.23%	0.73%
Region 2C	July 2012 to Current	129	**109.9%**	104.2%	115.9%	129	**0.45%**	-2.67%	3.67%
Region 2D	January 1996 to June 2005	1,853	**69.2%**	67.1%	71.5%	1,853	**0.13%**	0.08%	0.17%
Region 2D	July 2005 to June 2008	729	**80.5%**	76.3%	84.8%	729	**0.48%**	0.21%	0.75%
Region 2D	July 2008 to June 2011	645	**97.2%**	92.3%	102.4%	645	**0.43%**	0.17%	0.70%
Region 2D	July 2011 to June 2012	144	**116.7%**	105.2%	129.5%	144	**0.59%**	-1.07%	2.29%
Region 2D	July 2012 to Current	11	**70.2%**	33.2%	148.3%	11	**15.56%**	-23.56%	74.69%
Region 3A	January 1996 to June 2005	16,919	**49.2%**	49.0%	49.5%	16,919	**0.46%**	0.45%	0.47%
Region 3A	July 2005 to June 2008	7,702	**89.4%**	88.9%	89.9%	7,702	**0.41%**	0.38%	0.44%
Region 3A	July 2008 to June 2011	5,208	**103.1%**	102.4%	103.8%	5,208	**-0.04%**	-0.07%	-0.01%
Region 3A	July 2011 to June 2012	1,635	**99.4%**	98.2%	100.6%	1,635	**0.51%**	0.34%	0.68%
Region 3A	July 2012 to Current	139	**105.2%**	101.3%	109.1%	139	**3.79%**	-0.16%	7.89%

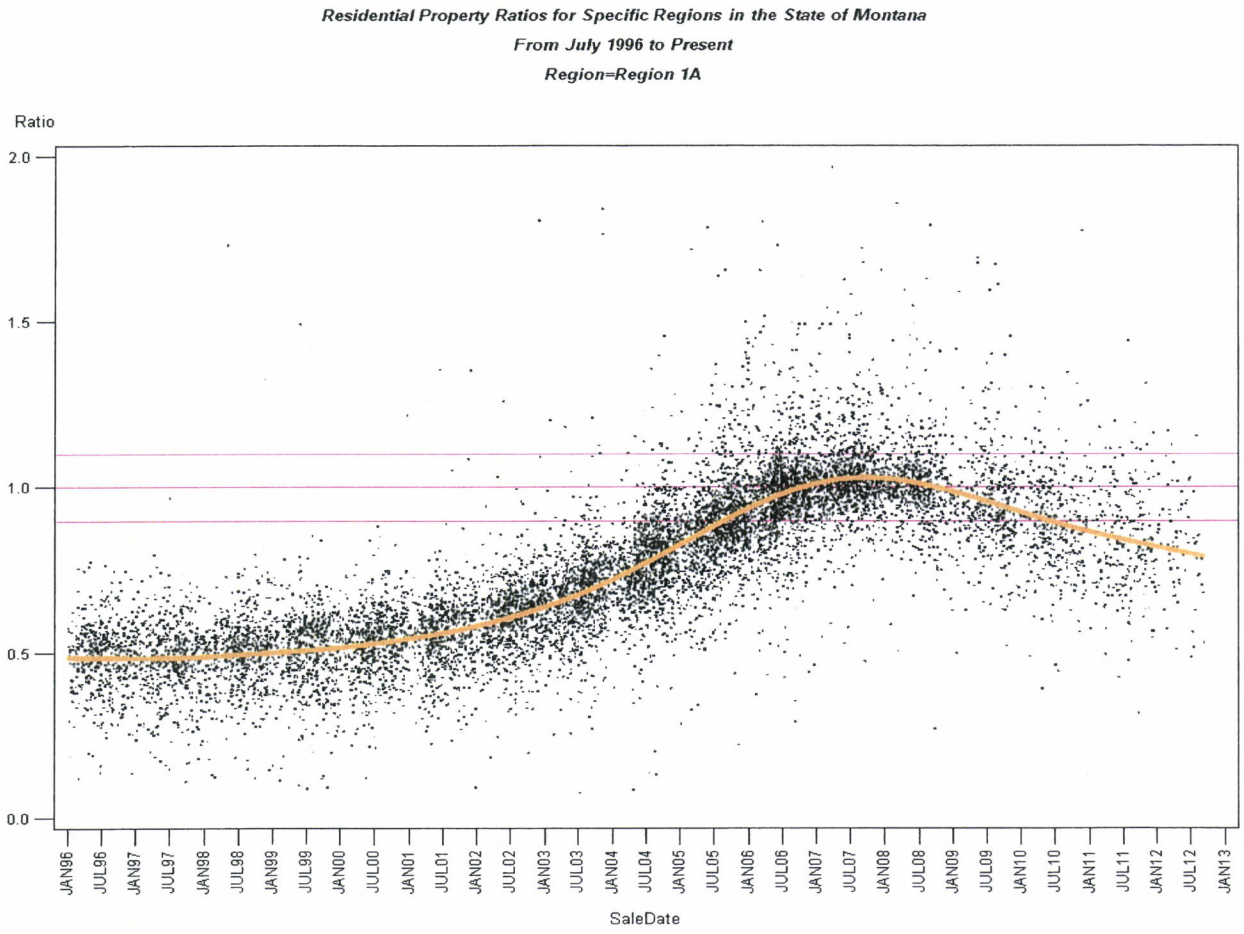
Continued on next page...

Continued from last page...

Residential Market Conditions in Montana from 1996 to 2012

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Region 3C	January 1996 to June 2005	2,752	**52.5%**	51.1%	53.9%	2,752	**0.38%**	0.35%	0.42%
Region 3C	July 2005 to June 2008	1,387	**87.5%**	85.2%	89.8%	1,387	**0.53%**	0.40%	0.66%
Region 3C	July 2008 to June 2011	893	**109.8%**	106.5%	113.2%	893	**-0.37%**	-0.52%	-0.22%
Region 3C	July 2011 to June 2012	289	**95.7%**	90.4%	101.3%	289	**0.57%**	-0.31%	1.45%
Region 3C	July 2012 to Current	30	**96.9%**	78.8%	119.3%	30	**3.17%**	-10.84%	19.38%
Region 3D	January 1996 to June 2005	2,363	**53.8%**	52.4%	55.2%	2,363	**0.30%**	0.27%	0.34%
Region 3D	July 2005 to June 2008	1,039	**79.3%**	76.4%	82.4%	1,039	**0.73%**	0.53%	0.92%
Region 3D	July 2008 to June 2011	623	**101.1%**	97.4%	104.9%	623	**0.15%**	-0.04%	0.35%
Region 3D	July 2011 to June 2012	135	**103.2%**	95.5%	111.4%	135	**1.61%**	0.49%	2.74%
Region 3D	July 2012 to Current	5	**77.5%**	55.2%	109.0%	5	**32.15%**	8.64%	60.77%
Region 3E	January 1996 to June 2005	2,182	**53.2%**	51.7%	54.7%	2,182	**0.25%**	0.20%	0.29%
Region 3E	July 2005 to June 2008	864	**80.0%**	77.0%	83.2%	864	**0.75%**	0.55%	0.95%
Region 3E	July 2008 to June 2011	642	**103.8%**	99.3%	108.5%	642	**0.53%**	0.33%	0.74%
Region 3E	July 2011 to June 2012	226	**131.0%**	122.8%	139.8%	226	**0.96%**	-0.09%	2.03%
Region 3E	July 2012 to Current	35	**135.6%**	118.7%	154.9%	61	**5.10%**	-2.03%	12.75%
Region 4A	January 1996 to June 2005	7,896	**52.2%**	51.6%	52.8%	7,896	**0.35%**	0.33%	0.36%
Region 4A	July 2005 to June 2008	3,876	**88.7%**	87.6%	89.7%	3,876	**0.65%**	0.59%	0.72%
Region 4A	July 2008 to June 2011	2,200	**106.6%**	104.8%	108.4%	2,200	**-0.21%**	-0.30%	-0.13%
Region 4A	July 2011 to June 2012	576	**95.2%**	92.4%	98.1%	576	**0.66%**	0.20%	1.13%
Region 4A	July 2012 to Current	61	**104.3%**	93.8%	116.0%	61	**-1.04%**	-7.53%	5.89%
Region 4B	January 1996 to June 2005	13,303	**43.9%**	43.6%	44.2%	13,303	**0.57%**	0.56%	0.57%
Region 4B	July 2005 to June 2008	5,658	**90.4%**	89.8%	91.1%	5,658	**0.41%**	0.38%	0.45%
Region 4B	July 2008 to June 2011	3,010	**100.8%**	99.9%	101.7%	3,010	**-0.14%**	-0.19%	-0.10%
Region 4B	July 2011 to June 2012	627	**95.7%**	93.8%	97.6%	627	**0.13%**	-0.18%	0.45%
Region 4B	July 2012 to Current	105	**100.3%**	95.4%	105.5%	105	**-2.31%**	-5.58%	1.07%
Region 4C	January 1996 to June 2005	4,851	**45.0%**	44.0%	46.0%	4,851	**0.41%**	0.38%	0.44%
Region 4C	July 2005 to June 2008	2,321	**89.9%**	88.1%	91.7%	2,321	**0.65%**	0.54%	0.76%
Region 4C	July 2008 to June 2011	928	**105.3%**	101.5%	109.2%	928	**-0.57%**	-0.74%	-0.39%
Region 4C	July 2011 to June 2012	332	**84.3%**	78.6%	90.4%	332	**0.49%**	-0.60%	1.59%
Region 4C	July 2012 to Current	14	**116.3%**	78.9%	171.6%	14	**-15.12%**	-33.66%	8.59%
Region 4D	January 1996 to June 2005	6,315	**60.3%**	59.3%	61.4%	6,315	**0.16%**	0.13%	0.18%
Region 4D	July 2005 to June 2008	3,242	**78.6%**	76.7%	80.6%	3,242	**0.80%**	0.67%	0.93%
Region 4D	July 2008 to June 2011	1,706	**106.2%**	103.6%	108.9%	1,706	**0.01%**	-0.12%	0.13%
Region 4D	July 2011 to June 2012	424	**102.4%**	98.1%	107.0%	424	**0.39%**	-0.29%	1.08%
Region 4D	July 2012 to Current	28	**95.8%**	79.8%	115.0%	28	**0.99%**	-9.12%	12.23%
Region 4E	January 1996 to June 2005	13,148	**39.0%**	38.7%	39.4%	13,148	**0.57%**	0.56%	0.58%
Region 4E	July 2005 to June 2008	5,469	**93.2%**	92.4%	94.0%	5,469	**0.31%**	0.26%	0.35%
Region 4E	July 2008 to June 2011	3,072	**95.2%**	94.0%	96.5%	3,072	**-0.68%**	-0.74%	-0.62%
Region 4E	July 2011 to June 2012	983	**74.7%**	72.8%	76.8%	983	**0.68%**	0.29%	1.07%
Region 4E	July 2012 to Current	71	**85.8%**	80.1%	91.8%	71	**1.92%**	-4.81%	9.12%
Statewide	January 1996 to June 2005	109,649	**48.4%**	48.2%	48.5%	109,649	**0.41%**	0.41%	0.42%
Statewide	July 2005 to June 2008	48,524	**87.8%**	87.4%	88.1%	48,524	**0.51%**	0.49%	0.53%
Statewide	July 2008 to June 2011	26,818	**102.2%**	101.7%	102.7%	26,818	**-0.20%**	-0.22%	-0.17%
Statewide	July 2011 to June 2012	7,415	**94.5%**	93.5%	95.5%	7,415	**0.47%**	0.31%	0.63%
Statewide	July 2012 to Current	812	**99.5%**	96.6%	102.5%	812	**2.30%**	0.26%	4.38%

Region 1A: Flathead and Lake Counties

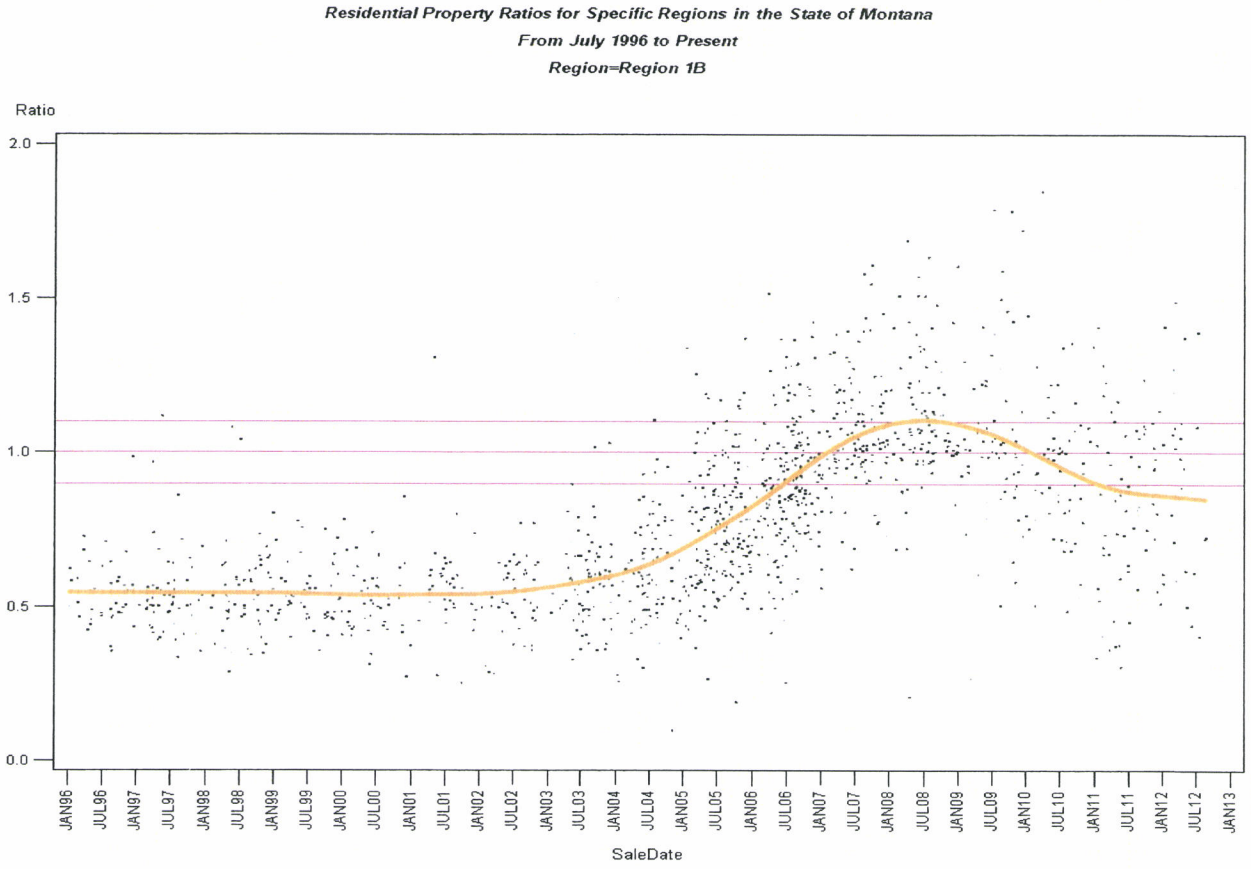


Region 1A is composed of Flathead and Lake Counties, which are located in the northwest quarter of the state. As the scatter plot depicts, residential market conditions have roughly doubled between 1996 and 2007, before peaking and steadily declining through mid-2012.

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Region 1A	January 1996 to June 2005	15,470	**39.7%**	39.3%	40.1%	15,470	**0.57%**	0.56%	0.59%
Region 1A	July 2005 to June 2008	6,515	**91.1%**	90.4%	91.8%	6,515	**0.45%**	0.41%	0.49%
Region 1A	July 2008 to June 2011	2,471	**101.3%**	99.9%	102.7%	2,471	**-0.57%**	-0.64%	-0.50%
Region 1A	July 2011 to June 2012	479	**81.6%**	78.5%	84.8%	479	**-0.20%**	-0.86%	0.46%
Region 1A	July 2012 to Current	43	**79.2%**	67.7%	92.6%	43	**0.38%**	-9.06%	10.80%

As the table illustrates, beginning in 1996 average sale-to-appraisal ratios grew from approximately 40% of 2008-reappraisal-values, to approximately 101% in 2008, before declining to approximately 82% in 2011. The post 2011 sales data is insufficient to conclusively determine current trends.

Region 1B: Lincoln and Sanders Counties

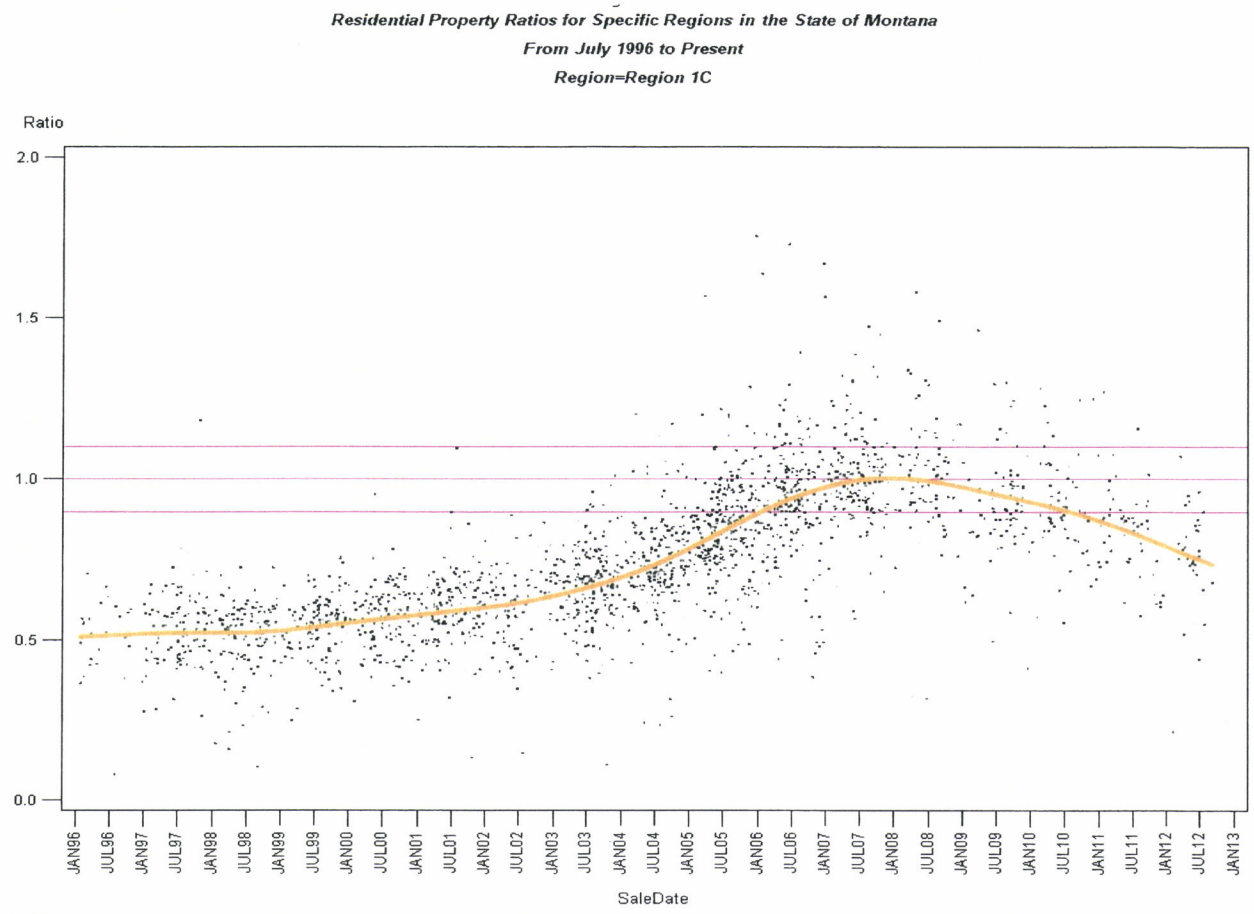


Region 1B is composed of Lincoln and Sanders Counties, which are located in the northwest corner of the state. As the scatter plot depicts, residential market conditions roughly doubled between 1996 and 2007, before peaking in 2008, and declining through mid-2012.

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Region 1B	January 1996 to June 2005	1,857	**46.0%**	44.6%	47.4%	1,857	**0.33%**	0.29%	0.37%
Region 1B	July 2005 to June 2008	1,160	**78.8%**	76.6%	81.1%	1,160	**1.16%**	1.00%	1.31%
Region 1B	July 2008 to June 2011	513	**113.8%**	108.4%	119.5%	513	**-0.85%**	-1.08%	-0.62%
Region 1B	July 2011 to June 2012	154	**91.5%**	84.0%	99.7%	154	**-0.05%**	-1.37%	1.29%
Region 1B	July 2012 to Current	13	**98.1%**	68.3%	140.9%	13	**-12.71%**	-39.20%	25.31%

As the table illustrates, beginning in 1996 average sale-to-appraisal ratios grew from approximately 46% of 2008-reappraisal-values, to a peak of 114% in 2008, before declining to 92% in 2011. While the regression appears to show an increase in market value after June 2012, there are too few sales in this period to have confidence that this is due to a real market trend rather than the circumstances of those individual sales.

Region 1C: Mineral and Ravalli Counties

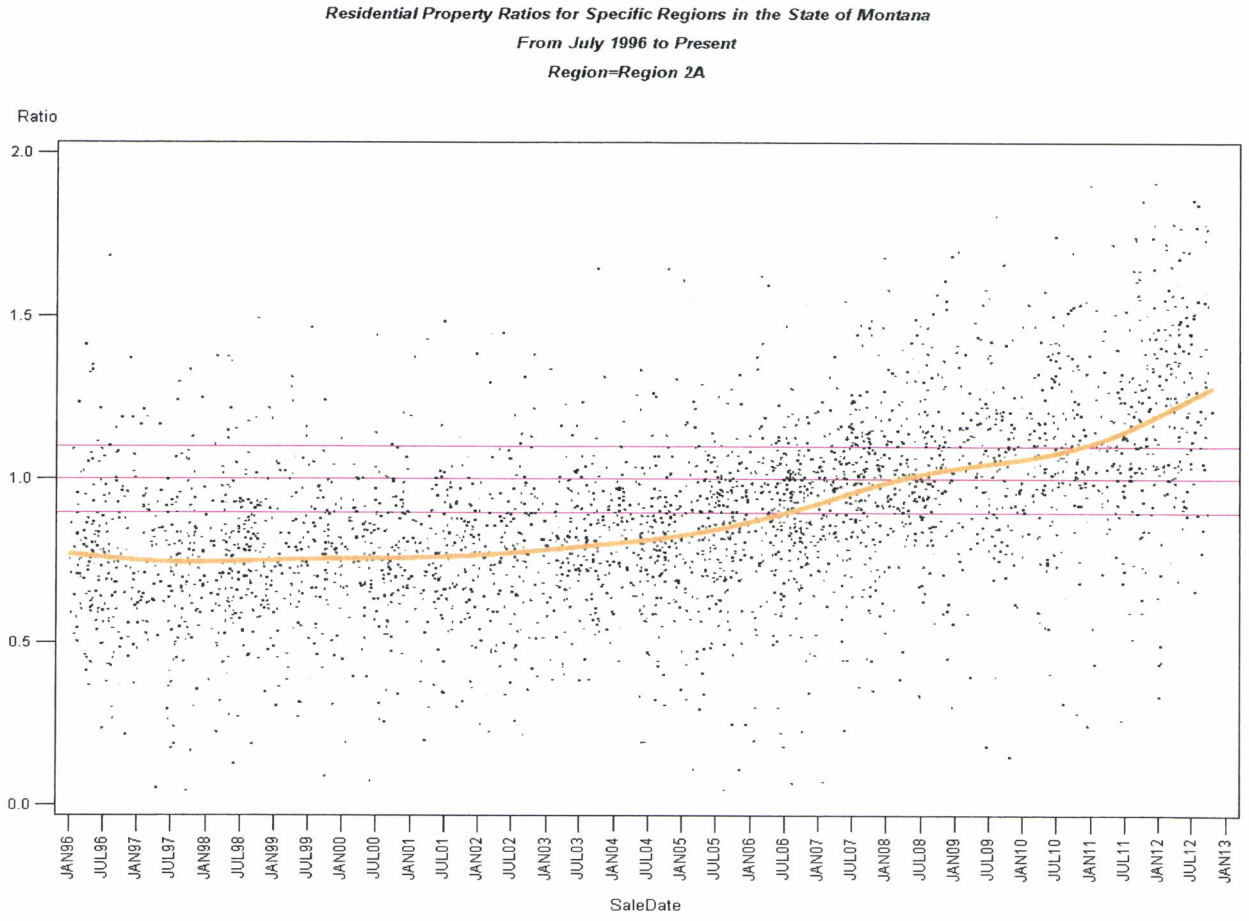


Region 1C is composed of Mineral and Ravalli Counties, which are located on the west side of the state. As the scatter plot depicts, residential market conditions roughly doubled between 1995 and 2007, before peaking and steadily declining through mid-2012.

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Region 1C	January 1996 to June 2005	4,940	**44.1%**	43.4%	44.9%	4,940	**0.53%**	0.51%	0.56%
Region 1C	July 2005 to June 2008	1,963	**90.8%**	89.1%	92.6%	1,963	**0.44%**	0.34%	0.55%
Region 1C	July 2008 to June 2011	734	**101.5%**	99.0%	104.1%	734	**-0.43%**	-0.55%	-0.30%
Region 1C	July 2011 to June 2012	235	**87.9%**	84.0%	92.1%	235	**-0.52%**	-1.15%	0.13%
Region 1C	July 2012 to Current	40	**83.1%**	73.2%	94.3%	40	**2.06%**	-5.94%	10.75%

As the table illustrates, beginning in 1996 average sale-to-appraisal ratios grew from approximately 44% of the 2008 reappraisal values, to a peak of approximately 102% in 2008, before declining to 88% in 2011.

Region 2A: Glacier, Toole, Liberty, Pondera, and Teton Counties

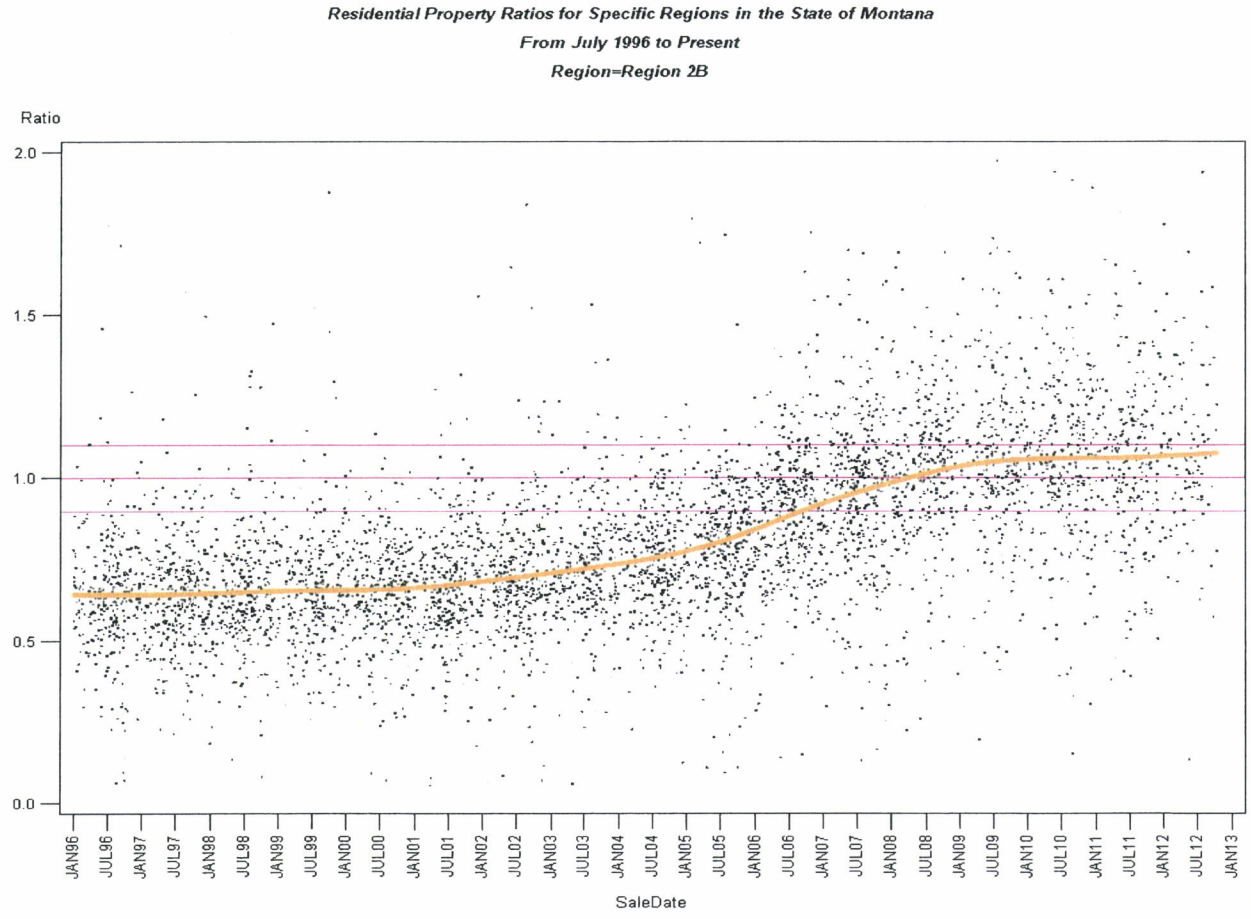


Region 2A is composed of Glacier, Toole, Liberty, Pondera, and Teton Counties, which are located in the north central portion of the state. As the scatter plot depicts, residential market conditions in this region have been increasing since about 1997.

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Region 2A	January 1996 to June 2005	2,047	**67.6%**	65.6%	69.7%	2,047	**0.15%**	0.10%	0.19%
Region 2A	July 2005 to June 2008	881	**82.7%**	79.2%	86.4%	881	**0.53%**	0.31%	0.74%
Region 2A	July 2008 to June 2011	600	**101.1%**	96.5%	105.8%	600	**0.13%**	-0.10%	0.36%
Region 2A	July 2011 to June 2012	251	**111.0%**	103.8%	118.8%	251	**0.93%**	-0.04%	1.90%
Region 2A	July 2012 to Current	41	**128.9%**	106.4%	156.2%	41	**-2.18%**	-11.62%	8.26%

As the table illustrates, beginning in 1996 average sale-to-appraisal ratios grew from approximately 68% of 2008-reappraisal-values, to approximately 101% in 2008, 111% in 2011.

Region 2B: Hill, Blaine, Chouteau, Fergus, and Judith Basin Counties

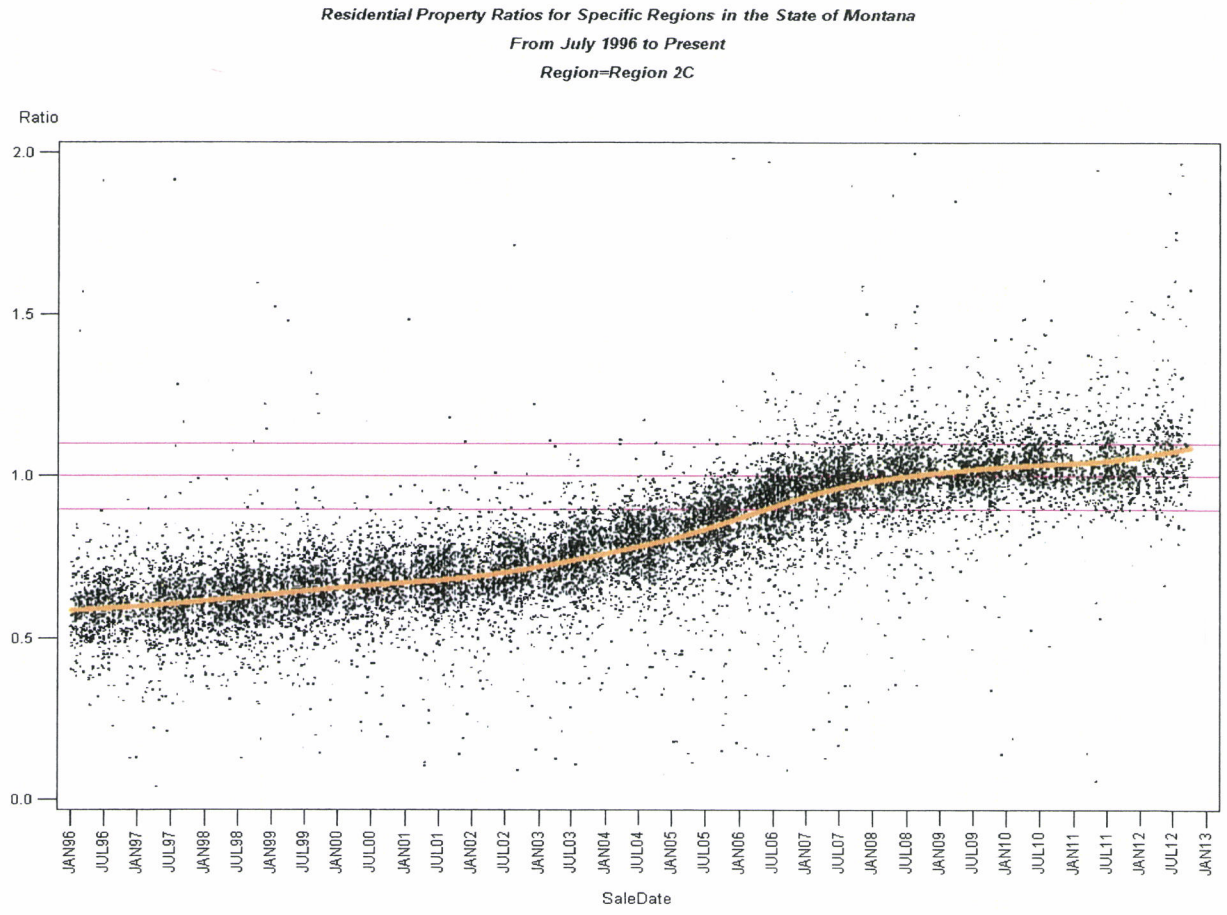


Region 2B is composed of Hill, Blaine, Chouteau, Fergus, and Judith Basin Counties, which are located in the north central portion of the state. As the scatter plot depicts, residential market conditions increased until about 2008 when they started to slow down.

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Region 2B	January 1996 to June 2005	3,503	**58.3%**	57.1%	59.5%	3,503	**0.21%**	0.18%	0.24%
Region 2B	July 2005 to June 2008	1,384	**79.6%**	77.1%	82.1%	1,384	**0.69%**	0.53%	0.84%
Region 2B	July 2008 to June 2011	931	**103.5%**	100.2%	106.9%	931	**0.00%**	-0.16%	0.16%
Region 2B	July 2011 to June 2012	226	**101.5%**	95.4%	108.0%	226	**0.38%**	-0.62%	1.39%
Region 2B	July 2012 to Current	47	**107.3%**	91.4%	125.8%	47	**-0.16%**	-8.43%	8.85%

As the table illustrates, beginning in 1996 average sale-to-appraisal ratios grew from approximately 58% of 2008-reappraisal-values to 104% in 2008.

Region 2C: Cascade County

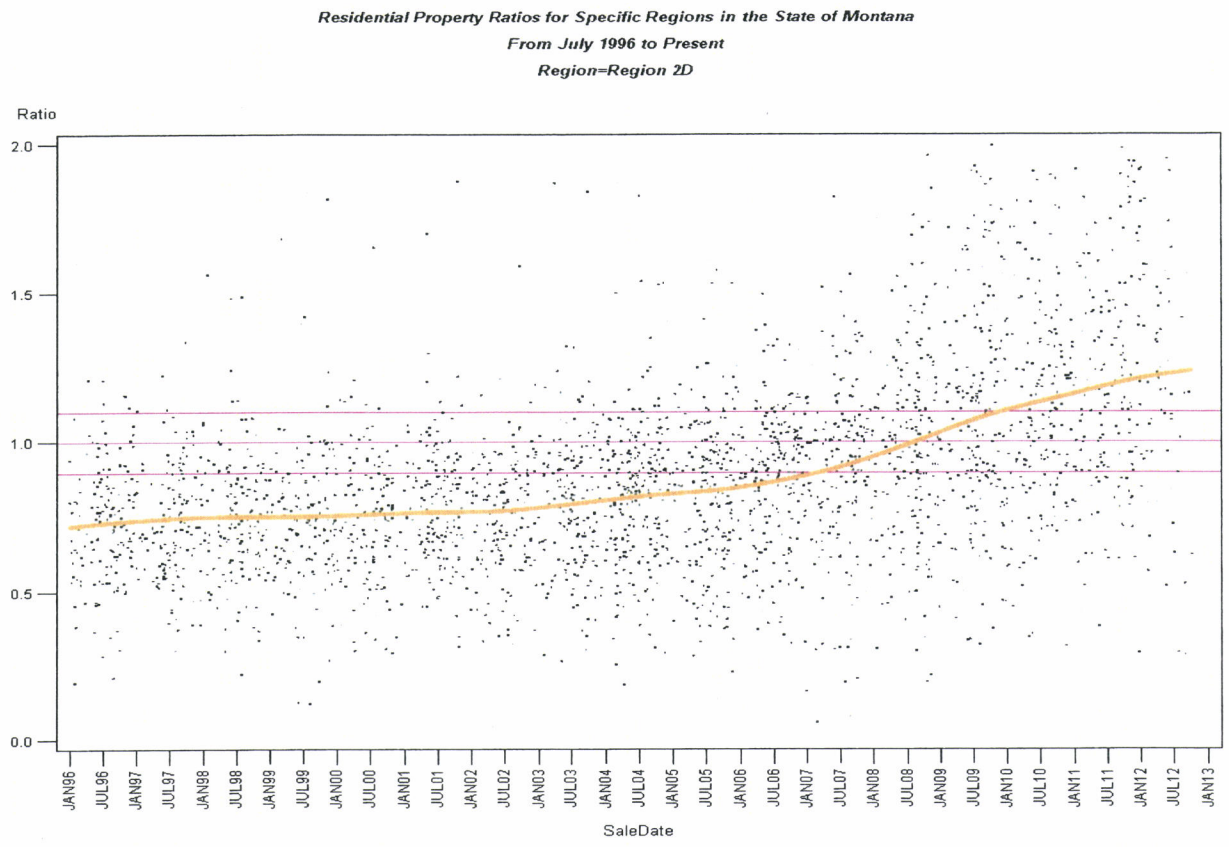


Region 2C is composed of Cascade County, which is located in central portion of the state. As the scatter plot depicts, residential market conditions have continued to grow between 1996 and 2012, with periods of acceleration between 2000 and 2005 and over the last few years.

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Region 2C	January 1996 to June 2005	10,250	**56.4%**	55.9%	56.8%	10,250	**0.29%**	0.28%	0.30%
Region 2C	July 2005 to June 2008	4,334	**83.9%**	83.0%	84.9%	4,334	**0.54%**	0.48%	0.59%
Region 2C	July 2008 to June 2011	2,642	**99.9%**	98.8%	101.1%	2,642	**0.12%**	0.06%	0.18%
Region 2C	July 2011 to June 2012	699	**102.7%**	100.9%	104.5%	699	**0.48%**	0.23%	0.73%
Region 2C	July 2012 to Current	129	**109.9%**	104.2%	115.9%	129	**0.45%**	-2.67%	3.67%

As the table illustrates, beginning in 1996 average sale-to-appraisal ratios grew from approximately 56% of 2008-reappraisal-values to approximately 100% in 2008, before growing to approximately 110% in 2012.

Region 2D: Phillips, Valley, Daniels, Roosevelt, and Sheridan Counties

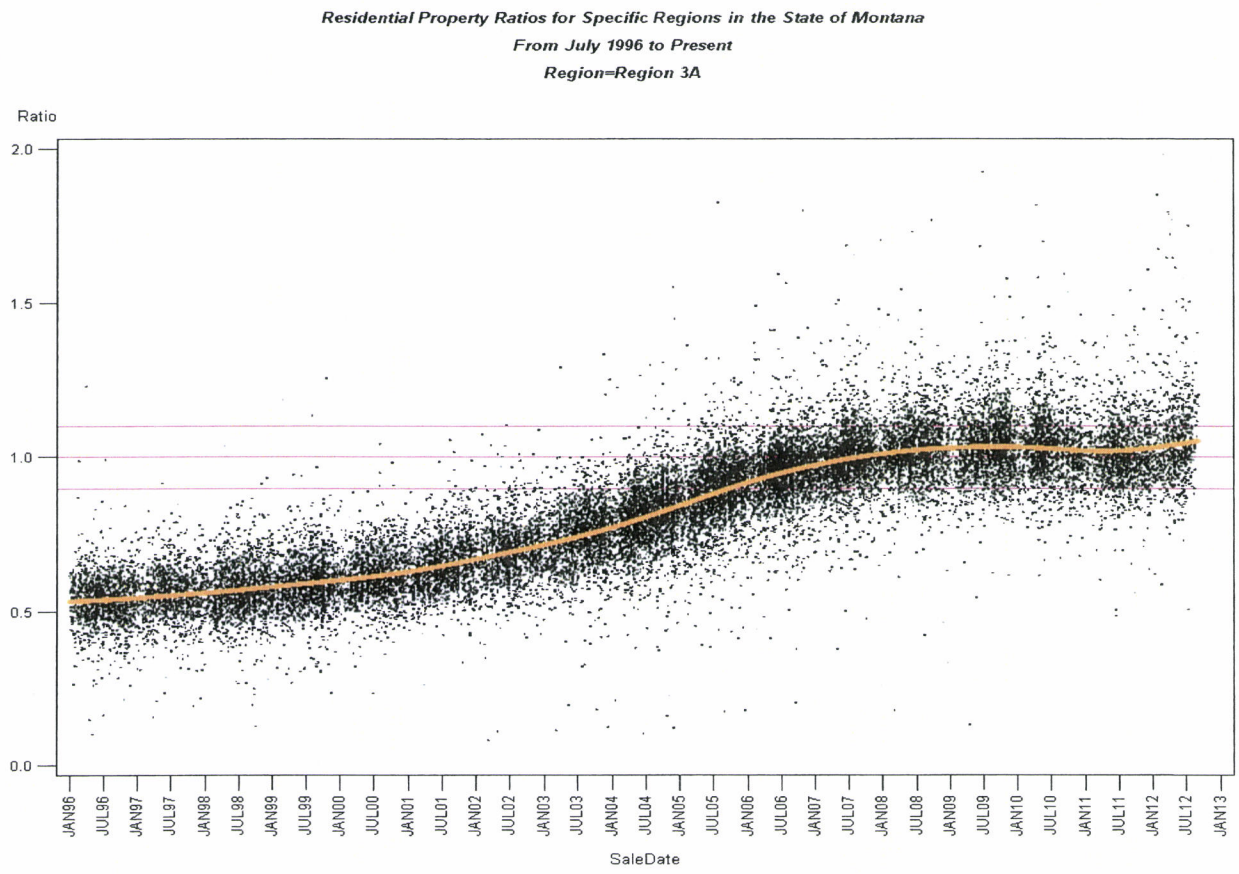


Region 2D is composed of Phillips, Valley, Daniels, Roosevelt, and Sheridan Counties, which are located in northeast portion of the state. The scatter plot depicts residential market conditions growing throughout the time period.

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Region 2D	January 1996 to June 2005	1,853	**69.2%**	67.1%	71.5%	1,853	**0.13%**	0.08%	0.17%
Region 2D	July 2005 to June 2008	729	**80.5%**	76.3%	84.8%	729	**0.48%**	0.21%	0.75%
Region 2D	July 2008 to June 2011	645	**97.2%**	92.3%	102.4%	645	**0.43%**	0.17%	0.70%
Region 2D	July 2011 to June 2012	144	**116.7%**	105.2%	129.5%	144	**0.59%**	-1.07%	2.29%
Region 2D	July 2012 to Current	11	**70.2%**	33.2%	148.3%	11	**15.56%**	-23.56%	74.69%

As the table illustrates, beginning in 1996 average sale-to-appraisal ratios grew from approximately 69% of 2008-reappraisal-values, to approximately 97% in 2008, before increasing to 117% in 2011. While the regression appears to show a sharp decline in market value after June 2012, there are too few sales in this period to have any confidence that this is due to a real market trend rather than the circumstances of those individual sales.

Region 3A: Yellowstone County

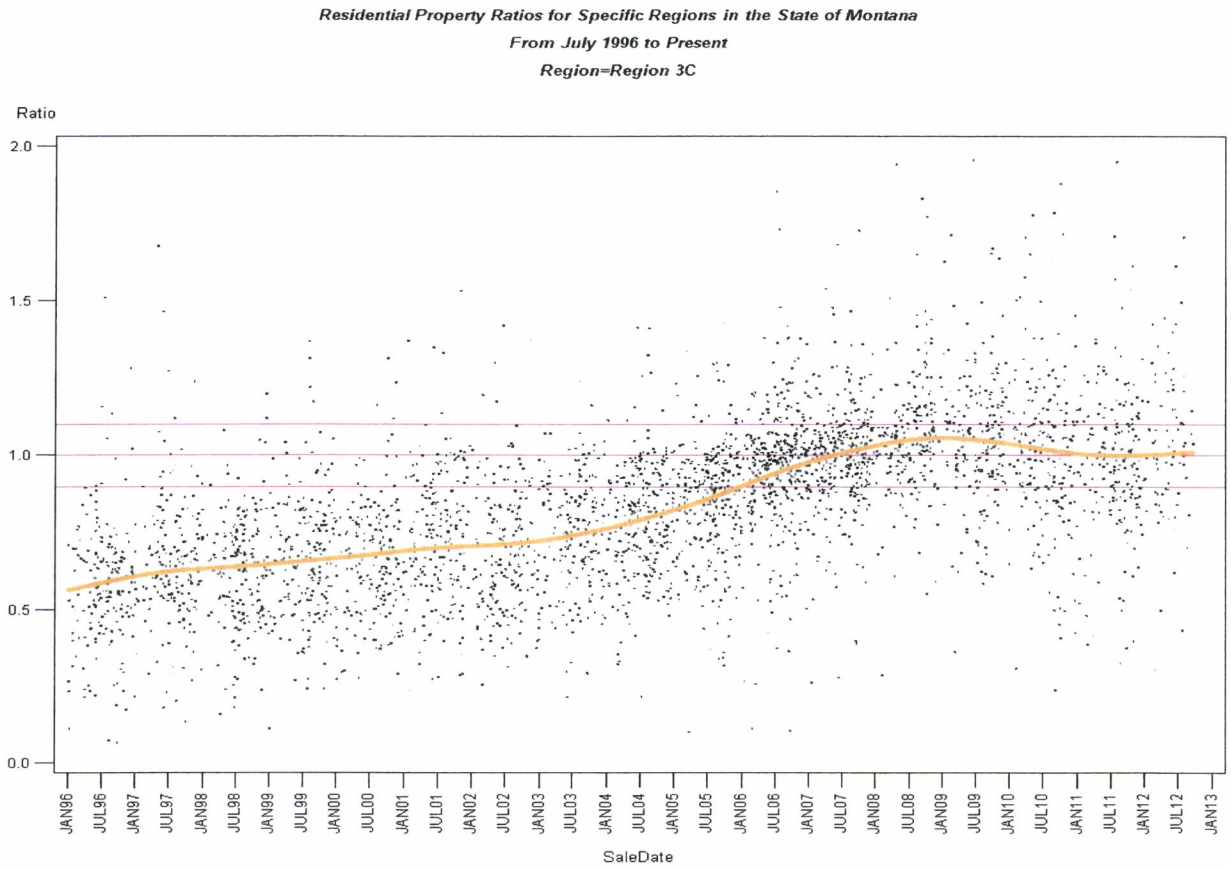


Region 3A is composed of Yellowstone County, which is located in the south-central portion of eastern Montana. The scatter plot depicts residential market conditions roughly doubled between 1996 and 2008 before flattening out and resuming growth in 2011.

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Region 3A	January 1996 to June 2005	16,919	**49.2%**	49.0%	49.5%	16,919	**0.46%**	0.45%	0.47%
Region 3A	July 2005 to June 2008	7,702	**89.4%**	88.9%	89.9%	7,702	**0.41%**	0.38%	0.44%
Region 3A	July 2008 to June 2011	5,208	**103.1%**	102.4%	103.8%	5,208	**-0.04%**	-0.07%	-0.01%
Region 3A	July 2011 to June 2012	1,635	**99.4%**	98.2%	100.6%	1,635	**0.51%**	0.34%	0.68%
Region 3A	July 2012 to Current	139	**105.2%**	101.3%	109.1%	139	**3.79%**	-0.16%	7.89%

As the table illustrates, beginning in 1996 average sale-to-appraisal ratios grew from approximately 49% of 2008-reappraisal-values, to approximately 103% in 2008, then decreasing to 99% in 2011, before increasing to 105% in July 2012.

Region 3C: Petroleum, Wheatland, Golden Valley, Musselshell, Sweet Grass, Stillwater, and Carbon Counties

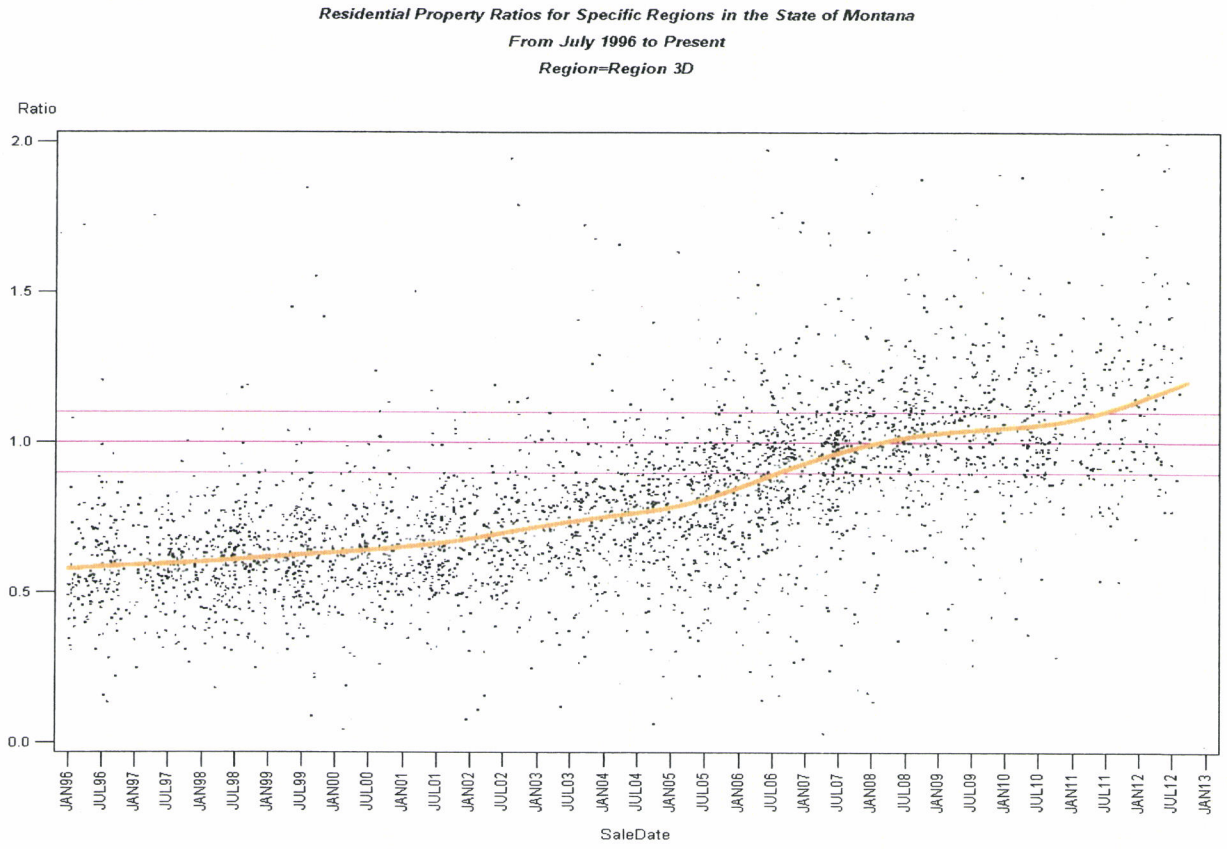


Region 3C is composed of Petroleum, Wheatland, Golden Valley, Musselshell, Sweet Grass, Stillwater, and Carbon Counties, which are located in central southern Montana. The graph depicts growth until 2009, followed by slight depreciation until 2011, when market conditions flattened out at 2007 levels.

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Region 3C	January 1996 to June 2005	2,752	**52.5%**	51.1%	53.9%	2,752	**0.38%**	0.35%	0.42%
Region 3C	July 2005 to June 2008	1,387	**87.5%**	85.2%	89.8%	1,387	**0.53%**	0.40%	0.66%
Region 3C	July 2008 to June 2011	893	**109.8%**	106.5%	113.2%	893	**-0.37%**	-0.52%	-0.22%
Region 3C	July 2011 to June 2012	289	**95.7%**	90.4%	101.3%	289	**0.57%**	-0.31%	1.45%
Region 3C	July 2012 to Current	30	**96.9%**	78.8%	119.3%	30	**3.17%**	-10.84%	19.38%

As the table illustrates, beginning in 1996 average sale-to-appraisal ratios grew from approximately 53% of 2008-reappraisal-values, to approximately 110% in 2008, before depreciating to 96% in 2011.

Region 3D: Rosebud, Treasure, Big Horn, Custer, and Powder River Counties

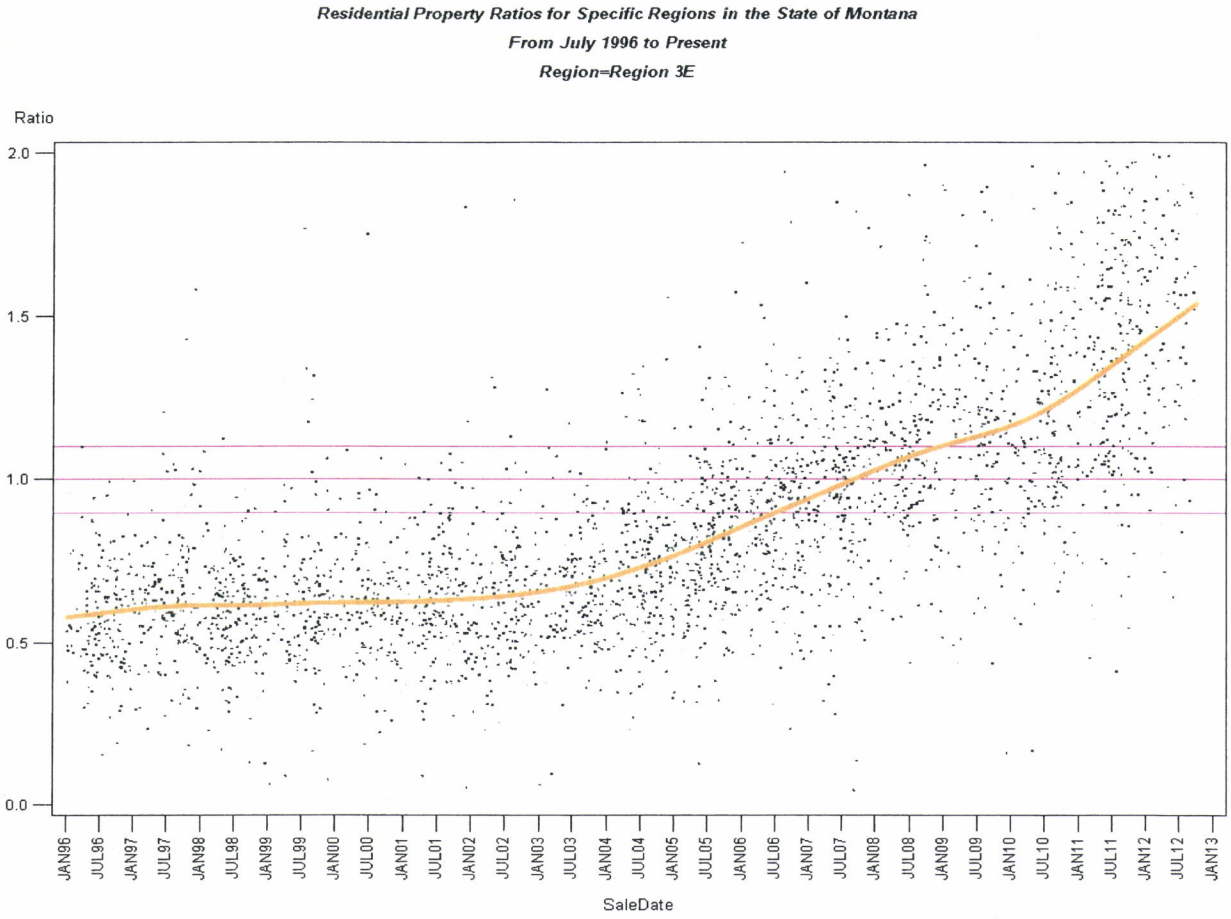


Region 3D is composed of Rosebud, Treasure, Big Horn, Custer, and Powder River Counties, which are located in southeastern part of the state. The graph depicts residential market conditions growing throughout the time period.

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Region 3D	January 1996 to June 2005	2,363	**53.8%**	52.4%	55.2%	2,363	**0.30%**	0.27%	0.34%
Region 3D	July 2005 to June 2008	1,039	**79.3%**	76.4%	82.4%	1,039	**0.73%**	0.53%	0.92%
Region 3D	July 2008 to June 2011	623	**101.1%**	97.4%	104.9%	623	**0.15%**	-0.04%	0.35%
Region 3D	July 2011 to June 2012	135	**103.2%**	95.5%	111.4%	135	**1.61%**	0.49%	2.74%
Region 3D	July 2012 to Current	5	**77.5%**	55.2%	109.0%	5	**32.15%**	8.64%	60.77%

As the table illustrates, beginning in 1995 average sale-to-appraisal ratios grew from approximately 54% of 2008-reappraisal-values, to approximately 101% in 2008 and 103% in 2011. While the regression appears to show a decline in market value after June 2012, there are too few sales in this period to have any confidence that this is due to a real market trend rather than the circumstances of those individual sales.

Region 3E: Garfield, McCone, Richland, Dawson, Prairie, Wibaux, Fallon, and Carter Counties

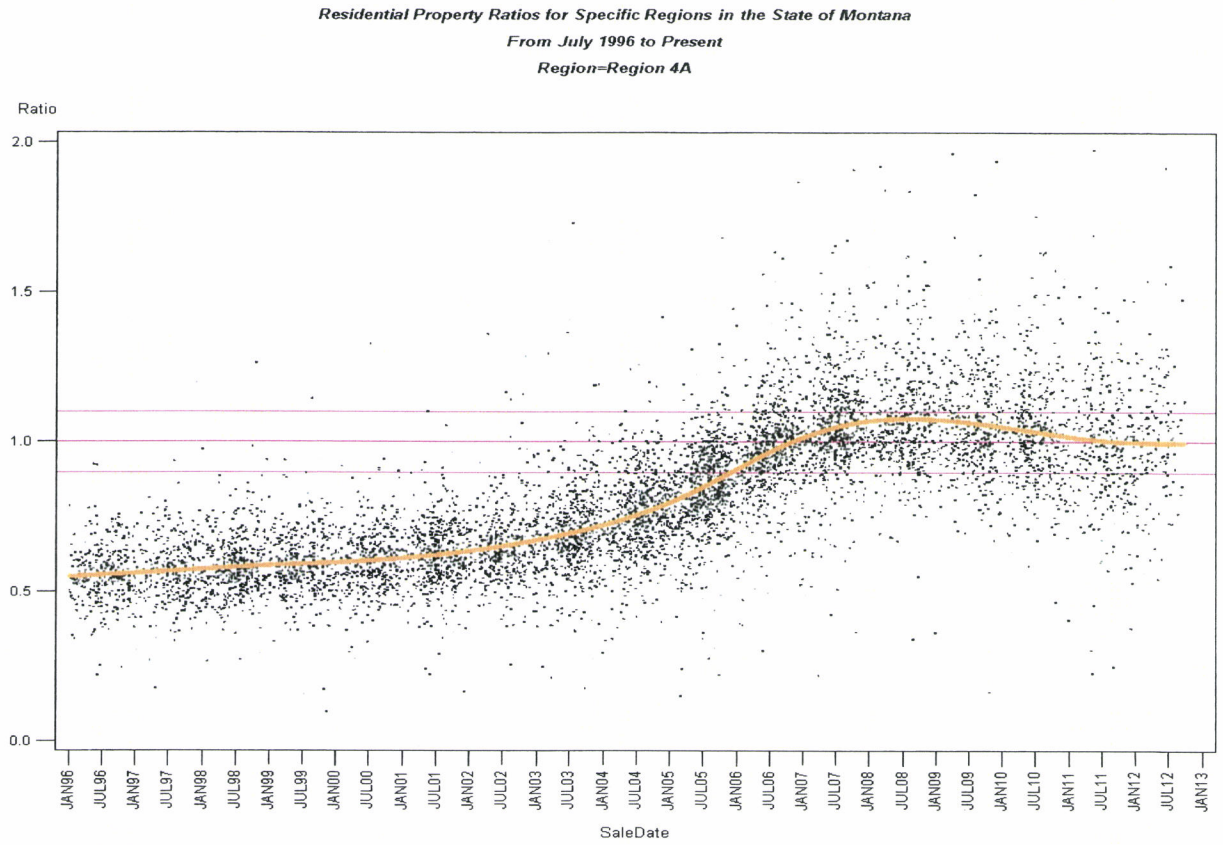


Region 3E is composed of Garfield, McCone, Richland, Dawson, Prairie, Wibaux, Fallon, and Carter Counties, which are located in the central-east and southeast portions of the state. The graph depicts residential market conditions growing strongly throughout the time period.

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Region 3E	January 1996 to June 2005	2,182	**53.2%**	51.7%	54.7%	2,182	**0.25%**	0.20%	0.29%
Region 3E	July 2005 to June 2008	864	**80.0%**	77.0%	83.2%	864	**0.75%**	0.55%	0.95%
Region 3E	July 2008 to June 2011	642	**103.8%**	99.3%	108.5%	642	**0.53%**	0.33%	0.74%
Region 3E	July 2011 to June 2012	226	**131.0%**	122.8%	139.8%	226	**0.96%**	-0.09%	2.03%
Region 3E	July 2012 to Current	35	**135.6%**	118.7%	154.9%	61	**5.10%**	-2.03%	12.75%

As the table illustrates, beginning in 1996 average sale-to-appraisal ratios grew from approximately 53% of 2008-reappraisal-values, to approximately 104% in 2008, 131% in 2011, and 136% in 2012.

Region 4A: Lewis and Clark, Broadwater, and Meagher Counties

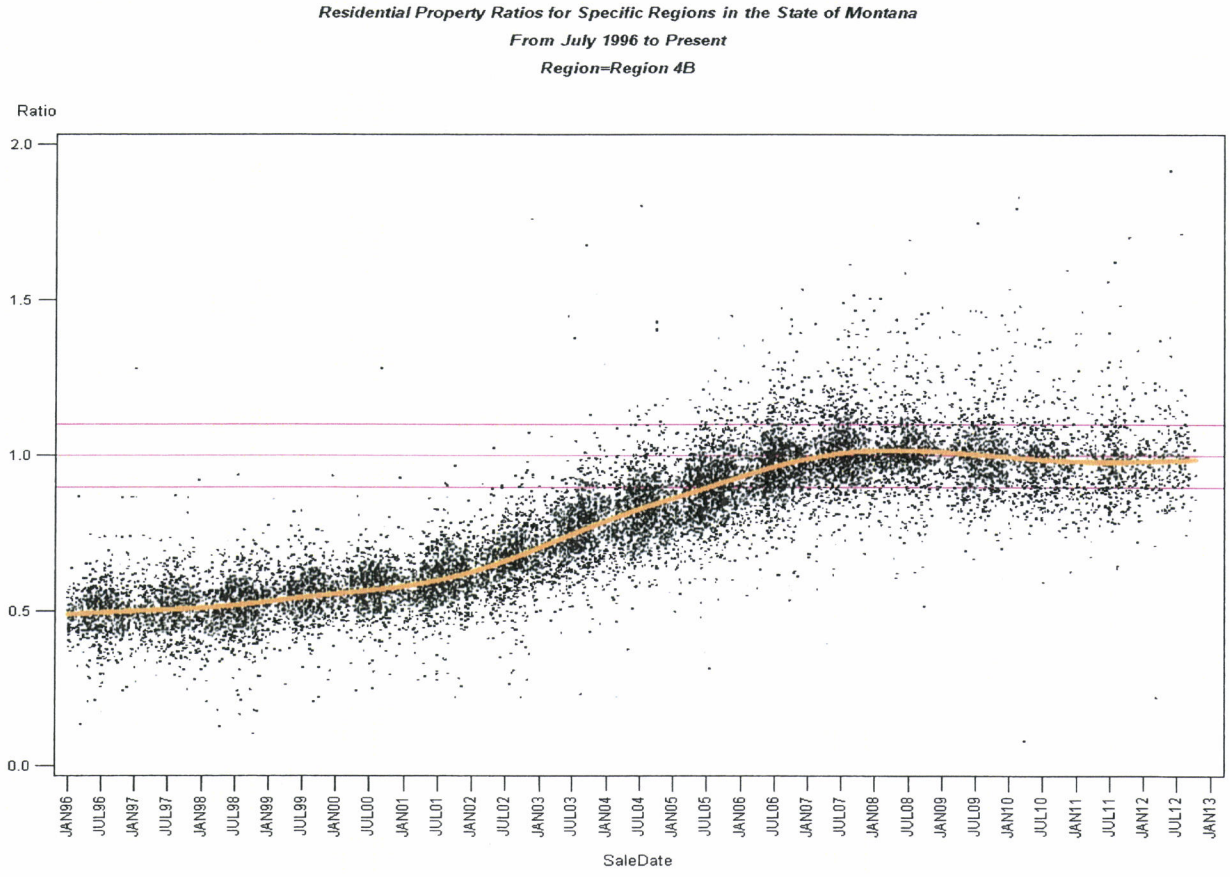


Region 4A is composed of Lewis and Clark, Broadwater, and Meagher Counties, which are located in the central portion of the state. The graph depicts residential market conditions accelerating until about 2006 and peaking in 2008 before returning to 2006 levels in recent years.

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Region 4A	January 1996 to June 2005	7,896	**52.2%**	51.6%	52.8%	7,896	**0.35%**	0.33%	0.36%
Region 4A	July 2005 to June 2008	3,876	**88.7%**	87.6%	89.7%	3,876	**0.65%**	0.59%	0.72%
Region 4A	July 2008 to June 2011	2,200	**106.6%**	104.8%	108.4%	2,200	**-0.21%**	-0.30%	-0.13%
Region 4A	July 2011 to June 2012	576	**95.2%**	92.4%	98.1%	576	**0.66%**	0.20%	1.13%
Region 4A	July 2012 to Current	61	**104.3%**	93.8%	116.0%	61	**-1.04%**	-7.53%	5.89%

As the table illustrates, beginning in 1996 average sale-to-appraisal ratios grew from approximately 52% of 2008-reappraisal-values, to approximately 107% in 2008, before depreciating to 95% in 2011. While the regression appears to show an increase in market value after June 2012, there are too few sales in this period to have any confidence in the extent of this growth.

Region 4B: Missoula County

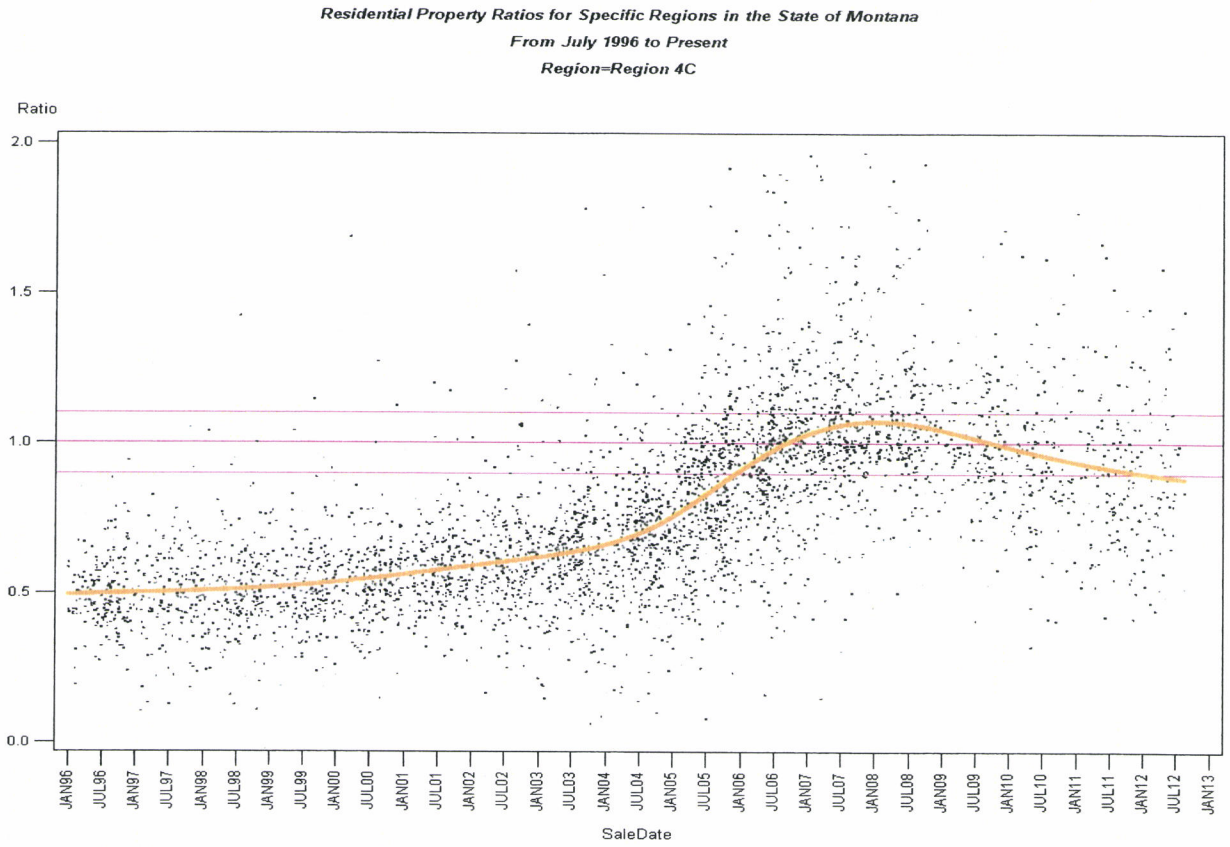


Region 4B is composed of Missoula County which is located in the west-central portion of the state. The graph depicts residential market conditions accelerating until about 2004, peaking around 2008 and maintaining this general level through 2012.

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Region 4B	January 1996 to June 2005	13,303	**43.9%**	43.6%	44.2%	13,303	**0.57%**	0.56%	0.57%
Region 4B	July 2005 to June 2008	5,658	**90.4%**	89.8%	91.1%	5,658	**0.41%**	0.38%	0.45%
Region 4B	July 2008 to June 2011	3,010	**100.8%**	99.9%	101.7%	3,010	**-0.14%**	-0.19%	-0.10%
Region 4B	July 2011 to June 2012	627	**95.7%**	93.8%	97.6%	627	**0.13%**	-0.18%	0.45%
Region 4B	July 2012 to Current	105	**100.3%**	95.4%	105.5%	105	**-2.31%**	-5.58%	1.07%

As the table illustrates, beginning in 1996 average sale-to-appraisal ratios grew from approximately 44% of 2008-reappraisal-values, to approximately 101% in 2008, before dipping slightly to 96% in 2011.

Region 4C: Beaverhead, Madison, and Park Counties

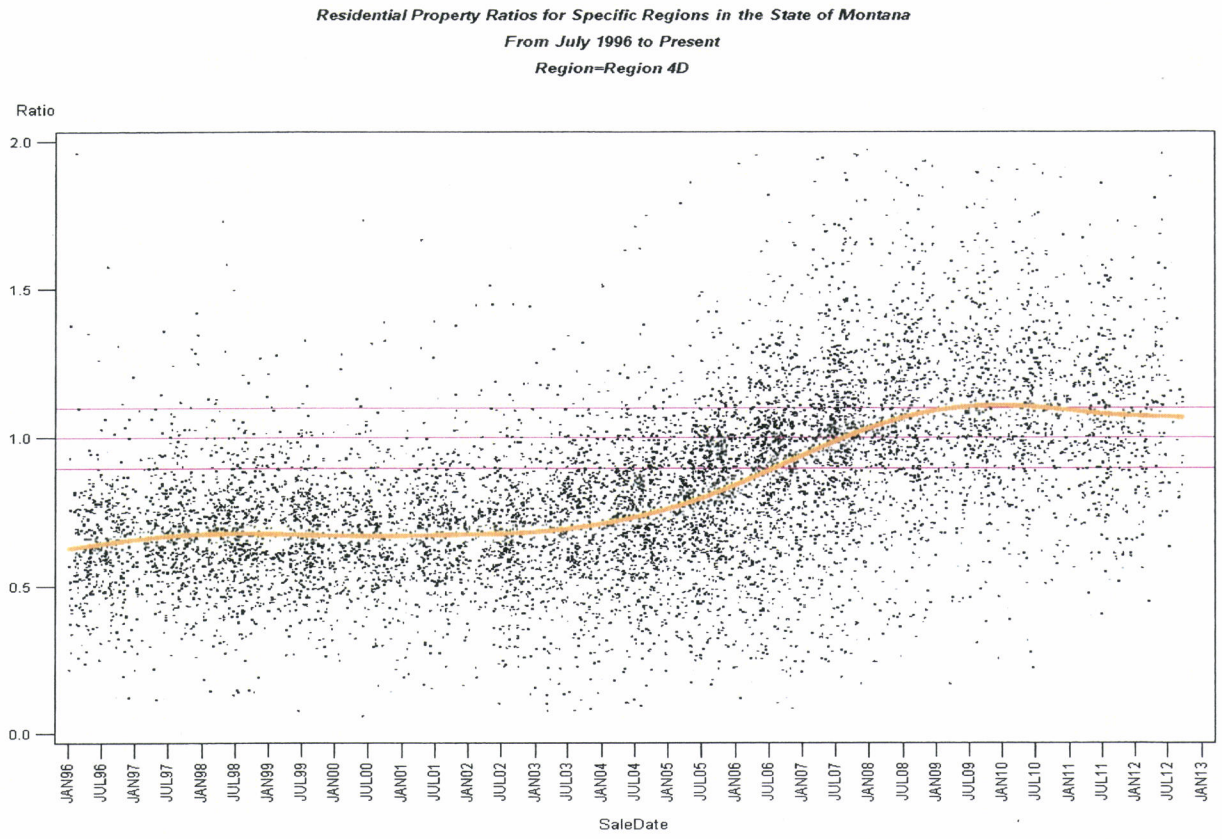


Region 4C is located in the southwest portion of the state and is composed of Beaverhead, Madison, and Park Counties. The graph depicts residential market conditions accelerating until about 2006, peaking in 2008, before declining to 2005 levels.

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Region 4C	January 1996 to June 2005	4,851	**45.0%**	44.0%	46.0%	4,851	**0.41%**	0.38%	0.44%
Region 4C	July 2005 to June 2008	2,321	**89.9%**	88.1%	91.7%	2,321	**0.65%**	0.54%	0.76%
Region 4C	July 2008 to June 2011	928	**105.3%**	101.5%	109.2%	928	**-0.57%**	-0.74%	-0.39%
Region 4C	July 2011 to June 2012	332	**84.3%**	78.6%	90.4%	332	**0.49%**	-0.60%	1.59%
Region 4C	July 2012 to Current	14	**116.3%**	78.9%	171.6%	14	**-15.12%**	-33.66%	8.59%

As the table illustrates, beginning in 1996 average sale-to-appraisal ratios grew from approximately 45% of 2008-reappraisal-values to 105% in 2008, before falling to 84% in 2011. While the regression appears to show a large increase in market value after June 2012, there are too few sales in this period to have confidence in the precise extent of this growth.

Region 4D: Powell, Granite, Deer Lodge, Silver Bow, and Jefferson Counties

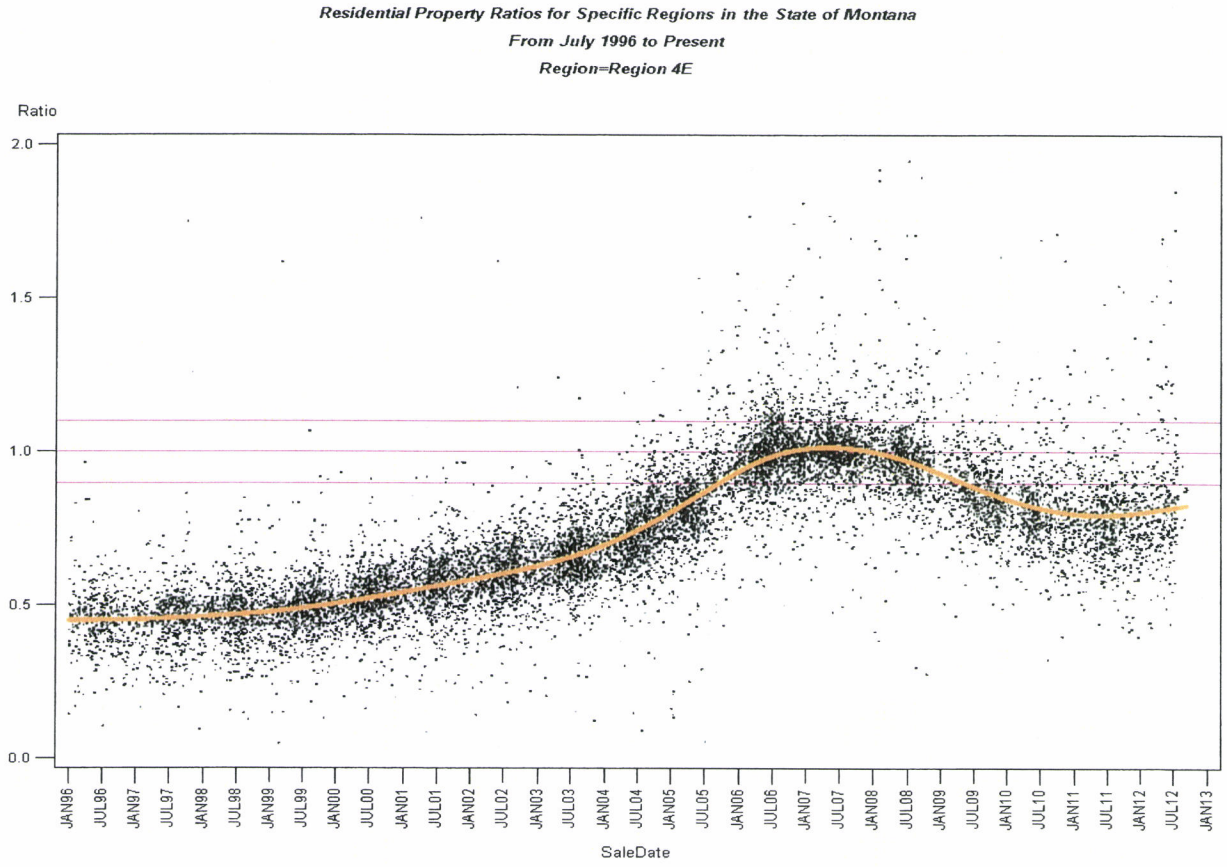


Region 4D is located in the central-west portion of the state and is composed of Powell, Granite, Deer Lodge, Silver Bow, and Jefferson Counties. The scatter plot depicts residential market conditions accelerating until about 2007, peaking around 2009, and decreasing slightly to 2012.

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Region 4D	January 1996 to June 2005	6,315	**60.3%**	59.3%	61.4%	6,315	**0.16%**	0.13%	0.18%
Region 4D	July 2005 to June 2008	3,242	**78.6%**	76.7%	80.6%	3,242	**0.80%**	0.67%	0.93%
Region 4D	July 2008 to June 2011	1,706	**106.2%**	103.6%	108.9%	1,706	**0.01%**	-0.12%	0.13%
Region 4D	July 2011 to June 2012	424	**102.4%**	98.1%	107.0%	424	**0.39%**	-0.29%	1.08%
Region 4D	July 2012 to Current	28	**95.8%**	79.8%	115.0%	28	**0.99%**	-9.12%	12.23%

As the table illustrates, beginning in 1996 average sale-to-appraisal ratios grew from approximately 60% of 2008-reappraisal-values, to approximately 106% in 2008, before decreasing to 102% in 2011. While the regression appears to show a large decline in market value after June 2012, there are too few sales in this period to have confidence in the precise extent of this reduction.

Region 4E: Gallatin County



Region 4E is composed of Gallatin County, which is located in the south central portion of the state. The scatter plot depicts residential market conditions accelerating until about 2005, before peaking in 2007, and depreciating until 2011, when they began to strengthen.

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	Lower Boundary at the 95% Confidence Level	Upper Boundary at the 95% Confidence Level
Region 4E	January 1996 to June 2005	13,148	**39.0%**	38.7%	39.4%	13,148	**0.57%**	0.56%	0.58%
Region 4E	July 2005 to June 2008	5,469	**93.2%**	92.4%	94.0%	5,469	**0.31%**	0.26%	0.35%
Region 4E	July 2008 to June 2011	3,072	**95.2%**	94.0%	96.5%	3,072	**-0.68%**	-0.74%	-0.62%
Region 4E	July 2011 to June 2012	983	**74.7%**	72.8%	76.8%	983	**0.68%**	0.29%	1.07%
Region 4E	July 2012 to Current	71	**85.8%**	80.1%	91.8%	71	**1.92%**	-4.81%	9.12%

As the table illustrates, beginning in 1996 average sale-to-appraisal ratios grew from approximately 39% of 2008-reappraisal-values to a peak in 2007, before falling to approximately 95% in 2008, 75% in 2011, and then rebounding up to 86% in 2012.

Summary

The Montana legislature requested this assessment ratio study report in order to monitor the 2008 reappraisal cycle values for residential property as a means to gauge the residential real estate market both across the state and in specific geographic areas. With those objectives in mind, the department has created a report that provides detailed statistical analysis to address both of those interests.

First, in terms of the continuing accuracy and uniformity of the 2008 residential reappraisal values, the data indicates that the accuracy continues to meets the mass appraisal industry standards as the statewide sale-to-appraisal ratio remaining at approximately 1.00, but the uniformity continues to deteriorate as the coefficient of dispersion has risen to 14.98%. Looking at each of the 16 geographic areas however, the disparate fluctuations of the real estate market have created a range of value ratios that are outside the mass appraisal standards with a "deflation" low of 0.79 in the northwestern area of the state and an "inflation" high of 1.36 in the eastern area. These fluctuations create growing and significant uniformity concerns, but are an inevitable result of a six-year reappraisal cycle that "freezes" a value on a fixed date that is independent of the surrounding real estate market realities.

Second, the report provides a detailed statistical snapshot of the current real estate market conditions as well as the ongoing market trends from 1996 through the present. On a statewide basis the real estate market peaked in 2008, and then eased until about 2011 when it leveled off and has even started back up more in line with the longer term historical trends. In the 16 distinct areas of the state, the story varies with two areas continuing to trend downward, Flathead/Lake counties and Gallatin County, while eastern Montana is experiencing a notable upward trend. In the majority of areas, however, the historic growth trends have either continued throughout this period (see Yellowstone and Cascade Counties) or have experienced a trough in their trend line which has leveled off, then resumed its gradual growth trend.

These are the residential real estate market conditions and statistical analysis data as of the date of this report based upon the verified valid sales data compiled by the Montana Department of Revenue.

Appendix

Residential Market Conditions in Montana from 1996 to 2012

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	t-Value	Pr > [1]	Statistically different than 1.00 at the 95% confidence level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	t-Value	Pr > [1]	Statistically different than 0.00% at the 95% confidence level
Region 1A	January 1996 to June 2005	15,470	**39.7%**	-176.32	<.0001	*	15,470	**0.57%**	80	<.0001	*
Region 1A	July 2005 to June 2008	6,515	**91.1%**	-24.12	<.0001	*	6,515	**0.45%**	21.66	<.0001	*
Region 1A	July 2008 to June 2011	2,471	**101.3%**	1.84	0.0664		2,471	**-0.57%**	-15.61	<.0001	*
Region 1A	July 2011 to June 2012	479	**81.6%**	-10.27	<.0001	*	479	**-0.20%**	-0.61	0.5454	
Region 1A	July 2012 to Current	43	**79.2%**	-3.02	0.0044	*	43	**0.38%**	0.08	0.9385	
Region 1B	January 1996 to June 2005	1,857	**46.0%**	-49.07	<.0001	*	1,857	**0.33%**	15.49	<.0001	*
Region 1B	July 2005 to June 2008	1,160	**78.8%**	-16.44	<.0001	*	1,160	**1.16%**	14.56	<.0001	*
Region 1B	July 2008 to June 2011	513	**113.8%**	5.21	<.0001	*	513	**-0.85%**	-7.19	<.0001	*
Region 1B	July 2011 to June 2012	154	**91.5%**	-2.06	0.0415	*	154	**-0.05%**	-0.08	0.9369	
Region 1B	July 2012 to Current	13	**98.1%**	-0.12	0.9101		13	**-12.71%**	-0.83	0.4255	
Region 1C	January 1996 to June 2005	4,940	**44.1%**	-96.08	<.0001	*	4,940	**0.53%**	46.97	<.0001	*
Region 1C	July 2005 to June 2008	1,963	**90.8%**	-10	<.0001	*	1,963	**0.44%**	8.29	<.0001	*
Region 1C	July 2008 to June 2011	734	**101.5%**	1.17	0.2419		734	**-0.43%**	-6.46	<.0001	*
Region 1C	July 2011 to June 2012	235	**87.9%**	-5.51	<.0001	*	235	**-0.52%**	-1.59	0.1136	
Region 1C	July 2012 to Current	40	**83.1%**	-2.95	0.0054	*	40	**2.06%**	0.51	0.6157	
Region 2A	January 1996 to June 2005	2,047	**67.6%**	-25.59	<.0001	*	2,047	**0.15%**	6.45	<.0001	*
Region 2A	July 2005 to June 2008	881	**82.7%**	-8.57	<.0001	*	881	**0.53%**	4.78	<.0001	*
Region 2A	July 2008 to June 2011	600	**101.1%**	0.44	0.657		600	**0.13%**	1.12	0.2636	
Region 2A	July 2011 to June 2012	251	**111.0%**	3.07	0.0024	*	251	**0.93%**	1.89	0.0602	*
Region 2A	July 2012 to Current	41	**128.9%**	2.67	0.0109	*	41	**-2.18%**	-0.44	0.6620	
Region 2B	January 1996 to June 2005	3,503	**58.3%**	-50.47	<.0001	*	3,503	**0.21%**	13.15	<.0001	*
Region 2B	July 2005 to June 2008	1,384	**79.6%**	-14.43	<.0001	*	1,384	**0.69%**	8.71	<.0001	*
Region 2B	July 2008 to June 2011	931	**103.5%**	2.05	0.0402	*	931	**0.00%**	-0.05	0.9612	
Region 2B	July 2011 to June 2012	226	**101.5%**	0.49	0.6266		226	**0.38%**	0.74	0.4594	
Region 2B	July 2012 to Current	47	**107.3%**	0.88	0.3810		47	**-0.16%**	-0.04	0.9695	
Region 2C	January 1996 to June 2005	10,250	**56.4%**	-131.74	<.0001	*	10,250	**0.29%**	46.09	<.0001	*
Region 2C	July 2005 to June 2008	4,334	**83.9%**	-30.29	<.0001	*	4,334	**0.54%**	18.47	<.0001	*
Region 2C	July 2008 to June 2011	2,642	**99.9%**	-0.11	0.9098		2,642	**0.12%**	4.02	<.0001	*
Region 2C	July 2011 to June 2012	699	**102.7%**	2.97	0.0031	*	699	**0.48%**	3.73	0.0002	*
Region 2C	July 2012 to Current	129	**109.9%**	3.52	0.0006	*	129	**0.45%**	0.28	0.7797	
Region 2D	January 1996 to June 2005	1,853	**69.2%**	-22.86	<.0001	*	1,853	**0.13%**	5.49	<.0001	*
Region 2D	July 2005 to June 2008	729	**80.5%**	-8.09	<.0001	*	729	**0.48%**	3.48	0.0005	*
Region 2D	July 2008 to June 2011	645	**97.2%**	-1.08	0.2816		645	**0.43%**	3.24	0.0012	*
Region 2D	July 2011 to June 2012	144	**116.7%**	2.95	0.0037	*	144	**0.59%**	0.7	0.4854	
Region 2D	July 2012 to Current	11	**70.2%**	-1.07	0.3124		11	**15.56%**	0.79	0.4489	
Region 3A	January 1996 to June 2005	16,919	**49.2%**	-270.13	<.0001	*	16,919	**0.46%**	125.23	<.0001	*
Region 3A	July 2005 to June 2008	7,702	**89.4%**	-39.15	<.0001	*	7,702	**0.41%**	28.61	<.0001	*
Region 3A	July 2008 to June 2011	5,208	**103.1%**	9.08	<.0001	*	5,208	**-0.04%**	-2.34	0.0192	*
Region 3A	July 2011 to June 2012	1,635	**99.4%**	-1.02	0.3086		1,635	**0.51%**	5.88	<.0001	*
Region 3A	July 2012 to Current	139	**105.2%**	2.69	0.0079	*	139	**3.79%**	1.9	0.0600	*

Continued on next page...

Continued from last page...

Residential Market Conditions in Montana from 1996 to 2012

Region	Time Period	Number of Verified Valid Sales	Average % of the 2008 Reappraisal Value at the Beginning of the Time Period	t-Value	Pr > [1]	Statistically different than 1.00 at the 95% confidence level	Number of Verified Valid Sales	Average Monthly Growth Rate for the Given Time Period	t-Value	Pr > [1]	Statistically different than 0.00% at the 95% confidence level
Region 3C	January 1996 to June 2005	2,752	**52.5%**	-47.57	<.0001	*	2,752	**0.38%**	19.98	<.0001	*
Region 3C	July 2005 to June 2008	1,387	**87.5%**	-10.17	<.0001	*	1,387	**0.53%**	7.92	<.0001	*
Region 3C	July 2008 to June 2011	893	**109.8%**	5.98	<.0001	*	893	**-0.37%**	-4.73	<.0001	*
Region 3C	July 2011 to June 2012	289	**95.7%**	-1.51	0.1324		289	**0.57%**	1.28	0.2013	
Region 3C	July 2012 to Current	30	**96.9%**	-0.31	0.7616		30	**3.17%**	0.44	0.6644	
Region 3D	January 1996 to June 2005	2,363	**53.8%**	-47.47	<.0001	*	2,363	**0.30%**	15.75	<.0001	*
Region 3D	July 2005 to June 2008	1,039	**79.3%**	-12.1	<.0001	*	1,039	**0.73%**	7.46	<.0001	*
Region 3D	July 2008 to June 2011	623	**101.1%**	0.58	0.564		623	**0.15%**	1.52	0.129	
Region 3D	July 2011 to June 2012	135	**103.2%**	0.8	0.4266		135	**1.61%**	2.86	0.0049	*
Region 3D	July 2012 to Current	5	**77.5%**	-2.38	0.0979		5	**32.15%**	4.53	0.0202	*
Region 3E	January 1996 to June 2005	2,182	**53.2%**	-43.66	<.0001	*	2,182	**0.25%**	11.65	<.0001	*
Region 3E	July 2005 to June 2008	864	**80.0%**	-11.18	<.0001	*	864	**0.75%**	7.42	<.0001	*
Region 3E	July 2008 to June 2011	642	**103.8%**	1.63	0.1029		642	**0.53%**	5.06	<.0001	*
Region 3E	July 2011 to June 2012	226	**131.0%**	8.22	<.0001	*	226	**0.96%**	1.8	0.0738	
Region 3E	July 2012 to Current	35	**135.6%**	4.66	<.0001	*	61	**5.10%**	-0.31	0.7575	
Region 4A	January 1996 to June 2005	7,896	**52.2%**	-110.5	<.0001	*	7,896	**0.35%**	44.57	<.0001	*
Region 4A	July 2005 to June 2008	3,876	**88.7%**	-19.36	<.0001	*	3,876	**0.65%**	20.24	<.0001	*
Region 4A	July 2008 to June 2011	2,200	**106.6%**	7.5	<.0001	*	2,200	**-0.21%**	-5.03	<.0001	*
Region 4A	July 2011 to June 2012	576	**95.2%**	-3.21	0.0014	*	576	**0.66%**	2.79	0.0054	*
Region 4A	July 2012 to Current	61	**104.3%**	0.8	0.4255		61	**-1.04%**	-0.31	0.7575	
Region 4B	January 1996 to June 2005	13,303	**43.9%**	-251.43	<.0001	*	13,303	**0.57%**	124.1	<.0001	*
Region 4B	July 2005 to June 2008	5,658	**90.4%**	-29.4	<.0001	*	5,658	**0.41%**	23.56	<.0001	*
Region 4B	July 2008 to June 2011	3,010	**100.8%**	1.67	0.0945		3,010	**-0.14%**	-5.94	<.0001	*
Region 4B	July 2011 to June 2012	627	**95.7%**	-4.37	<.0001	*	627	**0.13%**	0.83	0.4065	
Region 4B	July 2012 to Current	105	**100.3%**	0.12	0.9072		105	**-2.31%**	-1.36	0.1759	
Region 4C	January 1996 to June 2005	4,851	**45.0%**	-70.33	<.0001	*	4,851	**0.41%**	27.33	<.0001	*
Region 4C	July 2005 to June 2008	2,321	**89.9%**	-10.3	<.0001	*	2,321	**0.65%**	11.7	<.0001	*
Region 4C	July 2008 to June 2011	928	**105.3%**	2.79	0.0053	*	928	**-0.57%**	-6.34	<.0001	*
Region 4C	July 2011 to June 2012	332	**84.3%**	-4.79	<.0001	*	332	**0.49%**	0.89	0.3753	
Region 4C	July 2012 to Current	14	**116.3%**	0.85	0.4136		14	**-15.12%**	-1.45	0.1727	
Region 4D	January 1996 to June 2005	6,315	**60.3%**	-54.69	<.0001	*	6,315	**0.16%**	12.35	<.0001	*
Region 4D	July 2005 to June 2008	3,242	**78.6%**	-19.15	<.0001	*	3,242	**0.80%**	12.35	<.0001	*
Region 4D	July 2008 to June 2011	1,706	**106.2%**	4.73	<.0001	*	1,706	**0.01%**	0.09	0.9301	
Region 4D	July 2011 to June 2012	424	**102.4%**	1.08	0.2792		424	**0.39%**	1.12	0.2632	
Region 4D	July 2012 to Current	28	**95.8%**	-0.49	0.6304		28	**0.99%**	0.19	0.8488	
Region 4E	January 1996 to June 2005	13,148	**39.0%**	-199.75	<.0001	*	13,148	**0.57%**	90.23	<.0001	*
Region 4E	July 2005 to June 2008	5,469	**93.2%**	-15.64	<.0001	*	5,469	**0.31%**	13.46	<.0001	*
Region 4E	July 2008 to June 2011	3,072	**95.2%**	-7.41	<.0001	*	3,072	**-0.68%**	-21.2	<.0001	*
Region 4E	July 2011 to June 2012	983	**74.7%**	-21.27	<.0001	*	983	**0.68%**	3.41	0.0007	*
Region 4E	July 2012 to Current	71	**85.8%**	-4.49	<.0001	*	71	**1.92%**	0.55	0.5809	
Statewide	January 1996 to June 2005	109,649	**48.4%**	-408.55	<.0001	*	109,649	**0.41%**	167.64	<.0001	*
Statewide	July 2005 to June 2008	48,524	**87.8%**	-67.87	<.0001	*	48,524	**0.51%**	51.33	<.0001	*
Statewide	July 2008 to June 2011	26,818	**102.2%**	8.53	<.0001	*	26,818	**-0.20%**	-15.29	<.0001	*
Statewide	July 2011 to June 2012	7,415	**94.5%**	-10.5	<.0001	*	7,415	**0.47%**	5.85	<.0001	*
Statewide	July 2012 to Current	812	**99.5%**	-0.32	0.7470		812	**2.30%**	2.22	0.0267	