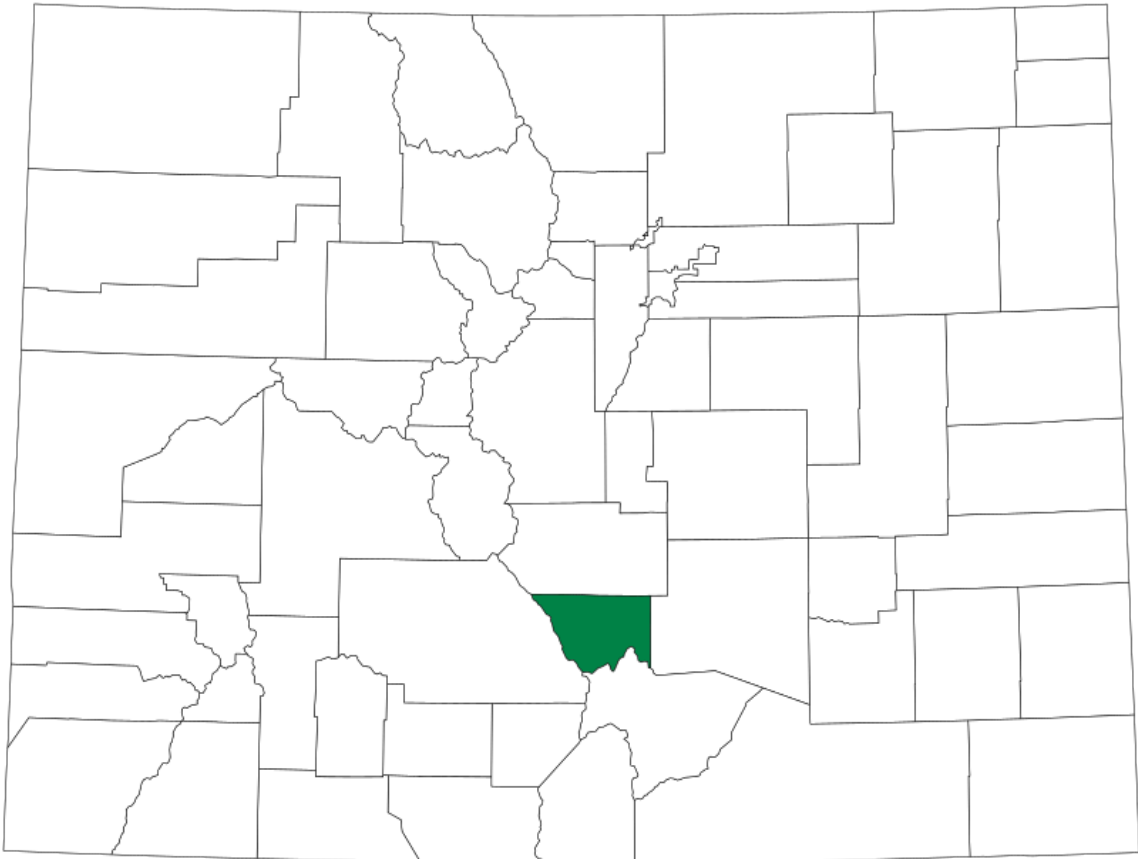


# San Matteo

DATA ANALYTICS

## 2025 Property Assessment Study Custer County



September 15, 2025

**Natalie Castle**

Director of Research, Colorado Legislative Council  
Room 029, 200 East Colfax Avenue  
Denver, CO 80203

San Matteo Data Analytics (SMDA) respectfully submits the **Final Report regarding the 2025 Colorado Property Assessment Study for Custer County**. This report summarizes the results of both a procedural review and a statistical analysis.

The **procedural review** evaluated local assessment practices, including valuation methods of residential, commercial, agricultural properties, as well as natural resources, personal property, possessory interests, and subdivision discounting. It also examined processes related to the development of economic areas, and sales qualification.

The **statistical analysis** measured compliance with statutory assessment levels for vacant land, residential, and commercial/industrial properties.

We value the opportunity to support the State of Colorado in ensuring fair and consistent property assessments. Please contact us if you have any questions or need additional details regarding these reports.



Joel Cuthbert, CAE, AAS | Audit Manager  
San Matteo Data Analytics | [audit@sanmatteodata.org](mailto:audit@sanmatteodata.org)

**San Matteo**  
DATA ANALYTICS

# Table of Contents

- 1. Statistical Overview.....4
- 2. Vacant Land.....8
- 3. Residential.....13
- 4. Commercial and Industrial.....18
- 5. Agriculture.....23
- 6. Agriculture Non-Integral.....25
- 7. Economic Areas.....26
- 8. Natural Resources.....27
- 9. Personal Property.....28
- 10. Possessory Interest.....30
- 11. Sales Verification.....31
- 12. Subdivision Discounting.....33
- 13. Appendix.....34

# 1. Statistical Overview

## Compliance and Evaluations

Custer County was found to be in compliance. For more details on the definitions and methodology underlying this analysis, see the 2025 County Report Methodology document. For the full analysis behind each evaluation see the appendix.

	Result	Value
<b>Vacant Land</b>		
Median Sales Ratio	Pass	1.00
Coefficient of Dispersion	Pass	11.86%
Time Adjustments	Pass	0.555
Price Related Differential	Sufficient	1.02
Price Related Bias	Sufficient	-0.02
Sold/Unsold Similarity	Sufficient	
Qualified Sales > 50%	Yes	

	<b>Result</b>	<b>Value</b>
<b>Residential</b>		
Median Sales Ratio	Pass	1.00
Coefficient of Dispersion	Pass	10.28%
Time Adjustments	Pass	0.051
Price Related Differential	Sufficient	1.01
Price Related Bias	Sufficient	0.00
Sold/Unsold Similarity	Sufficient	
Qualified Sales > 50%	Yes	

Custer County

	<b>Result</b>	<b>Value</b>
<b>Commercial/Industrial</b>		
Median Sales Ratio	Pass	1.00
Coefficient of Dispersion	Pass	11.00%
Time Adjustments	Pass	0.217
Price Related Differential	Sufficient	1.01
Price Related Bias	Sufficient	-0.01
Sold/Unsold Similarity	Sufficient	
Qualified Sales > 50%	Yes	

## Property Types

Below is a breakdown of the property types of the 9,302 parcels in Custer County.



## 2. Vacant Land

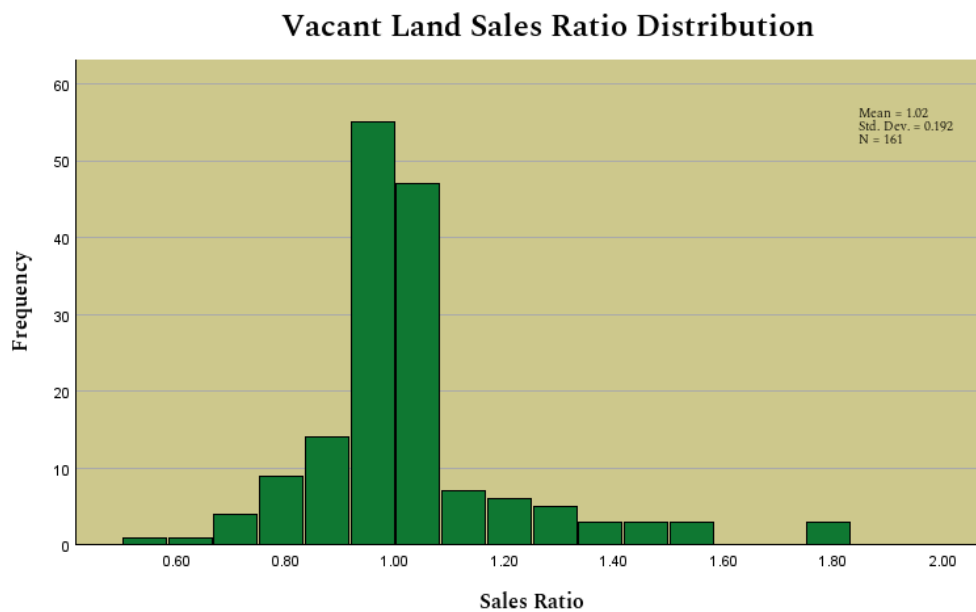
### Overview

Custer was found to be compliant for Vacant Land properties.

	Result	Value
<b>Vacant Land</b>		
Median Sales Ratio	Pass	1.00
Coefficient of Dispersion	Pass	11.86%
Time Adjustments	Pass	0.555
Price Related Differential	Sufficient	1.02
Price Related Bias	Sufficient	-0.02
Sold/Unsold Similarity	Sufficient	-
Qualified Sales > 50%	Yes	-

## Vacant Land Median Sales Ratio

The median sales ratio (MSR) tests how close the Assessor's valuations (estimates of market value) are to the true market value. The distribution of these sales ratios should be centered around 1.00. The Vacant Land MSR for Custer County was calculated to be 1.00, which is within the acceptable statistical range of 0.95 to 1.05 established by the Colorado Board of Equalization (SBOE). We trimmed Vacant Land sales during the development of this analysis. The MSR was also calculated for all applicable subclass, neighborhoods, economic areas, size and valuation strata identified by the auditor. See appendix for more details.

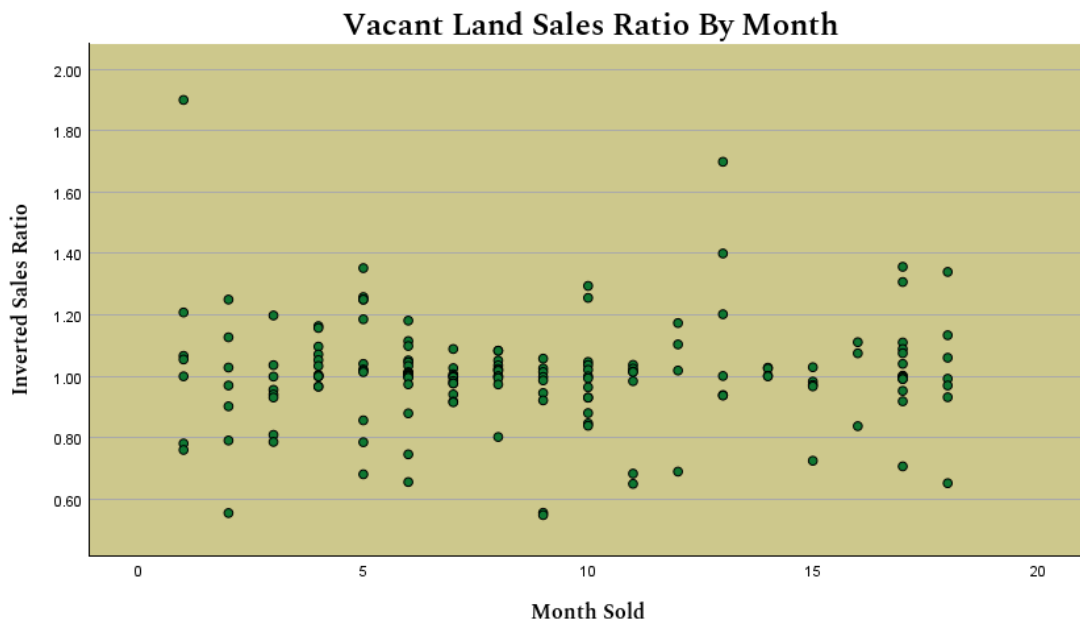


## Vacant Land Coefficient of Dispersion

The Coefficient of Dispersion (COD) tests for undesirable variance in the valuations. The variance in sales ratios should be as small as possible. The COD for Vacant Land properties in Custer County was calculated at 11.86% which is within the acceptable statistical standard of 20.99% or less established by the Colorado Board of Equalization (SBOE). The COD was also calculated for all applicable class, subclass, neighborhoods, economic areas, and valuation strata identified by the auditor. See appendix for more details.

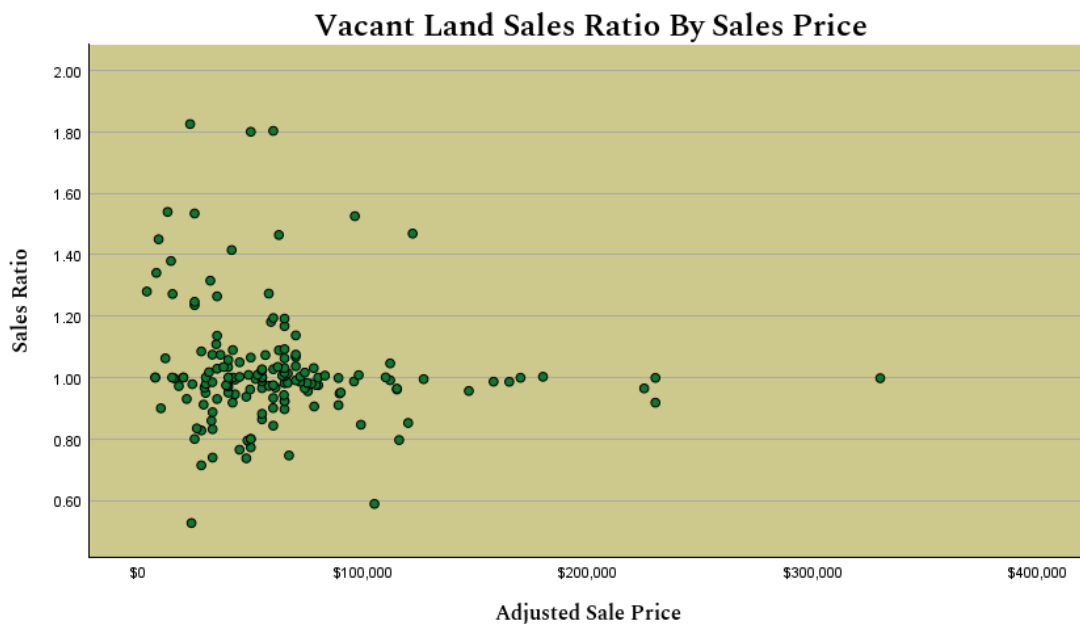
## Vacant Land Market (Time) Adjustments

All previous statistics used the time-adjusted sales price to ensure that the effect of time on sales ratios has been appropriately addressed. There should be a consistent and reasonable time adjustment methodology, not one tailored to improve sales ratios. We examined the sales ratios over the 18 - month period of sales. There does not appear to be a significant effect of time on Custer's Vacant Land sales ratios.



### Vacant Land Price Related Differential

The Price Related Differential (PRD) tests for differences in the valuations of high and low value sold properties. Sales ratios should be consistent across the range of sale prices so the PRD should be very close to 1.00. The PRD for Custer County was calculated at 1.02, which is within the acceptable range of 0.98 to 1.03 established by the International Association of Assessing Officers (IAAO). The PRD was also calculated for all applicable class, subclass, neighborhoods, economic areas, size, and valuation strata identified by the auditor. See appendix for more details.



### Vacant Land Price Related Bias

The Price Related Bias (PRB) measures whether assessment levels change systematically with property value. A PRB close to 0.00 indicates that high- and low-value properties are valued consistently, without upward or downward bias in the sales ratios. For Custer County, the PRB was calculated at -0.02 which is within the acceptable statistical range of -0.05 to 0.05 established by the International Association of Assessing Officers. The PRB was also analyzed across all applicable categories, including property class, subclass, neighborhood, economic area, size, and valuation strata as identified by the auditor. Additional details are provided in the appendix.

## **Vacant Land Sold/Unsold Comparison**

All previous Vacant Land statistics focus only on the compliance of properties that were sold during the Vacant Land data collection period. In order to ensure that the unsold properties are also being valued consistently we evaluate whether or not they were treated the same as the sold properties.

Our default comparison approach utilizes the Mann-Whitney U test (also known as the Wilcoxon rank-sum test), to analyze two samples of sold and unsold properties. First, we compare the price per square foot, followed by the change in price per square foot from last reappraisal to this one, and finally we compare the change in total value from last reappraisal to this one. If necessary, we will also consider the stratified (economic area, neighborhood, improvement abstract, etc.) medians of the following unitary metrics: price per foot, change in price per foot, and change in value. See appendix for more details.

Our study indicates that the Vacant Land sold and unsold properties are treated similarly.

## **Vacant Land Sales Qualification**

All the analysis above, notwithstanding the sold/unsold comparison, relies entirely on qualified sales. In order to ensure that this is a complete and unbiased analysis of assessment practices, we will verify that sales are being correctly coded. We have concluded that Vacant Land sales are being coded in an acceptable way.

There were 163 Vacant Land sales. We have confirmed that more than 50% of all sales were qualified.

### 3. Residential

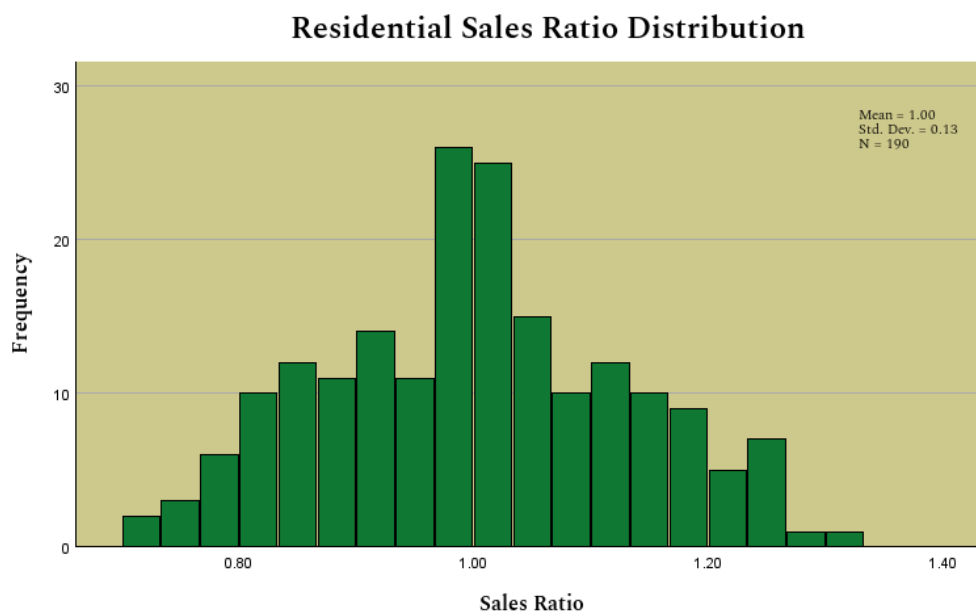
#### Overview

Custer County was found to be compliant for Residential properties.

	Result	Value
<b>Residential</b>		
Median Sales Ratio	Pass	1.00
Coefficient of Dispersion	Pass	10.28%
Time Adjustments	Pass	0.051
Price Related Differential	Sufficient	1.01
Price Related Bias	Sufficient	0.00
Sold/Unsold Similarity	Sufficient	
Qualified Sales > 50%	Yes	

## Residential Median Sales Ratio

The median sales ratio (MSR) tests how close the Assessor's valuations (estimates of market value) are to the true market value. The distribution of these sales ratios should be centered around 1.00. The Residential MSR for Custer County was calculated to be 1.00, which is within the acceptable statistical range of 0.95 to 1.05 established by the Colorado Board of Equalization (SBOE). We trimmed 9 Residential sales during the development of this analysis. The MSR was also calculated for all applicable subclass, neighborhoods, economic areas, size and valuation strata identified by the auditor. See appendix for more details.



## Residential Coefficient of Dispersion

The Coefficient of Dispersion (COD) tests for undesirable variance in the valuations. The variance in sales ratios should be as small as possible. The COD for Residential properties in Custer County was calculated at 10.28% which is within the acceptable statistical standard of 15.99% or less established by the Colorado Board of Equalization (SBOE). The COD was also calculated for all applicable class, subclass, neighborhoods, economic areas, and valuation strata identified by the auditor. See appendix for more details.

## Residential Market (Time) Adjustments

All previous statistics used the time-adjusted sales price to ensure that the effect of time on sales ratios has been appropriately addressed. There should be a consistent and reasonable time adjustment methodology, not one tailored to improve sales ratios. We examined the sales ratios over the 18 - month period of sales. There does not appear to be a significant effect of time on Custer County's Residential sales ratios.



## Residential Price Related Differential

The Price Related Differential (PRD) tests for differences in the valuations of high and low value sold properties. Sales ratios should be consistent across the range of sale prices so the PRD should be very close to 1.00. The PRD for Custer County was calculated at 1.01, which is within the acceptable range of 0.98 to 1.03 established by the International Association of Assessing Officers (IAAO). The PRD was also calculated for all applicable class, subclass, neighborhoods, economic areas, size, and valuation strata identified by the auditor. See appendix for more details.



## Residential Price Related Bias

The Price Related Bias (PRB) measures whether assessment levels change systematically with property value. A PRB close to 0.00 indicates that high- and low-value properties are valued consistently, without upward or downward bias in the sales ratios. For Custer County, the PRB was calculated at 0.00 which is within the acceptable statistical range of -0.05 to 0.05 established by the International Association of Assessing Officers. The PRB was also analyzed across all applicable categories, including property class, subclass, neighborhood, economic area, size, and valuation strata as identified by the auditor. Additional details are provided in the appendix.

## **Residential Sold/Unsold Comparison**

All previous Residential statistics focus only on the compliance of properties that were sold during the Residential data collection period. In order to ensure that the unsold properties are also being valued consistently we evaluate whether or not they were treated the same as the sold properties.

Our default comparison approach utilizes the Mann-Whitney U test (also known as the Wilcoxon rank-sum test), to analyze two samples of sold and unsold properties. First, we compare the price per square foot, followed by the change in price per square foot from last reappraisal to this one, and finally we compare the change in total value from last reappraisal to this one. If necessary, we will also consider the stratified (economic area, neighborhood, improvement abstract, etc.) medians of the following unitary metrics: price per foot, change in price per foot, and change in value. See appendix for more details.

Our analysis indicates that the Residential sold and unsold properties are treated similarly. See appendix for more details.

## **Residential Sales Qualification**

All the analysis above, notwithstanding the sold/unsold comparison, relies entirely on qualified sales. In order to ensure that this is a complete and unbiased analysis of assessment practices, we will verify that sales are being correctly coded. We have concluded that Residential sales are being coded in an acceptable way.

There were 190 Residential sales. We have confirmed that more than 50% of all sales were qualified.

## 4. Commercial and Industrial

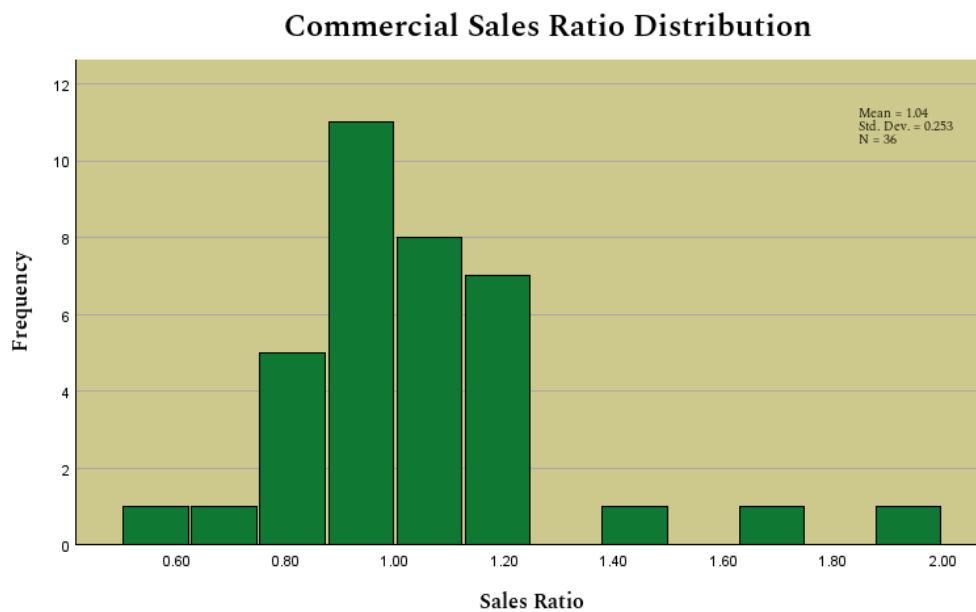
### Overview

Custer was found to be compliant for Commercial and Industrial properties.

	Result	Value
<b>Commercial and Industrial</b>		
Median Sales Ratio	Pass	1.00
Coefficient of Dispersion	Pass	11.00%
Time Adjustments	Pass	0.217
Price Related Differential	Sufficient	1.01
Price Related Bias	Sufficient	-0.01
Sold/Unsold Similarity	Sufficient	
Qualified Sales > 50%	Yes	

## Commercial Median Sales Ratio

The median sales ratio (MSR) tests how close the Assessor's valuations (estimates of market value) are to the true market value. The distribution of these sales ratios should be centered around 1.00. The Commercial MSR for Custer County was calculated to be 1.00, which is within the acceptable statistical range of 0.95 to 1.05 established by the Colorado Board of Equalization (SBOE). We trimmed zero sales during the development of this analysis. The MSR was also calculated for all applicable subclass, neighborhoods, economic areas, size and valuation strata identified by the auditor. See appendix for more details.

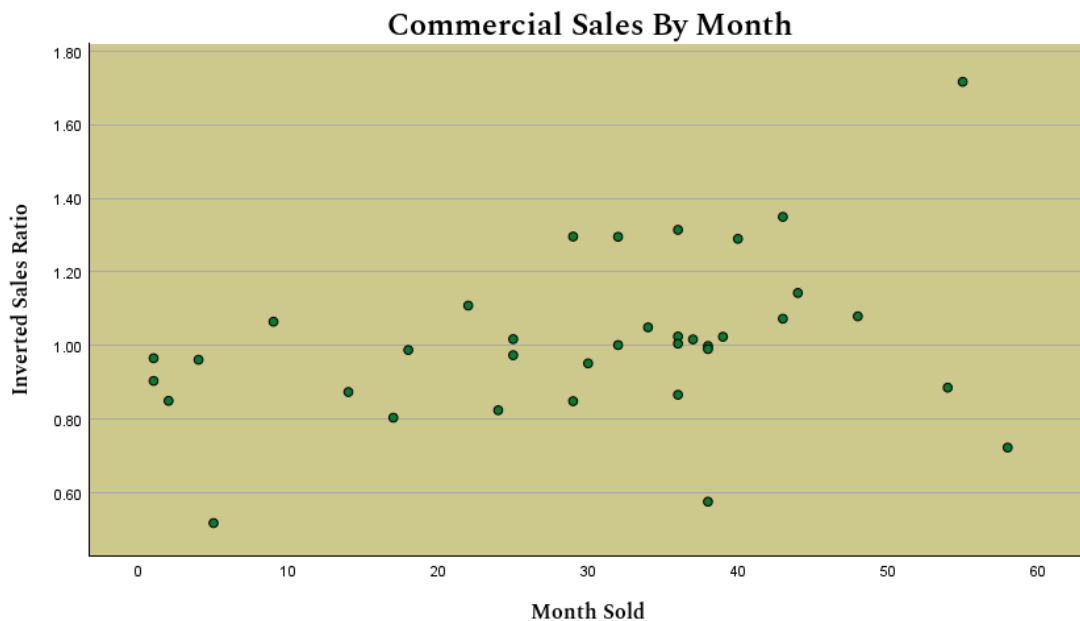


## Commercial Coefficient of Dispersion

The Coefficient of Dispersion (COD) tests for undesirable variance in the valuations. The variance in sales ratios should be as small as possible. The COD for Commercial properties in Custer County was calculated at 11.00% which is within the acceptable statistical standard of 20.99% or less established by the Colorado Board of Equalization (SBOE). The COD was also calculated for all applicable class, subclass, neighborhoods, economic areas, and valuation strata identified by the auditor. See appendix for more details.

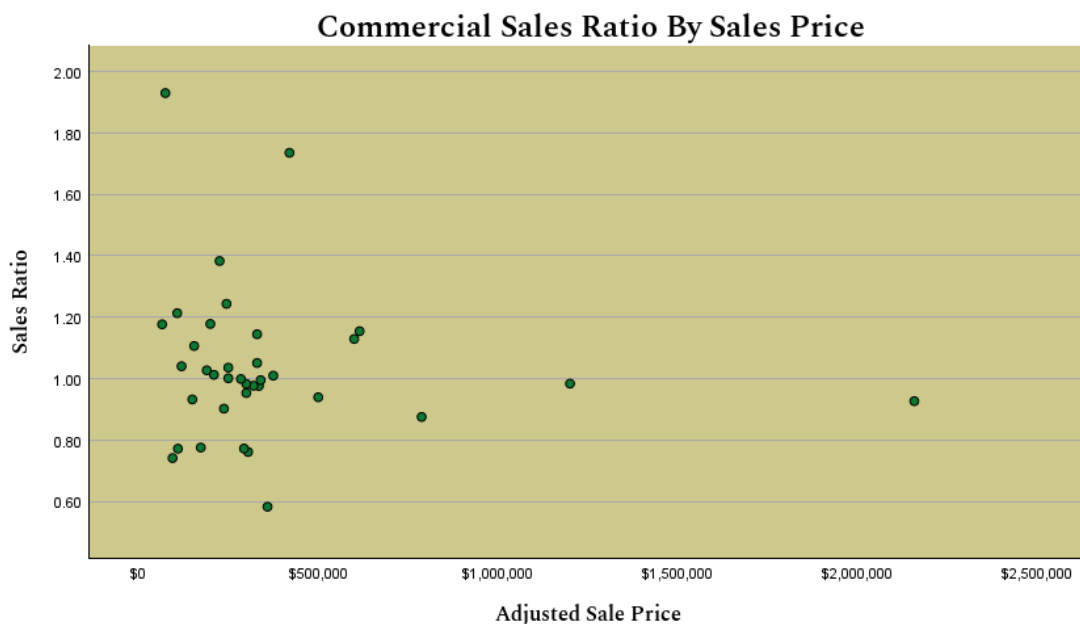
## Commercial Market (Time) Adjustments

All previous statistics used the time-adjusted sales price to ensure that the effect of time on sales ratios has been appropriately addressed. There should be a consistent and reasonable time adjustment methodology, not one tailored to improve sales ratios. We examined the sales ratios over the 60 - month period of sales. There does not appear to be a significant effect of time on Custer County's Commercial sales ratios.



### Commercial Price Related Differential

The Price Related Differential (PRD) tests for differences in the valuations of high and low value sold properties. Sales ratios should be consistent across the range of sale prices so the PRD should be very close to 1.00. The PRD for Custer County was calculated at 1.01, which is within the acceptable range of 0.98 to 1.03 established by the International Association of Assessing Officers (IAAO) The PRD was also calculated for all applicable class, subclass, neighborhoods, economic areas, size, and valuation strata identified by the auditor. See appendix for more details.



### Commercial Price Related Bias

The Price Related Bias (PRB) measures whether assessment levels change systematically with property value. A PRB close to 0.00 indicates that high- and low-value properties are valued consistently, without upward or downward bias in the sales ratios. For Custer County, the PRB was calculated at -0.01 which is within the acceptable statistical range of -0.05 to 0.05 established by the International Association of Assessing Officers. The PRB was also analyzed across all applicable categories, including property class, subclass, neighborhood, economic area, size, and valuation strata as identified by the auditor. Additional details are provided in the appendix.

## **Commercial Sold/Unsold Comparison**

All previous commercial statistics focus only on the compliance of properties that were sold during the Commercial data collection period. In order to ensure that the unsold properties are also being valued consistently we evaluate whether or not they were treated the same as the sold properties.

Our default comparison approach utilizes the Mann-Whitney U test (also known as the Wilcoxon rank-sum test), to analyze two samples of sold and unsold properties. First, we compare the price per square foot, followed by the change in price per square foot from last reappraisal to this one, and finally we compare the change in total value from last reappraisal to this one. If necessary, we will also consider the stratified (economic area, neighborhood, improvement abstract, etc.) medians of the following unitary metrics: price per foot, change in price per foot, and change in value. See appendix for more details.

Our study indicates that commercial sold and unsold properties are treated similarly.

## **Commercial Sales Qualification**

All the analysis above, notwithstanding the sold/unsold comparison, relies entirely on qualified sales. In order to ensure that this is a complete and unbiased analysis of assessment practices, we will verify that sales are being correctly coded. We have concluded that Commercial sales are being coded in an acceptable way.

There were 33 commercial sales. We have confirmed that more than 50% of all sales were qualified.

## 5. Agriculture

### Methodology

SMDA conducted a comprehensive review of county records to evaluate the classification and valuation of agricultural lands. The review included an assessment of major land categories, such as sprinkler irrigated farmland (4107), flood irrigated (4117), dry farmland (4127), meadow hay (4137), grazing areas (4147), orchard land (4157), farm/ranch waste land (4167), and forest land (4177).

Custer County applied the following methods to determine agricultural land classification and appropriate valuation methodology:

- Aerial photos are available and used for land classification
- Soil conservation guidelines determine land productivity classes
- Crop rotations are documented using a ten-year average
- Expenses reflect a ten-year average of typical landlord costs
- Ten-year crop yield averages are based on local and supporting data
- Grazing land is classified by its ten-year carrying capacity
- Orchards are correctly classified but valued at irrigated land rates
- Forest land is classified properly and valued like surrounding parcels
- Acreage totals for all classes and subclasses are verified
- A 13% capitalization rate is correctly applied

Additionally, SMDA checked the county records to confirm that the commodity prices and expense data provided by the Property Tax Administrator (PTA) were accurately applied. Guidance from the **Assessor's Reference Library (ARL), Volume 3, Chapter 5** was referenced where appropriate.

### Conclusions

Based on the review and analysis, SMDA considers Custer County's appraisal practices for agricultural property acceptable and in alignment with statutory requirements. The directives, commodity pricing, and expense figures issued by the Property Tax Administrator were correctly applied throughout the process. County-reported yields closely matched the figures published by Colorado Agricultural Statistics, and the expenses used were both reasonable and within allowable ranges. Grazing land carrying capacities were properly supported and fell within acceptable limits. Overall, the analysis confirms that the valuation approach is sound, well-documented, and based on reliable data.

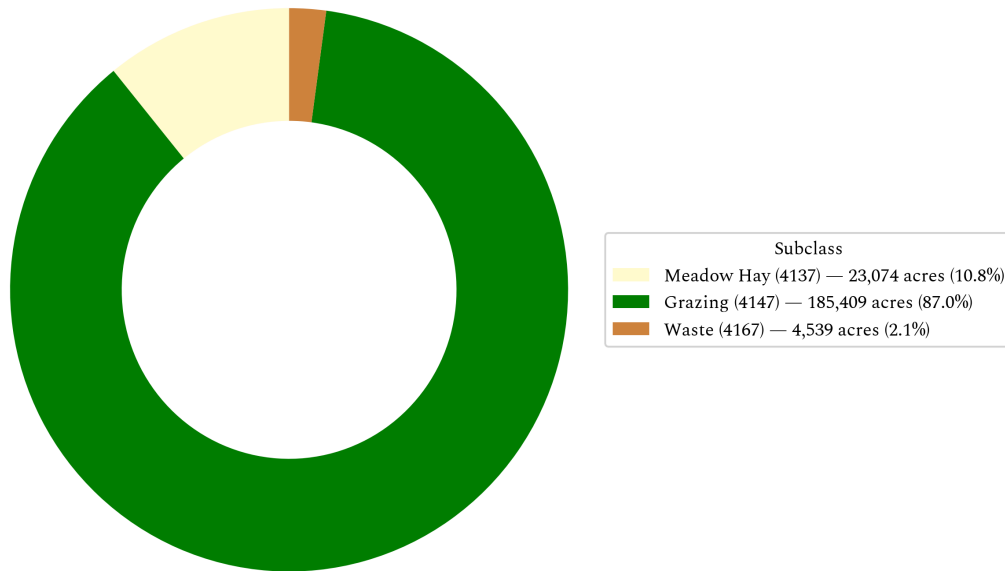
### Recommendations

None

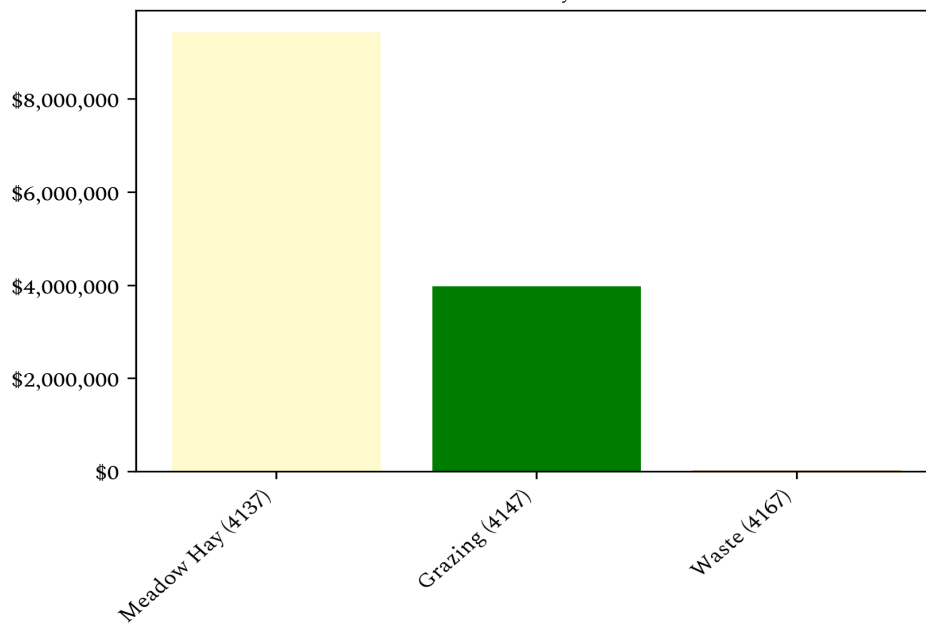
### Agricultural Land Breakdown

Abstract	Class	Acres	Actual Value	Actual Value/Acre	Assessed Value
4137	Meadow Hay	23,074	\$9,420,851	\$408.29	\$2,543,630
4147	Grazing	185,409	\$3,970,113	\$21.41	\$1,071,825
4167	Waste	4,539	\$28,799	\$6.34	\$7,775

Acres by Subclass



Actual Value by Subclass



## 6. Agriculture Non-Integral

### Methodology

SMDA reviewed Custer County's processes to determine whether it complied with the guidelines outlined in the **Assessor's Reference Library (ARL), Volume 3, Chapter 5**. The review focused on Custer County's approach to identifying land associated with residential improvements on farms and ranches, as well as land beneath residential structures that may not be integral to an agricultural operation under **§39-1-102, C.R.S.**

### For Residential Improvements on a Farm or Ranch

When identifying land under residential structures on a **farm or ranch** that is determined to be not integral to agricultural activity, Custer County applied the following discovery methods:

- Questionnaires
- Field Inspections
- Phone Interviews
- In Person Interviews
- Personal Knowledge of Occupants

### For Residential Improvements Not Integral to Agriculture

When identifying land under residential structures that is determined to be **not integral** to agricultural activity, Custer County applied the following discovery methods:

- Questionnaires
- Field Inspections
- In Person Interviews
- Personal Knowledge of Occupants
- Aerial Photography

### Conclusions

Custer County followed the procedures set forth by the **Division of Property Taxation** for classifying and valuing land associated with residential improvements, whether or not the property is considered integral to agricultural use.

### Recommendations

None

## 7. Economic Areas

### **Methodology**

Custer County submitted written narratives and maps outlining its economic areas. SMDA reviewed these materials for clarity, logical consistency, and alignment between the descriptions and mapped boundaries.

### **Conclusions**

Each area is affected by comparable market conditions, which supports consistent property valuations and helps maintain uniformity in values among properties with similar characteristics within the same geographic region.

### **Recommendations**

None

## 8. Natural Resources

### Earth and Stone

#### Methodology

In accordance with the **Assessor's Reference Library (ARL), Volume 3, Chapter 6: Natural Resource Valuation Procedures**, the county used the **income approach** to determine the value of earth and stone production. Production totals, measured in tons, were multiplied by the economic royalty rate established by the **Division of Property Taxation** to calculate projected income. This income figure was then capitalized using the **Hoskold factor**, which is based on the expected life of the reserves or lease. Since production data is not collected by any state or private agency, the operator is the source for both estimated tonnage and reserve life. Ultimately, valuation depends on two primary variables: the quantity of material and the remaining productive life of the site.

#### Conclusions

The county applied the correct formulas and state guidelines to earth and stone resources.

#### Recommendations

None

## 9. Personal Property

### Methodology

SMDA reviewed Custer County's personal property assessment procedures for compliance with the **Assessor's Reference Library (ARL), Volume 5** and the requirements of the **State Board of Equalization (SBOE)**. The SBOE mandates the use of ARL Volume 5, which includes up-to-date discovery processes, classification methods, documentation standards, economic life tables, cost factor tables, depreciation schedules, and level-of-value adjustment tables.

The county provided a current personal property audit plan for the 2025 valuation period along with a list of audited businesses, which matched the plan requirements.

To identify and discover personal property accounts, Custer County used several methods:

- Public record documents
- MLS listing or sold books
- Local publications
- Personal observation
- Questionnaires

The county follows all classification, documentation, and valuation procedures recommended by the **Division of Property Taxation (DPT)**, including the prescribed cost factor tables, depreciation schedules, and level-of-value adjustment factors.

Custer County also employed a structured audit process using multiple audit triggers to select accounts for review:

- Accounts close to \$56,000 actual value exemption status
- Accounts protested with substantial disagreement
- Non-filing taxpayers
- Businesses with no deletions or additions for 2 or more years
- Same business type or use
- Accounts with omitted property
- Accounts with greater than 10% change
- Accounts with obvious discrepancies
- Businesses in selected area

### Conclusions

Custer County implemented effective discovery, classification, documentation, valuation, and auditing practices for personal property assessments. The county's procedures align with ARL Volume 5, meet all SBOE requirements, and demonstrate statistical compliance.

**Recommendations**

None

## 10. Possessory Interest

### Methodology

SMDA reviewed Custer County's discovery and valuation of possessory interest properties to ensure they correctly applied the guidelines outlined in the **Assessor's Reference Library (ARL), Volume 3, Chapter 7**, in accordance with **§39-1-103(17)(a)(II), C.R.S.** Possessory interest refers to a private right to occupy or use government-owned property granted through a lease, license, permit, concession, contract, or other agreement, as defined by the Property Tax Administrator.

SMDA reviewed Custer County's assessment procedures for compliance with these guidelines for **agricultural** possessory interests. The county confirmed the completeness of its discovery process and whether it was confident that all relevant possessory interest properties had been identified and placed on the assessment roll.

### Conclusions

Custer County established an effective discovery process to ensure that possessory interest properties were added to the tax roll. The county consistently applied the proper procedures and valuation methods according to State guidelines, resulting in accurate and compliant assessments.

### Recommendations

None

### Possessory Interest Breakdown

Possessory Interest Type	Value
Agricultural	\$34,631.69

# 11. Sales Verification

## Methodology

As part of the Property Assessment Study, SMDA conducted an evaluation of Custer County's procedures for verifying real estate sales. This review was guided by the relevant provisions of the **Colorado Revised Statutes**:

A representative body of sales is required when considering the market approach to appraisal.

*(8) In any case in which sales prices of comparable properties within any class or subclass are utilized when considering the market approach to appraisal in the determination of actual value of any taxable property, the following limitations and conditions shall apply:*

*(a)(I) Use of the market approach shall require a representative body of sales, including sales by a lender or government, sufficient to set a pattern, and appraisals shall reflect due consideration of the degree of comparability of sales, including the extent of similarities and dissimilarities among properties that are compared for assessment purposes. In order to obtain a reasonable sample and to reduce sudden price changes or fluctuations, all sales shall be included in the sample that reasonably reflect a true or typical sales price during the period specified in section 39-1-104 (10.2). Sales of personal property exempt pursuant to the provisions of sections 39-3-102, 39-3-103, and 39-3-119 to 39-3-122 shall not be included in any such sample.*

*(b) Each such sale included in the sample shall be coded to indicate a typical, negotiated sale, as screened and verified by the assessor. (39-1-103, C.R.S.)*

The assessor is required to use sales of real property only in the valuation process.

*(8)(f) Such true and typical sales shall include only those sales which have been determined on an individual basis to reflect the selling price of the real property only or which have been adjusted on an individual basis to reflect the selling price of the real property only. (39-1-103, C.R.S.)*

SMDA examined Custer County's sales verification practices for the 2025 valuation period by reviewing a selection of sales from Custer County's master sales list. A total of 40 unqualified sales were analyzed. Of these, 40 sales provided clear and supportable reasons for disqualification, while three sales were amended from unqualified to qualified.

Where fewer than **50% of sales** were qualified within a property class, SMDA evaluated the reasons for disqualification within any subclass comprising **20% or more** of the class (by property count or value). When indications arose that sales data might be inadequate, unrepresentative, or incorrectly disqualified, SMDA discussed these cases directly with the assessor. SMDA also reviewed disqualified sales by assigned code to confirm consistent application; additional analysis was performed if SMDA discovered discrepancies.

### Custer County

Because Custer County maintained a sufficient percentage of qualified sales, an in-depth subclass analysis was not required.

### **Conclusions**

Based on SMDA's review, Custer County performed adequately in verifying sales and applying statutory requirements.

### **Recommendations**

None

## 12. Subdivision Discounting

### **Methodology**

SMDA reviewed Custer County's subdivision discounting practices to ensure compliance with §39-1-103(14), C.R.S. Custer County did not apply subdivision discounting.

### **Conclusions**

Custer County is excused from the procedural review.

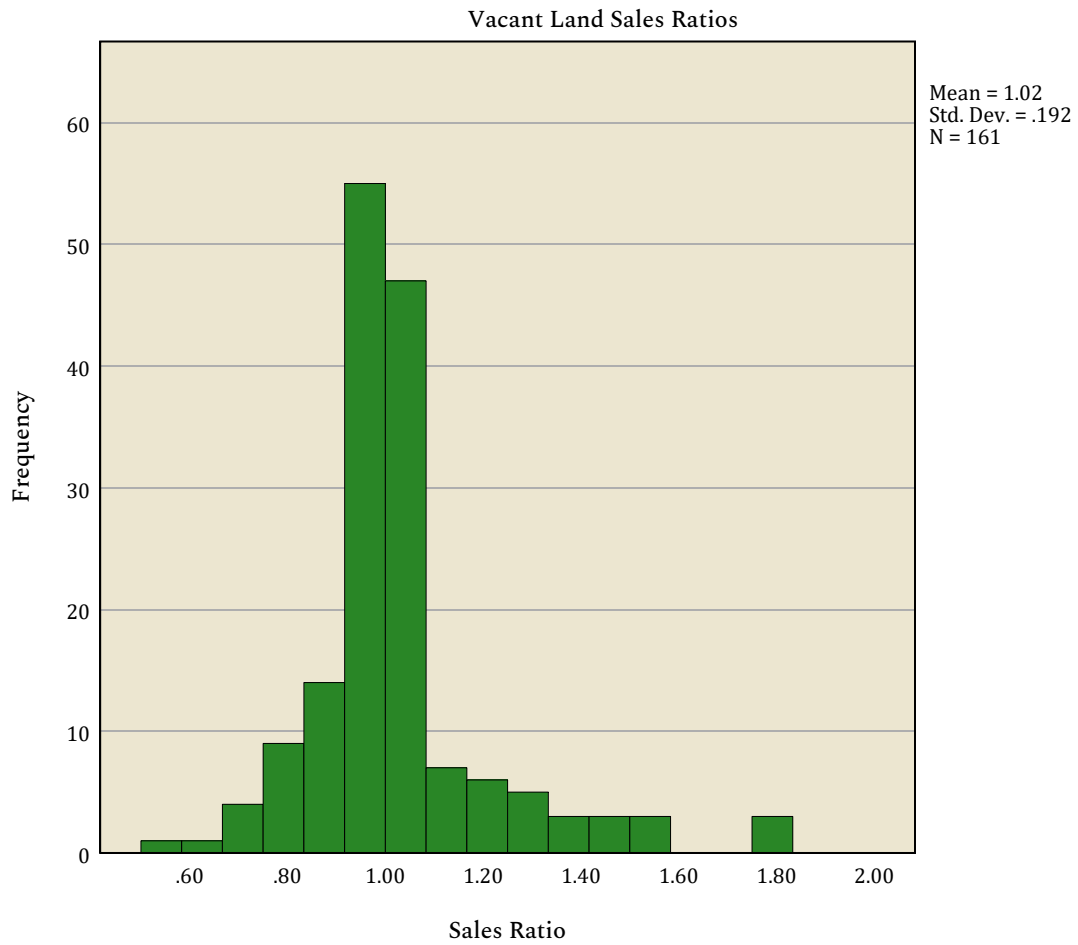
### **Recommendations**

None

# 13. Appendix

### OVERALL Vacant Land: Sales Ratio Distribution

Graph



**OVERALL Vacant Land: Central Tendencies**

**Ratio Statistics**

Ratio Statistics for Current Total Value /  
Adjusted Sale Price

N	Median	Coefficient of Dispersion
163	.998	.119

**Ratio Statistics**

Ratio Statistics for Current Total  
Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
-.018	1.023

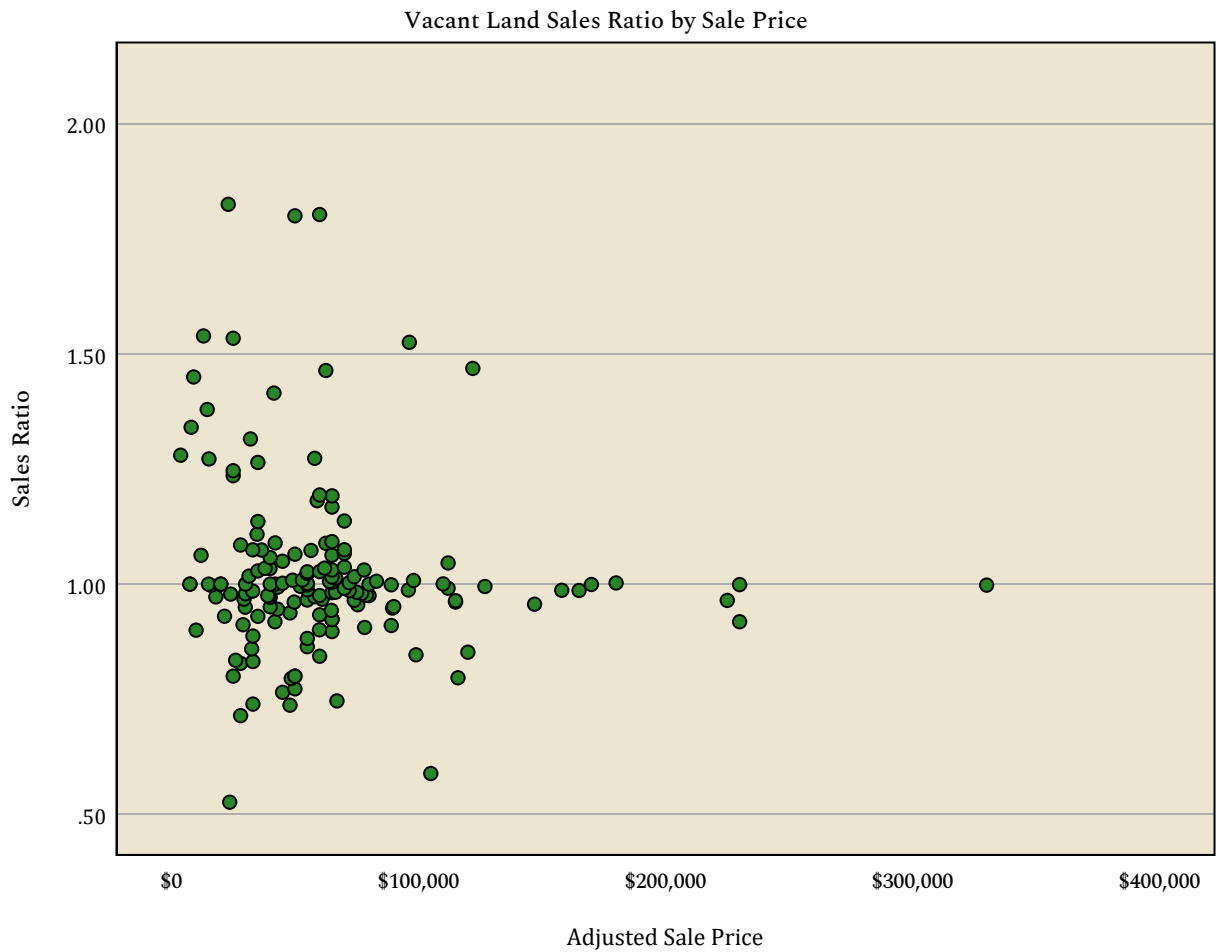
**OVERALL Vacant Land: Sales Price by Sales Ratio**

**Regression**

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.061	.027		39.830	<.001
	Adjusted Sale Price	-7.016E-7	.000	-.159	-2.039	.043

a. Dependent Variable: Sales Ratio

**Graph**



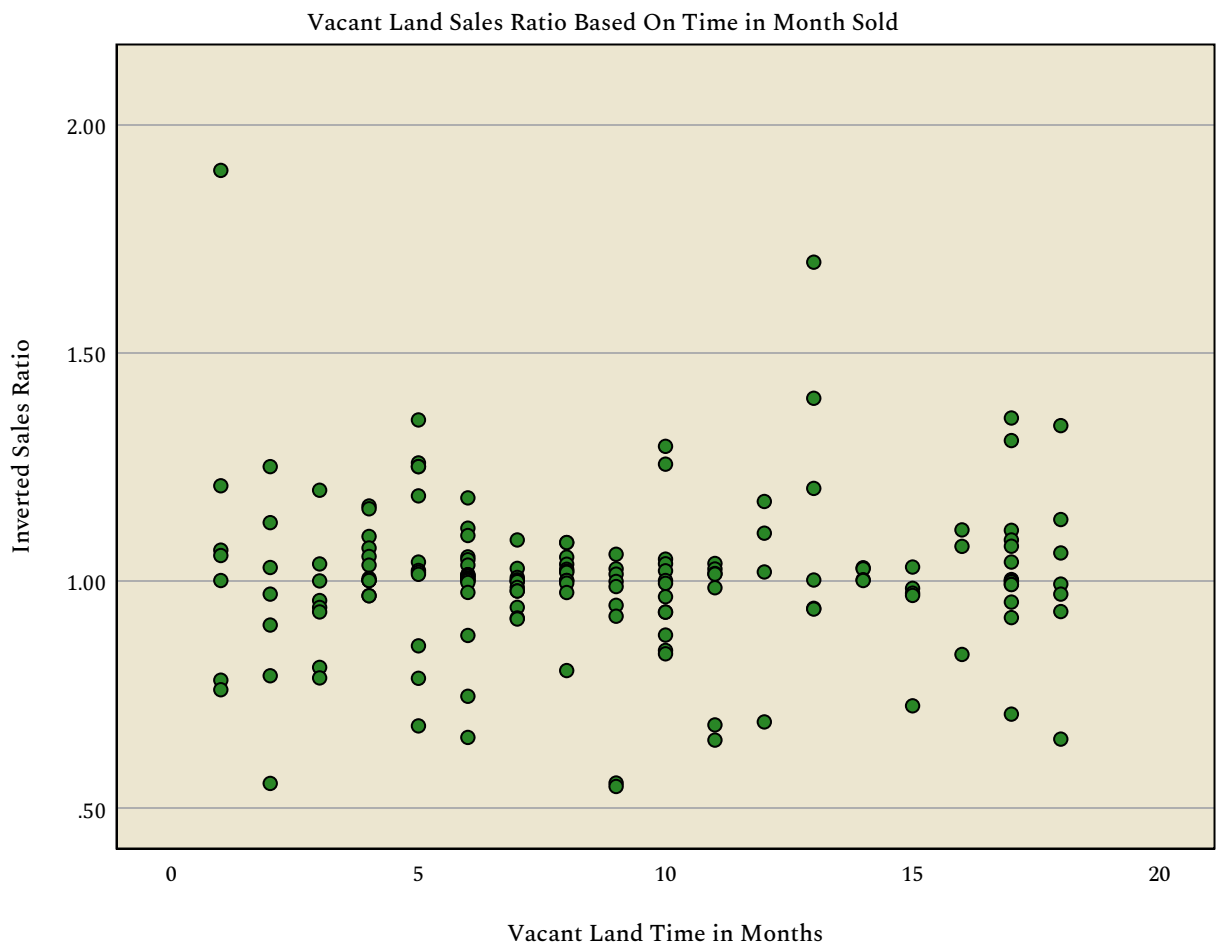
### OVERALL Vacant Land: Months by Inverted Sales Ratio

Regression

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.003	.034		29.268	<.001
	Vacant Land Time in Months	.002	.003	.047	.592	.555

a. Dependent Variable: Inverted Sales Ratio

Graph



**OVERALL Vacant Land: Descriptive Statistics**

**Frequencies**

		Statistics		
		Previous Total Value	Current Total Value	Difference in Total Value
N	Valid	163	163	163
	Missing	0	0	0
Mean		\$37,326.27	\$62,436.46	\$25,110.19
Median		\$33,930.00	\$55,048.00	\$19,074.00
Percentiles	2.5	\$4,455.90	\$9,172.50	-\$2,924.90
	25	\$21,700.00	\$36,000.00	\$1,250.00
	50	\$33,930.00	\$55,048.00	\$19,074.00
	75	\$51,475.00	\$74,680.00	\$31,482.00
	97.5	\$104,554.70	\$208,125.00	\$131,062.10

**OVERALL Vacant Land: Mann-Whitney U-Test (Rank-sum)**

**Nonparametric Tests**

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. <sup>a,b</sup>
1	The distribution of Current Total Value is the same across categories of VacantSOLDFLG.	Independent-Samples Mann-Whitney U Test	<.001

Hypothesis Test Summary

	Decision
1	Reject the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.

**Independent-Samples Mann-Whitney U Test**

**Current Total Value across VacantSOLDFLG**

Independent-Samples Mann-Whitney U Test Summary

Total N	2640
Mann-Whitney U	137541.500
Wilcoxon W	3226396.500
Test Statistic	137541.500
Standard Error	9206.955
Standardized Test Statistic	-5.979
Asymptotic Sig.(2-sided test)	<.001

**Nonparametric Tests**

**OVERALL Vacant Land: Mann-Whitney U-Test (Rank-sum)**

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. <sup>a,b</sup>
1	The distribution of Difference in Total Value is the same across categories of VacantSOLDFLG.	Independent-Samples Mann-Whitney U Test	<.001

Hypothesis Test Summary

	Decision
1	Reject the null hypothesis.

a. The significance level is .050.

b. Asymptotic significance is displayed.

**Independent-Samples Mann-Whitney U Test**

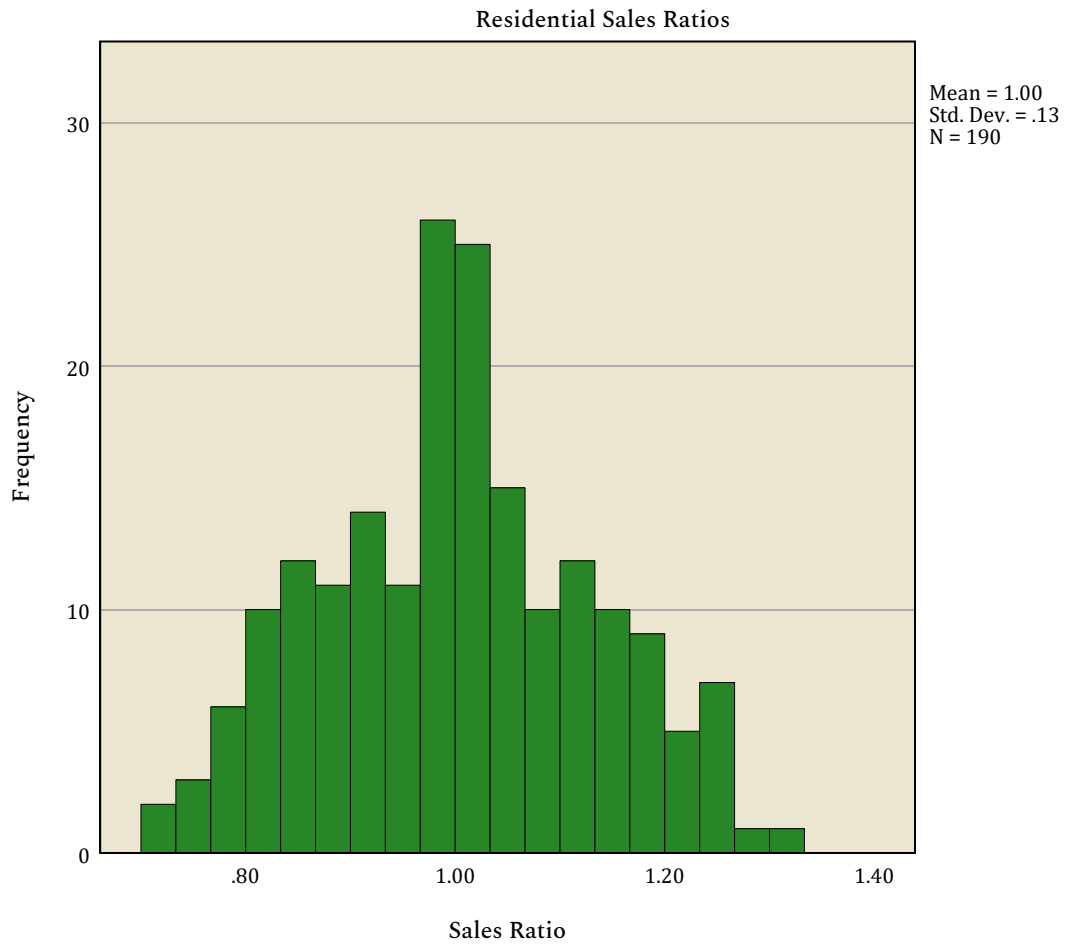
**Difference in Total Value across VacantSOLDFLG**

Independent-Samples Mann-Whitney U Test Summary

Total N	2634
Mann-Whitney U	105154.000
Wilcoxon W	3221410.000
Test Statistic	105154.000
Standard Error	8038.321
Standardized Test Statistic	-8.344
Asymptotic Sig.(2-sided test)	<.001

### OVERALL Residential: Sales Ratio Distribution

Graph



## OVERALL Residential: Central Tendencies

### Ratio Statistics

Ratio Statistics for Current Total Value /  
Adjusted Sale Price

N	Median	Coefficient of Dispersion
190	1.000	.103

### Ratio Statistics

Ratio Statistics for Current Total  
Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
.001	1.009

### OVERALL Residential: Sales Price by Sales Ratio

Regression

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.028	.018		56.593	<.001
	Adjusted Sale Price	-5.992E-8	.000	-.121	-1.672	.096

a. Dependent Variable: Sales Ratio

Graph



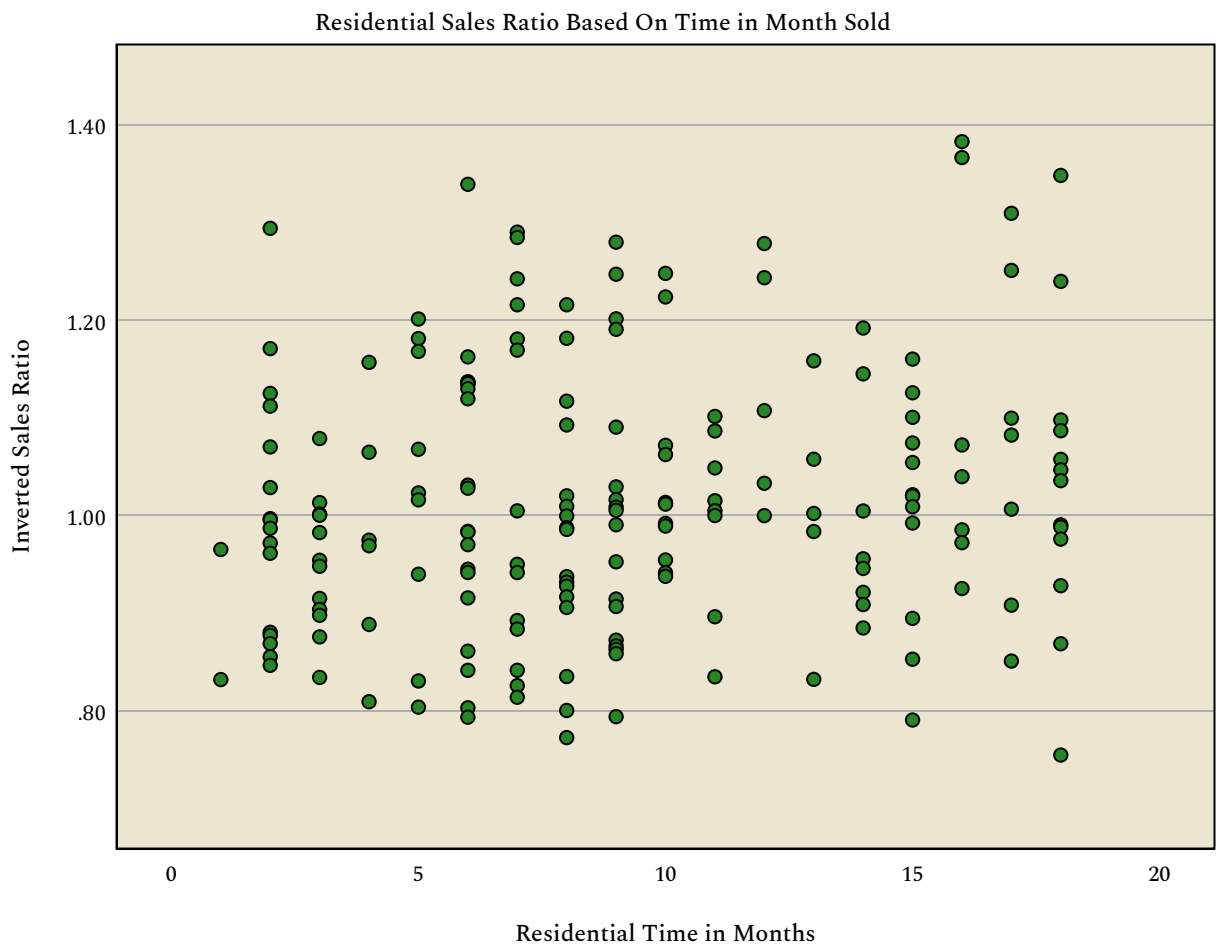
### OVERALL Residential: Months by Inverted Sales Ratio

Regression

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.978	.021		47.566	<.001
	Residential Time in Months	.004	.002	.147	2.039	.043

a. Dependent Variable: Inverted Sales Ratio

Graph



**OVERALL Residential: Descriptive Statistics**

**Frequencies**

		Statistics		
		Previous Price Per Foot	Price Per Foot	Difference in Price Per Foot
N	Valid	190	190	190
	Missing	0	0	0
Mean		\$251.19	\$270.09	1.14
Median		\$233.31	\$260.73	1.02
Percentiles	2.5	\$61.70	\$92.15	.83
	25	\$168.58	\$198.75	.98
	50	\$233.31	\$260.73	1.02
	75	\$314.53	\$329.92	1.10
	97.5	\$539.02	\$547.02	2.24

**Frequencies**

		Statistics		
		Previous Total Value	Current Total Value	Difference in Total Value
N	Valid	190	190	190
	Missing	0	0	0
Mean		\$410,154.26	\$431,461.56	\$21,307.30
Median		\$372,545.00	\$402,777.00	\$7,932.50
Percentiles	2.5	\$56,008.50	\$75,911.35	-\$82,483.37
	25	\$235,243.75	\$248,251.50	-\$6,027.50
	50	\$372,545.00	\$402,777.00	\$7,932.50
	75	\$537,524.00	\$541,151.00	\$34,523.75
	97.5	\$1,186,267.40	\$1,192,515.80	\$188,649.87

**OVERALL Residential: Mann-Whitney U-Test (Rank-sum)**

**Nonparametric Tests**

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. <sup>a,b</sup>
1	The distribution of Difference in Total Value is the same across categories of Residential Sold vs Unsold.	Independent-Samples Mann-Whitney U Test	.017

Hypothesis Test Summary

	Decision
1	Reject the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.

**Independent-Samples Mann-Whitney U Test**

**Difference in Total Value across Residential Sold vs Unsold**

Independent-Samples Mann-Whitney U Test Summary

Total N	3056
Mann-Whitney U	178443.000
Wilcoxon W	4434346.000
Test Statistic	178443.000
Standard Error	10163.252
Standardized Test Statistic	-2.390
Asymptotic Sig.(2-sided test)	.017

**Nonparametric Tests**

**OVERALL Residential: Mann-Whitney U-Test (Rank-sum)**

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. <sup>a,b</sup>
1	The distribution of Price Per Foot is the same across categories of Residential Sold vs Unsold.	Independent-Samples Mann-Whitney U Test	.006

Hypothesis Test Summary

	Decision
1	Reject the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.

**Independent-Samples Mann-Whitney U Test**

**Price Per Foot across Residential Sold vs Unsold**

Independent-Samples Mann-Whitney U Test Summary

Total N	3094
Mann-Whitney U	201734.000
Wilcoxon W	4513250.000
Test Statistic	201734.000
Standard Error	10938.210
Standardized Test Statistic	-2.762
Asymptotic Sig.(2-sided test)	.006

**Nonparametric Tests**

**OVERALL Residential: Mann-Whitney U-Test (Rank-sum)**

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. <sup>a,b</sup>
1	The distribution of Difference in Price Per Foot is the same across categories of Residential Sold vs Unsold.	Independent-Samples Mann-Whitney U Test	.003

Hypothesis Test Summary

	Decision
1	Reject the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.

**Independent-Samples Mann-Whitney U Test**

**Difference in Price Per Foot across Residential Sold vs Unsold**

Independent-Samples Mann-Whitney U Test Summary

Total N	3094
Mann-Whitney U	173996.000
Wilcoxon W	4544442.000
Test Statistic	173996.000
Standard Error	10257.262
Standardized Test Statistic	-2.922
Asymptotic Sig.(2-sided test)	.003

**OVERALL Residential: Unit Value Comparison**

**Summarize**

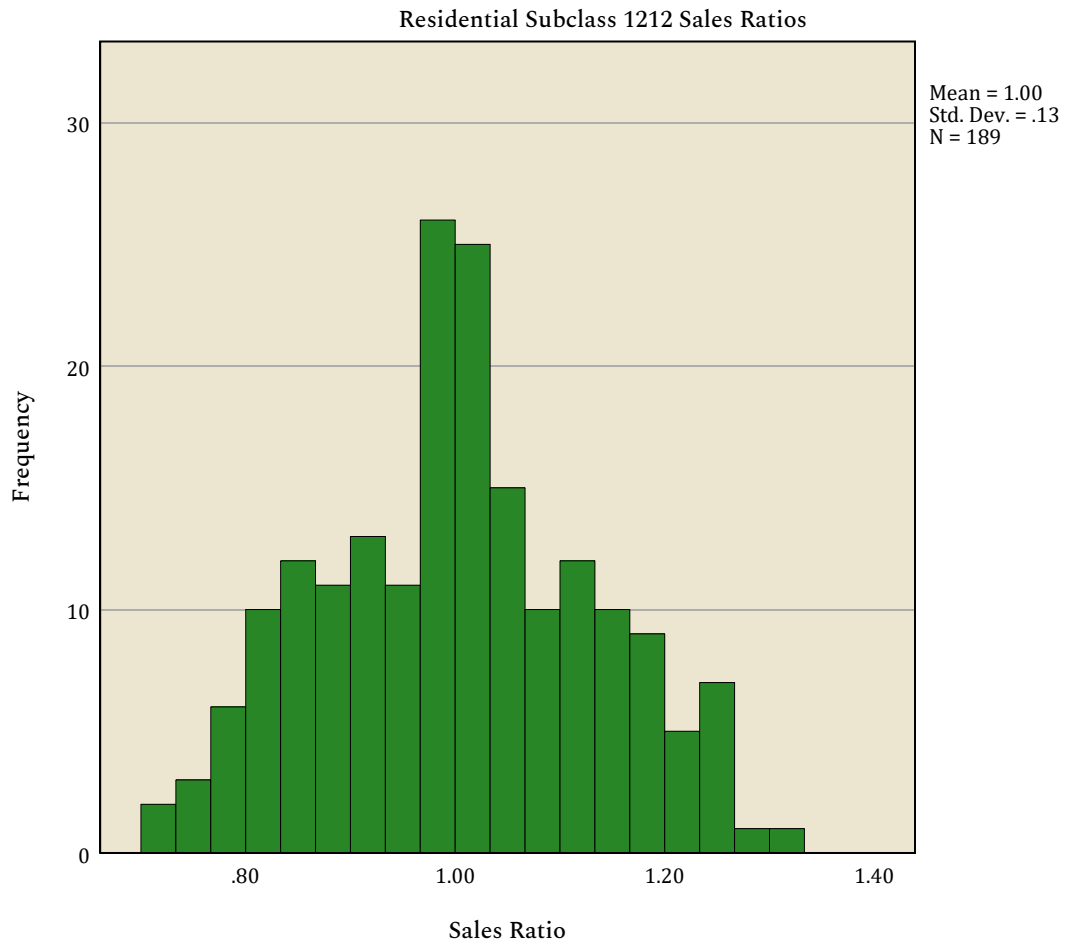
Sold vs Unsold

Difference in Price Per Foot

Residential Sold vs Unsold	N	Median	Mean
SOLD	171	1.02	1.14
UNSOLD	3087	1.00	1.00
Total	3258	1.00	1.01

### Residential Subclass 1212: Sales Ratio Distribution

Graph



**Residential Subclass 1212: Central Tendencies**

**Ratio Statistics**

Ratio Statistics for Current Total Value /  
Adjusted Sale Price

N	Median	Coefficient of Dispersion
189	1.000	.103

**Ratio Statistics**

Ratio Statistics for Current Total  
Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
.001	1.010

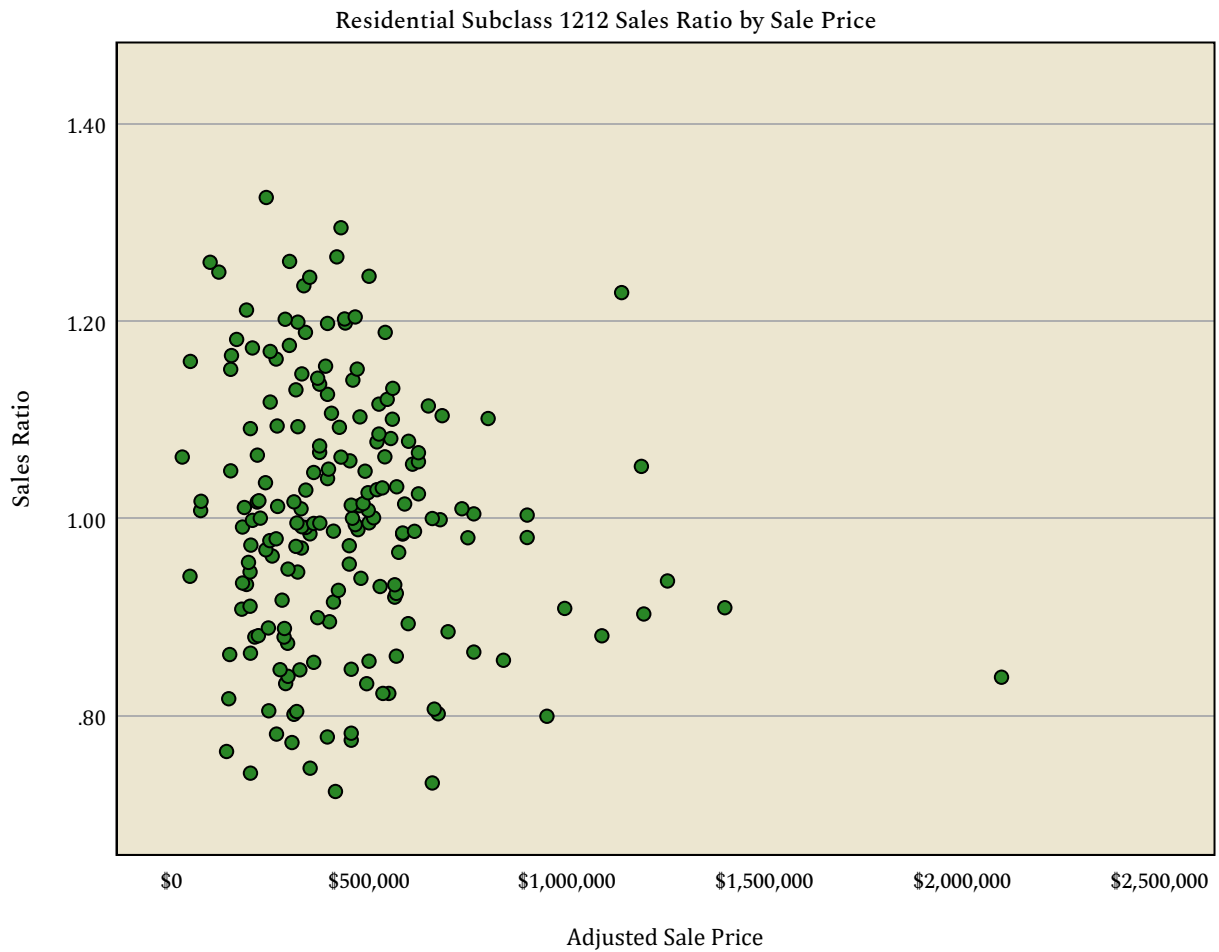
### Residential Subclass 1212: Sales Price by Sales Ratio

**Regression**

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.030	.018		56.289	<.001
	Adjusted Sale Price	-6.220E-8	.000	-.125	-1.728	.086

a. Dependent Variable: Sales Ratio

**Graph**



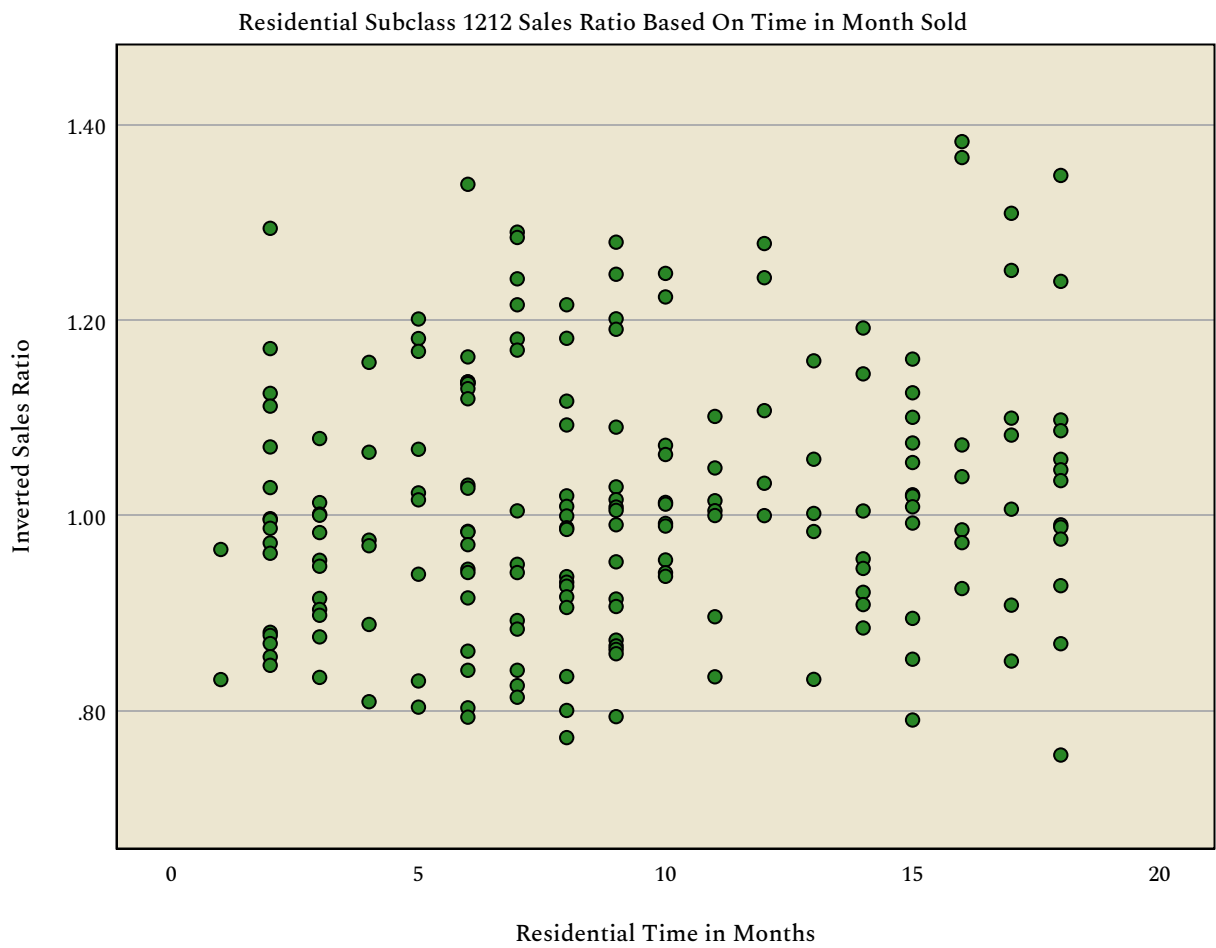
### Residential Subclass 1212: Months by Inverted Sales Ratio

Regression

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.978	.021		47.462	<.001
	Residential Time in Months	.004	.002	.146	2.021	.045

a. Dependent Variable: Inverted Sales Ratio

Graph



**Residential Subclass 1212: Descriptive Statistics**

**Frequencies**

		Statistics		
		Previous Price Per Foot	Price Per Foot	Difference in Price Per Foot
N	Valid	189	189	189
	Missing	0	0	0
Mean		\$251.60	\$270.57	1.14
Median		\$233.48	\$260.74	1.02
Percentiles	2.5	\$61.59	\$92.03	.83
	25	\$168.00	\$198.92	.98
	50	\$233.48	\$260.74	1.02
	75	\$315.17	\$330.05	1.11
	97.5	\$540.75	\$548.01	2.25

**Frequencies**

		Statistics		
		Previous Total Value	Current Total Value	Difference in Total Value
N	Valid	189	189	189
	Missing	0	0	0
Mean		\$411,658.31	\$433,062.68	\$21,404.37
Median		\$372,819.00	\$403,030.00	\$7,972.00
Percentiles	2.5	\$55,985.00	\$75,868.50	-\$82,504.75
	25	\$240,440.00	\$249,558.50	-\$6,086.00
	50	\$372,819.00	\$403,030.00	\$7,972.00
	75	\$537,866.00	\$541,198.00	\$34,557.50
	97.5	\$1,189,563.00	\$1,194,423.00	\$188,888.75

**Residential Subclass 1212: Mann-Whitney U-Test (Rank-sum)**

**Nonparametric Tests**

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. <sup>a,b</sup>
1	The distribution of Difference in Total Value is the same across categories of Residential Sold vs Unsold.	Independent-Samples Mann-Whitney U Test	.016

Hypothesis Test Summary

	Decision
1	Reject the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.

**Independent-Samples Mann-Whitney U Test**

**Difference in Total Value across Residential Sold vs Unsold**

Independent-Samples Mann-Whitney U Test Summary

Total N	3018
Mann-Whitney U	174721.000
Wilcoxon W	4323361.000
Test Statistic	174721.000
Standard Error	9999.464
Standardized Test Statistic	-2.400
Asymptotic Sig.(2-sided test)	.016

**Nonparametric Tests**

**Residential Subclass 1212: Mann-Whitney U-Test (Rank-sum)**

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. <sup>a,b</sup>
1	The distribution of Price Per Foot is the same across categories of Residential Sold vs Unsold.	Independent-Samples Mann-Whitney U Test	.013

Hypothesis Test Summary

	Decision
1	Reject the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.

**Independent-Samples Mann-Whitney U Test**

**Price Per Foot across Residential Sold vs Unsold**

Independent-Samples Mann-Whitney U Test Summary

Total N	3022
Mann-Whitney U	198337.000
Wilcoxon W	4303882.000
Test Statistic	198337.000
Standard Error	10644.875
Standardized Test Statistic	-2.496
Asymptotic Sig.(2-sided test)	.013

**Nonparametric Tests**

**Residential Subclass 1212: Mann-Whitney U-Test (Rank-sum)**

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. <sup>a,b</sup>
1	The distribution of Difference in Price Per Foot is the same across categories of Residential Sold vs Unsold.	Independent-Samples Mann-Whitney U Test	.006

Hypothesis Test Summary

	Decision
1	Reject the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.

**Independent-Samples Mann-Whitney U Test**

**Difference in Price Per Foot across Residential Sold vs Unsold**

Independent-Samples Mann-Whitney U Test Summary

Total N	3022
Mann-Whitney U	170326.000
Wilcoxon W	4333381.000
Test Statistic	170326.000
Standard Error	9978.417
Standardized Test Statistic	-2.736
Asymptotic Sig.(2-sided test)	.006

### Residential Subclass 1212: Unit Comparison Method

**Summarize**

Sold vs Unsold Percent Change for Subclass 1212

Difference in Price Per Foot

Residential Sold vs Unsold	N	Median	Mean
SOLD	170	1.02	1.14
UNSOLD	3012	1.00	1.01
Total	3182	1.00	1.02

**Summarize**

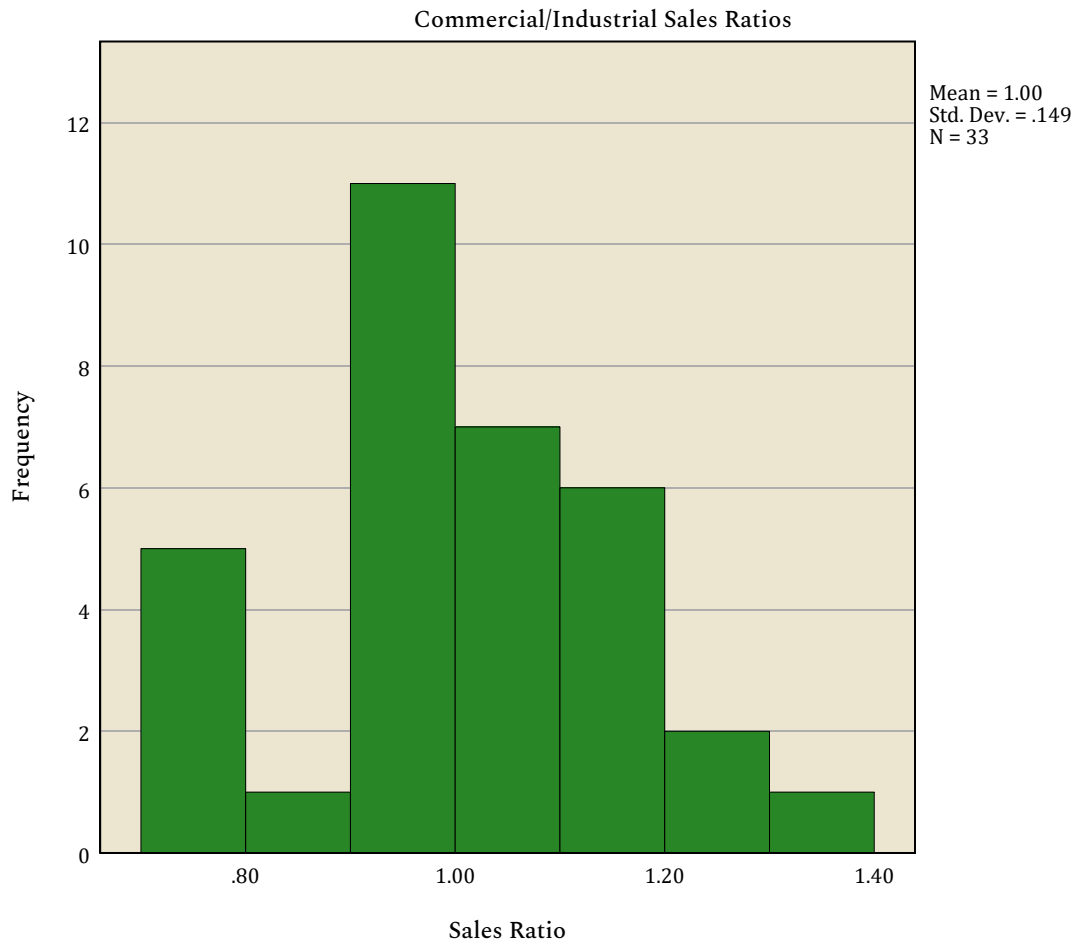
Sold vs Unsold Percent Change for Subclass 1212 by Economic Area

Difference in Price Per Foot

economic_area	Residential Sold vs Unsold	N	Median	Mean
	SOLD	8	1.09	1.14
	UNSOLD	120	1.00	1.02
	Total	128	1.00	1.03
1	SOLD	162	1.01	1.14
	UNSOLD	2892	1.00	1.01
	Total	3054	1.00	1.02
Total	SOLD	170	1.02	1.14
	UNSOLD	3012	1.00	1.01
	Total	3182	1.00	1.02

### OVERALL Commercial/Industrial: Sales Ratio Distribution

Graph



**OVERALL Commercial/Industrial: Central Tendencies**

**Ratio Statistics**

Ratio Statistics for Current Total Value /  
Adjusted Sale Price

N	Median	Coefficient of Dispersion
33	.999	.110

**Ratio Statistics**

Ratio Statistics for Current Total  
Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
.006	1.014

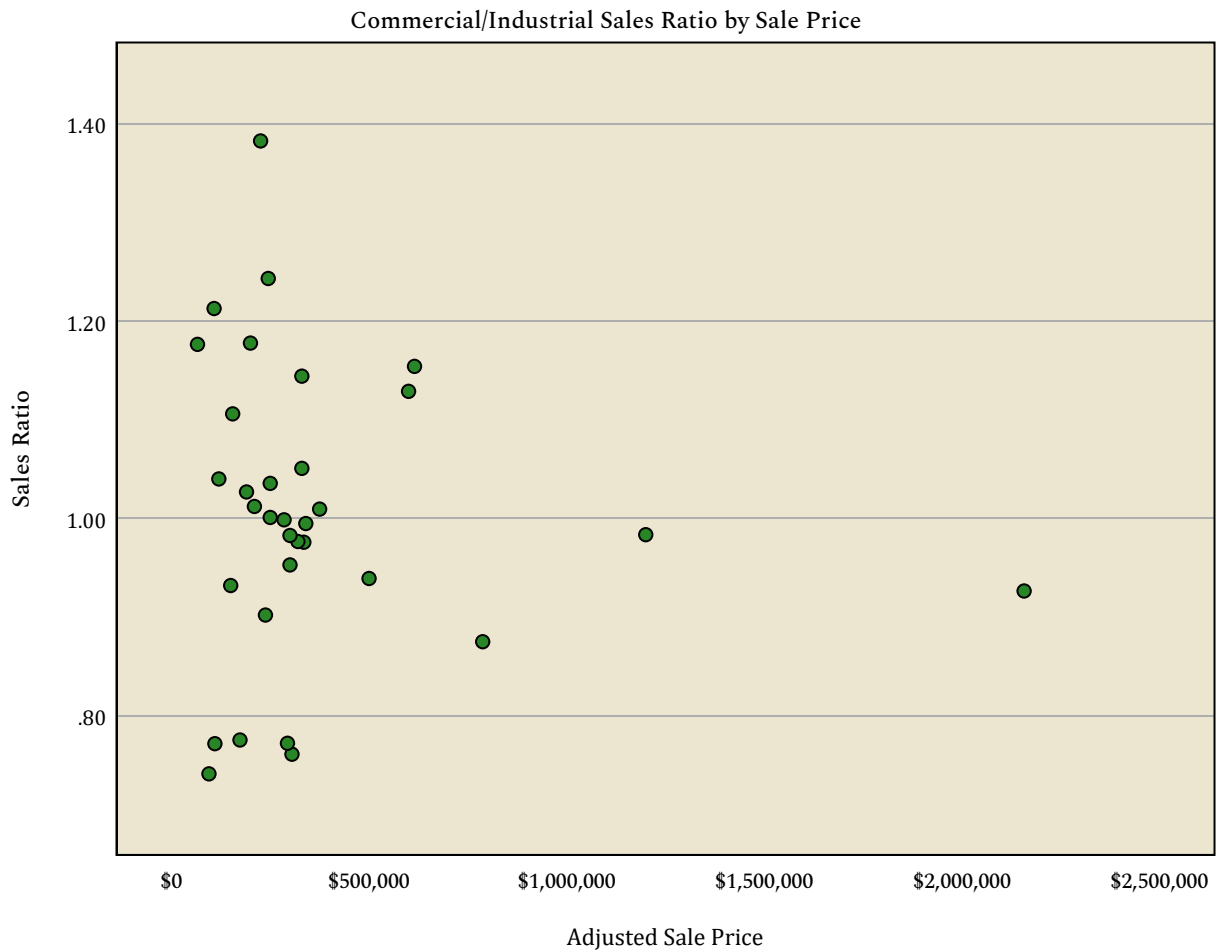
**OVERALL Commercial/Industrial: Sales Price by Sales Ratio**

**Regression**

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.018	.036		27.969	<.001
	Adjusted Sale Price	-3.519E-8	.000	-.092	-.515	.610

a. Dependent Variable: Sales Ratio

**Graph**



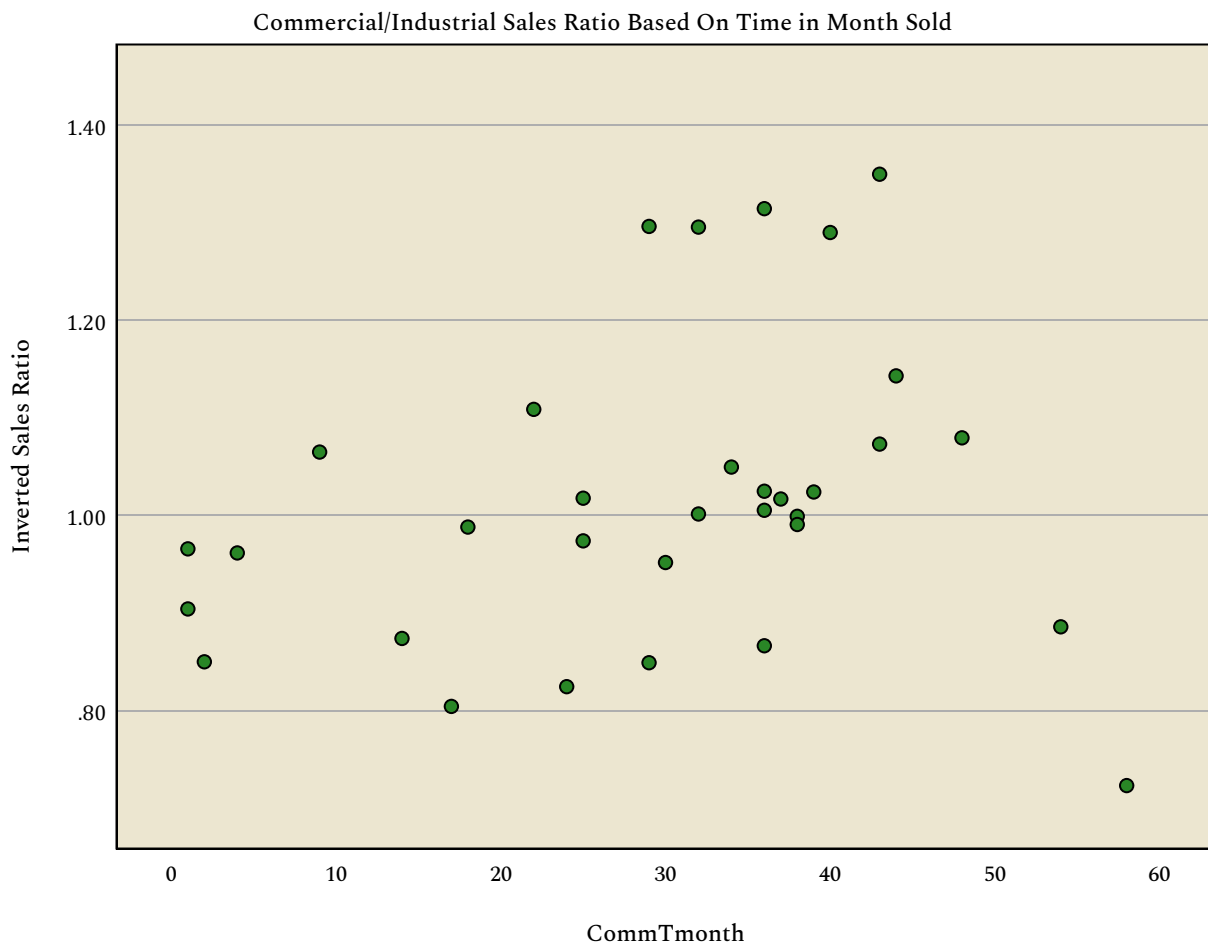
**OVERALL Commercial/Industrial: Months by Inverted Sales Ratio**

**Regression**

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.949	.061		15.677	<.001
	CommTmonth	.002	.002	.221	1.260	.217

a. Dependent Variable: Inverted Sales Ratio

**Graph**



**OVERALL Commercial/Industrial: Descriptive Statistics**

**Frequencies**

		Statistics		
		Previous Price Per Foot	Price Per Foot	Difference in Price Per Foot
N	Valid	33	33	33
	Missing	0	0	0
Mean		\$136.96	\$149.59	1.15
Median		\$140.09	\$138.06	1.00
Percentiles	2.5	\$25.26	\$26.21	.79
	25	\$74.40	\$81.88	.96
	50	\$140.09	\$138.06	1.00
	75	\$181.23	\$179.74	1.09
	97.5	.	.	.

**Frequencies**

		Statistics		
		Previous Total Value	Current Total Value	Difference in Total Value
N	Valid	33	33	33
	Missing	0	0	0
Mean		\$304,017.88	\$365,036.55	\$61,018.67
Median		\$256,693.00	\$284,575.00	-\$697.00
Percentiles	2.5	\$72,208.00	\$70,397.00	-\$127,228.00
	25	\$139,348.00	\$183,250.00	-\$8,015.00
	50	\$256,693.00	\$284,575.00	-\$697.00
	75	\$364,890.00	\$362,144.50	\$41,614.50
	97.5	.	.	.

**OVERALL Commercial/Industrial: Mann-Whitney U-Test (Rank-sum)**

**Nonparametric Tests**

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. <sup>a,b</sup>
1	The distribution of Difference in Total Value is the same across categories of CommSOLDFLG.	Independent-Samples Mann-Whitney U Test	.014

Hypothesis Test Summary

	Decision
1	Reject the null hypothesis.

a. The significance level is .050.

b. Asymptotic significance is displayed.

**Independent-Samples Mann-Whitney U Test**

**Difference in Total Value across CommSOLDFLG**

Independent-Samples Mann-Whitney U Test Summary

Total N	132
Mann-Whitney U	1014.000
Wilcoxon W	6474.000
Test Statistic	1014.000
Standard Error	179.651
Standardized Test Statistic	-2.460
Asymptotic Sig.(2-sided test)	.014

**Nonparametric Tests**

**OVERALL Commercial/Industrial: Mann-Whitney U-Test (Rank-sum)**

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. <sup>a,b</sup>
1	The distribution of Price Per Foot is the same across categories of CommSOLDFLG.	Independent-Samples Mann-Whitney U Test	.027

Hypothesis Test Summary

	Decision
1	Reject the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.

**Independent-Samples Mann-Whitney U Test**

**Price Per Foot across CommSOLDFLG**

Independent-Samples Mann-Whitney U Test Summary

Total N	134
Mann-Whitney U	1178.000
Wilcoxon W	6534.000
Test Statistic	1178.000
Standard Error	189.529
Standardized Test Statistic	-2.208
Asymptotic Sig.(2-sided test)	.027

**Nonparametric Tests**

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. <sup>a,b</sup>
1	The distribution of Difference in Price Per Foot is the same across categories of CommSOLDFLG.	Independent-Samples Mann-Whitney U Test	.040

**OVERALL Commercial/Industrial: Mann-Whitney U-Test (Rank-sum)**

Hypothesis Test Summary

	Decision
1	Reject the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.

**Independent-Samples Mann-Whitney U Test**

**Difference in Price Per Foot across CommSOLDFLG**

Independent-Samples Mann-Whitney U Test Summary

Total N	134
Mann-Whitney U	1142.000
Wilcoxon W	6707.000
Test Statistic	1142.000
Standard Error	185.084
Standardized Test Statistic	-2.056
Asymptotic Sig.(2-sided test)	.040

**OVERALL Commercial/Industrial: Unit Value Comparison**

Summarize

Sold vs Unsold

Difference in Price Per Foot

CommSOLDFLG	N	Median	Mean
SOLD	22	1.00	1.15
UNSOLD	109	.97	.99
Total	142	.98	1.03

Summarize

Sold vs Unsold

Difference in Price Per Foot

Improvement Abstract Codes	CommSOLDFLG	N	Median	Mean
2212	SOLD	10	1.00	1.08
	UNSOLD	19	.95	.97
	Total	29	.96	1.01
2215	SOLD	1	.91	.91
	UNSOLD	9	.98	1.00
	Total	10	.98	.99
2220	SOLD	11	1.00	1.12
	UNSOLD	18	.98	1.02
	Total	29	.99	1.06
2225	UNSOLD	3	.99	1.02
	Total	3	.99	1.02
2230	SOLD	6	1.07	1.22
	UNSOLD	25	.98	1.05
	Total	31	.98	1.08
2235	SOLD	4	.96	1.01
	UNSOLD	26	.97	.96
	Total	30	.97	.97
2245	UNSOLD	2	.95	.95
	Total	2	.95	.95

**OVERALL Commercial/Industrial: Unit Value Comparison**

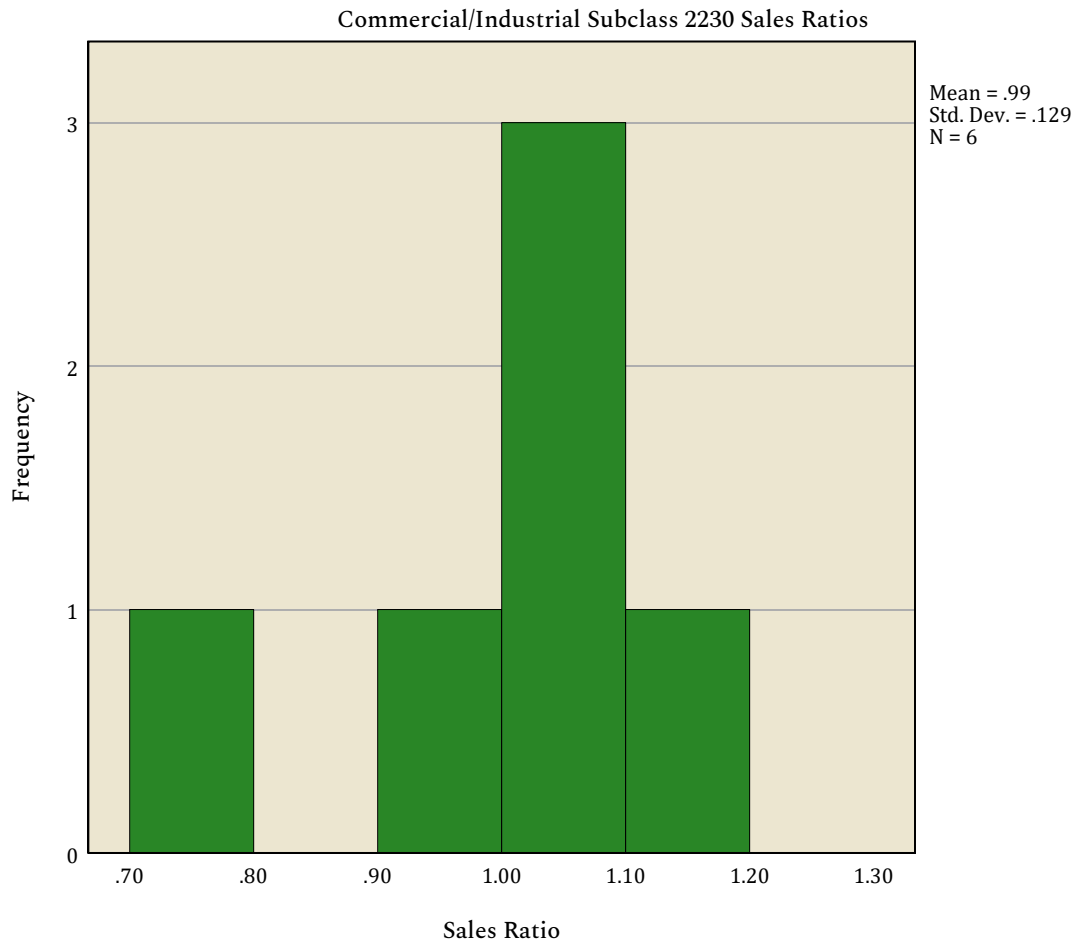
Sold vs Unsold

Difference in Price Per Foot

Improvement Abstract Codes	CommSOLDFLG	N	Median	Mean
3215	SOLD	1	2.38	2.38
	UNSOLD	7	.92	.88
	Total	8	.95	1.07
Total	SOLD	33	1.00	1.15
	UNSOLD	109	.97	.99
	Total	142	.98	1.03

### Commercial/Industrial Subclass 2230: Sales Ratio Distribution

Graph



**Commercial/Industrial Subclass 2230: Central Tendencies**

**Ratio Statistics**

Ratio Statistics for Current Total Value /  
Adjusted Sale Price

N	Median	Coefficient of Dispersion
6	1.025	.087

**Ratio Statistics**

Ratio Statistics for Current Total  
Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
.014	1.014

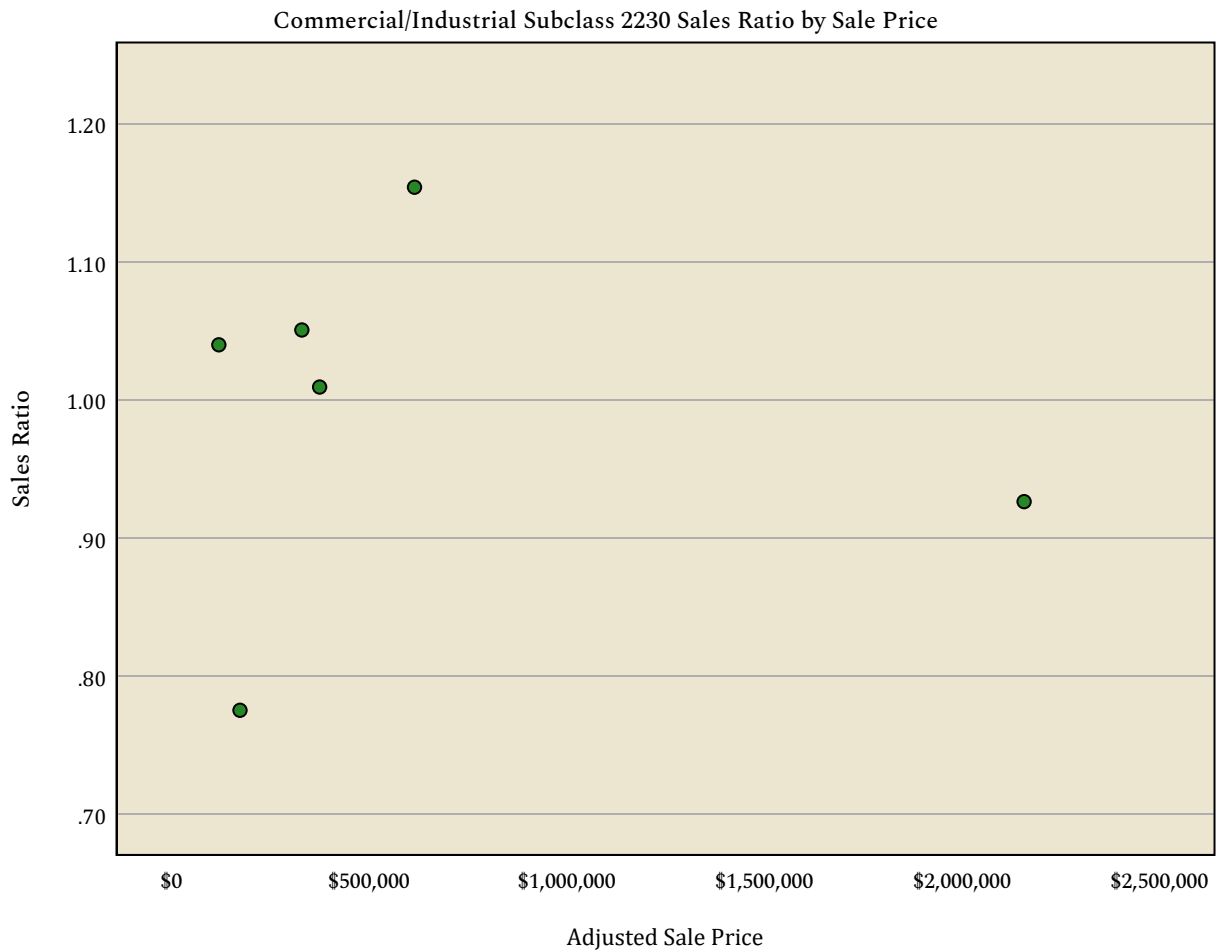
**Commercial/Industrial Subclass 2230: Sales Price by Sales Ratio**

**Regression**

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.003	.079		12.733	<.001
	Adjusted Sale Price	-1.698E-8	.000	-.101	-.203	.849

a. Dependent Variable: Sales Ratio

**Graph**



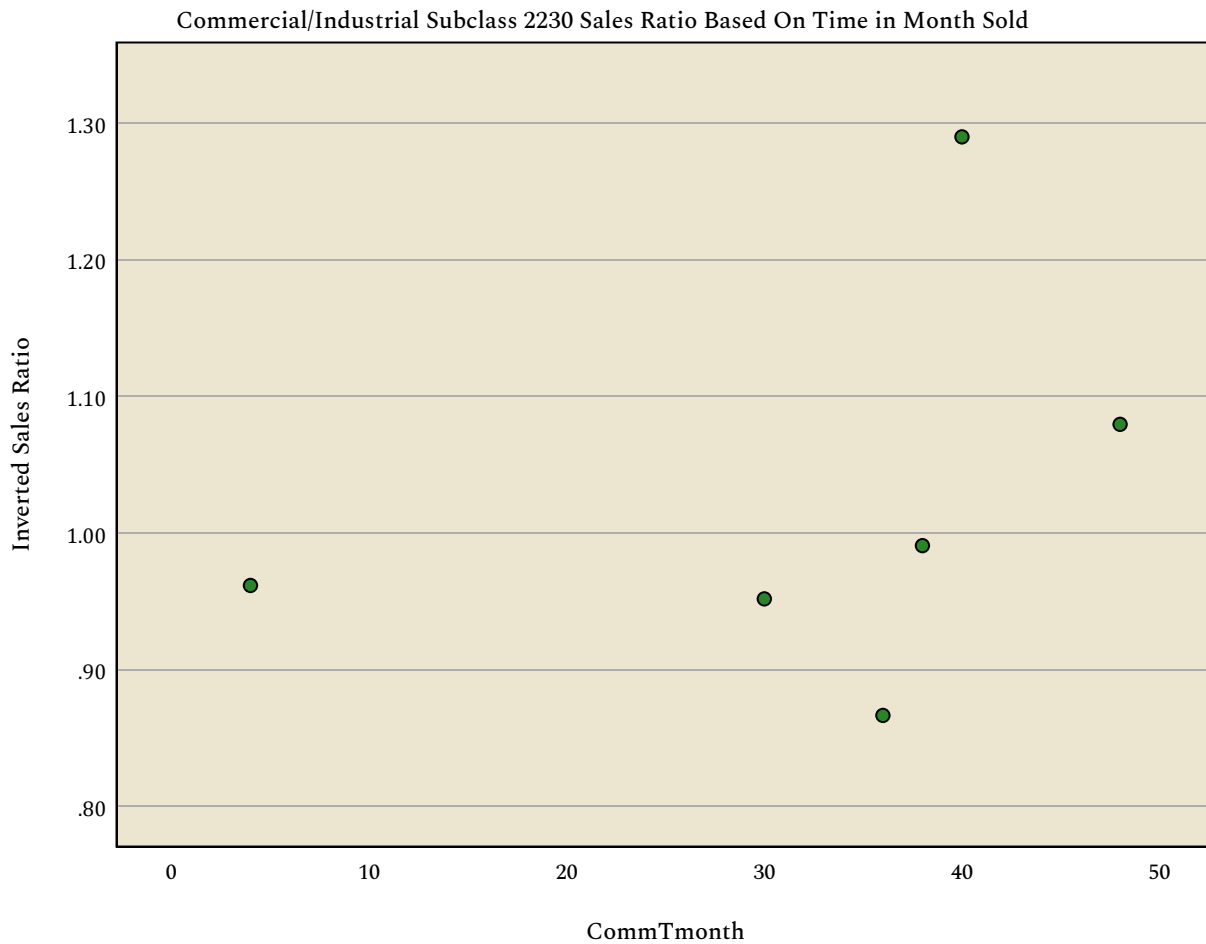
### Commercial/Industrial Subclass 2230: Months by Inverted Sales Ratio

**Regression**

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.908	.160		5.667	.005
	CommTmonth	.004	.005	.364	.781	.479

a. Dependent Variable: Inverted Sales Ratio

**Graph**



**Commercial/Industrial Subclass 2230: Descriptive Statistics**

**Frequencies**

		Statistics		
		Previous Price Per Foot	Price Per Foot	Difference in Price Per Foot
N	Valid	6	6	6
	Missing	0	0	0
Mean		\$111.92	\$146.81	1.22
Median		\$107.29	\$121.17	1.07
Percentiles	2.5	\$25.26	\$26.21	.89
	25	\$69.16	\$76.61	.95
	50	\$107.29	\$121.17	1.07
	75	\$167.33	\$201.01	1.50
	97.5	.	.	.

**Frequencies**

		Statistics		
		Previous Total Value	Current Total Value	Difference in Total Value
N	Valid	6	6	6
	Missing	0	0	0
Mean		\$428,831.00	\$615,444.50	\$186,613.50
Median		\$337,392.00	\$362,617.00	\$33,882.00
Percentiles	2.5	\$120,279.00	\$124,793.00	-\$44,147.00
	25	\$133,332.75	\$132,086.75	-\$13,411.25
	50	\$337,392.00	\$362,617.00	\$33,882.00
	75	\$733,304.75	\$1,031,900.50	\$322,106.00
	97.5	.	.	.

**Commercial/Industrial Subclass 2230: Mann-Whitney U-Test (Rank-sum)**

**Nonparametric Tests**

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. <sup>a,b</sup>
1	The distribution of Difference in Total Value is the same across categories of CommSOLDFLG.	Independent-Samples Mann-Whitney U Test	.060 <sup>c</sup>

Hypothesis Test Summary

	Decision
1	Retain the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.
- c. Exact significance is displayed for this test.

**Independent-Samples Mann-Whitney U Test**

**Difference in Total Value across CommSOLDFLG**

Independent-Samples Mann-Whitney U Test Summary

Total N	29
Mann-Whitney U	20.000
Wilcoxon W	345.000
Test Statistic	20.000
Standard Error	15.811
Standardized Test Statistic	-1.897
Asymptotic Sig.(2-sided test)	.058
Exact Sig.(2-sided test)	.060

**Nonparametric Tests**

**Commercial/Industrial Subclass 2230: Mann-Whitney U-Test (Rank-sum)**

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. <sup>a,b</sup>
1	The distribution of Price Per Foot is the same across categories of CommSOLDFLG.	Independent-Samples Mann-Whitney U Test	.408 <sup>c</sup>

Hypothesis Test Summary

	Decision
1	Retain the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.
- c. Exact significance is displayed for this test.

**Independent-Samples Mann-Whitney U Test**

**Price Per Foot across CommSOLDFLG**

Independent-Samples Mann-Whitney U Test Summary

Total N	29
Mann-Whitney U	36.000
Wilcoxon W	361.000
Test Statistic	36.000
Standard Error	15.811
Standardized Test Statistic	-.885
Asymptotic Sig.(2-sided test)	.376
Exact Sig.(2-sided test)	.408

**Nonparametric Tests**

**Commercial/Industrial Subclass 2230: Mann-Whitney U-Test (Rank-sum)**

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. <sup>a,b</sup>
1	The distribution of Difference in Price Per Foot is the same across categories of CommSOLDFLG.	Independent-Samples Mann-Whitney U Test	.109 <sup>c</sup>

Hypothesis Test Summary

	Decision
1	Retain the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.
- c. Exact significance is displayed for this test.

**Independent-Samples Mann-Whitney U Test**

**Difference in Price Per Foot across CommSOLDFLG**

Independent-Samples Mann-Whitney U Test Summary

Total N	29
Mann-Whitney U	24.000
Wilcoxon W	349.000
Test Statistic	24.000
Standard Error	15.811
Standardized Test Statistic	-1.644
Asymptotic Sig.(2-sided test)	.100
Exact Sig.(2-sided test)	.109

**Commercial/Industrial Subclass 2230: Unit Comparison Method**

**Summarize**

Sold vs Unsold Percent Change for Subclass 2230

Difference in Price Per Foot

CommSOLDFLG	N	Median	Mean
SOLD	6	1.07	1.22
UNSOLD	27	.98	1.07
Total	33	.98	1.10

**Commercial/Industrial Subclass 2230: Economic Area Analysis**

**Ratio Statistics**

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Median	Coefficient of Dispersion
1	15	.926	.471
Overall	15	.926	.471

**Ratio Statistics**

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
1	15	-.164	1.384
Overall	15	-.164	1.384

**Summarize**

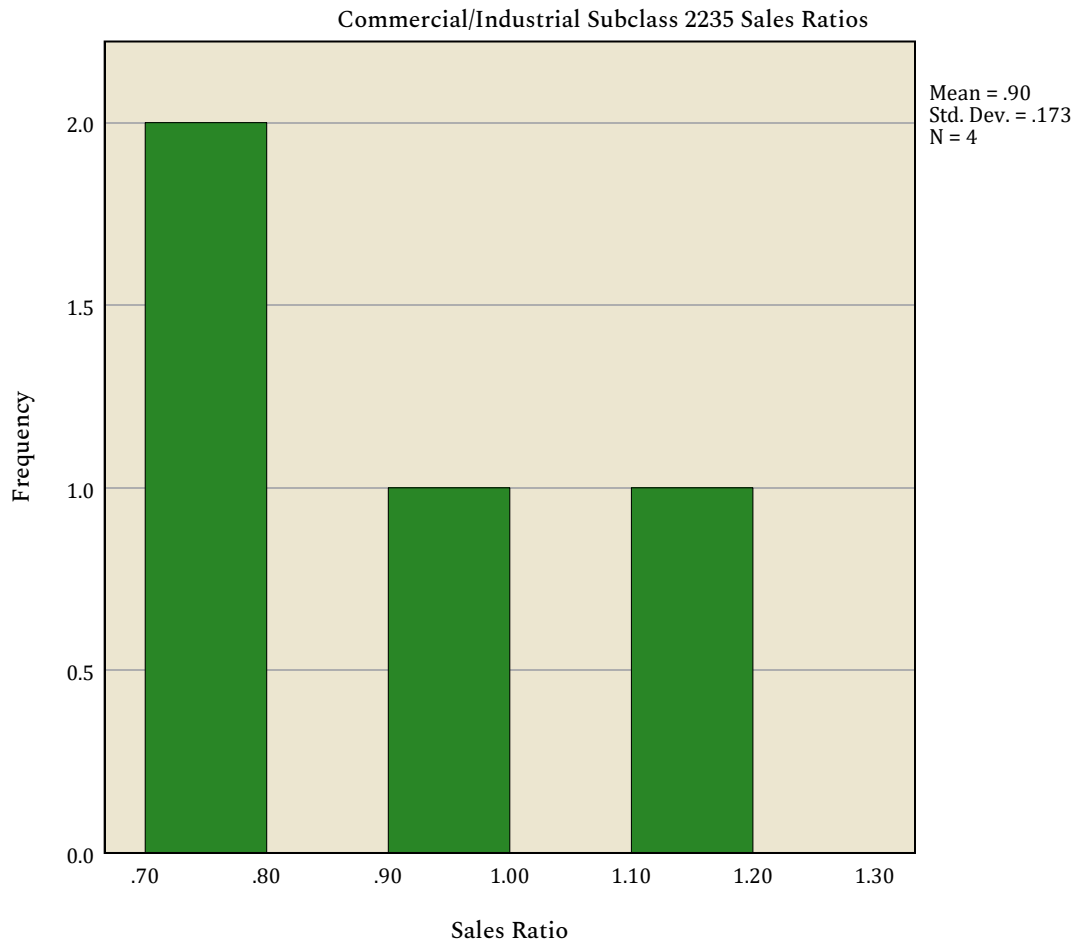
Sold vs Unsold Percent Change for Subclass 2230 by Economic Area

Difference in Price Per Foot

economic_area	CommSOLDFLG	N	Median	Mean
1	SOLD	6	1.07	1.22
	UNSOLD	27	.98	1.07
	Total	33	.98	1.10
Total	SOLD	6	1.07	1.22
	UNSOLD	27	.98	1.07
	Total	33	.98	1.10

### Commercial/Industrial Subclass 2235: Sales Ratio Distribution

Graph



**Commercial/Industrial Subclass 2235: Central Tendencies**

**Ratio Statistics**

Ratio Statistics for Current Total Value /  
Adjusted Sale Price

N	Median	Coefficient of Dispersion
4	.855	.156

**Ratio Statistics**

Ratio Statistics for Current Total  
Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
.137	.932

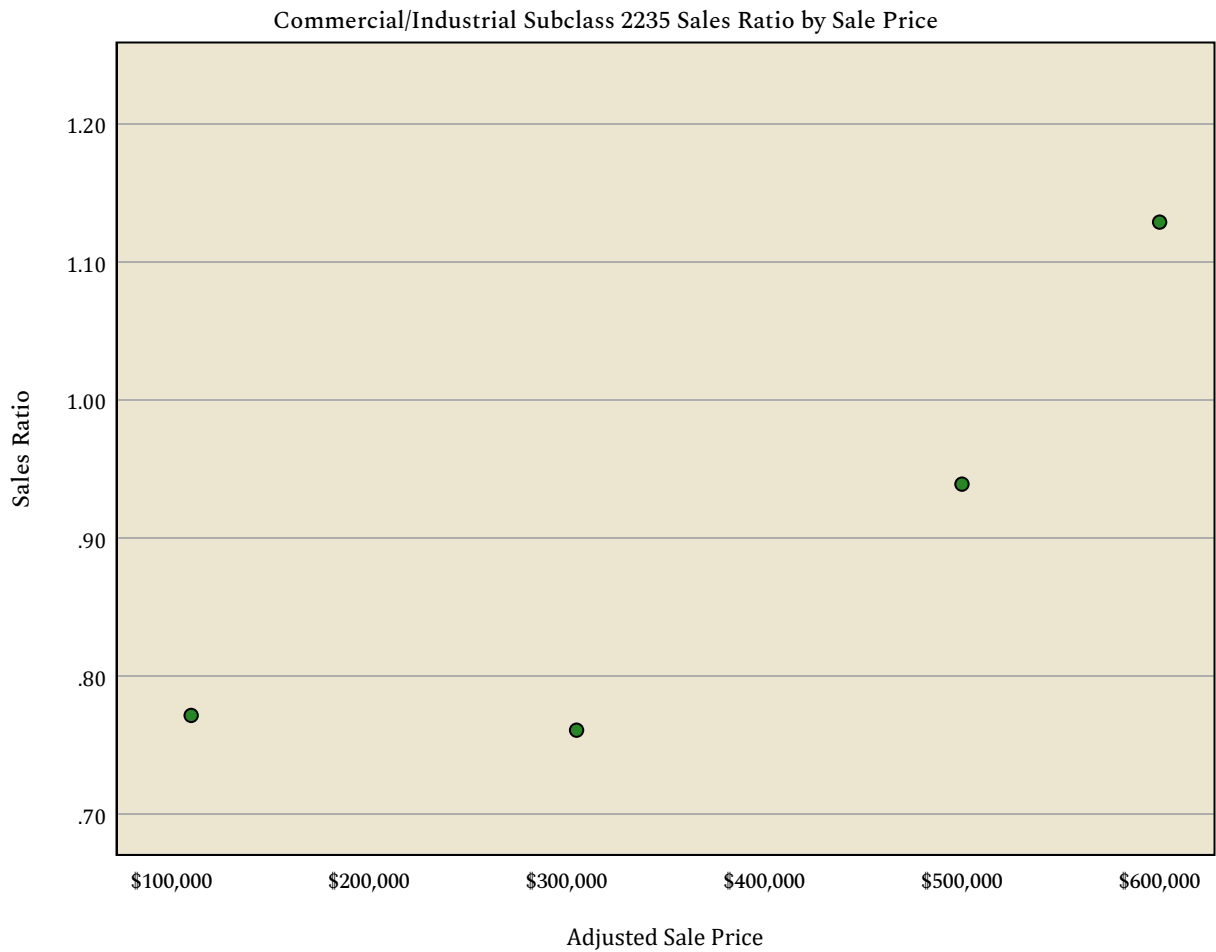
**Commercial/Industrial Subclass 2235: Sales Price by Sales Ratio**

**Regression**

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.632	.109		5.798	.028
	Adjusted Sale Price	7.085E-7	.000	.889	2.749	.111

a. Dependent Variable: Sales Ratio

**Graph**



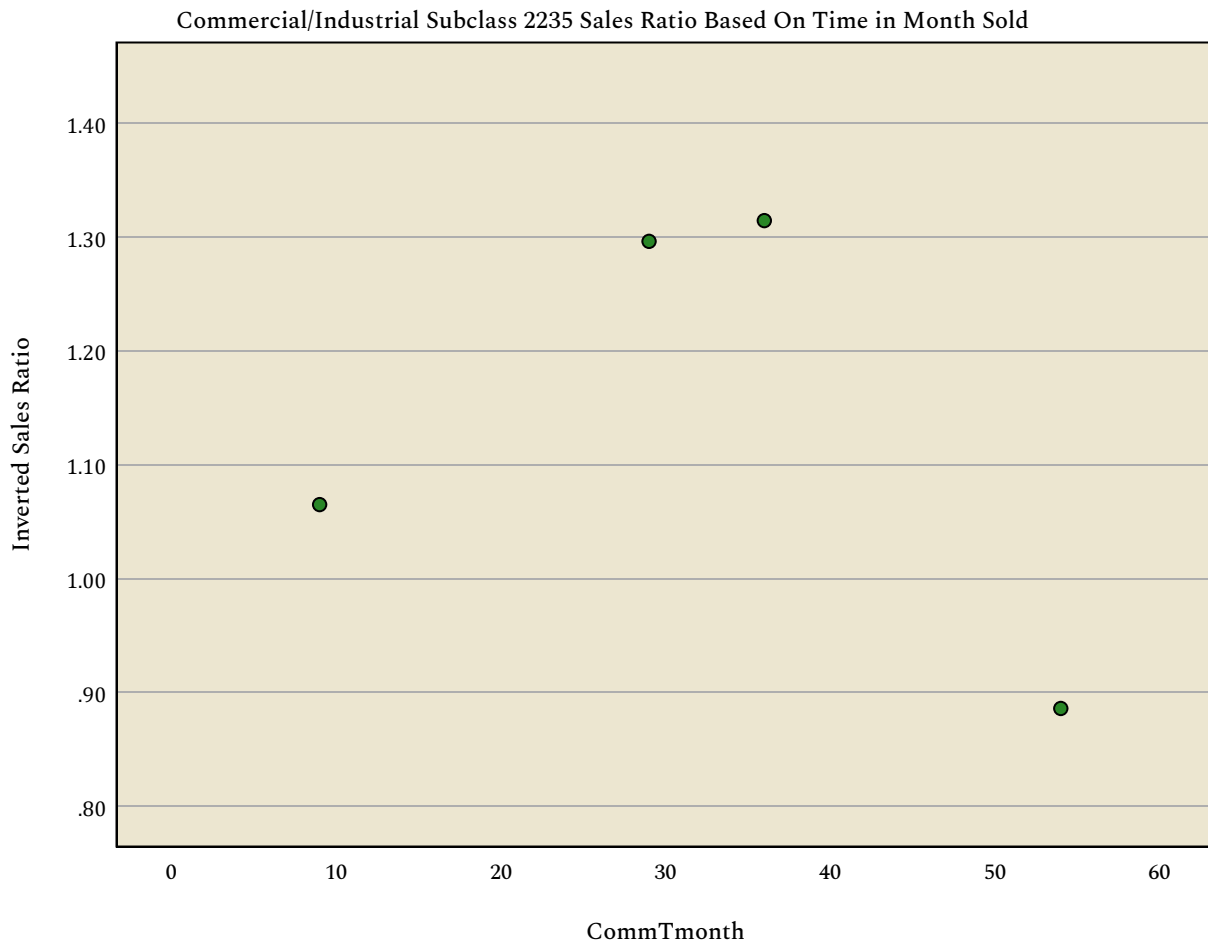
**Commercial/Industrial Subclass 2235: Months by Inverted Sales Ratio**

**Regression**

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.252	.263		4.755	.041
	CommTmonth	-.004	.007	-.319	-.476	.681

a. Dependent Variable: Inverted Sales Ratio

**Graph**



**Commercial/Industrial Subclass 2235: Descriptive Statistics**

**Frequencies**

		Statistics		
		Previous Price Per Foot	Price Per Foot	Difference in Price Per Foot
N	Valid	4	4	4
	Missing	0	0	0
Mean		\$74.79	\$72.80	1.01
Median		\$57.53	\$56.17	.96
Percentiles	2.5	\$44.02	\$46.27	.79
	25	\$44.83	\$48.03	.83
	50	\$57.53	\$56.17	.96
	75	\$122.01	\$114.21	1.25
	97.5	.	.	.

**Frequencies**

		Statistics		
		Previous Total Value	Current Total Value	Difference in Total Value
N	Valid	4	4	4
	Missing	0	0	0
Mean		\$357,213.50	\$365,935.75	\$8,722.25
Median		\$371,222.00	\$350,802.00	-\$4,892.50
Percentiles	2.5	\$89,655.00	\$84,875.00	-\$127,228.00
	25	\$126,511.75	\$121,675.50	-\$96,672.25
	50	\$371,222.00	\$350,802.00	-\$4,892.50
	75	\$573,906.75	\$625,329.75	\$127,731.50
	97.5	.	.	.

**Commercial/Industrial Subclass 2235: Mann-Whitney U-Test (Rank-sum)**

**Nonparametric Tests**

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. <sup>a,b</sup>
1	The distribution of Difference in Total Value is the same across categories of CommSOLDFLG.	Independent-Samples Mann-Whitney U Test	.821 <sup>c</sup>

Hypothesis Test Summary

	Decision
1	Retain the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.
- c. Exact significance is displayed for this test.

**Independent-Samples Mann-Whitney U Test**

**Difference in Total Value across CommSOLDFLG**

Independent-Samples Mann-Whitney U Test Summary

Total N	27
Mann-Whitney U	28.000
Wilcoxon W	353.000
Test Statistic	28.000
Standard Error	10.801
Standardized Test Statistic	.278
Asymptotic Sig.(2-sided test)	.781
Exact Sig.(2-sided test)	.821

**Nonparametric Tests**

**Commercial/Industrial Subclass 2235: Mann-Whitney U-Test (Rank-sum)**

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. <sup>a,b</sup>
1	The distribution of Price Per Foot is the same across categories of CommSOLDFLG.	Independent-Samples Mann-Whitney U Test	.889 <sup>c</sup>

Hypothesis Test Summary

	Decision
1	Retain the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.
- c. Exact significance is displayed for this test.

**Independent-Samples Mann-Whitney U Test**

Price Per Foot across CommSOLDFLG

Independent-Samples Mann-Whitney U Test Summary

Total N	28
Mann-Whitney U	35.000
Wilcoxon W	360.000
Test Statistic	35.000
Standard Error	13.463
Standardized Test Statistic	-.186
Asymptotic Sig.(2-sided test)	.853
Exact Sig.(2-sided test)	.889

**Nonparametric Tests**

**Commercial/Industrial Subclass 2235: Mann-Whitney U-Test (Rank-sum)**

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. <sup>a,b</sup>
1	The distribution of Difference in Price Per Foot is the same across categories of CommSOLDFLG.	Independent-Samples Mann-Whitney U Test	.924 <sup>c</sup>

Hypothesis Test Summary

	Decision
1	Retain the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.
- c. Exact significance is displayed for this test.

**Independent-Samples Mann-Whitney U Test**

**Difference in Price Per Foot across CommSOLDFLG**

Independent-Samples Mann-Whitney U Test Summary

Total N	28
Mann-Whitney U	50.000
Wilcoxon W	350.000
Test Statistic	50.000
Standard Error	15.232
Standardized Test Statistic	.131
Asymptotic Sig.(2-sided test)	.896
Exact Sig.(2-sided test)	.924

**Commercial/Industrial Subclass 2235: Unit Comparison Method**

**Summarize**

Sold vs Unsold Percent Change for Subclass 2235

Difference in Price Per Foot

CommSOLDFLG	N	Median	Mean
SOLD	4	.96	1.01
UNSOLD	28	.97	.96
Total	32	.97	.97

**Commercial/Industrial Subclass 2235: Economic Area Analysis**

**Ratio Statistics**

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Median	Coefficient of Dispersion
1	6	1.034	.381
Overall	6	1.034	.381

**Ratio Statistics**

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
1	6	-.066	1.088
Overall	6	-.066	1.088

**Summarize**

Sold vs Unsold Percent Change for Subclass 2235 by Economic Area

Difference in Price Per Foot

economic_area	CommSOLDFLG	N	Median	Mean
	UNSOLD	1	.88	.88
	Total	1	.88	.88
1	SOLD	4	.96	1.01
	UNSOLD	27	.97	.96
	Total	31	.97	.97
Total	SOLD	4	.96	1.01
	UNSOLD	28	.97	.96
	Total	32	.97	.97

**Final Analysis: OVERALL Statistical Abstract.**

**Ratio Statistics**

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Mean	95% Confidence Interval for Mean		Median
			Lower Bound	Upper Bound	
Vacant Land	163	1.017	.986	1.048	.998
Residential	190	1.002	.984	1.021	1.000
Commercial/Industrial	33	1.005	.952	1.058	.999
Overall	386	1.009	.992	1.025	.999

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for ...
	Lower Bound	Upper Bound	Actual Coverage		Lower Bound
Vacant Land	.982	1.000	95.9%	.994	.963
Residential	.987	1.015	95.0%	.993	.972
Commercial/Industrial	.953	1.040	96.5%	.991	.944
Overall	.989	1.001	95.3%	.993	.975

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	95% Confidence Interval for ...	Price Related Differential	Coefficient of Dispersion
	Upper Bound		
Vacant Land	1.026	1.023	.119
Residential	1.013	1.009	.103
Commercial/Industrial	1.037	1.014	.110
Overall	1.010	1.016	.110

The confidence interval for the median is constructed without any distribution assumptions. The actual coverage level may be greater than the specified level. Other confidence intervals are constructed by assuming a Normal distribution for the ratios.