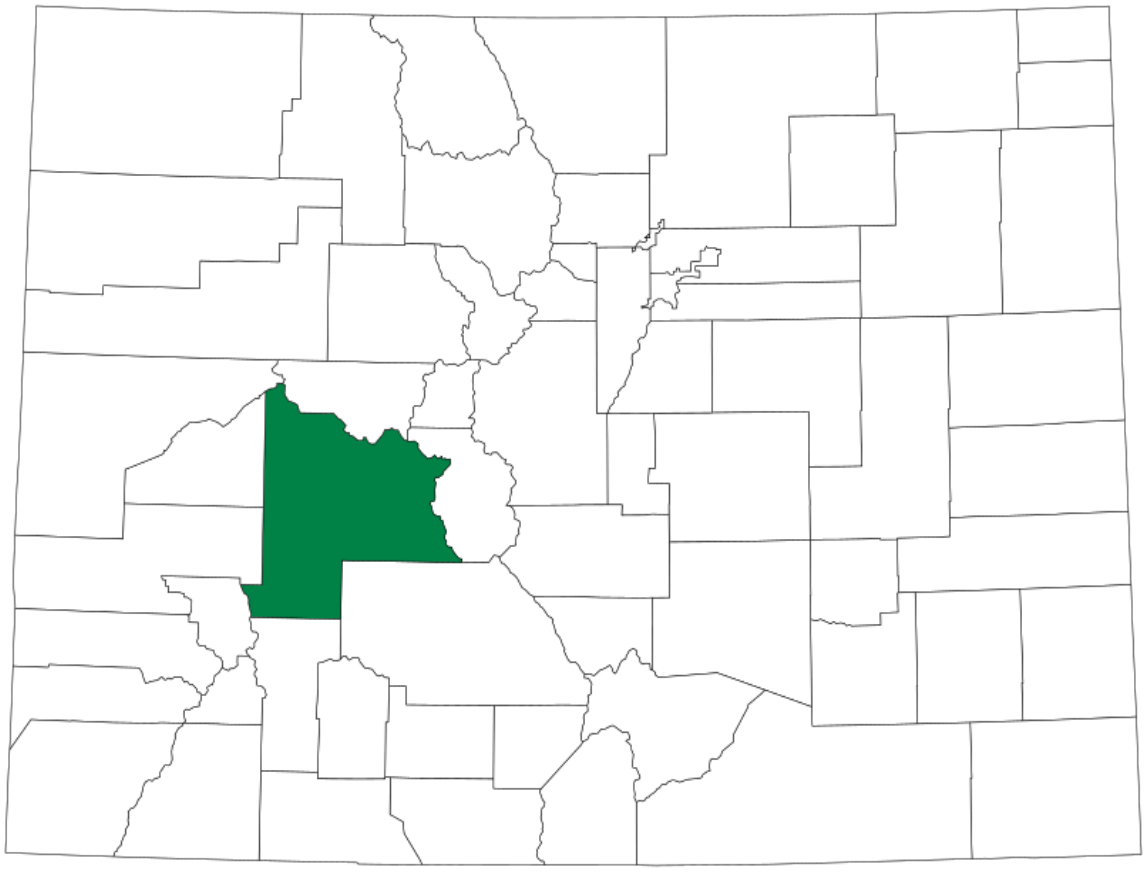
San Matteo

DATA ANALYTICS

# 2025 Property Assessment Study

# Gunnison 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 Gunnison 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.

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DATA ANALYTICS

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# 1. Statistical Overview

## Compliance and Evaluations

Gunnison County was found to be in compliance.

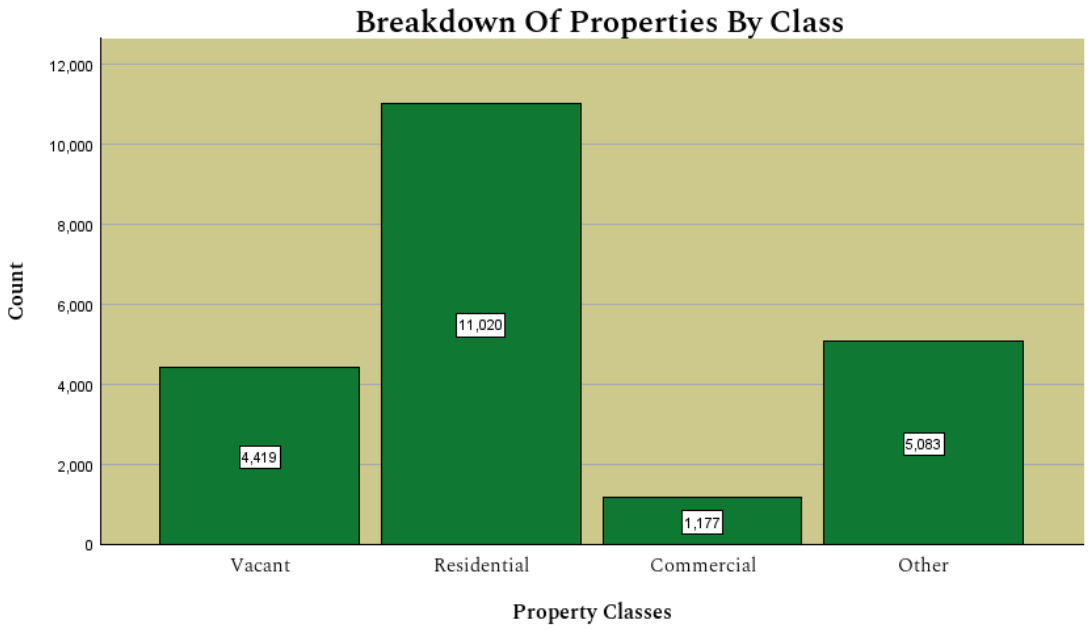
| | Result | Value |
|---|---|---|
| **Vacant Land** | | |
| Median Sales Ratio | Pass | 0.99 |
| Coefficient of Dispersion | Pass | 13.80% |
| Time Adjustments | Pass | 0.021 |
| Price Related Differential | Sufficient | 1.02 |
| Price Related Bias | Sufficient | -0.04 |
| Sold/Unsold Similarity | Sufficient | |
| Qualified Sales > 50% | Yes | |

| | Result | Value |
|---|---|---|
| **Residential** | | |
| Median Sales Ratio | Pass | 1.00 |
| Coefficient of Dispersion | Pass | 8.37% |
| Time Adjustments | Pass | 0.503 |
| Price Related Differential | Sufficient | 1.01 |
| Price Related Bias | Sufficient | -0.01 |
| Sold/Unsold Similarity | Sufficient | |
| Qualified Sales > 50% | Yes | |

| | Result | Value |
|---|---|---|
| **Commercial/Industrial** | | |
| Median Sales Ratio | Pass | 0.99 |
| Coefficient of Dispersion | Pass | 16.18% |
| Time Adjustments | Pass | 0.086 |
| Price Related Differential | Sufficient | 1.01 |
| Price Related Bias | Sufficient | 0.01 |
| Sold/Unsold Similarity | Sufficient | |
| Qualified Sales > 50% | No | See Section 11 |

## Property Types

Below is a breakdown of the property types of the 21,634 parcels in Gunnison County.



# 2. Vacant Land

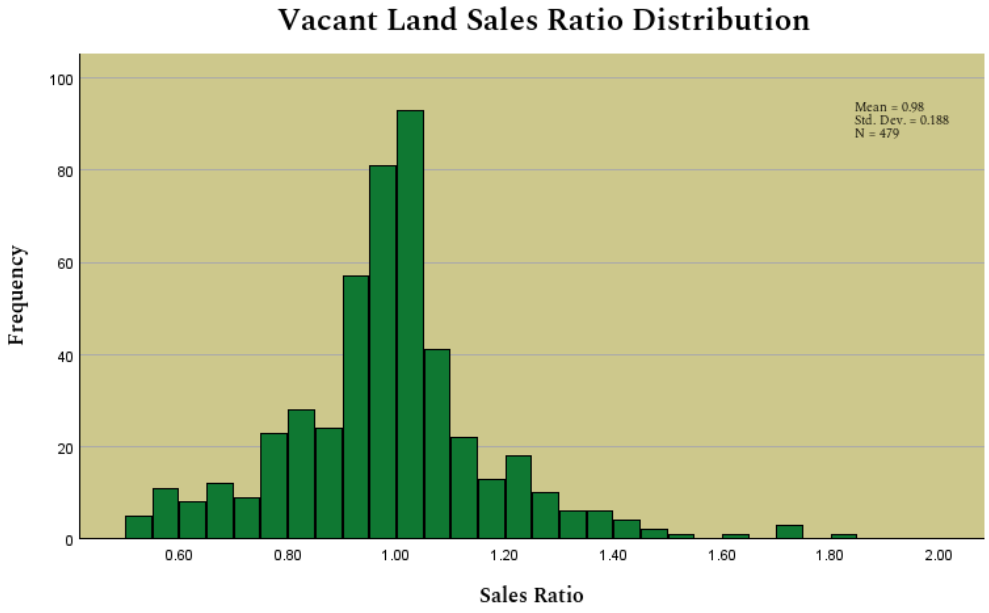
### Overview

Gunnison was found to be compliant for Vacant Land properties.

| | Result | Value |
|---|---|---|
| **Vacant Land** | | |
| Median Sales Ratio | Pass | 0.99 |
| Coefficient of Dispersion | Pass | 13.80% |
| Time Adjustments | Pass | 0.021 |
| Price Related Differential | Sufficient | 1.02 |
| Price Related Bias | Sufficient | -0.04 |
| 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 Gunnison County was calculated to be 0.99, which is within the acceptable statistical range of 0.95 to 1.05 established by the State Board of Equalization (SBOE). We trimmed 16 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.

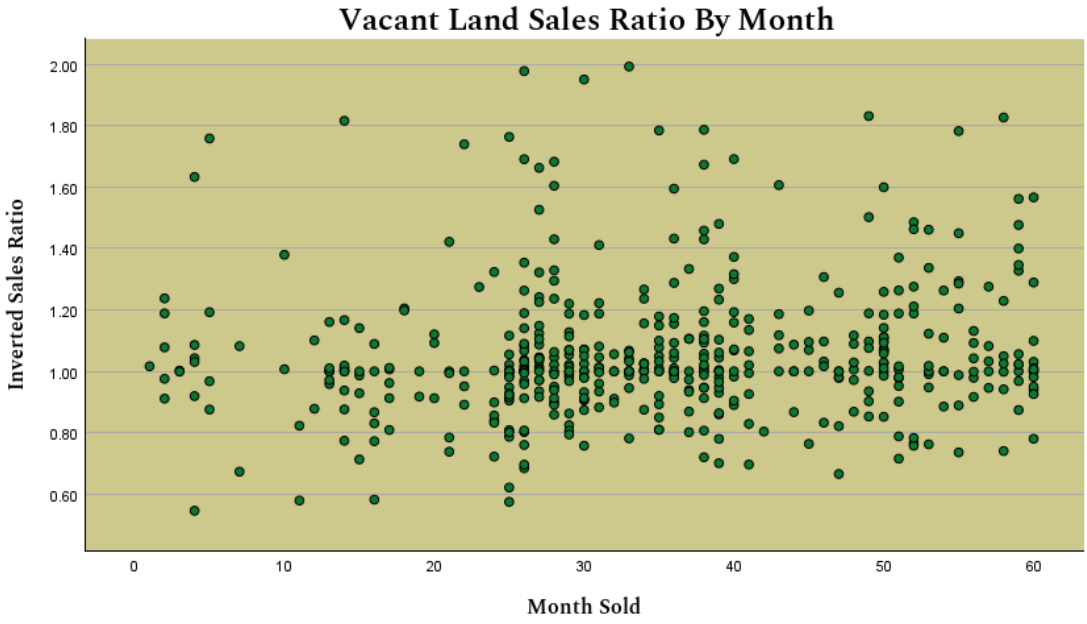


## Vacant Land Coefficient of Dispersion

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 Gunnison County was calculated at 13.80% which is within the acceptable statistical standard of 20.99% or less established by the State 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.

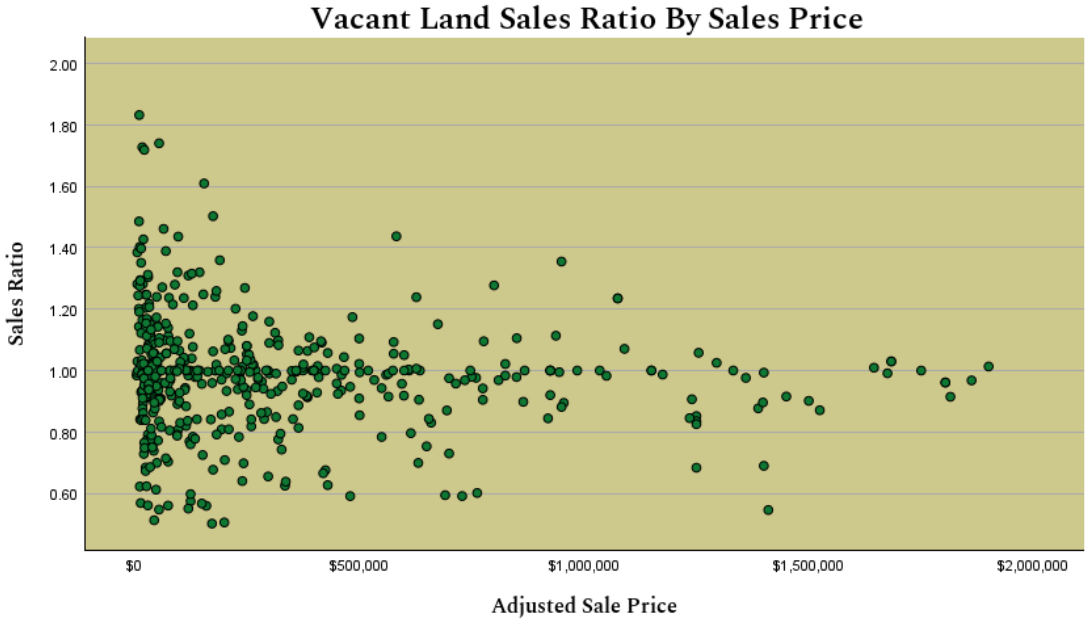
## Vacant Land Market (Time) Adjustments

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 60 - month period of sales. There does not appear to be a significant effect of time on Gunnison'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 Gunnison 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 Gunnison County, the PRB was calculated at -0.04 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 487 Vacant Land sales. We have confirmed that more than 50% of all sales were qualified.

# 3. Residential

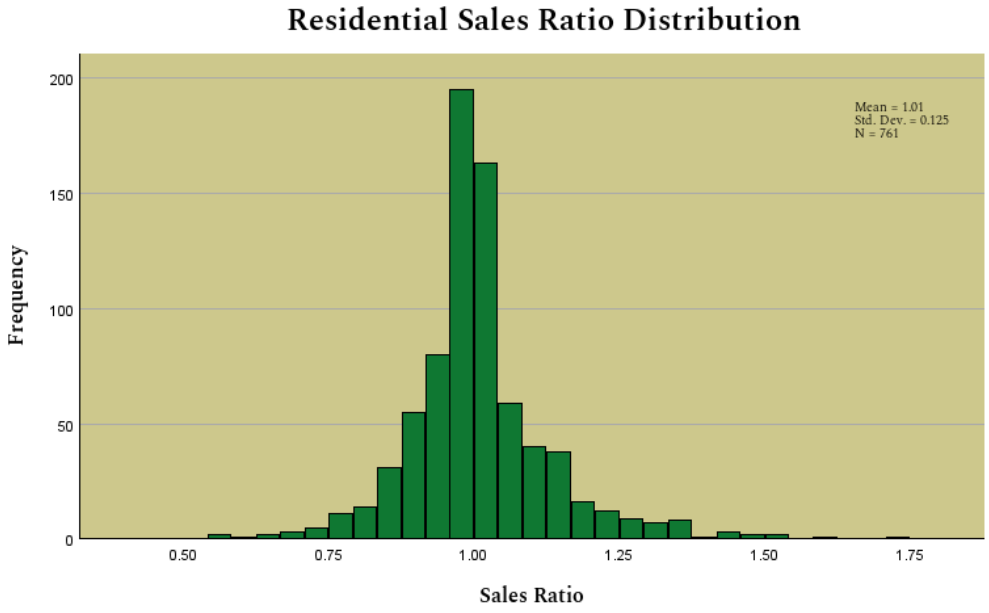
### Overview

Gunnison County was found to be compliant for Residential properties.

| | Result | Value |
|---|---|---|
| **Residential** | | |
| Median Sales Ratio | Pass | 1.00 |
| Coefficient of Dispersion | Pass | 8.37% |
| Time Adjustments | Pass | 0.503 |
| Price Related Differential | Sufficient | 1.01 |
| Price Related Bias | Sufficient | -0.01 |
| 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 Gunnison County was calculated to be 1.00, which is within the acceptable statistical range of 0.95 to 1.05 established by the State 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.

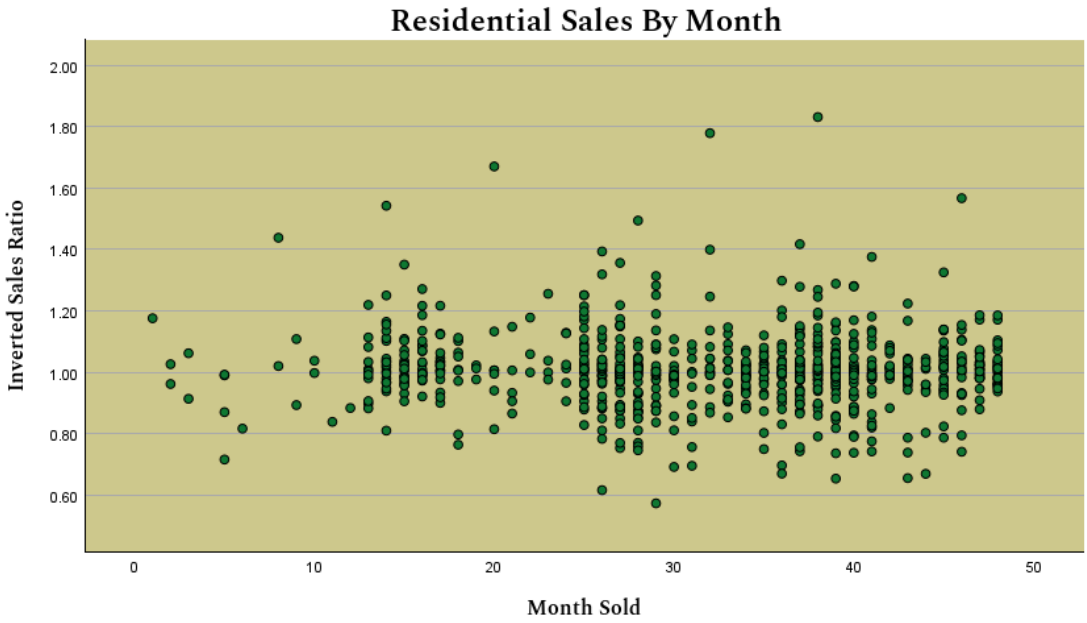



## Residential Coefficient of Dispersion

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 Gunnison County was calculated at 8.37% which is within the acceptable statistical standard of 15.99% or less established by the State 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 48 - month period of sales. There does not appear to be a significant effect of time on Gunnison 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 Gunnison 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 Gunnison 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.

## 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 790 Residential sales. We have confirmed that more than 50% of all sales were qualified.

# 4. Commercial and Industrial

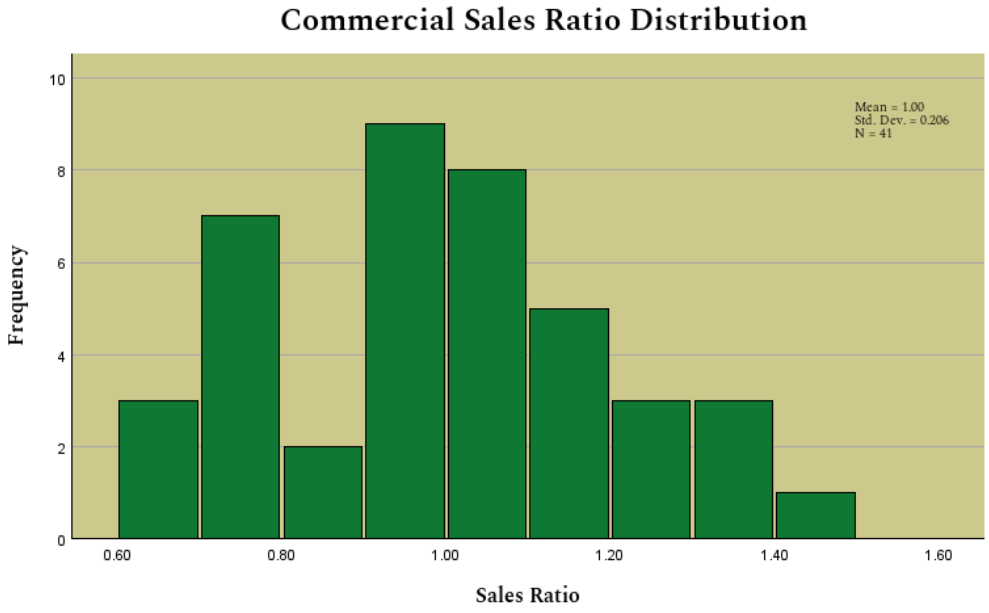
### Overview

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

| | Result | Value |
|---|---|---|
| **Commercial and Industrial** | | |
| Median Sales Ratio | Pass | 0.99 |
| Coefficient of Dispersion | Pass | 16.18% |
| Time Adjustments | Pass | 0.086 |
| Price Related Differential | Sufficient | 1.01 |
| Price Related Bias | Sufficient | 0.01 |
| Sold/Unsold Similarity | Sufficient | |
| Qualified Sales > 50% | No | See Section 11 |

## 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 Gunnison County was calculated to be 0.99, which is within the acceptable statistical range of 0.95 to 1.05 established by the State 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.

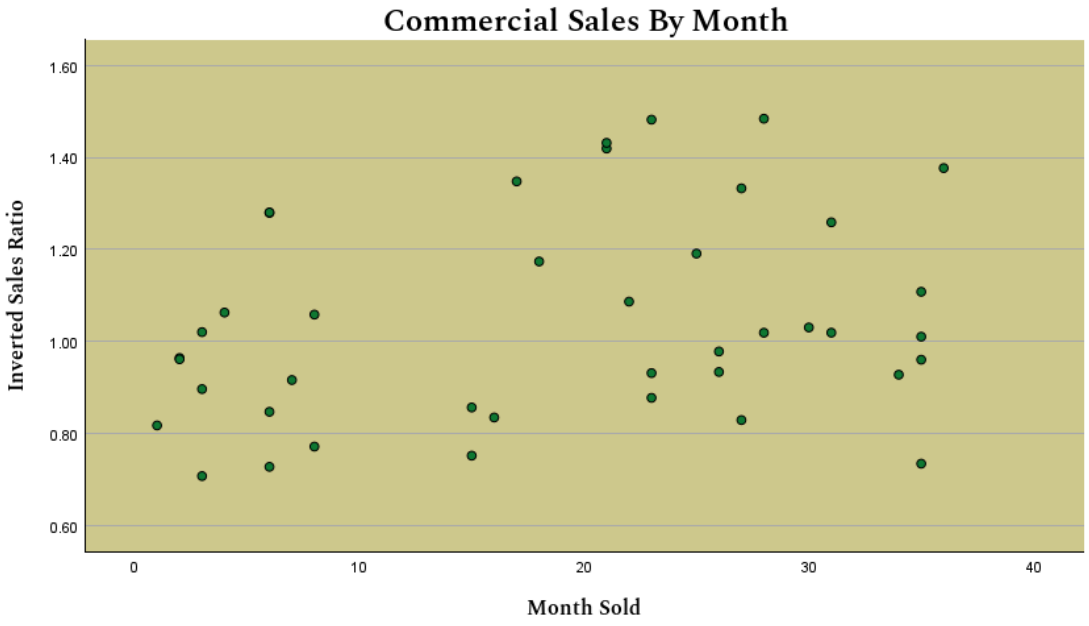


## Commercial Coefficient of Dispersion

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 Gunnison County was calculated at 16.18% which is within the acceptable statistical standard of 20.99% or less established by the State 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.

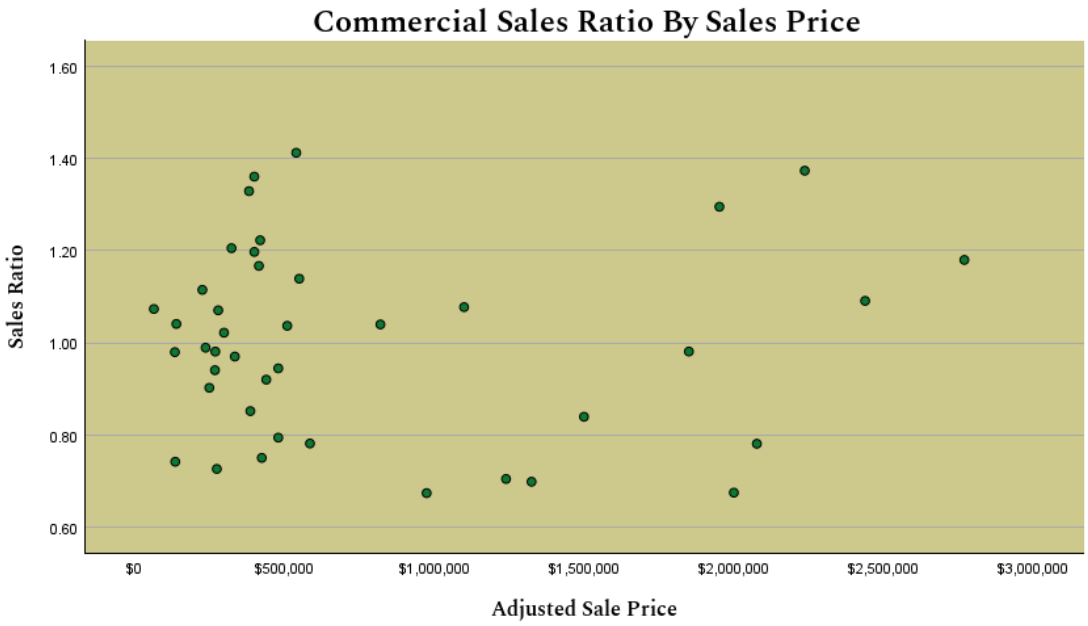
## Commercial Market (Time) Adjustments

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 36 - month period of sales. There does not appear to be a significant effect of time on Gunnison 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 Gunnison 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 Gunnison 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. See appendix for more details.

## 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 43 commercial sales. We have confirmed that less 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).

Gunnison 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
- Grazing land is classified by its ten-year carrying capacity
- 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

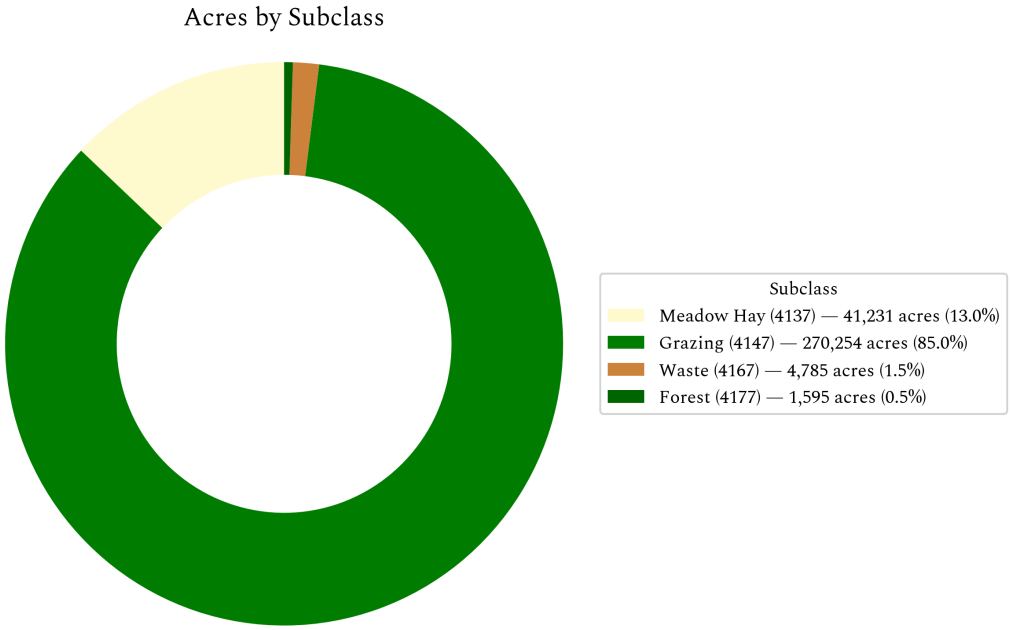
Based on the review and analysis, SMDA considers Gunnison County's appraisal practices for agricultural property acceptable and in alignment with statutory requirements. The directives, commodity pricing, and expense figures issued by the Property Tax Administrator were correctly applied throughout the 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.

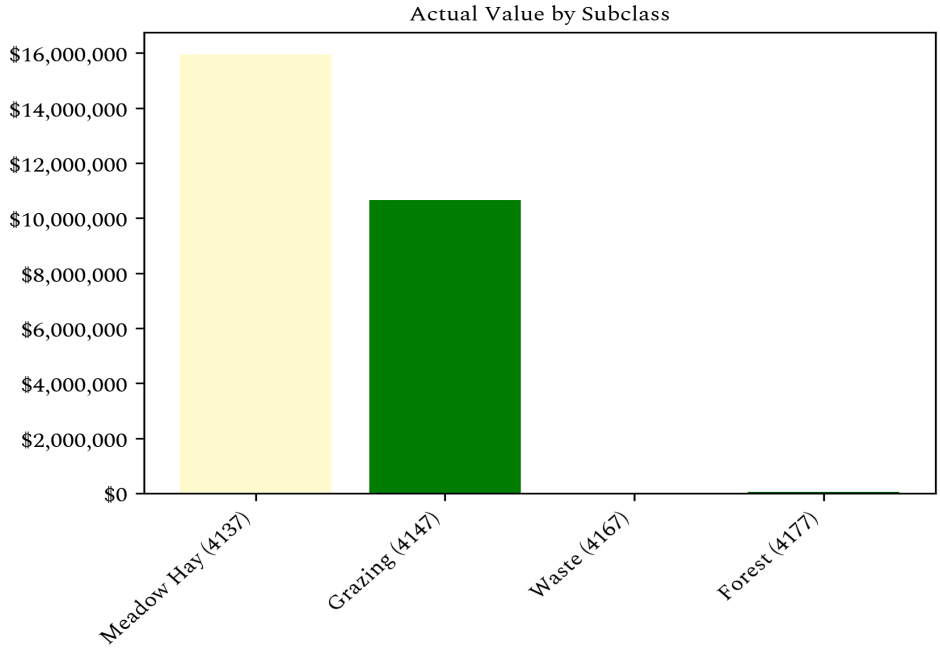
## Recommendations

None

## Agricultural Land Breakdown

| Abstract | Class | Acres | Actual Value | Actual Value/Acre | Assessed Value |
|---|---|---|---|---|---|
| 4137 | Meadow Hay | 41,230.67 | $15,946,870 | $386.77 | $4,305,620 |
| 4147 | Grazing | 270,254.43 | $10,659,610 | $39.44 | $2,878,830 |
| 4167 | Waste | 4,784.75 | $30,590 | $6.39 | $8,340 |
| 4177 | Forest | 1,595.43 | $51,910 | $32.54 | $14,030 |



# 6. Agriculture Non-Integral

## Methodology

SMDA reviewed Gunnison 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 Gunnison 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, Gunnison County applied the following discovery methods:

- Field Inspections
- Phone Interviews
- In Person Interviews
- Written Correspondence
- 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, Gunnison County applied the following discovery methods:

- Field Inspections
- Phone Interviews
- In Person Interviews
- Written Correspondence
- Personal Knowledge of Occupants
- Aerial Photography

## Conclusions

Gunnison 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

Gunnison 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

## Producing Coal Mines

### Methodology

In accordance with the **Assessor's Reference Library** (**ARL**), **Volume 3, Chapter 6: Valuation of Natural Resources for Producing Coal Mines and Producing Coal Leaseholds and Lands** , the income approach is used as the primary method for valuing producing coal mines. This process estimates annual economic royalty income based on the prior year's production figures, which is then multiplied by the **Hoskold factor** to determine the actual value of the permitted acreage. Production data and the expected life of the leases are provided directly by the operator, as there is no independent source for this information.

### Conclusions

The county applied the correct formulas and state guidelines to producing coal mines resources.

### Recommendations

None

## Producing Oil and Gas

### Methodology

Under the guidelines of the **Assessor's Reference Library** (**ARL**), **Volume 3, Chapter 6: Valuation of Natural Resources**, the valuation of producing oil and gas leaseholds and lands follows the statutory requirements outlined in **§39-1-103, C.R.S.** and **Article 7 of Title 39, C.R.S.** By law, producing oil and gas properties are assessed based on **87.5% of the selling price** of oil or gas from the previous calendar year. When calculating this value, sales delivered as royalty to federal, state, or local government entities

are excluded. For oil or gas produced but not sold during the prior year, valuation is based on the average selling price of comparable production within the same field.

The assessor relies on the production and sales information reported by operators to determine the appropriate valuation for assessment purposes, ensuring that the procedures conform to state statutes and the ARL's established methodologies.

**Conclusions**

The county applied the correct formulas and state guidelines to producing oil and gas resources.

**Recommendations**

None

# 9. Personal Property

## Methodology

SMDA reviewed Gunnison 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. For counties with populations over 100,000, a statistically valid sample of audited schedules was selected to confirm compliance with state laws and Property Tax Administrator guidelines. In Gunnison County, SMDA reviewed at least 30 schedules, and the aggregate ratio was based solely on accounts physically inspected.

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

- Public record documents and MLS listing or sold books
- Local publications, personal observation, and 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.

Gunnison 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
- Accounts with omitted property
- Incomplete or inconsistent declarations
- New businesses filing for the first time
- Accounts with obvious discrepancies

## Conclusions

Gunnison 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 Gunnison 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.

## Conclusions

The county is currently waiting on documentation from relevant government entities and will provide an update to the auditor as soon as they are able to finalize the possessory interest valuation.

## Recommendations

None

# 11. Sales Verification

## Methodology

As part of the Property Assessment Study, SMDA conducted an evaluation of Gunnison 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 Gunnison County's sales verification practices for the 2025 valuation period by reviewing a selection of sales from Gunnison County's master sales list. A total of 70 unqualified sales were analyzed. Of these, 65 sales provided clear and supportable reasons for disqualification, while 5 sales lacked sufficient justification.

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.

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

## Conclusions

Based on SMDA's review, Gunnison County performed adequately in verifying vacant land and residential sales and applying statutory requirements.

Qualified commercial sales represented less than 50% of the total over the three-year period. Given the variety of commercial subclasses and the limited number of sales, the County's sales verification is considered sufficient.

## Recommendations

None

# 12. Subdivision Discounting

## Methodology

SMDA reviewed Gunnison County's subdivision discounting practices to ensure compliance with **§39-1-103(14), C.R.S.** The review confirmed that discounting was applied to subdivisions where fewer than 80% of vacant lots had been sold. For each qualifying subdivision, an absorption rate was estimated to reflect the expected timeframe for selling the remaining parcels. Using the Summation Method and following the Division of Property Taxation guidelines, an appropriate discount rate was developed to account for the anticipated holding period and associated carrying costs.

## Conclusions

Gunnison County properly applied discounting procedures for qualifying subdivisions. The county's estimates of absorption periods, discount rates, and lot values are consistent with statutory requirements and state-recommended methodologies.

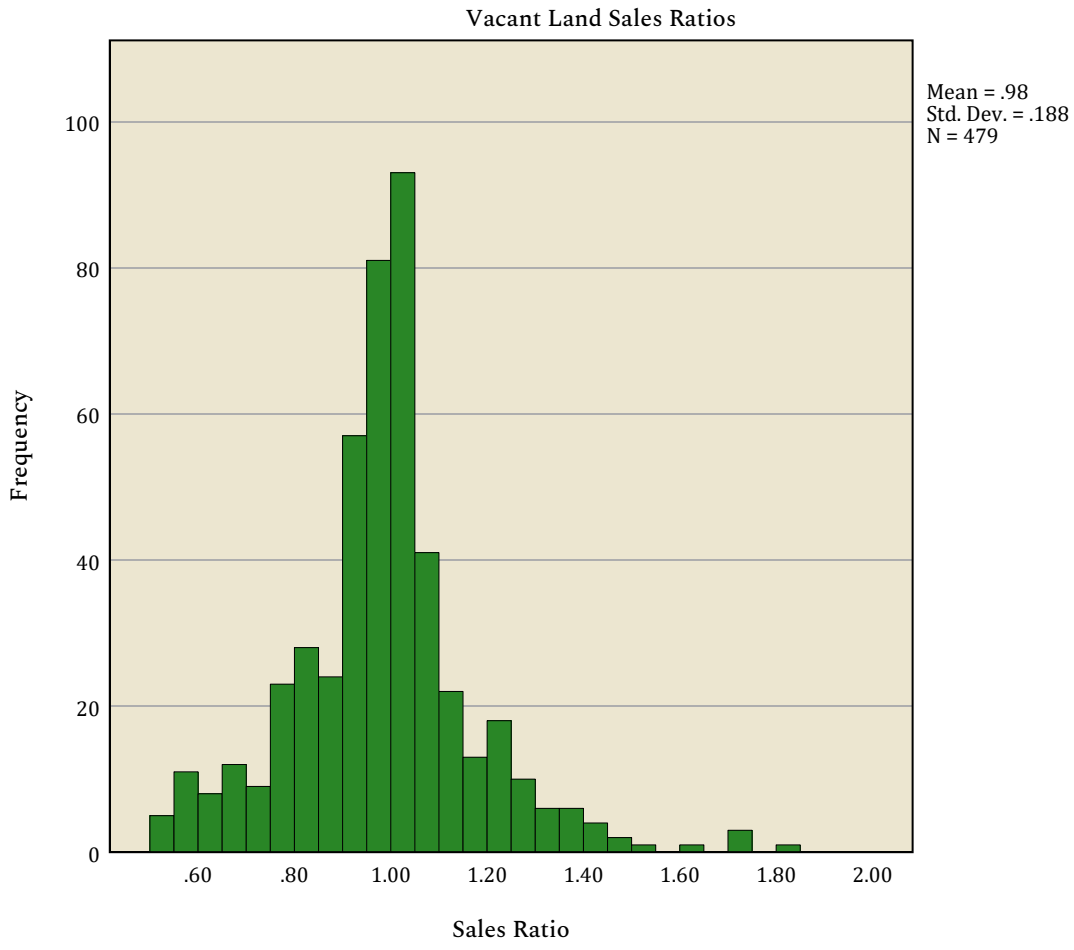
## Recommendations

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 |
|---|---|---|
| 487 | .994 | .138 |

**Ratio Statistics**

Ratio Statistics for Current Total Value / Adjusted Sale Price

| Price Related Bias | Price Related Differential |
|---|---|
| -.013 | 1.027 |

## OVERALL Vacant Land: Sales Price by Sales Ratio

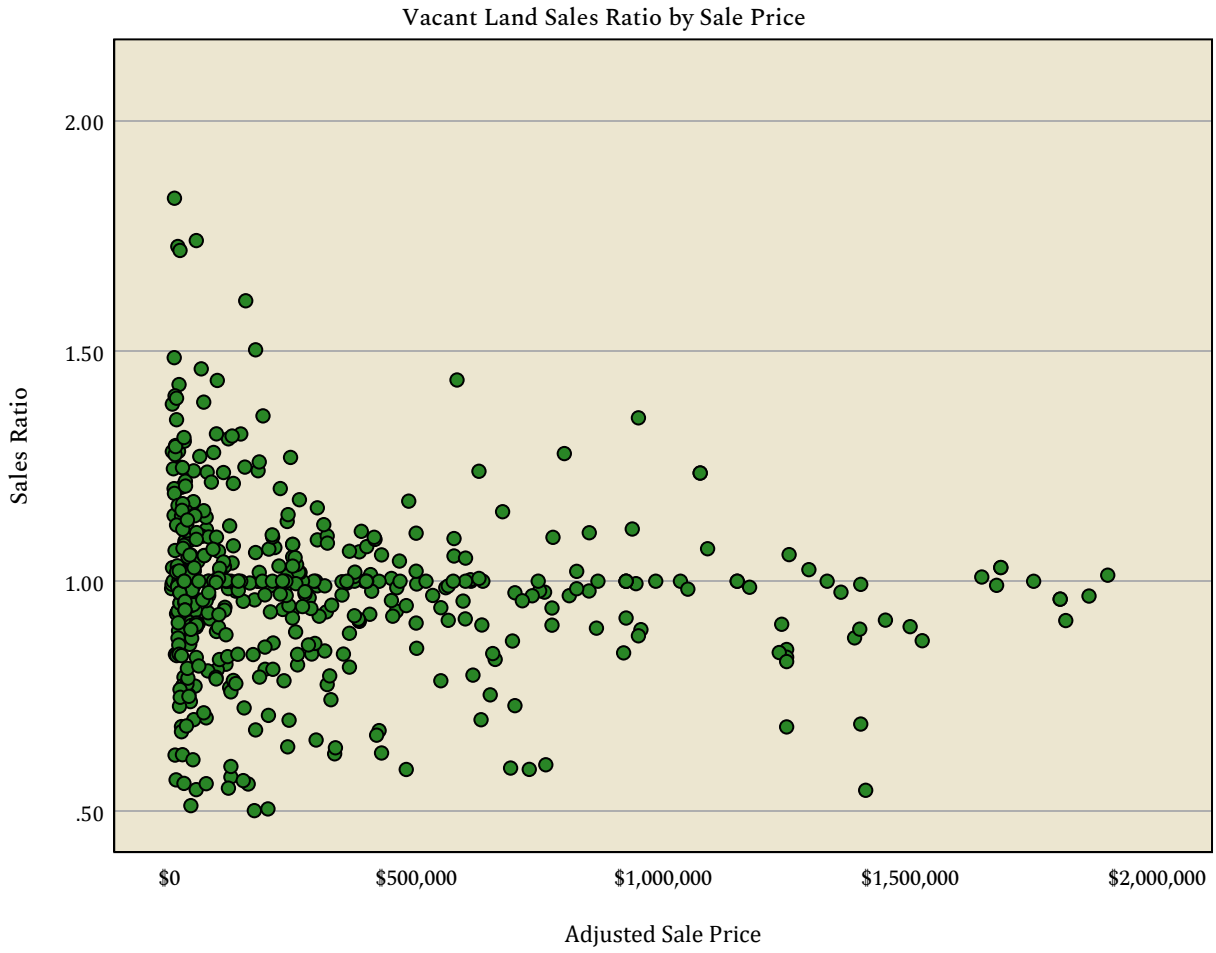
### Regression

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | .996 | .012 | | 83.876 | <.001 |
| | Adjusted Sale Price | -5.134E-8 | .000 | -.098 | -2.162 | .031 |

a. Dependent Variable: Sales Ratio

### Graph



## OVERALL Vacant Land: Months by Inverted Sales Ratio

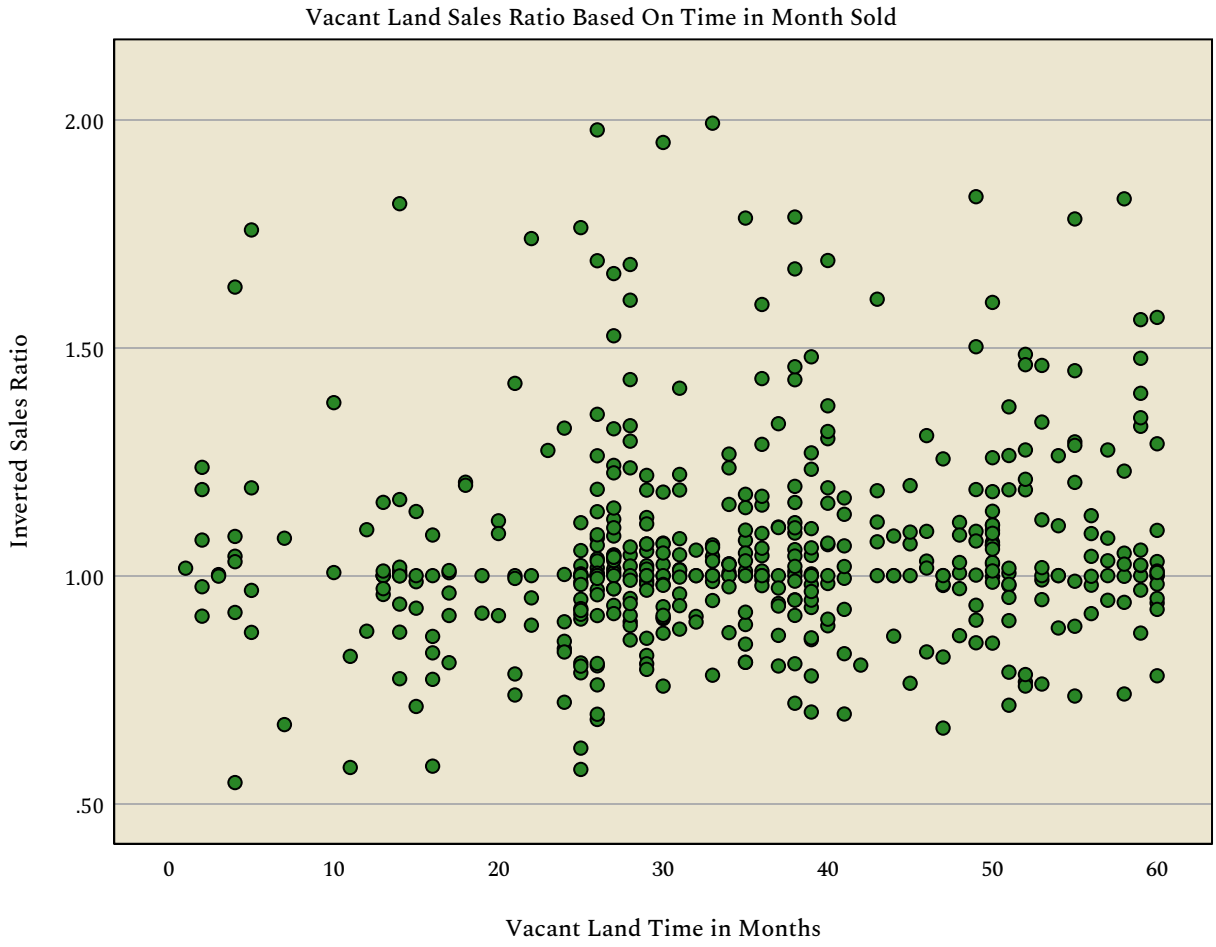
### Regression

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 1.003 | .031 | | 32.602 | <.001 |
| | Vacant Land Time in Months | .002 | .001 | .105 | 2.322 | .021 |

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 | 487 | 487 | 487 |
| | Missing | 0 | 0 | 0 |
| Mean | | $280,443.55 | $296,733.02 | $16,289.47 |
| Median | | $144,900.00 | $140,000.00 | $9,000.00 |
| Percentiles | 2.5 | $5,070.00 | $11,544.00 | -$160,402.00 |
| | 25 | $35,640.00 | $40,000.00 | -$4,450.00 |
| | 50 | $144,900.00 | $140,000.00 | $9,000.00 |
| | 75 | $396,890.00 | $399,970.00 | $27,020.00 |
| | 97.5 | $1,275,000.00 | $1,347,996.00 | $252,418.00 |

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

**Nonparametric Tests**

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig.[a,b] |
|---|---|---|---|
| 1 | The distribution of Current Total Value is the same across categories of Vacant Land Sold vs. Unsold. | 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 Vacant Land Sold vs. Unsold**

Independent-Samples Mann-Whitney U Test Summary

| | |
|---|---|
| Total N | 4125 |
| Mann-Whitney U | 562148.000 |
| Wilcoxon W | 7335188.000 |
| Test Statistic | 562148.000 |
| Standard Error | 23726.911 |
| Standardized Test Statistic | -10.817 |
| Asymptotic Sig.(2-sided test) | <.001 |

**Nonparametric Tests**

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

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig.[a,b] |
|---|---|---|---|
| 1 | The distribution of Difference in Total Value is the same across categories of Vacant Land Sold vs. Unsold. | 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**

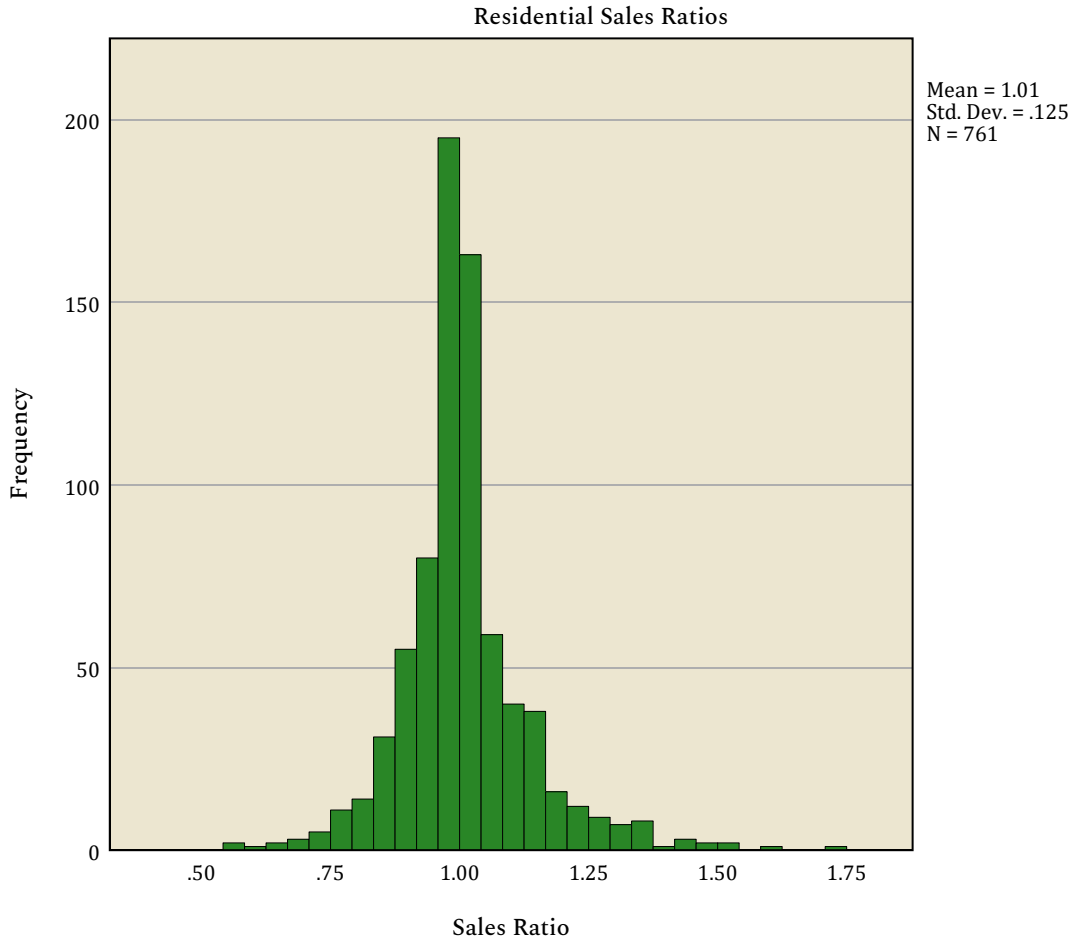
**Difference in Total Value across Vacant Land Sold vs. Unsold**

Independent-Samples Mann-Whitney U Test Summary

| | |
|---|---|
| Total N | 4183 |
| Mann-Whitney U | 706541.500 |
| Wilcoxon W | 7702211.500 |
| Test Statistic | 706541.500 |
| Standard Error | 24017.308 |
| Standardized Test Statistic | -5.074 |
| 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 |
|---|---|---|
| 790 | .995 | .084 |

**Ratio Statistics**

Ratio Statistics for Current Total Value / Adjusted Sale Price

| Price Related Bias | Price Related Differential |
|---|---|
| -.009 | 1.013 |

## OVERALL Residential: Sales Price by Sales Ratio

### Regression

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 1.022 | .007 | | 147.633 | <.001 |
| | Adjusted Sale Price | -1.564E-8 | .000 | -.100 | -2.833 | .005 |

a. Dependent Variable: Sales Ratio

### Graph

## OVERALL Residential: Months by Inverted Sales Ratio

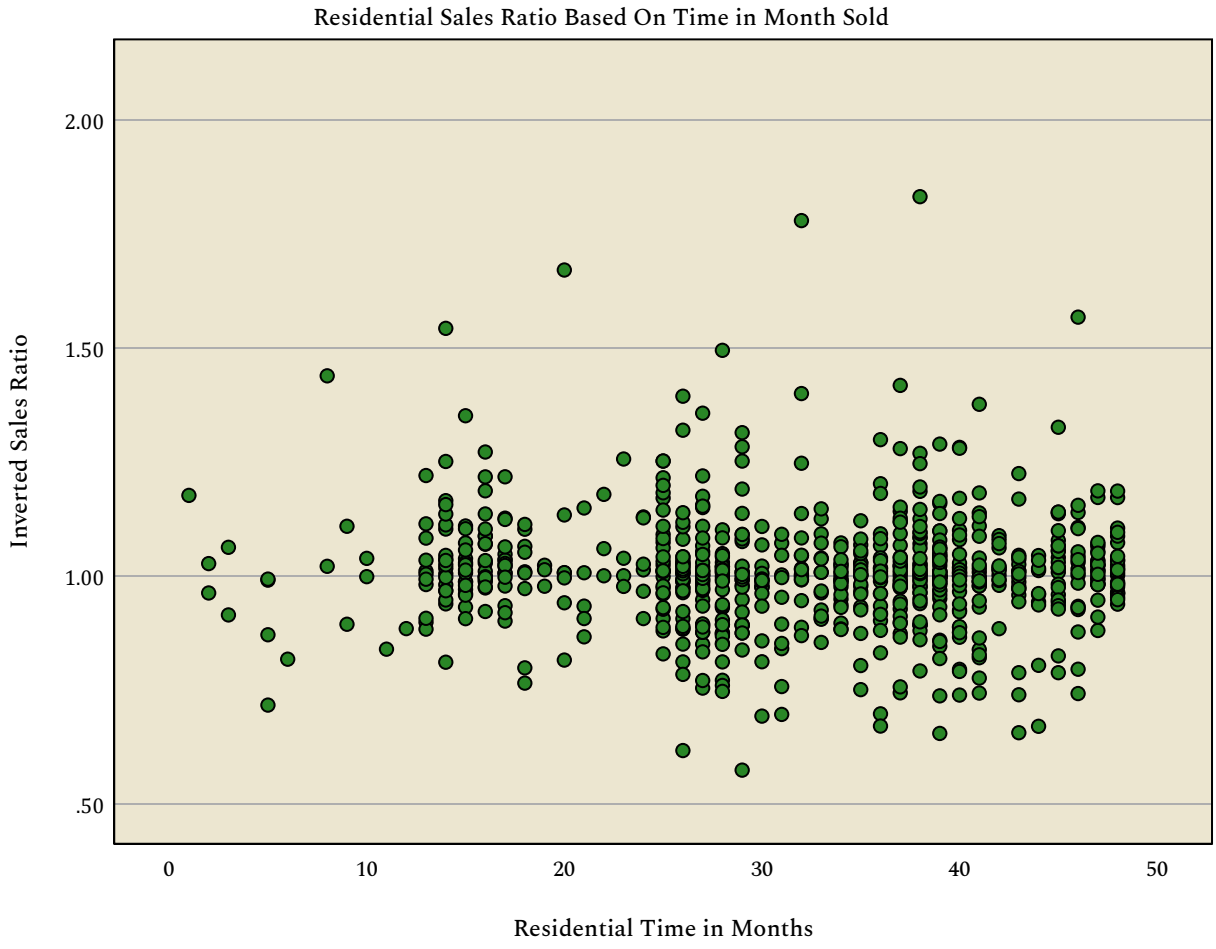
### Regression

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 1.021 | .018 | | 58.104 | <.001 |
| | Residential Time in Months | .000 | .001 | -.024 | -.671 | .503 |

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 | 789 | 789 | 789 |
| | Missing | 1 | 1 | 1 |
| Mean | | $3,872.56 | $4,006.59 | 1.06 |
| Median | | $483.69 | $509.26 | 1.03 |
| Percentiles | 2.5 | $206.56 | $222.45 | .78 |
| | 25 | $327.90 | $369.72 | .95 |
| | 50 | $483.69 | $509.26 | 1.03 |
| | 75 | $757.23 | $746.72 | 1.14 |
| | 97.5 | $1,579.83 | $1,566.82 | 1.46 |

**Frequencies**

Statistics

| | | Previous Total Value | Current Total Value | Difference in Total Value |
|---|---|---|---|---|
| N | Valid | 790 | 790 | 790 |
| | Missing | 0 | 0 | 0 |
| Mean | | $873,552.94 | $909,671.13 | $36,118.19 |
| Median | | $645,225.00 | $677,095.00 | $17,480.00 |
| Percentiles | 2.5 | $168,830.00 | $183,120.00 | -$190,611.50 |
| | 25 | $402,467.50 | $423,892.50 | -$32,305.00 |
| | 50 | $645,225.00 | $677,095.00 | $17,480.00 |
| | 75 | $994,030.00 | $1,010,472.50 | $82,480.00 |
| | 97.5 | $3,432,373.75 | $3,481,047.75 | $428,092.00 |

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

**Nonparametric Tests**

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig.[a,b] |
|---|---|---|---|
| 1 | The distribution of Difference in Total Value is the same across categories of Residential Sold vs Unsold. | Independent-Samples Mann-Whitney U Test | .344 |

Hypothesis Test Summary

| | Decision |
|---|---|
| 1 | Retain 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 | 10097 |
| Mann-Whitney U | 3625544.000 |
| Wilcoxon W | 47210660.000 |
| Test Statistic | 3625544.000 |
| Standard Error | 77321.401 |
| Standardized Test Statistic | .947 |
| Asymptotic Sig.(2-sided test) | .344 |

**Nonparametric Tests**

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

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig.[a,b] |
|---|---|---|---|
| 1 | The distribution of Price Per Foot is the same across categories of Residential Sold vs Unsold. | Independent-Samples Mann-Whitney U Test | .405 |

Hypothesis Test Summary

| | Decision |
|---|---|
| 1 | Retain 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 | 10118 |
| Mann-Whitney U | 3495857.000 |
| Wilcoxon W | 47277260.000 |
| Test Statistic | 3495857.000 |
| Standard Error | 77488.776 |
| Standardized Test Statistic | -.832 |
| Asymptotic Sig.(2-sided test) | .405 |

**Nonparametric Tests**

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

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig.[a,b] |
|---|---|---|---|
| 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 | .365 |

Hypothesis Test Summary

| | Decision |
|---|---|
| 1 | Retain 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 | 10118 |
| Mann-Whitney U | 3604503.000 |
| Wilcoxon W | 47442069.000 |
| Test Statistic | 3604503.000 |
| Standard Error | 77207.426 |
| Standardized Test Statistic | .906 |
| Asymptotic Sig.(2-sided test) | .365 |

## OVERALL Residential: Unit Value Comparison

**Summarize**

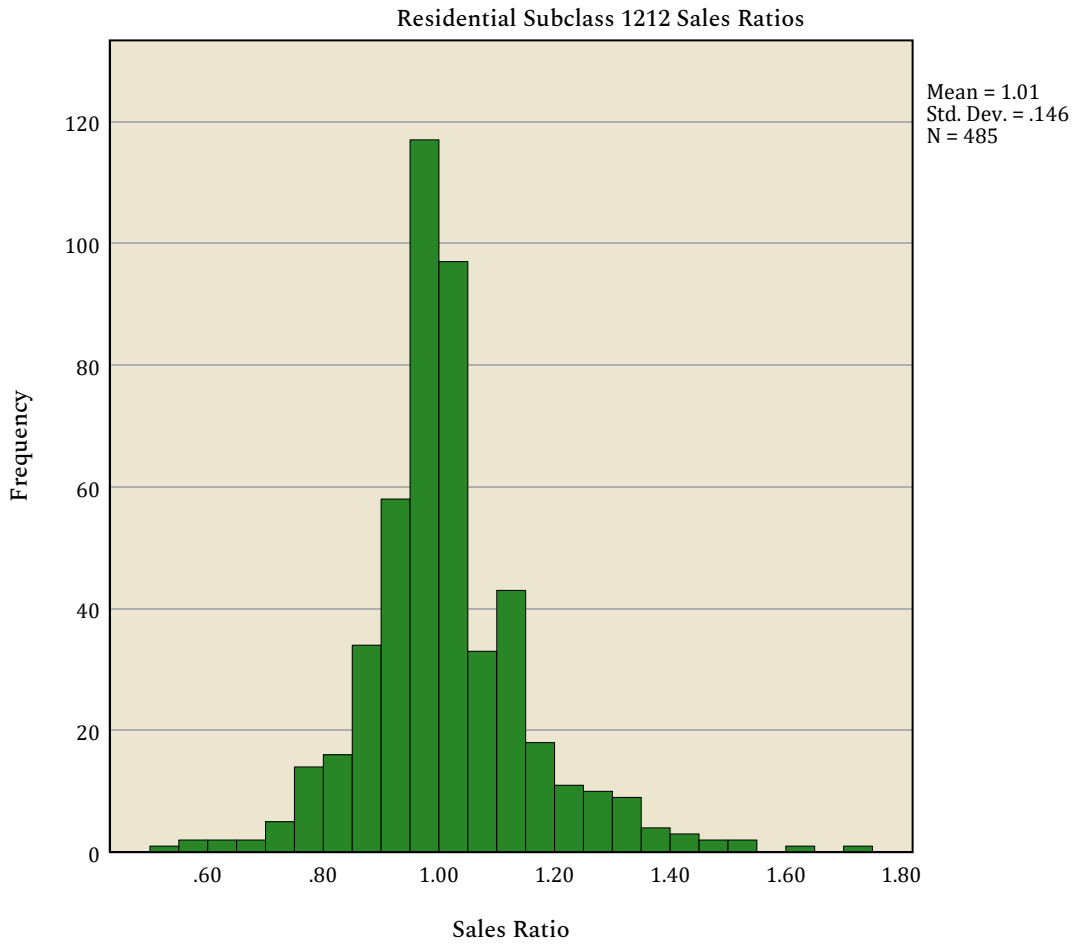
Sold vs Unsold

Difference in Price Per Foot

| Residential Sold vs Unsold | N | Median | Mean |
|---|---|---|---|
| SOLD | 783 | 1.03 | 1.06 |
| UNSOLD | 9869 | 1.04 | 1.10 |
| Total | 10652 | 1.04 | 1.10 |

## 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 |
|---|---|---|
| 513 | .995 | .098 |

### Ratio Statistics

Ratio Statistics for Current Total Value / Adjusted Sale Price

| Price Related Bias | Price Related Differential |
|---|---|
| -.010 | 1.015 |

## Residential Subclass 1212: Sales Price by Sales Ratio

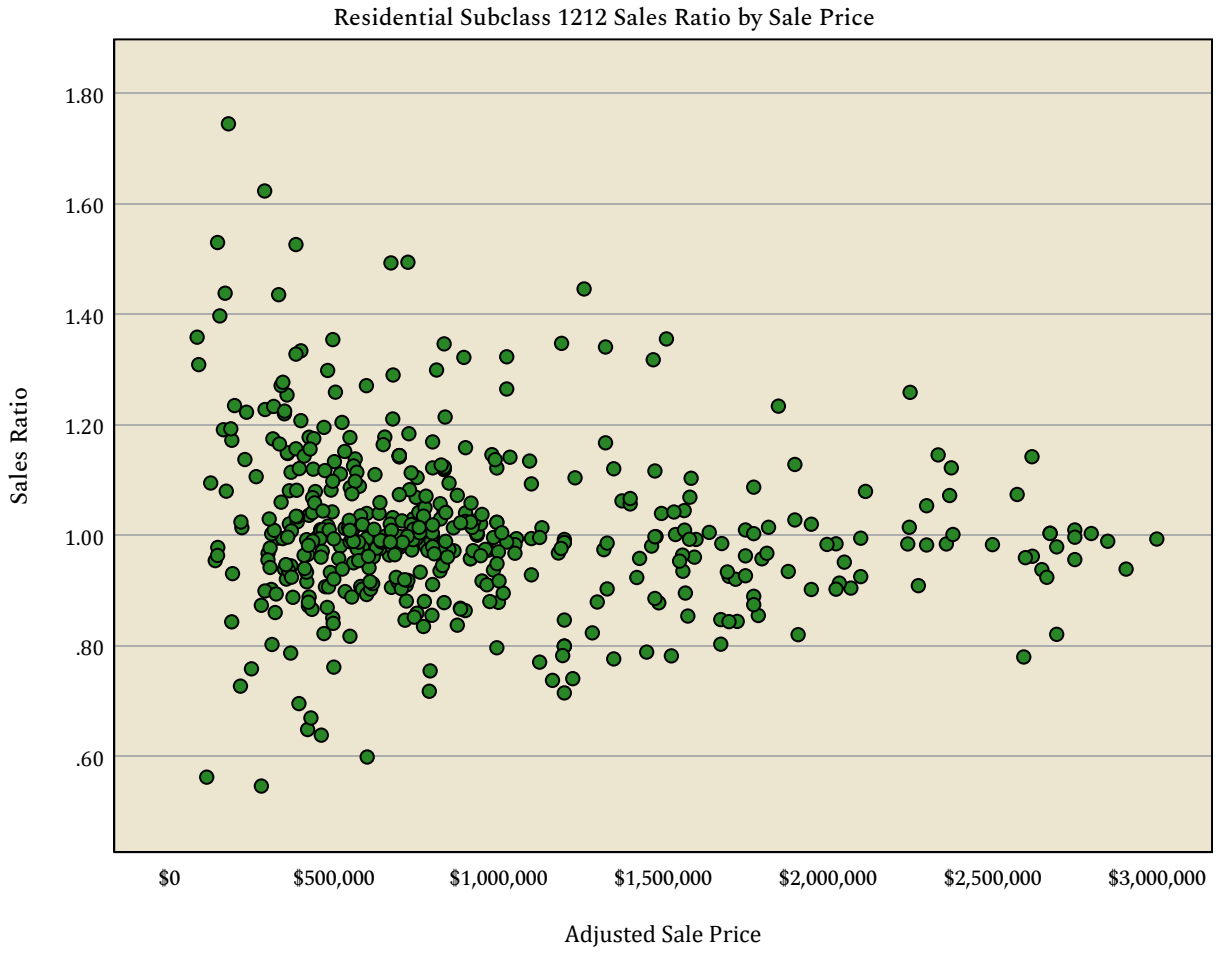
### Regression

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 1.028 | .010 | | 107.509 | <.001 |
| | Adjusted Sale Price | -1.686E-8 | .000 | -.114 | -2.594 | .010 |

a. Dependent Variable: Sales Ratio

### Graph



## Residential Subclass 1212: Months by Inverted Sales Ratio

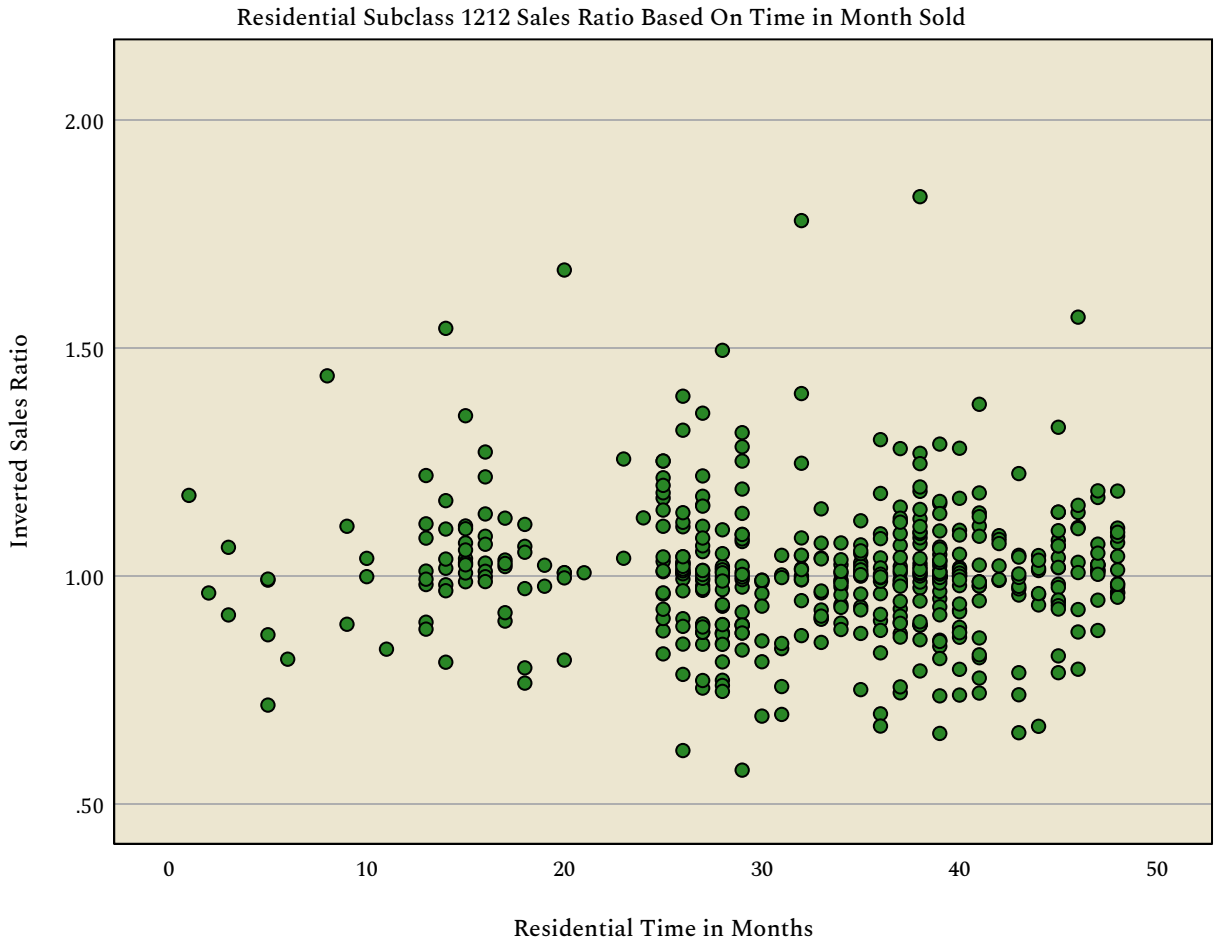
### Regression

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 1.023 | .026 | | 38.744 | <.001 |
| | Residential Time in Months | .000 | .001 | -.018 | -.406 | .685 |

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 | 513 | 513 | 513 |
| | Missing | 0 | 0 | 0 |
| Mean | | $559.88 | $592.76 | 1.10 |
| Median | | $414.50 | $471.32 | 1.07 |
| Percentiles | 2.5 | $192.30 | $213.59 | .80 |
| | 25 | $305.45 | $332.82 | .97 |
| | 50 | $414.50 | $471.32 | 1.07 |
| | 75 | $751.22 | $787.74 | 1.18 |
| | 97.5 | $1,611.47 | $1,575.27 | 1.57 |

**Frequencies**

Statistics

| | | Previous Total Value | Current Total Value | Difference in Total Value |
|---|---|---|---|---|
| N | Valid | 513 | 513 | 513 |
| | Missing | 0 | 0 | 0 |
| Mean | | $1,019,802.18 | $1,083,115.67 | $63,313.49 |
| Median | | $698,090.00 | $783,220.00 | $40,970.00 |
| Percentiles | 2.5 | $186,026.00 | $186,070.00 | -$173,725.00 |
| | 25 | $453,900.00 | $510,470.00 | -$22,485.00 |
| | 50 | $698,090.00 | $783,220.00 | $40,970.00 |
| | 75 | $1,152,295.00 | $1,305,395.00 | $118,860.00 |
| | 97.5 | $4,112,408.50 | $3,980,094.50 | $479,477.00 |

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

**Nonparametric Tests**

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig.[a,b] |
|---|---|---|---|
| 1 | The distribution of Difference in Total Value is the same across categories of Residential Sold vs Unsold. | Independent-Samples Mann-Whitney U Test | .240 |

Hypothesis Test Summary

| | Decision |
|---|---|
| 1 | Retain 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 | 7546 |
| Mann-Whitney U | 1706153.000 |
| Wilcoxon W | 26532734.000 |
| Test Statistic | 1706153.000 |
| Standard Error | 47070.939 |
| Standardized Test Statistic | -1.176 |
| Asymptotic Sig.(2-sided test) | .240 |

**Nonparametric Tests**

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

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig.[a,b] |
|---|---|---|---|
| 1 | The distribution of Price Per Foot is the same across categories of Residential Sold vs Unsold. | Independent-Samples Mann-Whitney U Test | .700 |

Hypothesis Test Summary

| | Decision |
|---|---|
| 1 | Retain 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 | 7559 |
| Mann-Whitney U | 1743290.500 |
| Wilcoxon W | 26668620.500 |
| Test Statistic | 1743290.500 |
| Standard Error | 47111.061 |
| Standardized Test Statistic | -.386 |
| Asymptotic Sig.(2-sided test) | .700 |

**Nonparametric Tests**

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

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig.[a,b] |
|---|---|---|---|
| 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 | .315 |

Hypothesis Test Summary

| | Decision |
|---|---|
| 1 | Retain 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 | 7559 |
| Mann-Whitney U | 1707626.000 |
| Wilcoxon W | 26647079.000 |
| Test Statistic | 1707626.000 |
| Standard Error | 47023.215 |
| Standardized Test Statistic | -1.005 |
| Asymptotic Sig.(2-sided test) | .315 |

## 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 | 513 | 1.07 | 1.10 |
| UNSOLD | 7444 | 1.06 | 1.13 |
| Total | 7957 | 1.06 | 1.13 |

**Summarize**

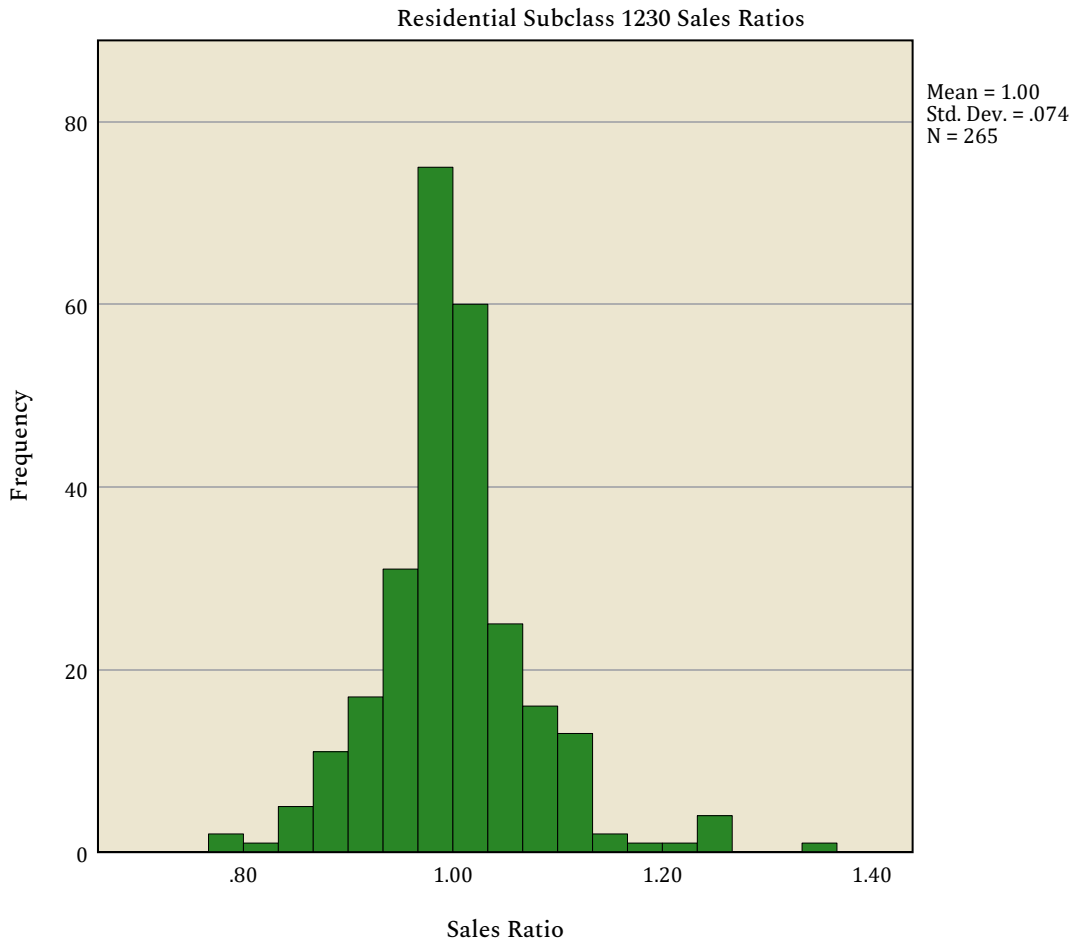
Sold vs Unsold Percent Change for Subclass 1212 by Economic Area

Difference in Price Per Foot

| economic_area | Residential Sold vs Unsold | N | Median | Mean |
|---|---|---|---|---|
| | UNSOLD | 54 | 1.04 | 1.23 |
| | Total | 54 | 1.04 | 1.23 |
| 1 | SOLD | 188 | 1.18 | 1.21 |
| | UNSOLD | 2496 | 1.17 | 1.21 |
| | Total | 2684 | 1.17 | 1.21 |
| 2 | SOLD | 41 | 1.04 | 1.04 |
| | UNSOLD | 676 | 1.02 | 1.04 |
| | Total | 717 | 1.02 | 1.04 |
| 6 | SOLD | 156 | 1.00 | 1.03 |
| | UNSOLD | 1911 | 1.00 | 1.11 |
| | Total | 2067 | 1.00 | 1.10 |
| 8 | SOLD | 128 | .98 | 1.03 |
| | UNSOLD | 2307 | .98 | 1.08 |
| | Total | 2435 | .98 | 1.08 |
| Total | SOLD | 513 | 1.07 | 1.10 |
| | UNSOLD | 7444 | 1.06 | 1.13 |
| | Total | 7957 | 1.06 | 1.13 |

## Residential Subclass 1230: Sales Ratio Distribution

**Graph**



## Residential Subclass 1230: Central Tendencies

### Ratio Statistics

Ratio Statistics for Current Total Value / Adjusted Sale Price

| N | Median | Coefficient of Dispersion |
|---|---|---|
| 266 | .997 | .056 |

### Ratio Statistics

Ratio Statistics for Current Total Value / Adjusted Sale Price

| Price Related Bias | Price Related Differential |
|---|---|
| -.012 | 1.008 |

## Residential Subclass 1230: Sales Price by Sales Ratio

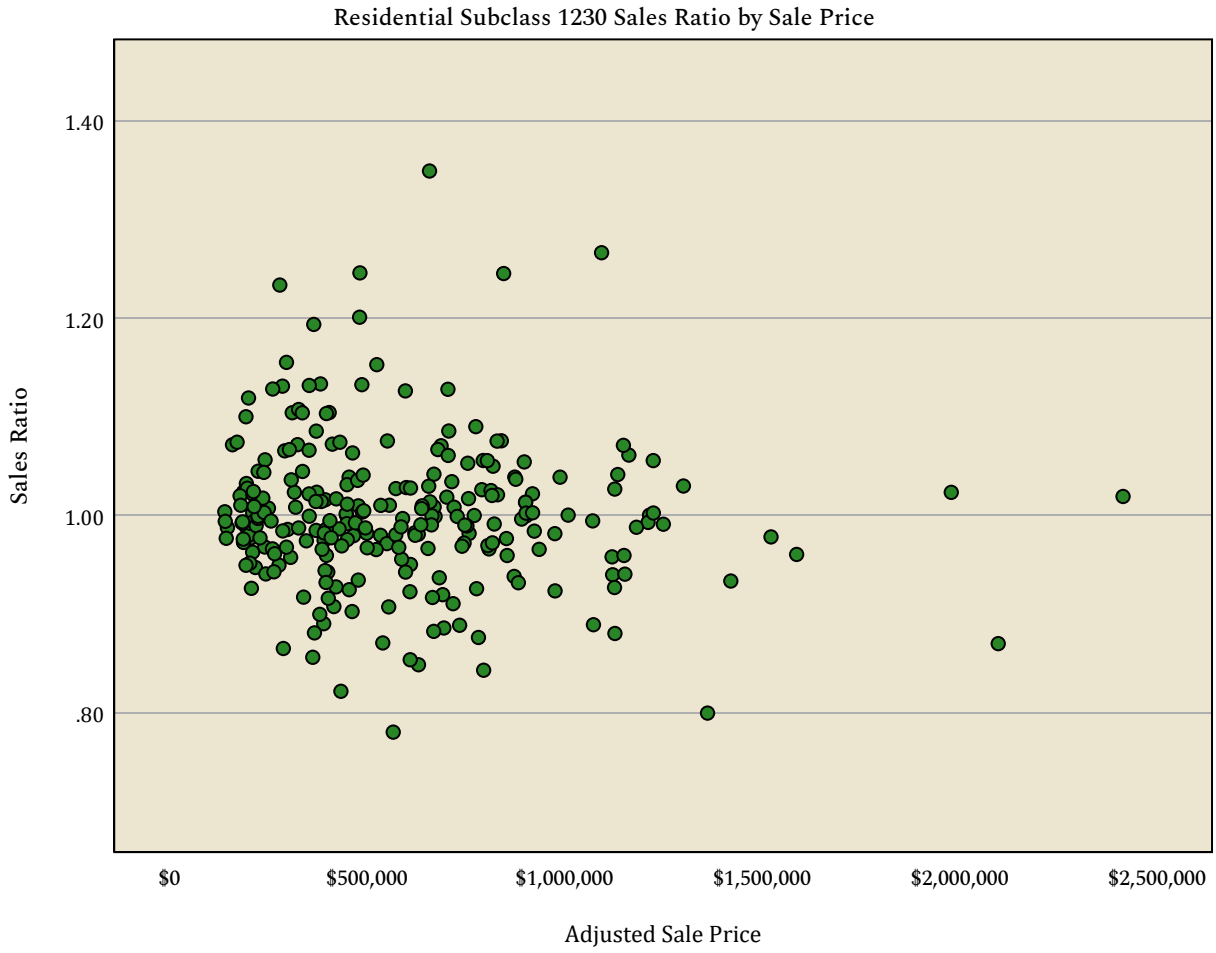
### Regression

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 1.028 | .012 | | 82.462 | <.001 |
| | Adjusted Sale Price | -3.754E-8 | .000 | -.124 | -2.030 | .043 |

a. Dependent Variable: Sales Ratio

### Graph



## Residential Subclass 1230: Months by Inverted Sales Ratio

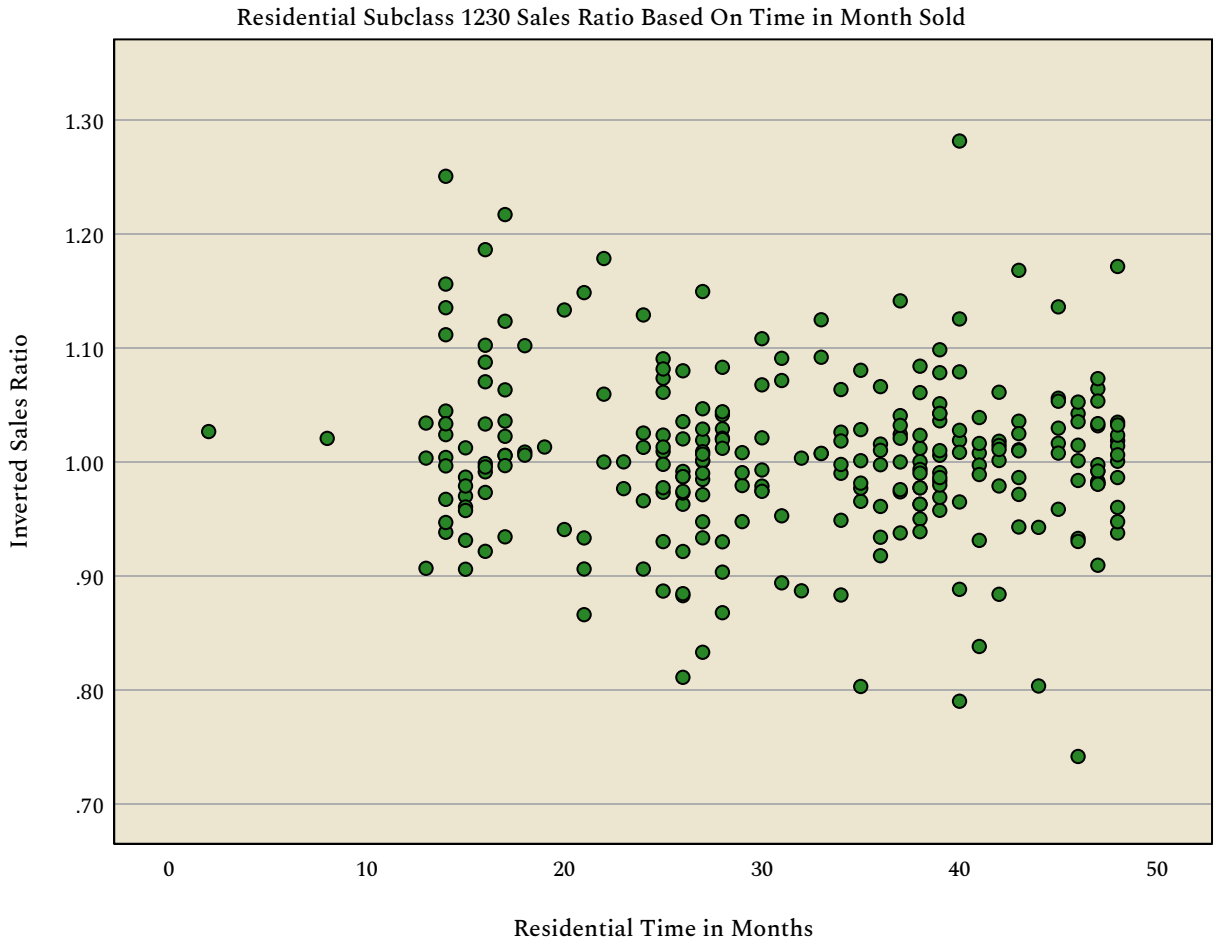
### Regression

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 1.022 | .015 | | 67.045 | <.001 |
| | Residential Time in Months | -.001 | .000 | -.085 | -1.379 | .169 |

a. Dependent Variable: Inverted Sales Ratio

### Graph



## Residential Subclass 1230: Descriptive Statistics

**Frequencies**

Statistics

| | | Previous Price Per Foot | Price Per Foot | Difference in Price Per Foot |
|---|---|---|---|---|
| N | Valid | 266 | 266 | 266 |
| | Missing | 0 | 0 | 0 |
| Mean | | $10,392.91 | $10,725.94 | .99 |
| Median | | $606.76 | $575.01 | 1.00 |
| Percentiles | 2.5 | $264.71 | $290.39 | .76 |
| | 25 | $432.90 | $448.47 | .92 |
| | 50 | $606.76 | $575.01 | 1.00 |
| | 75 | $771.91 | $714.31 | 1.07 |
| | 97.5 | $62,803.02 | $71,474.00 | 1.24 |

**Frequencies**

Statistics

| | | Previous Total Value | Current Total Value | Difference in Total Value |
|---|---|---|---|---|
| N | Valid | 266 | 266 | 266 |
| | Missing | 0 | 0 | 0 |
| Mean | | $592,252.14 | $575,342.74 | -$16,909.40 |
| Median | | $503,365.00 | $492,235.00 | -$800.00 |
| Percentiles | 2.5 | $167,490.00 | $183,120.00 | -$241,225.75 |
| | 25 | $304,840.00 | $323,350.00 | -$55,897.50 |
| | 50 | $503,365.00 | $492,235.00 | -$800.00 |
| | 75 | $798,730.00 | $770,832.50 | $21,425.00 |
| | 97.5 | $1,441,321.50 | $1,354,828.50 | $147,328.00 |

## Residential Subclass 1230: Mann-Whitney U-Test (Rank-sum)

**Nonparametric Tests**

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig.[a,b] |
|---|---|---|---|
| 1 | The distribution of Difference in Total Value is the same across categories of Residential Sold vs Unsold. | Independent-Samples Mann-Whitney U Test | .784 |

Hypothesis Test Summary

| | Decision |
|---|---|
| 1 | Retain 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 | 2293 |
| Mann-Whitney U | 258079.500 |
| Wilcoxon W | 2346025.500 |
| Test Statistic | 258079.500 |
| Standard Error | 9881.112 |
| Standardized Test Statistic | .274 |
| Asymptotic Sig.(2-sided test) | .784 |

**Nonparametric Tests**

## Residential Subclass 1230: Mann-Whitney U-Test (Rank-sum)

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig.[a,b] |
|---|---|---|---|
| 1 | The distribution of Price Per Foot is the same across categories of Residential Sold vs Unsold. | Independent-Samples Mann-Whitney U Test | .222 |

Hypothesis Test Summary

| | Decision |
|---|---|
| 1 | Retain 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 | 2297 |
| Mann-Whitney U | 267035.000 |
| Wilcoxon W | 2365211.000 |
| Test Statistic | 267035.000 |
| Standard Error | 9882.070 |
| Standardized Test Statistic | 1.220 |
| Asymptotic Sig.(2-sided test) | .222 |

**Nonparametric Tests**

## Residential Subclass 1230: Mann-Whitney U-Test (Rank-sum)

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig.[a,b] |
|---|---|---|---|
| 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 | .596 |

Hypothesis Test Summary

| | Decision |
|---|---|
| 1 | Retain 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 | 2296 |
| Mann-Whitney U | 248719.000 |
| Wilcoxon W | 2346895.000 |
| Test Statistic | 248719.000 |
| Standard Error | 9859.987 |
| Standardized Test Statistic | -.531 |
| Asymptotic Sig.(2-sided test) | .596 |

## Residential Subclass 1230: Unit Comparison Method

**Summarize**

Sold vs Unsold Percent Change for Subclass 1230

Difference in Price Per Foot

| Residential Sold vs Unsold | N | Median | Mean |
|---|---|---|---|
| SOLD | 260 | 1.00 | .99 |
| UNSOLD | 2158 | .99 | .99 |
| Total | 2418 | .99 | .99 |

**Summarize**

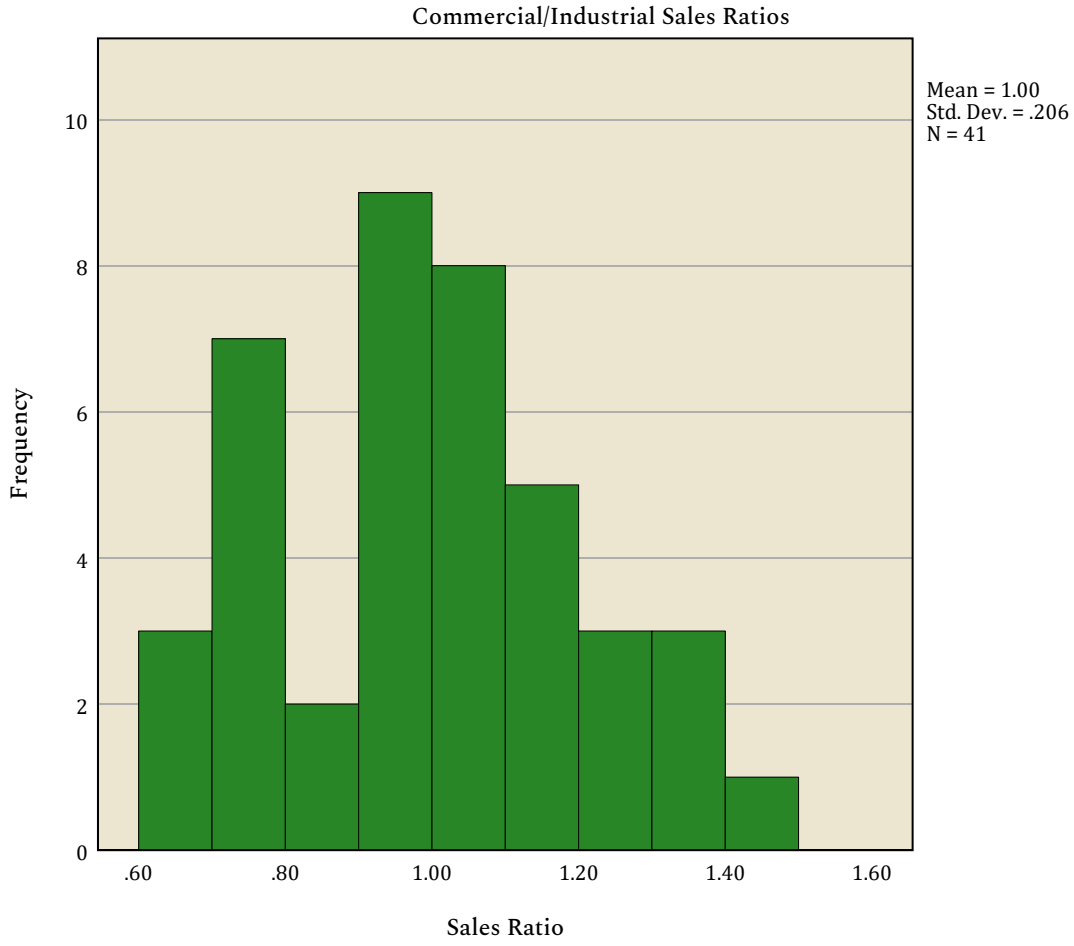
Sold vs Unsold Percent Change for Subclass 1230 by Economic Area

Difference in Price Per Foot

| economic_area | Residential Sold vs Unsold | N | Median | Mean |
|---|---|---|---|---|
| | SOLD | 260 | 1.00 | .99 |
| | UNSOLD | 2158 | .99 | .99 |
| | Total | 2418 | .99 | .99 |
| Total | SOLD | 260 | 1.00 | .99 |
| | UNSOLD | 2158 | .99 | .99 |
| | Total | 2418 | .99 | .99 |

## 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 |
|---|---|---|
| 43 | .988 | .162 |

**Ratio Statistics**

Ratio Statistics for Current Total Value / Adjusted Sale Price

| Price Related Bias | Price Related Differential |
|---|---|
| .007 | 1.008 |

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

### Regression

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 1.002 | .035 | | 28.468 | <.001 |
| | Adjusted Sale Price | -1.988E-9 | .000 | -.022 | -.143 | .887 |

a. Dependent Variable: Sales Ratio

### Graph

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

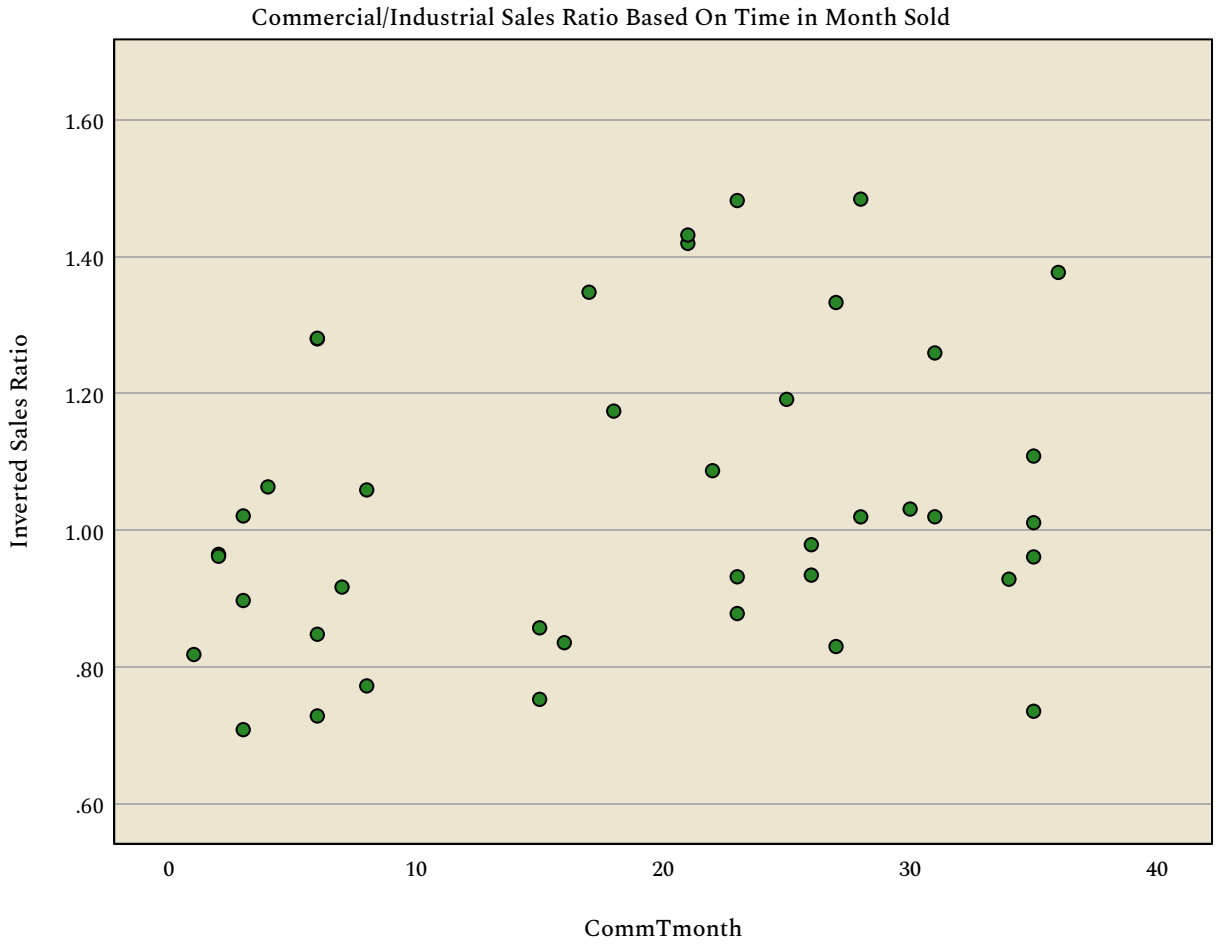
### Regression

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | .949 | .062 | | 15.287 | <.001 |
| | CommTmonth | .005 | .003 | .265 | 1.757 | .086 |

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 | 43 | 43 | 43 |
| | Missing | 0 | 0 | 0 |
| Mean | | $236.63 | $348.68 | 1.45 |
| Median | | $191.76 | $237.31 | 1.18 |
| Percentiles | 2.5 | $47.75 | $81.27 | .86 |
| | 25 | $124.78 | $141.58 | 1.10 |
| | 50 | $191.76 | $237.31 | 1.18 |
| | 75 | $332.10 | $482.15 | 1.67 |
| | 97.5 | $705.37 | $1,311.68 | 3.09 |

**Frequencies**

Statistics

| | | Previous Total Value | Current Total Value | Difference in Total Value |
|---|---|---|---|---|
| N | Valid | 43 | 43 | 43 |
| | Missing | 0 | 0 | 0 |
| Mean | | $793,052.79 | $1,185,509.53 | $392,456.74 |
| Median | | $435,110.00 | $484,720.00 | $97,740.00 |
| Percentiles | 2.5 | $67,544.00 | $72,909.00 | -$198,650.00 |
| | 25 | $214,190.00 | $299,410.00 | $29,090.00 |
| | 50 | $435,110.00 | $484,720.00 | $97,740.00 |
| | 75 | $755,310.00 | $1,185,180.00 | $187,340.00 |
| | 97.5 | $5,171,318.00 | $13,085,032.00 | $8,062,760.00 |

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

**Nonparametric Tests**

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig.[a,b] |
|---|---|---|---|
| 1 | The distribution of Difference in Total Value is the same across categories of CommSOLDFLG. | 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 CommSOLDFLG**

Independent-Samples Mann-Whitney U Test Summary

| | |
|---|---|
| Total N | 1071 |
| Mann-Whitney U | 11231.500 |
| Wilcoxon W | 545292.500 |
| Test Statistic | 11231.500 |
| Standard Error | 1867.534 |
| Standardized Test Statistic | -4.496 |
| Asymptotic Sig.(2-sided test) | <.001 |

**Nonparametric Tests**

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

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig.[a,b] |
|---|---|---|---|
| 1 | The distribution of Price Per Foot is the same across categories of CommSOLDFLG. | Independent-Samples Mann-Whitney U Test | .138 |

Hypothesis Test Summary

| | Decision |
|---|---|
| 1 | Retain 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 | 1092 |
| Mann-Whitney U | 19087.500 |
| Wilcoxon W | 570862.500 |
| Test Statistic | 19087.500 |
| Standard Error | 1999.059 |
| Standardized Test Statistic | -1.482 |
| Asymptotic Sig.(2-sided test) | .138 |

**Nonparametric Tests**

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig.[a,b] |
|---|---|---|---|
| 1 | The distribution of Difference in Price Per Foot is the same across categories of CommSOLDFLG. | Independent-Samples Mann-Whitney U Test | .001 |

## 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 | 1092 |
| Mann-Whitney U | 13338.500 |
| Wilcoxon W | 570378.500 |
| Test Statistic | 13338.500 |
| Standard Error | 1880.760 |
| Standardized Test Statistic | -3.285 |
| Asymptotic Sig.(2-sided test) | .001 |

## OVERALL Commercial/Industrial: Unit Value Comparison

**Summarize**

Sold vs Unsold

Difference in Price Per Foot

| CommSOLDFLG | N | Median | Mean |
|---|---|---|---|
| SOLD | 43 | 1.18 | 1.45 |
| UNSOLD | 1107 | 1.11 | 1.12 |
| Total | 1150 | 1.12 | 1.14 |

**Summarize**

Sold vs Unsold

Difference in Price Per Foot

| Improvement Abstract Codes | CommSOLDFLG | N | Median | Mean |
|---|---|---|---|---|
| 2210 | UNSOLD | 3 | .00 | .00 |
| | Total | 3 | .00 | .00 |
| 2212 | SOLD | 6 | 1.08 | 1.08 |
| | UNSOLD | 87 | 1.17 | 1.15 |
| | Total | 93 | 1.17 | 1.15 |
| 2215 | SOLD | 4 | 1.42 | 1.61 |
| | UNSOLD | 41 | 1.07 | 1.11 |
| | Total | 45 | 1.09 | 1.16 |
| 2220 | SOLD | 2 | 1.83 | 1.83 |
| | UNSOLD | 47 | 1.12 | 1.13 |
| | Total | 49 | 1.13 | 1.16 |
| 2225 | UNSOLD | 11 | 1.09 | 1.06 |
| | Total | 11 | 1.09 | 1.06 |
| 2230 | SOLD | 9 | 1.15 | 1.43 |
| | UNSOLD | 134 | 1.11 | 1.14 |
| | Total | 143 | 1.12 | 1.16 |
| 2235 | SOLD | 3 | 1.24 | 1.70 |
| | UNSOLD | 82 | 1.10 | 1.13 |
| | Total | 85 | 1.11 | 1.15 |

## OVERALL Commercial/Industrial: Unit Value Comparison

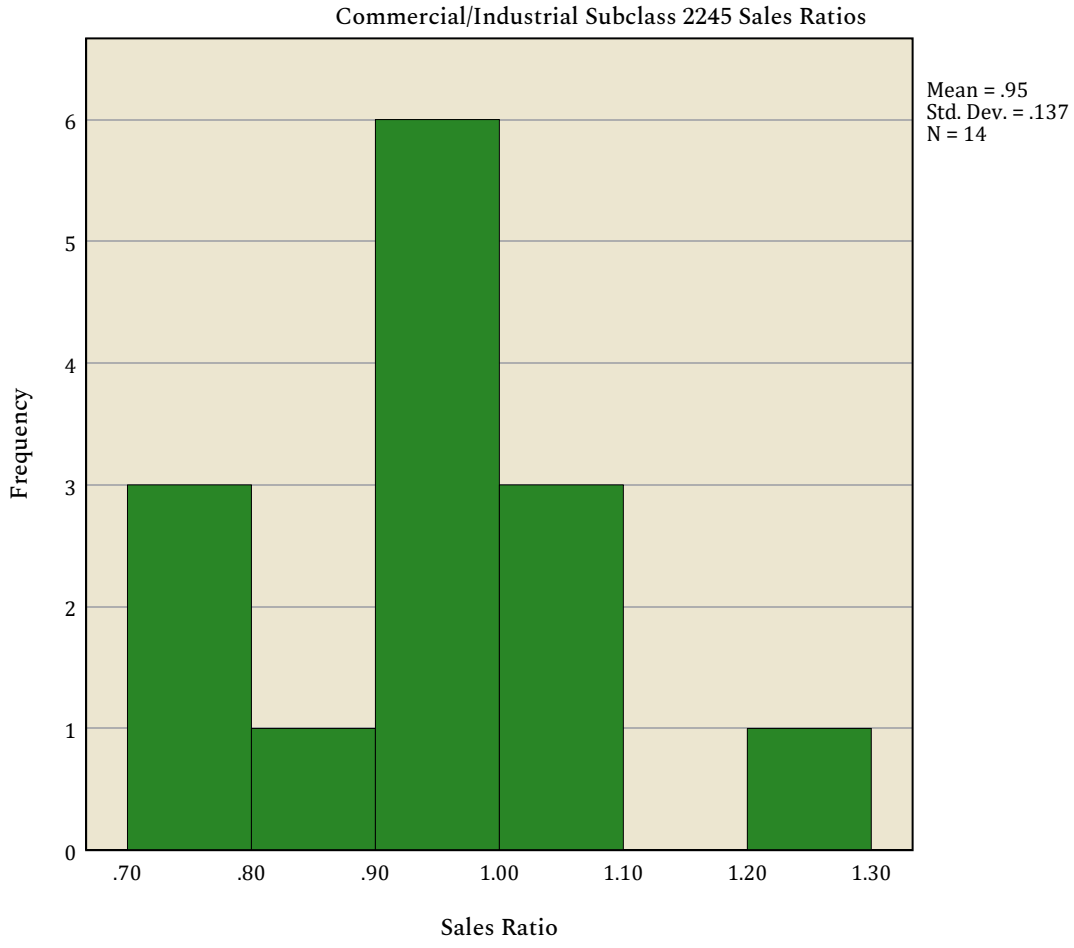
Sold vs Unsold

Difference in Price Per Foot

| Improvement Abstract Codes | CommSOLDFLG | N | Median | Mean |
|---|---|---|---|---|
| 2240 | SOLD | 2 | 1.15 | 1.15 |
| | UNSOLD | 17 | 1.20 | 1.22 |
| | Total | 19 | 1.18 | 1.21 |
| 2245 | SOLD | 14 | 1.51 | 1.56 |
| | UNSOLD | 657 | 1.06 | 1.12 |
| | Total | 671 | 1.06 | 1.13 |
| 3212 | UNSOLD | 7 | 1.13 | 1.13 |
| | Total | 7 | 1.13 | 1.13 |
| 3215 | SOLD | 3 | 1.10 | 1.16 |
| | UNSOLD | 13 | 1.08 | 1.31 |
| | Total | 16 | 1.09 | 1.28 |
| 3230 | UNSOLD | 8 | 1.11 | 1.18 |
| | Total | 8 | 1.11 | 1.18 |
| Total | SOLD | 43 | 1.18 | 1.45 |
| | UNSOLD | 1107 | 1.11 | 1.12 |
| | Total | 1150 | 1.12 | 1.14 |

## Commercial/Industrial Subclass 2245: Sales Ratio Distribution

**Graph**



## Commercial/Industrial Subclass 2245: Central Tendencies

**Ratio Statistics**

Ratio Statistics for Current Total Value / Adjusted Sale Price

| N | Median | Coefficient of Dispersion |
|---|---|---|
| 14 | .975 | .104 |

**Ratio Statistics**

Ratio Statistics for Current Total Value / Adjusted Sale Price

| Price Related Bias | Price Related Differential |
|---|---|
| -.090 | 1.079 |

## Commercial/Industrial Subclass 2245: Sales Price by Sales Ratio

**Regression**

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 1.059 | .046 | | 23.134 | <.001 |
| | Adjusted Sale Price | -3.256E-7 | .000 | -.670 | -3.122 | .009 |

a. Dependent Variable: Sales Ratio

**Graph**

## Commercial/Industrial Subclass 2245: Months by Inverted Sales Ratio

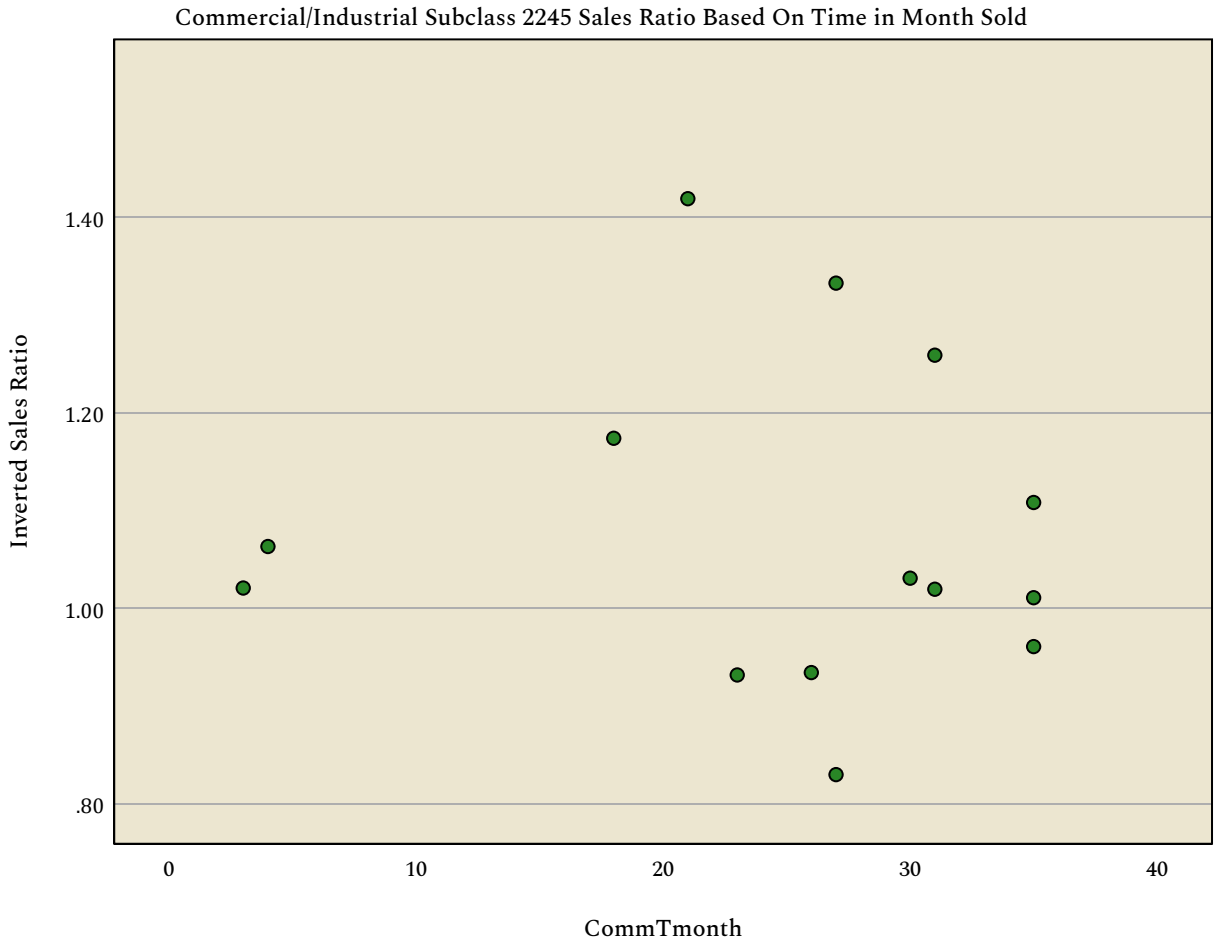
**Regression**

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 1.102 | .122 | | 8.997 | <.001 |
| | CommTmonth | -.001 | .005 | -.060 | -.209 | .838 |

a. Dependent Variable: Inverted Sales Ratio

**Graph**



## Commercial/Industrial Subclass 2245: Descriptive Statistics

**Frequencies**

Statistics

| | | Previous Price Per Foot | Price Per Foot | Difference in Price Per Foot |
|---|---|---|---|---|
| N | Valid | 14 | 14 | 14 |
| | Missing | 0 | 0 | 0 |
| Mean | | $300.24 | $456.78 | 1.56 |
| Median | | $302.92 | $476.01 | 1.51 |
| Percentiles | 2.5 | $111.50 | $164.32 | 1.04 |
| | 25 | $211.46 | $270.04 | 1.11 |
| | 50 | $302.92 | $476.01 | 1.51 |
| | 75 | $376.76 | $570.49 | 1.67 |
| | 97.5 | . | . | . |

**Frequencies**

Statistics

| | | Previous Total Value | Current Total Value | Difference in Total Value |
|---|---|---|---|---|
| N | Valid | 14 | 14 | 14 |
| | Missing | 0 | 0 | 0 |
| Mean | | $196,320.71 | $303,170.00 | $106,849.29 |
| Median | | $217,365.00 | $282,135.00 | $88,355.00 |
| Percentiles | 2.5 | $66,150.00 | $69,770.00 | $3,620.00 |
| | 25 | $115,922.50 | $205,625.00 | $24,670.00 |
| | 50 | $217,365.00 | $282,135.00 | $88,355.00 |
| | 75 | $243,615.00 | $342,505.00 | $122,925.00 |
| | 97.5 | . | . | . |

## Commercial/Industrial Subclass 2245: Mann-Whitney U-Test (Rank-sum)

**Nonparametric Tests**

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig.[a,b] |
|---|---|---|---|
| 1 | The distribution of Difference in Total Value is the same across categories of CommSOLDFLG. | 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 CommSOLDFLG**

Independent-Samples Mann-Whitney U Test Summary

| | |
|---|---|
| Total N | 620 |
| Mann-Whitney U | 1504.500 |
| Wilcoxon W | 186032.500 |
| Test Statistic | 1504.500 |
| Standard Error | 630.045 |
| Standardized Test Statistic | -3.874 |
| Asymptotic Sig.(2-sided test) | <.001 |

**Nonparametric Tests**

## Commercial/Industrial Subclass 2245: Mann-Whitney U-Test (Rank-sum)

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig.[a,b] |
|---|---|---|---|
| 1 | The distribution of Price Per Foot is the same across categories of CommSOLDFLG. | 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**

**Price Per Foot across CommSOLDFLG**

Independent-Samples Mann-Whitney U Test Summary

| | |
|---|---|
| Total N | 637 |
| Mann-Whitney U | 1579.500 |
| Wilcoxon W | 196579.500 |
| Test Statistic | 1579.500 |
| Standard Error | 648.211 |
| Standardized Test Statistic | -3.821 |
| Asymptotic Sig.(2-sided test) | <.001 |

**Nonparametric Tests**

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig.[a,b] |
|---|---|---|---|
| 1 | The distribution of Difference in Price Per Foot is the same across categories of CommSOLDFLG. | Independent-Samples Mann-Whitney U Test | .002 |

## Commercial/Industrial Subclass 2245: 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 | 637 |
| Mann-Whitney U | 1552.500 |
| Wilcoxon W | 197803.500 |
| Test Statistic | 1552.500 |
| Standard Error | 597.222 |
| Standardized Test Statistic | -3.165 |
| Asymptotic Sig.(2-sided test) | .002 |

## Commercial/Industrial Subclass 2245: Unit Comparison Method

**Summarize**

Sold vs Unsold Percent Change for Subclass 2245

Difference in Price Per Foot

| CommSOLDFLG | N | Median | Mean |
|---|---|---|---|
| SOLD | 14 | 1.51 | 1.56 |
| UNSOLD | 657 | 1.06 | 1.12 |
| Total | 671 | 1.06 | 1.13 |

## Commercial/Industrial Subclass 2245: Economic Area Analysis

**Ratio Statistics**

Ratio Statistics for Current Total Value / Adjusted Sale Price

| Group | N | Median | Coefficient of Dispersion |
|---|---|---|---|
| | 340 | .002 | 52.478 |
| Overall | 340 | .002 | 52.478 |

**Ratio Statistics**

Ratio Statistics for Current Total Value / Adjusted Sale Price

| Group | N | Price Related Bias | Price Related Differential |
|---|---|---|---|
| | 340 | 54.216 | 20.013 |
| Overall | 340 | 54.216 | 20.013 |

**Summarize**

Sold vs Unsold Percent Change for Subclass 2245 by Economic Area

Difference in Price Per Foot

| economic_area | CommSOLDFLG | N | Median | Mean |
|---|---|---|---|---|
| | SOLD | 14 | 1.51 | 1.56 |
| | UNSOLD | 657 | 1.06 | 1.12 |
| | Total | 671 | 1.06 | 1.13 |
| Total | SOLD | 14 | 1.51 | 1.56 |
| | UNSOLD | 657 | 1.06 | 1.12 |
| | Total | 671 | 1.06 | 1.13 |

## 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 | 487 | .980 | .962 | .999 | .994 |
| Residential | 790 | 1.008 | .999 | 1.017 | .995 |
| Commercial/Industrial | 43 | 1.000 | .938 | 1.062 | .988 |
| Overall | 1320 | .998 | .989 | 1.007 | .994 |

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 | .980 | 1.000 | 95.4% | .955 | .936 |
| Residential | .992 | 1.000 | 95.8% | .995 | .986 |
| Commercial/Industrial | .928 | 1.073 | 96.8% | .992 | .926 |
| Overall | .992 | 1.000 | 95.6% | .989 | .980 |

Ratio Statistics for Current Total Value / Adjusted Sale Price

| Group | 95% Confidence Interval for ... | Price Related Differential | Coefficient of Dispersion |
|---|---|---|---|
| | Upper Bound | | |
| Vacant Land | .974 | 1.027 | .138 |
| Residential | 1.005 | 1.013 | .084 |
| Commercial/Industrial | 1.057 | 1.008 | .162 |
| Overall | .997 | 1.009 | .106 |

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.