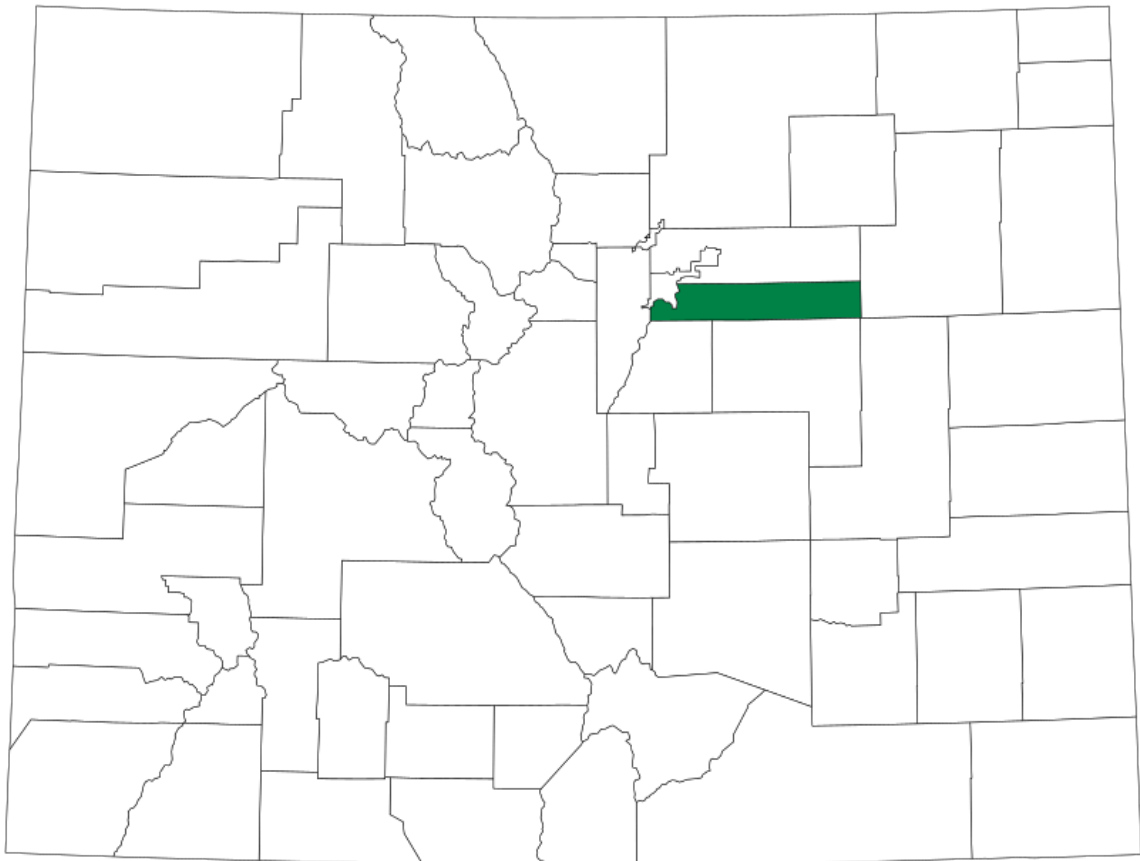


San Matteo

DATA ANALYTICS

2025 Property Assessment Study

Arapahoe 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 Arapahoe 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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1. Statistical Overview

Compliance and Evaluations

Arapahoe 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.

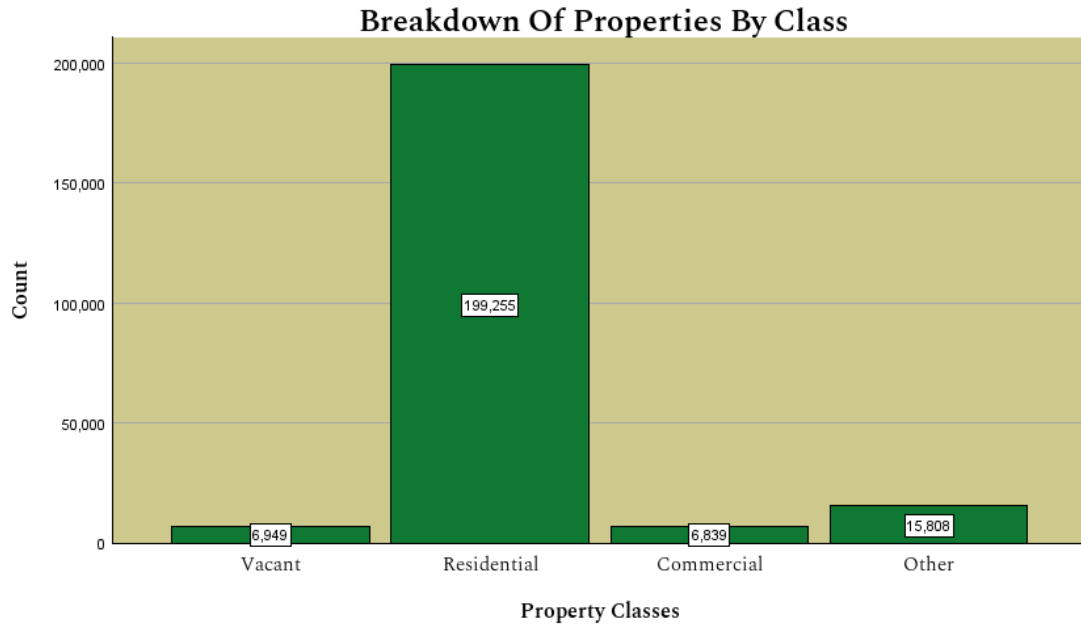
	Result	Value
Vacant Land		
Median Sales Ratio	Pass	1.00
Coefficient of Dispersion	Pass	8.85%
Time Adjustments	Pass	0.433
Price Related Differential	Sufficient	1.04
Price Related Bias	Sufficient	-0.02
Sold/Unsold Similarity	Sufficient	
Qualified Sales > 50%	Yes	

	Result	Value
Residential		
Median Sales Ratio	Pass	1.00
Coefficient of Dispersion	Pass	1.91%
Time Adjustments	Pass	0.545
Price Related Differential	Sufficient	1.01
Price Related Bias	Sufficient	0.00
Sold/Unsold Similarity	Sufficient	
Qualified Sales > 50%	Yes	

	Result	Value
Commercial/Industrial		
Median Sales Ratio	Pass	0.97
Coefficient of Dispersion	Pass	6.75%
Time Adjustments	Pass	0.918
Price Related Differential	Sufficient	1.00
Price Related Bias	Sufficient	0.00
Sold/Unsold Similarity	Sufficient	
Qualified Sales > 50%	Yes	

Arapahoe County
Property Types

Below is a breakdown of the property types of the 228,851 parcels in Arapahoe County.



2. Vacant Land

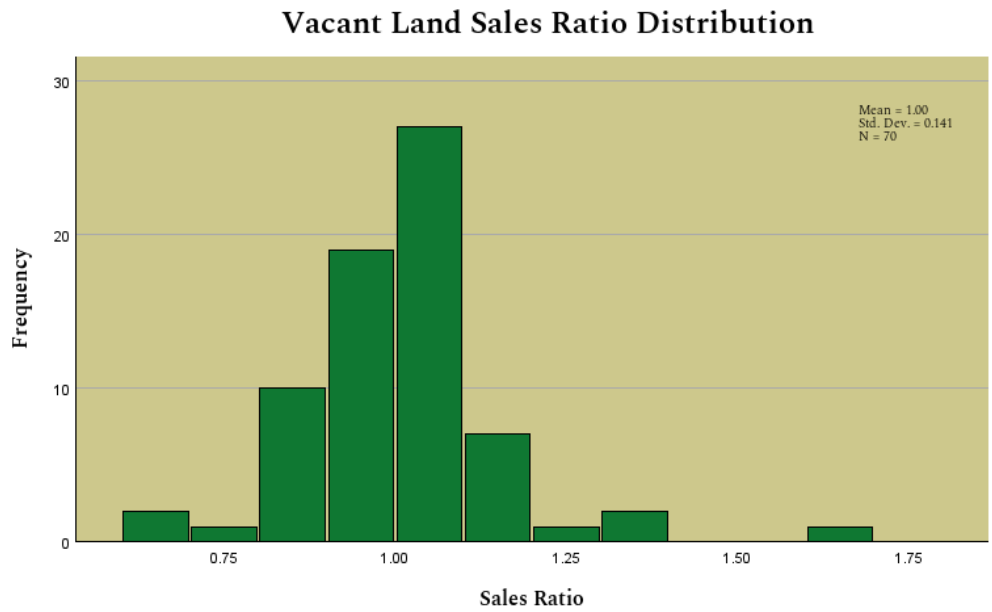
Overview

Arapahoe was found to be compliant for Vacant Land properties.

	Result	Value
Vacant Land		
Median Sales Ratio	Pass	1.00
Coefficient of Dispersion	Pass	8.85%
Time Adjustments	Pass	0.433
Price Related Differential	Sufficient	1.04
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 Arapahoe 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.

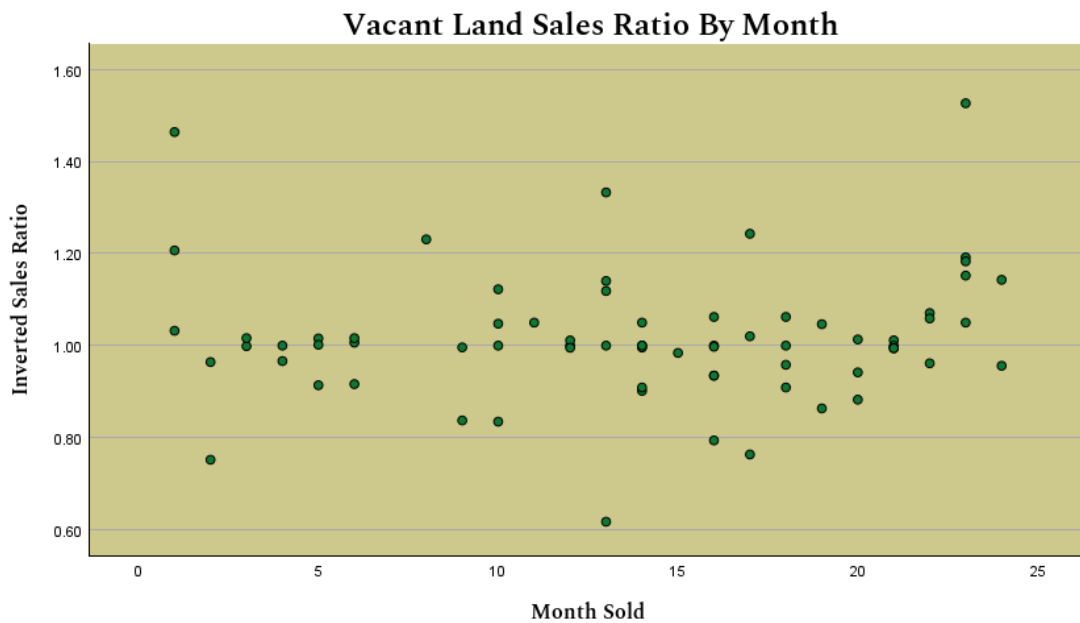


Vacant Land Coefficient of Dispersion

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 Arapahoe County was calculated at 8.85% 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.

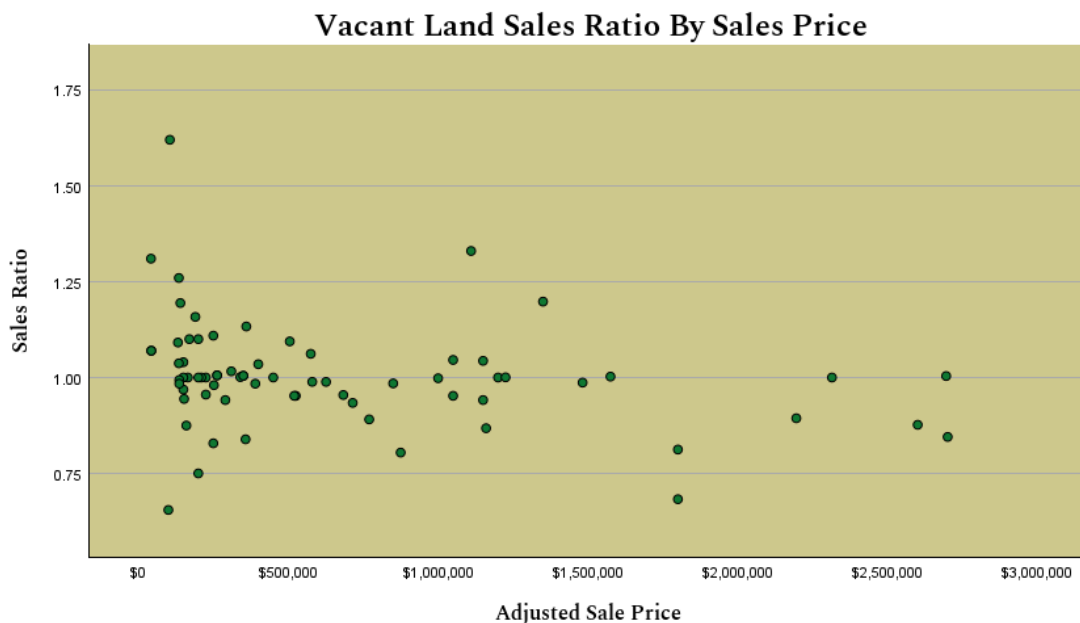
Vacant Land Market (Time) Adjustments

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 24 - month period of sales. There does not appear to be a significant effect of time on Arapahoe’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 Arapahoe County was calculated at 1.04, which is not 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. This test, combined with the Price Related Bias results, indicates that although the measure falls slightly outside the IAAO's acceptable range, it does not appear to present a concern. 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 Arapahoe 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 74 Vacant Land sales. We have confirmed that more than 50% of all sales were qualified.

3. Residential

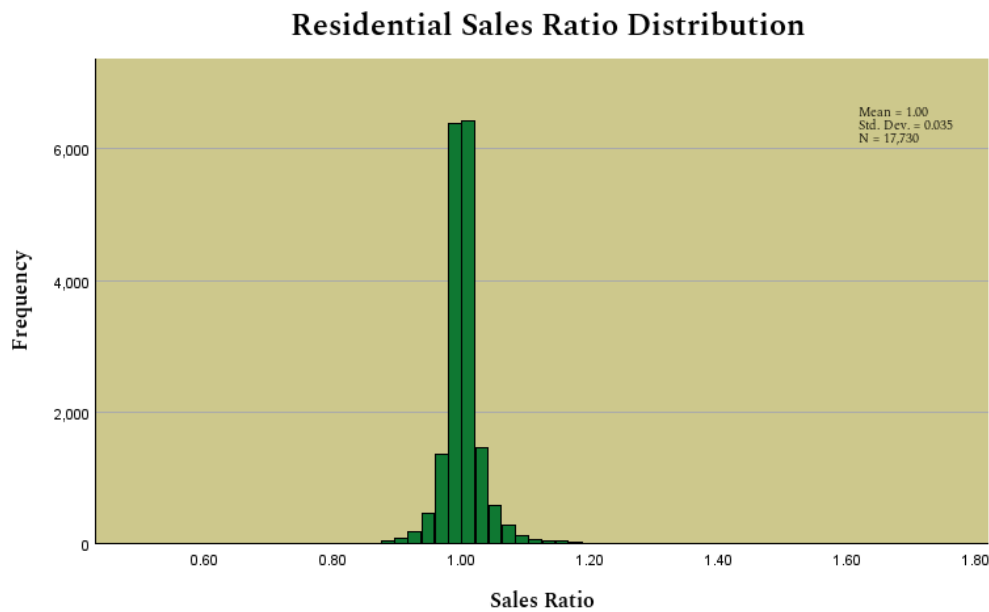
Overview

Arapahoe County was found to be compliant for Residential properties.

	Result	Value
Residential		
Median Sales Ratio	Pass	1.00
Coefficient of Dispersion	Pass	1.91%
Time Adjustments	Pass	0.545
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 Arapahoe 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 Arapahoe County was calculated at 1.91% 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 24 - month period of sales. There does not appear to be a significant effect of time on Arapahoe 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 Arapahoe 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 Arapahoe 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 17,935 residential sales. We have confirmed that more than 50% of all sales were qualified.

4. Commercial/Industrial

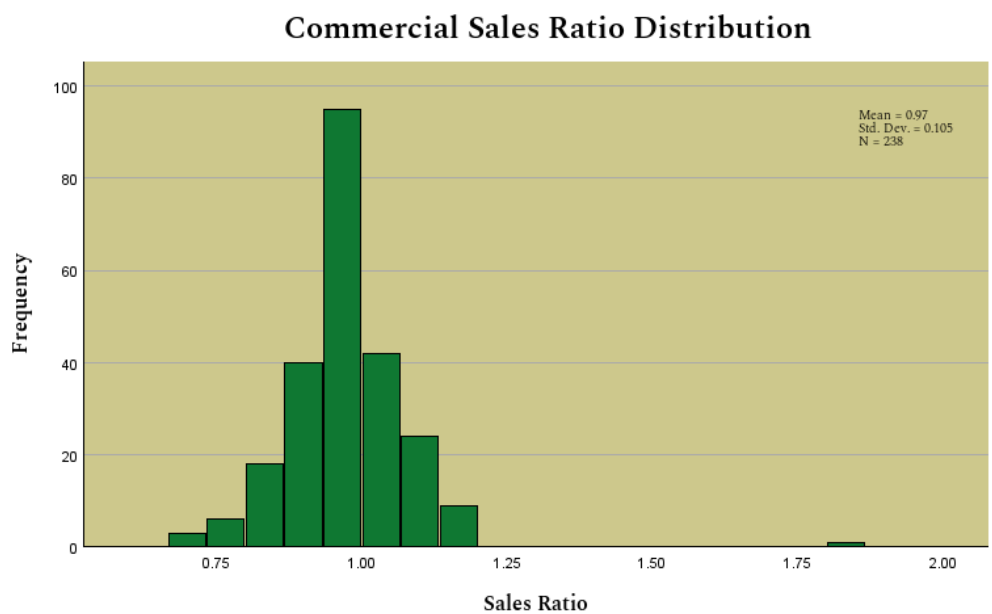
Overview

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

	Result	Value
Commercial and Industrial		
Median Sales Ratio	Pass	0.97
Coefficient of Dispersion	Pass	6.75%
Time Adjustments	Pass	0.918
Price Related Differential	Sufficient	1.00
Price Related Bias	Sufficient	0.00
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 Arapahoe County was calculated to be 0.97, 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.

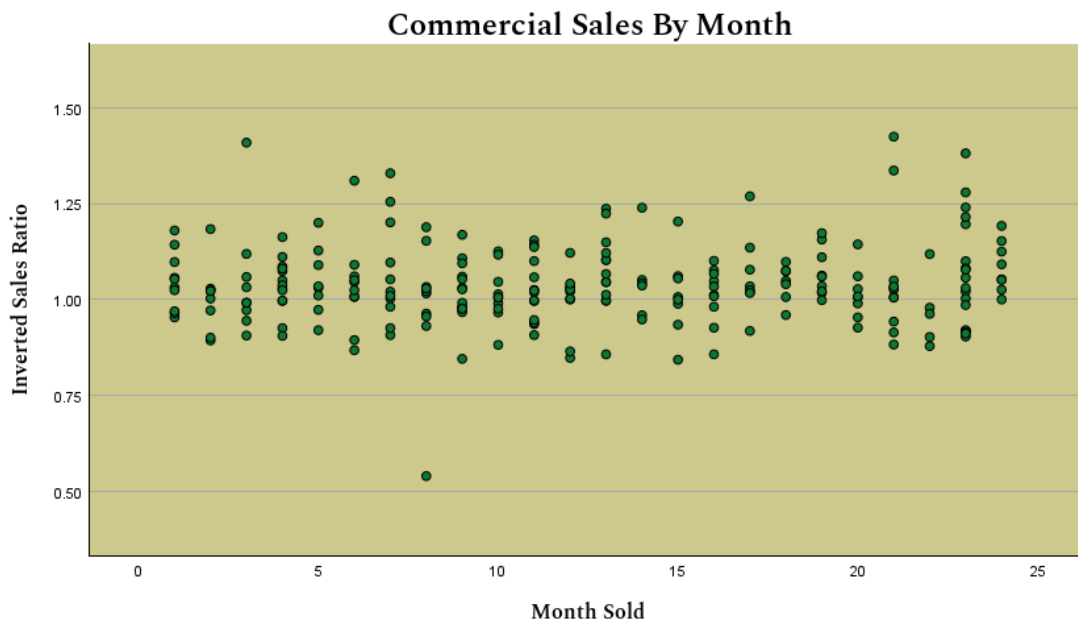


Commercial Coefficient of Dispersion

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 Arapahoe County was calculated at 6.75% 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.

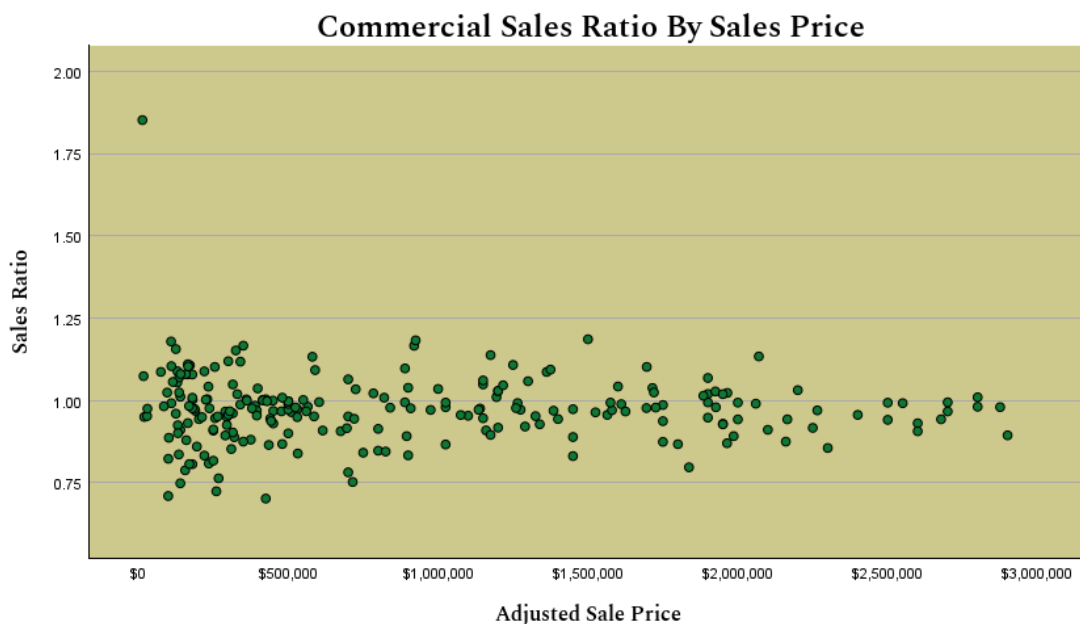
Commercial Market (Time) Adjustments

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 24 - month period of sales. There does not appear to be a significant effect of time on Arapahoe 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 Arapahoe County was calculated at 1.00, 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 Arapahoe 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.

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 most commercial sold and unsold properties are treated similarly. Abstract 2212, 2220 have large variances and should be noted. 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 312 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).

Arapahoe 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
- 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 Arapahoe 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.

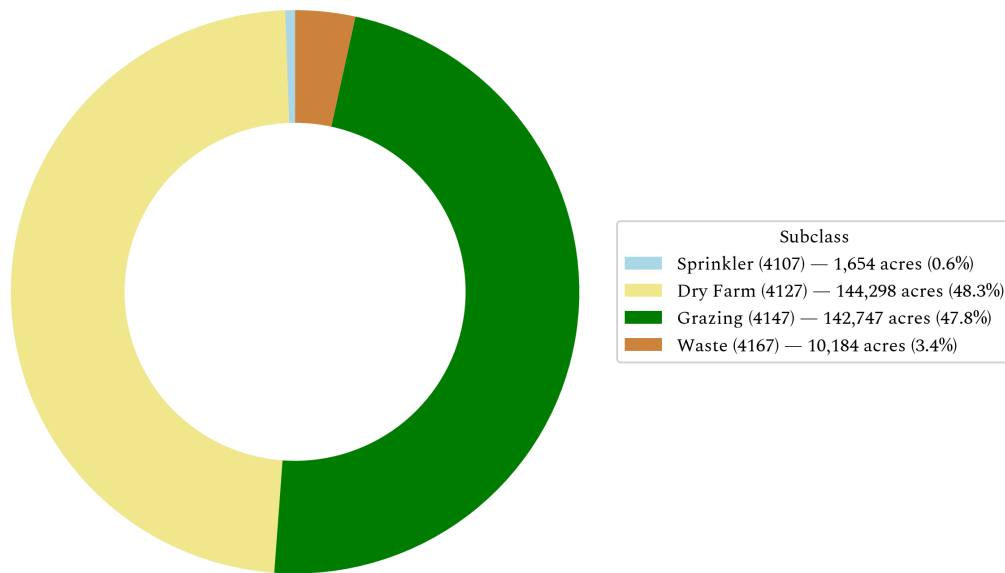
Recommendations

None

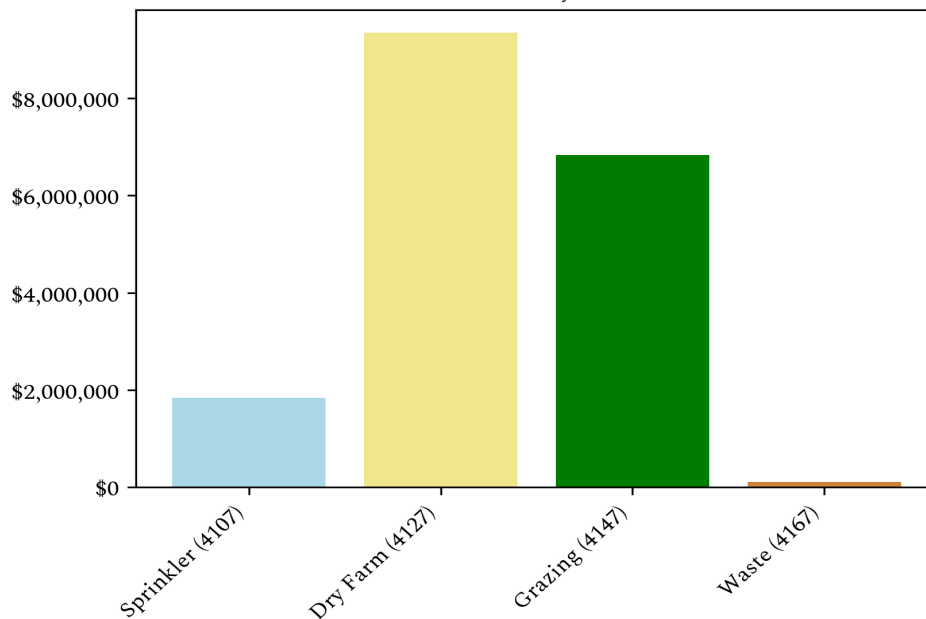
Agricultural Land Breakdown

Abstract	Class	Acres	Actual Value	Actual Value/Acre	Assessed Value
4107	Sprinkler	1,653.92	\$1,838,107	\$1,111.36	\$496,289
4127	Dry Farm	144,297.51	\$9,350,518	\$64.80	\$2,525,640
4147	Grazing	142,747.13	\$6,831,864	\$47.86	\$1,844,603
4167	Waste	10,184.13	\$101,841	\$10.00	\$27,497

Acres by Subclass



Actual Value by Subclass



6. Agriculture Non-Integral

Methodology

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

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

For Residential Improvements Not Integral to Agriculture

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

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

Conclusions

Arapahoe 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

Arapahoe 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 Arapahoe 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, including Arapahoe, a statistically valid sample of audited schedules was selected to confirm compliance with state laws and Property Tax Administrator guidelines.

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

- Public record documents
- MLS listing or sold books
- Chamber of Commerce/Economic Development contacts
- 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.

Arapahoe 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
- Lowest or highest quartile of value per square foot
- 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
- Incomplete or inconsistent declarations
- Accounts with greater than 10% change
- New businesses filing for the first time
- Accounts with obvious discrepancies
- Businesses in selected area

Conclusions

Arapahoe 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 Arapahoe 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 Arapahoe County's assessment procedures for compliance with these guidelines for **agricultural and commercial** 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

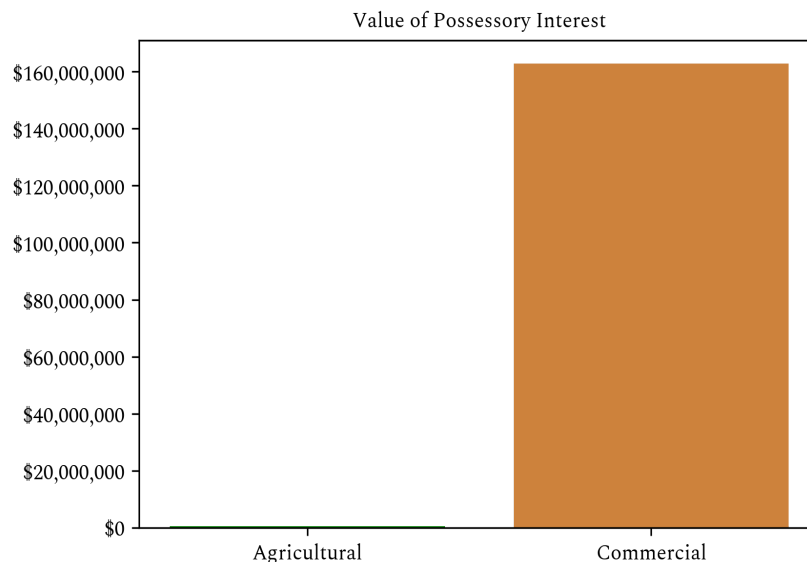
Arapahoe County established an effective discovery process to ensure that possessory interest properties were added to the tax roll. The county consistently applied the proper procedures and valuation methods according to State guidelines, resulting in accurate and compliant assessments.

Recommendations

None

Possessory Interest Breakdown

Possessory Interest Type	Value
Agricultural	\$462,788
Commercial	\$162,837,974



11. Sales Verification

Methodology

As part of the Property Assessment Study, SMDA conducted an evaluation of Arapahoe 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 Arapahoe County's sales verification practices for the 2025 valuation period by reviewing a selection of sales from Arapahoe County's master sales list. A total of 66 unqualified and 22 qualified sales were analyzed. Of these, the 66 unqualified sales provided clear and supportable reasons for disqualification, while the 22 qualified sales were corrected to be unqualified.

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.

Conclusions

Based on SMDA's review, Arapahoe County performed adequately in verifying sales and applying statutory requirements in most cases. However, a number of sales were initially qualified in error; these have since been identified and corrected.

Recommendations

Establish a quality control process that systematically reviews both qualified and unqualified sales to confirm accuracy and flag potential misclassifications.

12. Subdivision Discounting

Methodology

SMDA reviewed Arapahoe 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

Arapahoe 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.

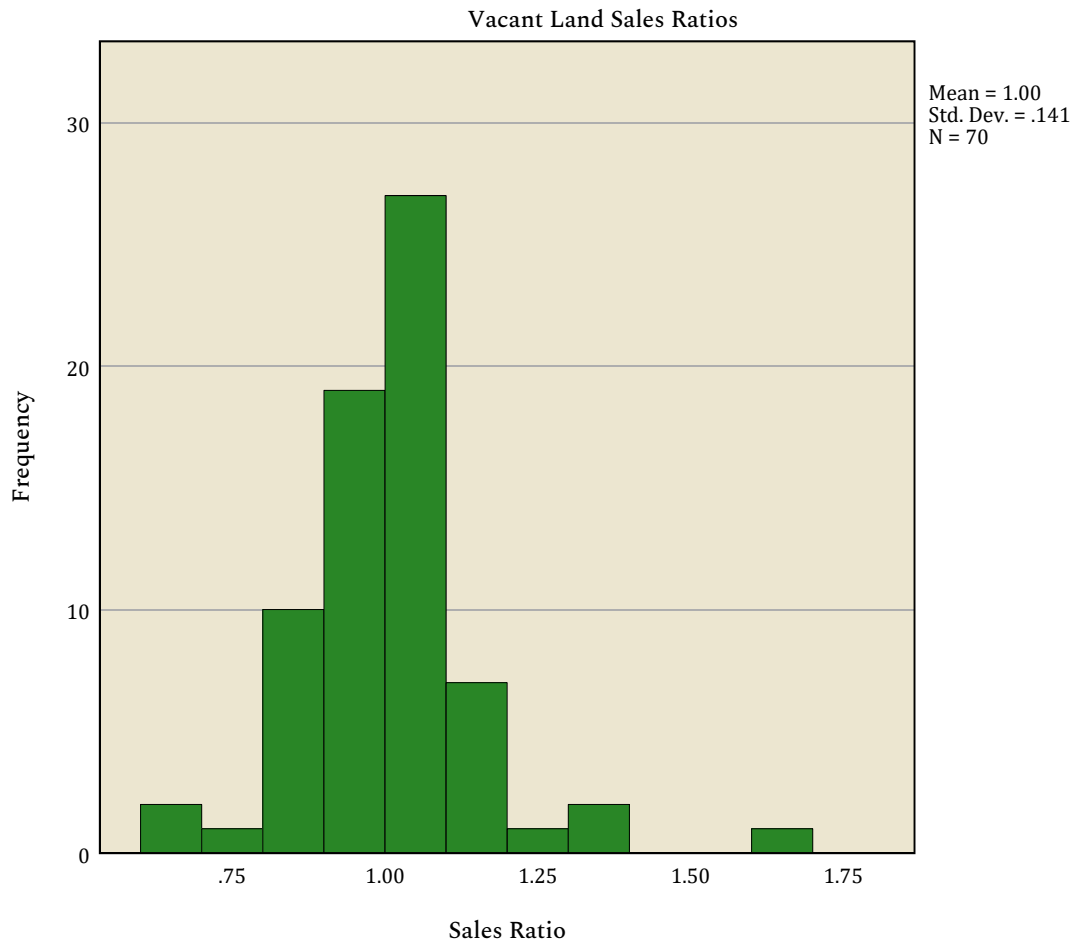
Recommendations

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
74	1.000	.089

Ratio Statistics

Ratio Statistics for Current Total
Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
-.020	1.039

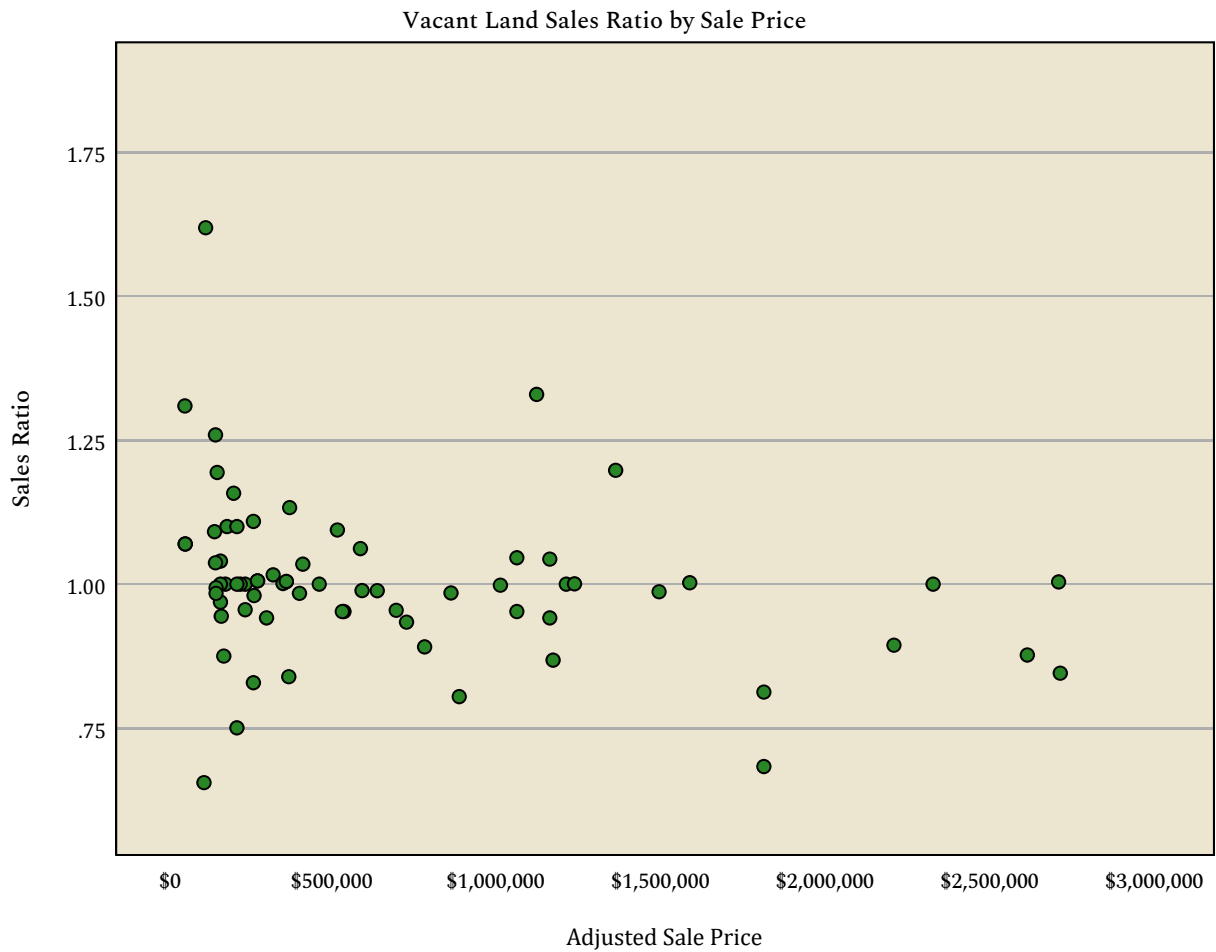
OVERALL Vacant Land: Sales Price by Sales Ratio

Regression

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.005	.018		56.383	<.001
	Adjusted Sale Price	-5.498E-9	.000	-.107	-.915	.363

a. Dependent Variable: Sales Ratio

Graph



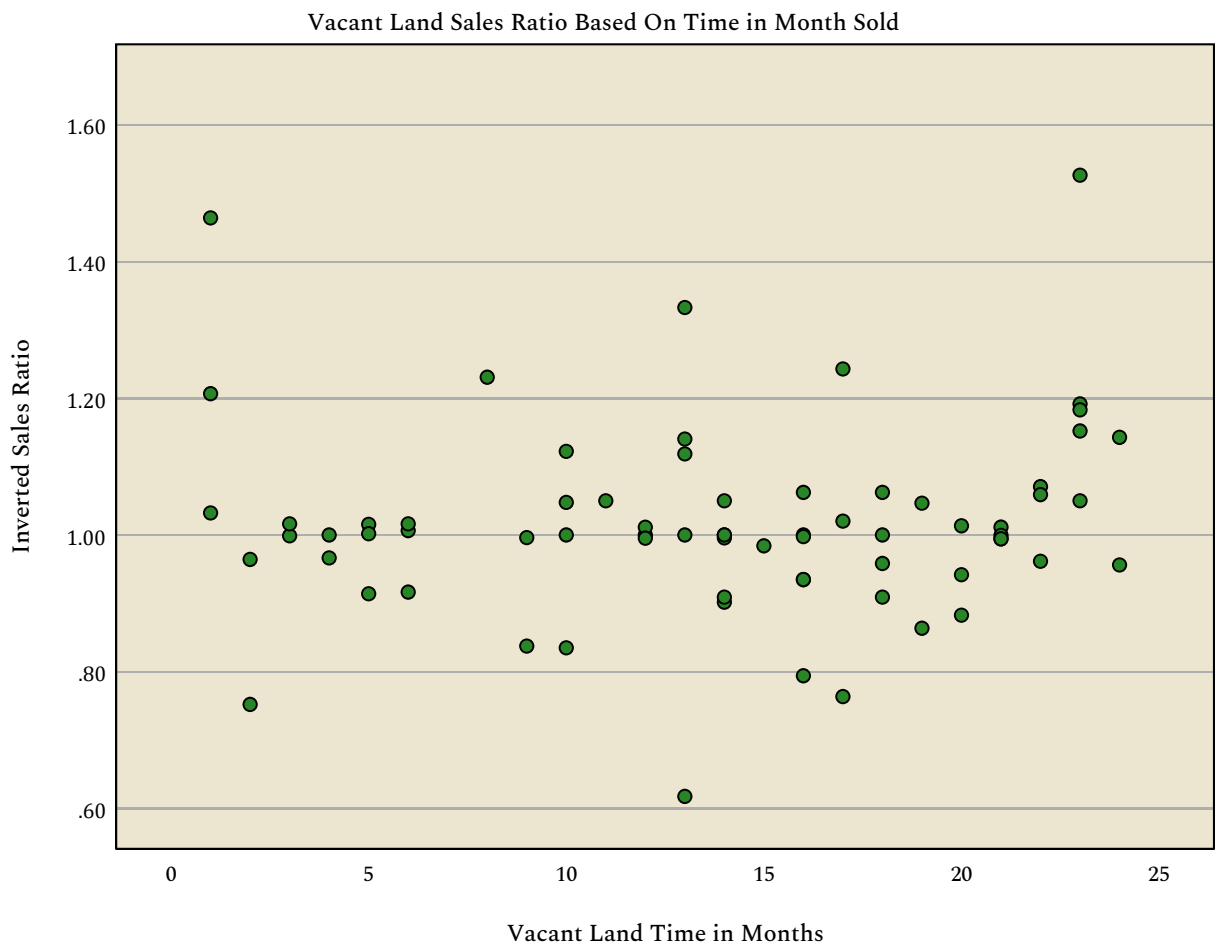
OVERALL Vacant Land: Months by Inverted Sales Ratio

Regression

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.994	.038		25.969	<.001
	Vacant Land Time in Months	.002	.002	.093	.789	.433

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	74	74	74
	Missing	0	0	0
Mean		\$755,442.26	\$1,070,326.99	\$314,884.73
Median		\$310,100.00	\$395,805.50	\$50,000.00
Percentiles	2.5	\$38,925.00	\$46,000.00	-\$182,209.12
	25	\$173,040.00	\$182,750.00	\$0.00
	50	\$310,100.00	\$395,805.50	\$50,000.00
	75	\$809,613.00	\$1,123,584.00	\$278,314.50
	97.5	\$6,704,500.00	\$8,113,837.50	\$3,228,896.50

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	5184
Mann-Whitney U	33199.500
Wilcoxon W	13183955.500
Test Statistic	33199.500
Standard Error	11118.425
Standardized Test Statistic	-9.928
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	.004

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

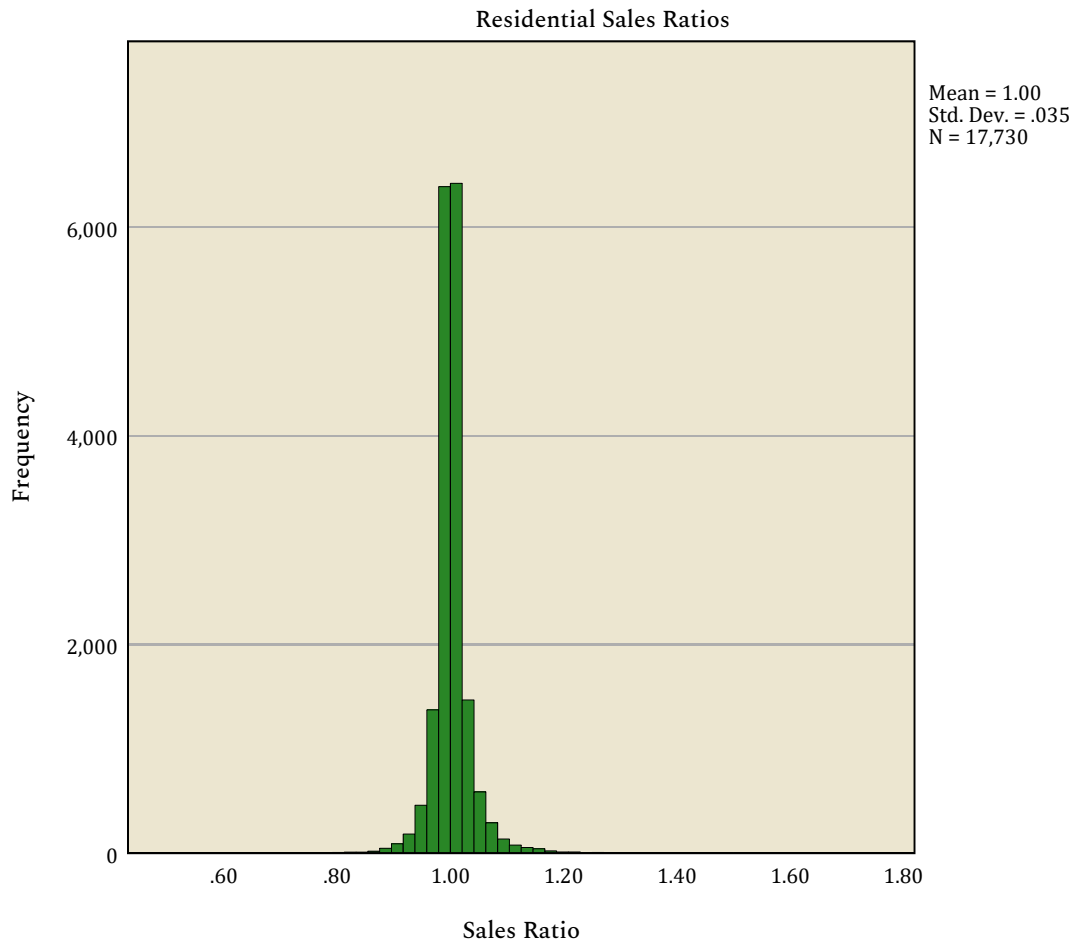
Difference in Total Value across Vacant Land Sold vs. Unsold

Independent-Samples Mann-Whitney U Test Summary

Total N	5701
Mann-Whitney U	95146.500
Wilcoxon W	16098799.500
Test Statistic	95146.500
Standard Error	10244.439
Standardized Test Statistic	-2.861
Asymptotic Sig.(2-sided test)	.004

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
17935	1.000	.019

Ratio Statistics

Ratio Statistics for Current Total
Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
-.002	1.009

OVERALL Residential: Sales Price by Sales Ratio

Regression

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.003	.000		3374.282	<.001
	Adjusted Sale Price	-1.319E-9	.000	-.073	-9.802	<.001

a. Dependent Variable: Sales Ratio

Graph



OVERALL Residential: Months by Inverted Sales Ratio

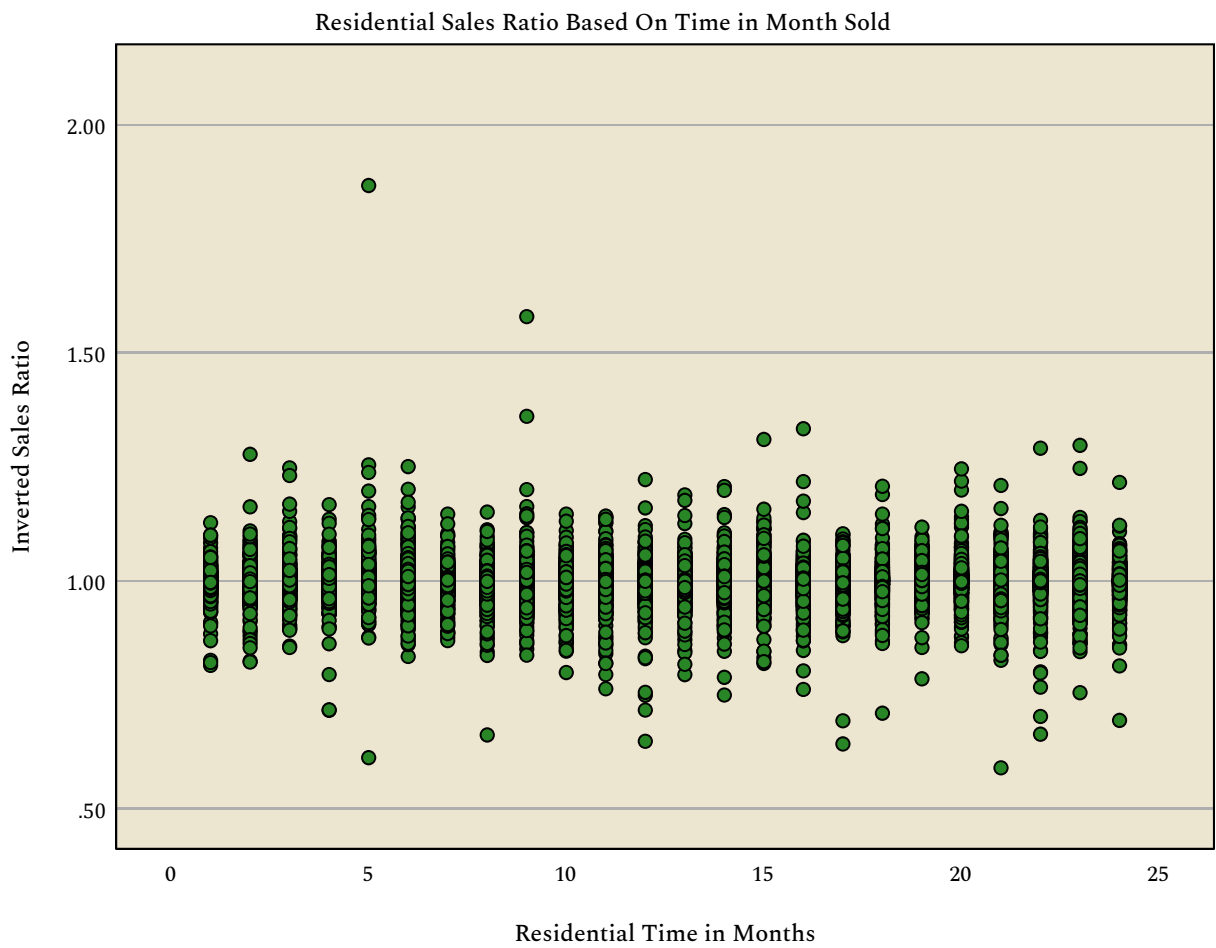
Regression

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.000	.001		1235.097	<.001
	Residential Time in Months	-3.447E-5	.000	-.005	-.605	.545

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	17931	17931	17931
	Missing	4	4	4
Mean		\$356.76	\$354.13	1.04
Median		\$328.40	\$320.64	.97
Percentiles	2.5	\$206.94	\$226.75	.84
	25	\$286.61	\$279.87	.93
	50	\$328.40	\$320.64	.97
	75	\$390.72	\$386.08	1.03
	97.5	\$651.79	\$686.32	1.40

Frequencies

		Statistics		
		Previous Total Value	Current Total Value	Difference in Total Value
N	Valid	17935	17935	17934
	Missing	0	0	1
Mean		\$677,284.79	\$683,748.11	\$11,995.14
Median		\$544,100.00	\$528,800.00	-\$12,300.00
Percentiles	2.5	\$205,740.00	\$225,920.00	-\$105,362.50
	25	\$427,500.00	\$418,600.00	-\$36,800.00
	50	\$544,100.00	\$528,800.00	-\$12,300.00
	75	\$674,300.00	\$678,300.00	\$17,800.00
	97.5	\$1,786,940.00	\$1,948,640.00	\$328,634.38

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	<.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 Residential Sold vs Unsold

Independent-Samples Mann-Whitney U Test Summary

Total N	185532
Mann-Whitney U	1019361711.500
Wilcoxon W	15564633231.500
Test Statistic	1019361711.500
Standard Error	6283642.466
Standardized Test Statistic	-40.984
Asymptotic Sig.(2-sided test)	<.001

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	<.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 Residential Sold vs Unsold

Independent-Samples Mann-Whitney U Test Summary

Total N	185541
Mann-Whitney U	1241401442.500
Wilcoxon W	15711043112.500
Test Statistic	1241401442.500
Standard Error	6369839.090
Standardized Test Statistic	-11.098
Asymptotic Sig.(2-sided test)	<.001

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	<.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 Price Per Foot across Residential Sold vs Unsold

Independent-Samples Mann-Whitney U Test Summary

Total N	185541
Mann-Whitney U	1039693833.000
Wilcoxon W	15634469658.000
Test Statistic	1039693833.000
Standard Error	6229843.470
Standardized Test Statistic	-34.570
Asymptotic Sig.(2-sided test)	<.001

OVERALL Residential: Unit Value Comparison

Summarize

Sold vs Unsold

Difference in Price Per Foot

Residential Sold vs Unsold	N	Median	Mean
SOLD	16214	.97	1.00
UNSOLD	179093	.95	.99
Total	195307	.95	.99

OVERALL Residential: Neighborhood Group

Ratio Statistics

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Median	Coefficient of Dispersion
	61	1.000	.032
1018.00	54	1.001	.007
102.00	104	1.000	.017
1021.00	35	1.000	.011
1040.00	38	1.001	.024
1041.00	30	1.007	.021
1046.00	37	.996	.027
1047.00	38	1.000	.025
1054.00	34	1.000	.013
1090.00	74	1.001	.039
1097.00	49	.996	.027
11.00	90	1.000	.014
110.00	31	1.000	.012
111.00	109	1.000	.013
112.00	53	1.000	.015
1172.00	57	1.001	.021
1183.00	30	.998	.026
1291.00	33	1.000	.010
1324.00	55	1.000	.010
1386.00	32	1.000	.014
149.00	66	1.000	.008
1564.00	78	1.000	.011
1586.00	53	1.000	.012
1588.00	60	.998	.016
1589.00	70	1.000	.016
1590.00	67	1.001	.010
1591.00	88	.999	.024
1647.00	36	1.000	.017

OVERALL Residential: Neighborhood Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Median	Coefficient of Dispersion
165.00	30	1.001	.016
1654.00	32	1.000	.016
1659.00	51	.998	.020
1725.00	56	1.000	.026
174.00	81	1.001	.033
1751.00	33	.997	.009
1763.00	38	1.000	.014
1766.00	45	.998	.016
1808.00	46	1.000	.008
1819.00	43	1.011	.021
1834.00	44	1.011	.035
1860.00	37	1.005	.015
1863.00	39	1.001	.013
1866.00	50	1.000	.013
1875.00	34	1.008	.025
1876.00	36	1.000	.023
1900.00	35	.991	.032
1903.00	38	1.000	.022
1918.00	35	.998	.024
1923.00	101	1.000	.016
1936.00	34	1.000	.012
1940.00	45	.999	.011
1942.00	31	.998	.010
1956.00	42	1.001	.017
1978.00	37	.999	.016
1982.00	219	.999	.028
1983.00	66	1.004	.037
1990.00	38	.998	.014
2000.00	41	1.000	.015

OVERALL Residential: Neighborhood Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Median	Coefficient of Dispersion
2002.00	30	1.000	.007
2016.00	67	1.006	.022
2017.00	43	1.000	.013
2022.00	67	1.003	.019
2024.00	30	1.001	.008
2060.00	81	1.000	.012
2074.00	49	.999	.017
2082.00	274	1.005	.040
2083.00	37	1.002	.017
2085.00	112	1.016	.030
2088.00	70	1.007	.038
2094.00	34	.999	.035
2101.00	33	1.000	.007
2107.00	39	1.000	.016
2110.00	32	1.002	.014
2126.00	42	.997	.023
2131.00	52	1.000	.016
2133.00	41	1.010	.034
2161.00	69	.999	.017
2172.00	30	.999	.007
2175.00	49	1.000	.013
218.00	125	1.000	.028
2181.00	46	.999	.025
2238.00	31	1.000	.017
2250.00	50	1.000	.014
226.00	56	1.003	.023
2270.00	46	1.000	.023
2276.00	34	1.001	.018
2300.00	43	.999	.016

OVERALL Residential: Neighborhood Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Median	Coefficient of Dispersion
231.00	41	.997	.053
2314.00	41	1.000	.013
2319.00	69	1.000	.014
2320.00	39	1.000	.005
2327.00	99	1.000	.012
2342.00	34	.997	.023
2363.00	57	1.000	.013
2405.00	47	1.000	.010
2414.00	204	1.004	.037
2436.00	74	1.000	.010
2453.00	33	1.000	.008
2458.00	47	.976	.051
2465.00	49	1.000	.028
247.00	93	.999	.014
2473.00	43	.999	.028
248.00	59	1.000	.017
2500.00	62	1.000	.013
2516.00	65	1.000	.010
2549.00	44	1.001	.009
26.00	34	1.000	.009
2613.00	35	1.000	.016
263.00	31	.999	.014
264.00	38	1.001	.009
265.00	38	1.000	.008
2688.00	32	.999	.018
271.00	34	1.003	.011
273.00	118	1.000	.015
2752.00	88	1.002	.020
2766.00	44	.999	.032

OVERALL Residential: Neighborhood Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Median	Coefficient of Dispersion
277.00	31	1.000	.017
2779.00	46	1.002	.017
2798.00	39	.999	.019
280.00	31	1.001	.013
2801.00	47	.999	.034
285.00	31	1.001	.015
2905.00	48	1.000	.012
2906.00	55	1.000	.010
2939.00	115	1.000	.015
304.00	74	.999	.015
315.00	39	.999	.017
324.00	65	1.001	.021
36.00	46	.999	.015
374.00	32	1.000	.010
380.00	45	.999	.007
391.00	31	1.001	.012
423.00	82	1.002	.032
45.00	40	.999	.026
457.00	33	1.001	.011
479.00	40	1.019	.047
509.00	56	1.001	.012
52.00	38	1.000	.008
570.00	30	.996	.012
593.00	59	1.006	.035
596.00	104	.999	.012
606.00	69	.992	.023
622.00	62	1.021	.041
625.00	61	1.004	.051
626.00	32	1.001	.013

OVERALL Residential: Neighborhood Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Median	Coefficient of Dispersion
628.00	281	1.001	.027
629.00	106	1.027	.035
654.00	41	.998	.011
661.00	36	.997	.031
683.00	44	.996	.018
718.00	51	1.001	.016
732.00	31	.998	.015
763.00	32	1.000	.010
764.00	91	.967	.056
774.00	60	1.000	.011
8.00	36	1.000	.015
844.00	41	1.000	.033
847.00	44	.999	.012
916.00	69	1.014	.020
989.00	30	.998	.018
Overall	8897	1.000	.021

Ratio Statistics

OVERALL Residential: Neighborhood Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
	61	.008	1.001
1018.00	54	-.009	1.000
102.00	104	-.061	1.001
1021.00	35	-.019	1.001
1040.00	38	-.024	1.001
1041.00	30	-.044	1.001
1046.00	37	-.091	1.001
1047.00	38	-.091	1.002
1054.00	34	-.010	1.001
1090.00	74	-.040	1.004
1097.00	49	-.017	1.002
11.00	90	-.020	1.000
110.00	31	-.067	1.001
111.00	109	-.057	1.001
112.00	53	-.053	1.001
1172.00	57	-.034	1.002
1183.00	30	-.041	1.001
1291.00	33	-.010	1.001
1324.00	55	.000	1.001
1386.00	32	-.075	1.001
149.00	66	-.040	1.000
1564.00	78	-.034	1.000
1586.00	53	-.043	1.001
1588.00	60	.008	1.000
1589.00	70	-.067	1.001
1590.00	67	-.037	1.001
1591.00	88	.012	1.000
1647.00	36	-.057	1.001
165.00	30	-.039	1.002

OVERALL Residential: Neighborhood Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
1654.00	32	-.062	1.001
1659.00	51	-.008	1.001
1725.00	56	-.118	1.002
174.00	81	-.063	1.003
1751.00	33	-.021	1.000
1763.00	38	-.060	1.001
1766.00	45	-.116	1.001
1808.00	46	-.022	1.000
1819.00	43	-.089	1.001
1834.00	44	-.014	1.001
1860.00	37	-.088	1.001
1863.00	39	-.039	1.001
1866.00	50	-.034	1.001
1875.00	34	-.418	1.001
1876.00	36	-.001	1.000
1900.00	35	-.012	1.001
1903.00	38	-.011	1.001
1918.00	35	-.052	1.001
1923.00	101	-.048	1.001
1936.00	34	-.044	1.001
1940.00	45	-.045	1.001
1942.00	31	-.024	1.000
1956.00	42	-.032	1.001
1978.00	37	-.014	1.000
1982.00	219	-.100	1.002
1983.00	66	-.092	1.003
1990.00	38	-.060	1.001
2000.00	41	-.047	1.001
2002.00	30	-.034	1.001

OVERALL Residential: Neighborhood Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
2016.00	67	-.297	1.001
2017.00	43	-.018	1.001
2022.00	67	-.032	1.001
2024.00	30	-.022	1.000
2060.00	81	-.006	1.000
2074.00	49	-.044	1.001
2082.00	274	-.052	1.004
2083.00	37	-.025	1.001
2085.00	112	-.054	1.003
2088.00	70	-.020	1.003
2094.00	34	-.198	1.003
2101.00	33	-.066	1.000
2107.00	39	-.013	1.001
2110.00	32	-.006	1.002
2126.00	42	-.075	1.001
2131.00	52	-.141	1.001
2133.00	41	.034	1.000
2161.00	69	-.090	1.001
2172.00	30	-.029	1.000
2175.00	49	-.034	1.000
218.00	125	-.059	1.002
2181.00	46	-.111	1.001
2238.00	31	-.050	1.001
2250.00	50	-.056	1.001
226.00	56	.004	1.001
2270.00	46	-.058	1.001
2276.00	34	-.049	1.000
2300.00	43	-.015	1.000
231.00	41	-.190	1.005

OVERALL Residential: Neighborhood Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
2314.00	41	-.058	1.001
2319.00	69	-.074	1.001
2320.00	39	-.030	1.000
2327.00	99	.001	1.000
2342.00	34	-.013	1.001
2363.00	57	-.031	1.001
2405.00	47	-.022	1.001
2414.00	204	-.036	1.002
2436.00	74	-.003	1.000
2453.00	33	-.034	1.001
2458.00	47	-.082	1.003
2465.00	49	-.044	1.004
247.00	93	-.038	1.000
2473.00	43	-.089	1.002
248.00	59	-.010	1.001
2500.00	62	-.003	1.000
2516.00	65	-.007	1.000
2549.00	44	-.046	1.001
26.00	34	.003	1.000
2613.00	35	-.049	1.001
263.00	31	-.055	1.003
264.00	38	-.010	1.001
265.00	38	-.010	1.001
2688.00	32	-.063	1.001
271.00	34	-.030	1.001
273.00	118	-.068	1.001
2752.00	88	-.074	1.001
2766.00	44	-.150	1.002
277.00	31	-.100	1.001

OVERALL Residential: Neighborhood Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
2779.00	46	-.091	1.001
2798.00	39	-.037	1.001
280.00	31	-.013	1.000
2801.00	47	-.064	1.002
285.00	31	-.099	1.002
2905.00	48	-.045	1.000
2906.00	55	.004	1.000
2939.00	115	-.080	1.001
304.00	74	-.074	1.001
315.00	39	-.054	1.002
324.00	65	-.150	1.001
36.00	46	-.056	1.001
374.00	32	-.039	1.001
380.00	45	-.033	1.000
391.00	31	-.053	1.001
423.00	82	-.027	1.002
45.00	40	-.078	1.002
457.00	33	-.025	1.001
479.00	40	-.103	1.004
509.00	56	-.026	1.001
52.00	38	-.012	1.000
570.00	30	-.039	1.001
593.00	59	-.043	1.002
596.00	104	-.028	1.001
606.00	69	.023	1.000
622.00	62	-.365	1.003
625.00	61	-.977	1.004
626.00	32	-.015	1.004
628.00	281	-.006	1.001

OVERALL Residential: Neighborhood Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
629.00	106	-.214	1.002
654.00	41	-.051	1.001
661.00	36	-.181	1.003
683.00	44	.039	1.000
718.00	51	-.032	1.001
732.00	31	-.005	1.000
763.00	32	-.052	1.001
764.00	91	-.024	1.002
774.00	60	-.039	1.000
8.00	36	-.016	1.002
844.00	41	.033	1.000
847.00	44	.008	1.000
916.00	69	-.021	1.000
989.00	30	-.132	1.001
Overall	8897	-.002	1.001

OVERALL Residential: Number of Sales by Value Group

Frequencies

Statistics

Groups of Value

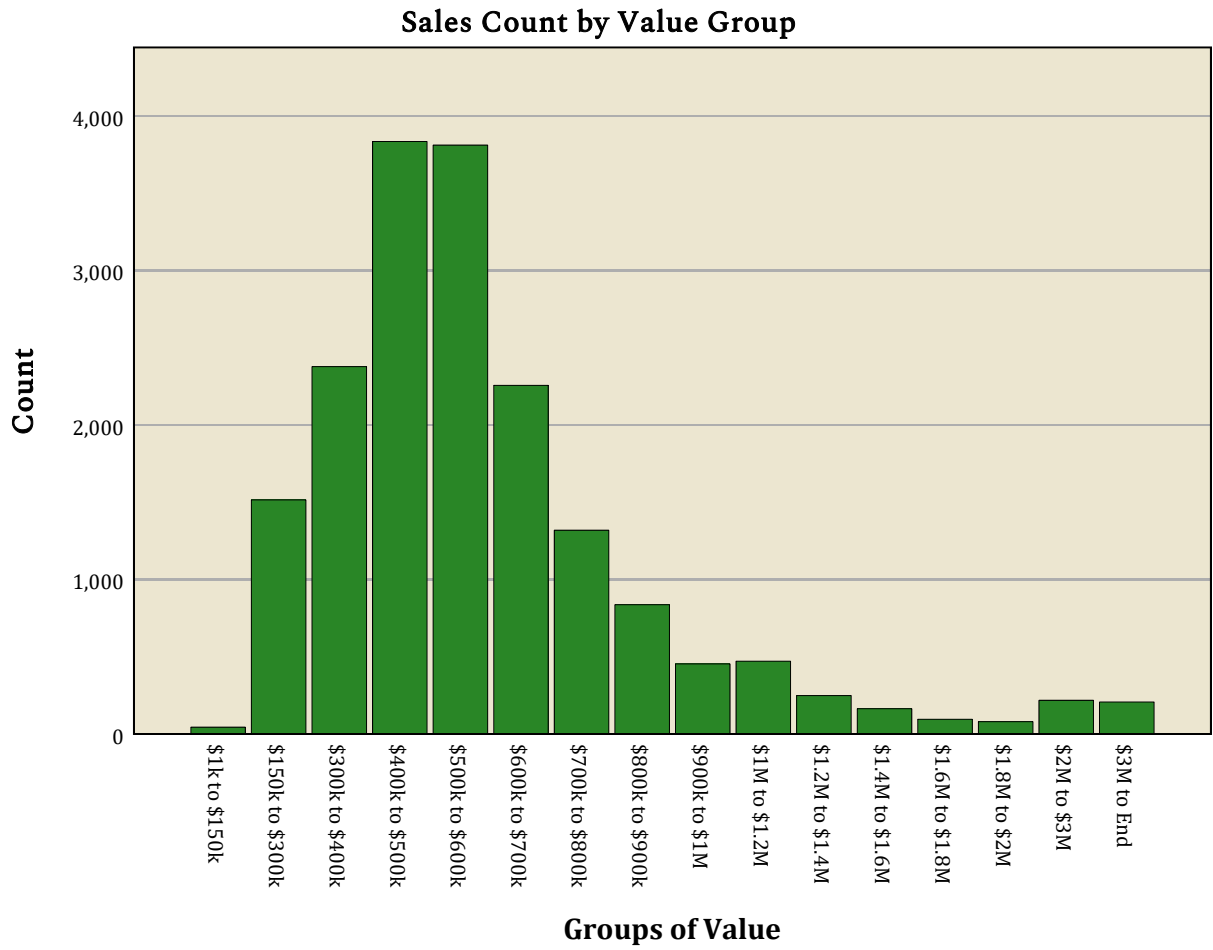
N	Valid	17935
	Missing	0

Groups of Value

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	\$1k to \$150k	44	.2	.2	.2
	\$150k to \$300k	1515	8.4	8.4	8.7
	\$300k to \$400k	2378	13.3	13.3	22.0
	\$400k to \$500k	3835	21.4	21.4	43.3
	\$500k to \$600k	3812	21.3	21.3	64.6
	\$600k to \$700k	2257	12.6	12.6	77.2
	\$700k to \$800k	1319	7.4	7.4	84.5
	\$800k to \$900k	837	4.7	4.7	89.2
	\$900k to \$1M	454	2.5	2.5	91.7
	\$1M to \$1.2M	471	2.6	2.6	94.4
	\$1.2M to \$1.4M	249	1.4	1.4	95.7
	\$1.4M to \$1.6M	164	.9	.9	96.7
	\$1.6M to \$1.8M	95	.5	.5	97.2
	\$1.8M to \$2M	80	.4	.4	97.6
	\$2M to \$3M	218	1.2	1.2	98.8
	\$3M to End	207	1.2	1.2	100.0
	Total		17935	100.0	100.0

Graph

OVERALL Residential: Number of Sales by Value Group



OVERALL Residential: Central Tendencies by Value Group

Ratio Statistics

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Median	Coefficient of Dispersion
\$1k to \$150k	44	1.001	.093
\$150k to \$300k	1515	1.000	.029
\$300k to \$400k	2378	1.000	.020
\$400k to \$500k	3835	1.000	.018
\$500k to \$600k	3812	1.000	.016
\$600k to \$700k	2257	1.000	.016
\$700k to \$800k	1319	1.000	.017
\$800k to \$900k	837	1.000	.018
\$900k to \$1M	454	1.000	.017
\$1M to \$1.2M	471	1.000	.024
\$1.2M to \$1.4M	249	.999	.019
\$1.4M to \$1.6M	164	.999	.025
\$1.6M to \$1.8M	95	1.000	.025
\$1.8M to \$2M	80	.999	.031
\$2M to \$3M	218	1.000	.021
\$3M to End	207	1.000	.031
Overall	17935	1.000	.019

Ratio Statistics

OVERALL Residential: Central Tendencies by Value Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
\$1k to \$150k	44	.137	1.007
\$150k to \$300k	1515	-.040	1.003
\$300k to \$400k	2378	-.064	1.001
\$400k to \$500k	3835	-.070	1.001
\$500k to \$600k	3812	-.084	1.001
\$600k to \$700k	2257	-.156	1.001
\$700k to \$800k	1319	-.246	1.001
\$800k to \$900k	837	-.282	1.001
\$900k to \$1M	454	-.296	1.001
\$1M to \$1.2M	471	-.186	1.002
\$1.2M to \$1.4M	249	-.226	1.002
\$1.4M to \$1.6M	164	-.627	1.003
\$1.6M to \$1.8M	95	-.598	1.003
\$1.8M to \$2M	80	-.596	1.003
\$2M to \$3M	218	-.155	1.010
\$3M to End	207	-.023	1.041
Overall	17935	-.002	1.009

OVERALL Residential: Sales by Building Area Group

Frequencies

Statistics

Groups by Building Area

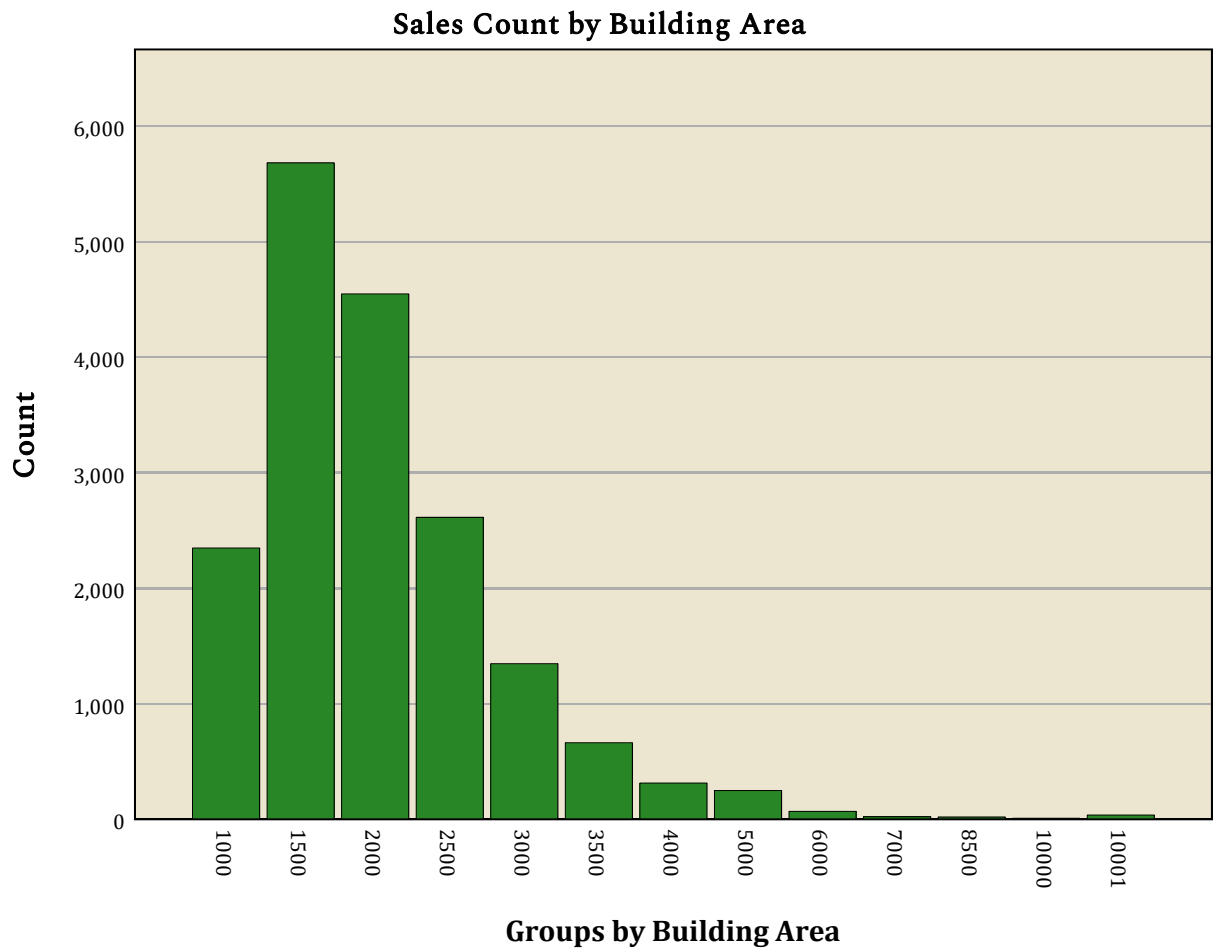
N	Valid	17935
	Missing	0

Groups by Building Area

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1000	2350	13.1	13.1	13.1
	1500	5685	31.7	31.7	44.8
	2000	4550	25.4	25.4	70.2
	2500	2615	14.6	14.6	84.8
	3000	1348	7.5	7.5	92.3
	3500	664	3.7	3.7	96.0
	4000	315	1.8	1.8	97.7
	5000	249	1.4	1.4	99.1
	6000	69	.4	.4	99.5
	7000	23	.1	.1	99.6
	8500	20	.1	.1	99.7
	10000	10	.1	.1	99.8
	10001	37	.2	.2	100.0
	Total	17935	100.0	100.0	

Graph

OVERALL Residential: Sales by Building Area Group



OVERALL Residential: Central Tendencies by Area Group

Ratio Statistics

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Median	Coefficient of Dispersion
1000	2350	1.000	.022
1500	5685	1.000	.019
2000	4550	1.000	.017
2500	2615	1.000	.017
3000	1348	1.001	.020
3500	664	1.000	.022
4000	315	1.001	.026
5000	249	1.000	.020
6000	69	1.000	.016
7000	23	1.000	.010
8500	20	1.000	.007
10000	10	1.000	.041
10001	37	.946	.143
Overall	17935	1.000	.019

Ratio Statistics

OVERALL Residential: Central Tendencies by Area Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
1000	2350	-.002	1.001
1500	5685	-.007	1.001
2000	4550	-.004	1.001
2500	2615	-.001	1.001
3000	1348	-.005	1.001
3500	664	-.001	1.001
4000	315	.003	1.001
5000	249	-.006	1.003
6000	69	-.010	1.002
7000	23	.011	.998
8500	20	.004	1.000
10000	10	-.005	1.023
10001	37	.018	.969
Overall	17935	-.002	1.009

OVERALL Residential: Sales by Economic Area Group

Frequencies

Statistics

economic_area

N	Valid	17935
	Missing	0

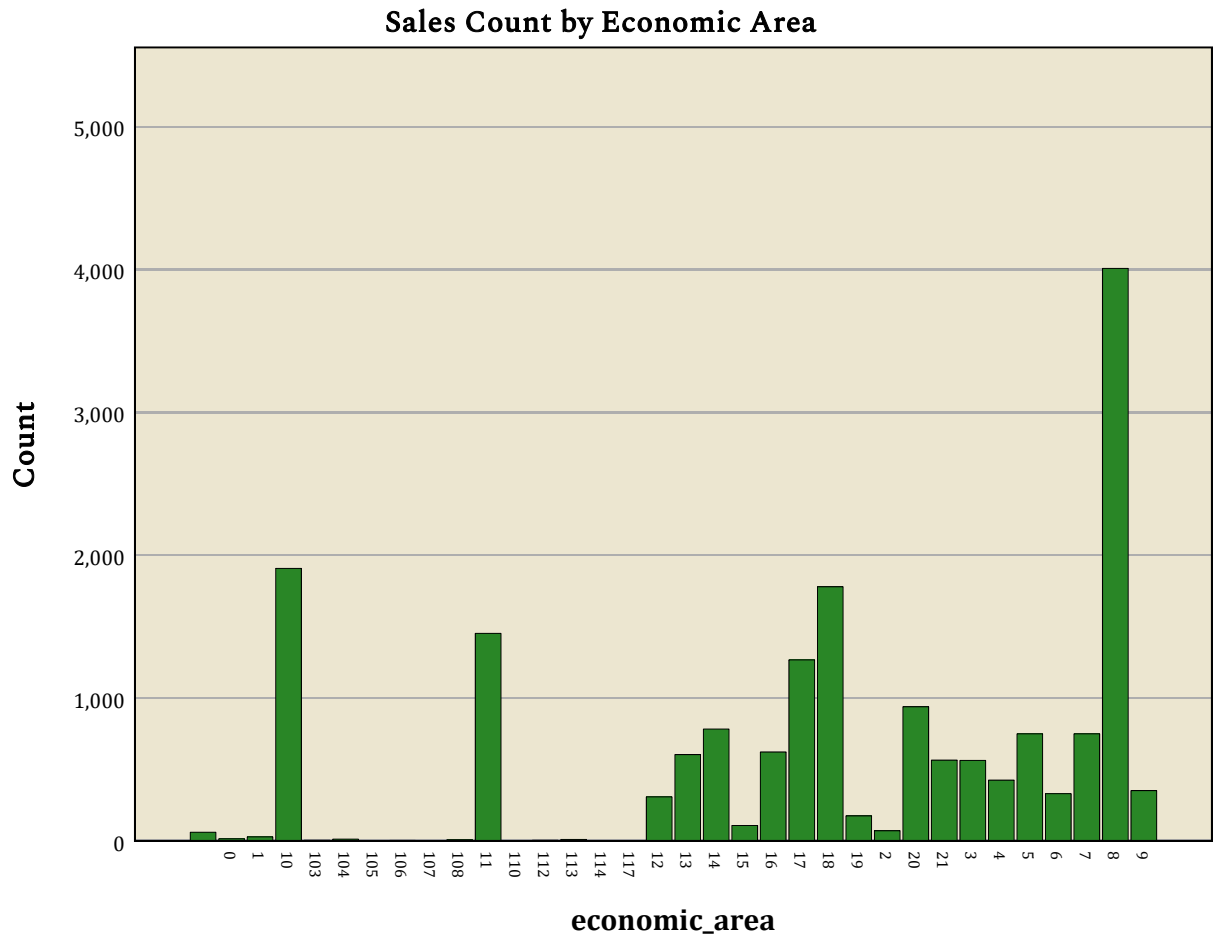
		economic_area			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		61	.3	.3	.3
	0	15	.1	.1	.4
	1	29	.2	.2	.6
	10	1908	10.6	10.6	11.2
	103	5	.0	.0	11.3
	104	13	.1	.1	11.3
	105	1	.0	.0	11.3
	106	4	.0	.0	11.4
	107	1	.0	.0	11.4
	108	8	.0	.0	11.4
	11	1454	8.1	8.1	19.5
	110	2	.0	.0	19.5
	112	5	.0	.0	19.5
	113	11	.1	.1	19.6
	114	2	.0	.0	19.6
	117	2	.0	.0	19.6
	12	309	1.7	1.7	21.4
	13	605	3.4	3.4	24.7
	14	784	4.4	4.4	29.1
	15	108	.6	.6	29.7
	16	623	3.5	3.5	33.2
	17	1268	7.1	7.1	40.2
	18	1780	9.9	9.9	50.2
	19	176	1.0	1.0	51.2
	2	72	.4	.4	51.6

OVERALL Residential: Sales by Economic Area Group

economic_area				
	Frequency	Percent	Valid Percent	Cumulative Percent
20	940	5.2	5.2	56.8
21	566	3.2	3.2	59.9
3	564	3.1	3.1	63.1
4	426	2.4	2.4	65.5
5	750	4.2	4.2	69.7
6	331	1.8	1.8	71.5
7	750	4.2	4.2	75.7
8	4009	22.4	22.4	98.0
9	353	2.0	2.0	100.0
Total	17935	100.0	100.0	

Graph

OVERALL Residential: Sales by Economic Area Group



OVERALL Residential: Central Tendencies by Economic Area Group

Ratio Statistics

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Median	Coefficient of Dispersion
	61	1.000	.032
0	15	1.042	.139
1	29	1.000	.016
10	1908	1.000	.015
103	5	.950	.041
104	13	.933	.065
105	1	.878	.000
106	4	.852	.211
107	1	1.210	.000
108	8	.923	.161
11	1454	1.002	.023
110	2	.957	.012
112	5	.913	.052
113	11	.908	.061
114	2	.903	.091
117	2	.728	.328
12	309	1.000	.013
13	605	1.000	.016
14	784	1.000	.014
15	108	1.000	.026
16	623	1.000	.020
17	1268	1.000	.015
18	1780	1.000	.018
19	176	1.000	.014
2	72	1.000	.014
20	940	1.000	.015
21	566	1.000	.014
3	564	1.000	.022

OVERALL Residential: Central Tendencies by Economic Area Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Median	Coefficient of Dispersion
4	426	1.000	.022
5	750	1.000	.016
6	331	1.000	.025
7	750	1.000	.021
8	4009	1.000	.021
9	353	1.000	.032
Overall	17935	1.000	.019

Ratio Statistics

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
	61	.008	1.001
0	15	-.006	1.422
1	29	-.009	1.001
10	1908	.000	1.000
103	5	-.015	1.020
104	13	-.055	1.140
105	1	.	1.000
106	4	-.159	1.250
107	1	.	1.000
108	8	.001	1.011
11	1454	-.002	1.001
110	2	.267	1.000
112	5	.016	.958
113	11	.002	1.010
114	2	.068	.939
117	2	.152	.778

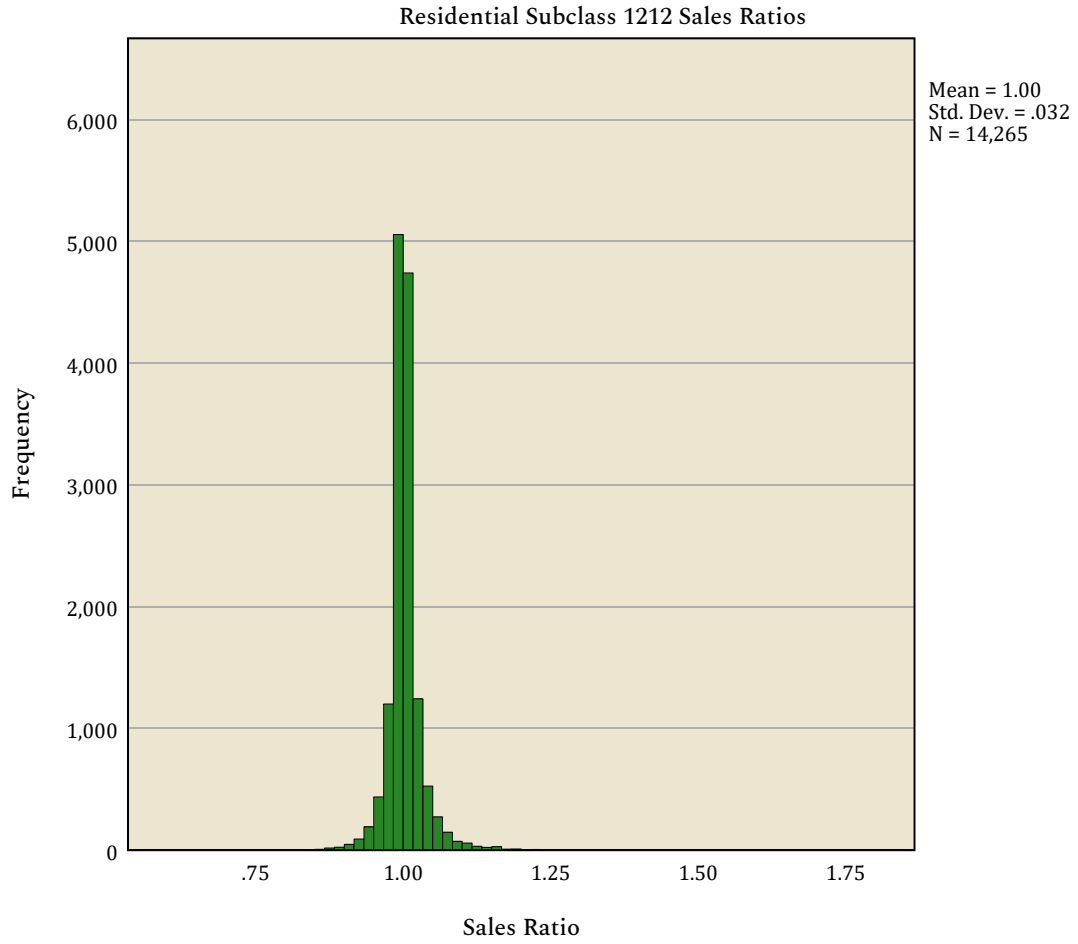
OVERALL Residential: Central Tendencies by Economic Area Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
12	309	-.007	1.003
13	605	.001	1.000
14	784	-.006	1.004
15	108	-.018	1.007
16	623	.000	1.002
17	1268	-.008	1.001
18	1780	-.002	1.001
19	176	.004	1.000
2	72	-.003	1.001
20	940	.000	1.000
21	566	.000	1.001
3	564	.001	1.013
4	426	-.045	1.004
5	750	-.004	1.001
6	331	-.014	1.004
7	750	-.012	1.002
8	4009	-.003	1.001
9	353	-.021	1.003
Overall	17935	-.002	1.009

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
14437	1.000	.017

Ratio Statistics

Ratio Statistics for Current Total
Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
.000	1.001

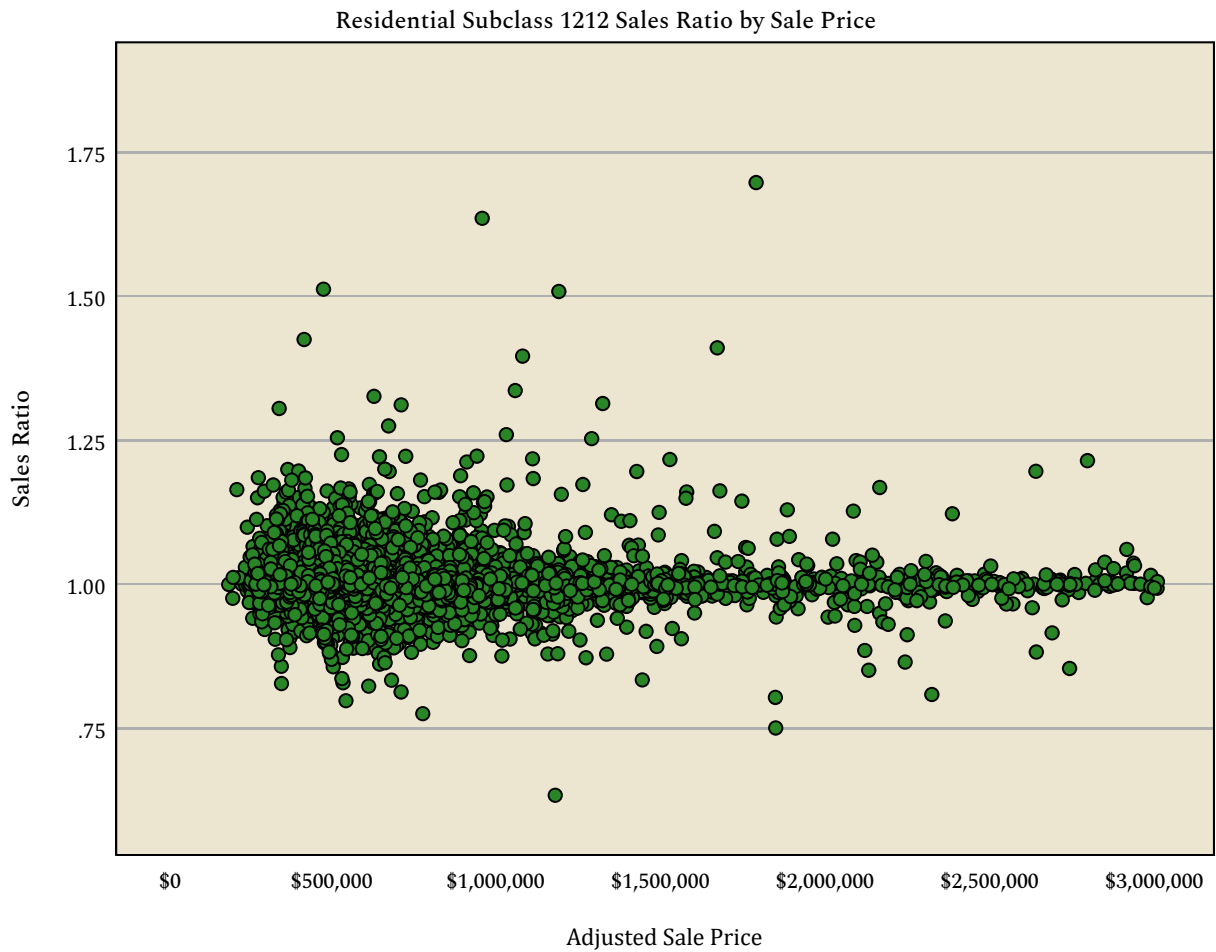
Residential Subclass 1212: Sales Price by Sales Ratio

Regression

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.004	.000		2451.554	<.001
	Adjusted Sale Price	-1.355E-9	.000	-.025	-3.022	.003

a. Dependent Variable: Sales Ratio

Graph



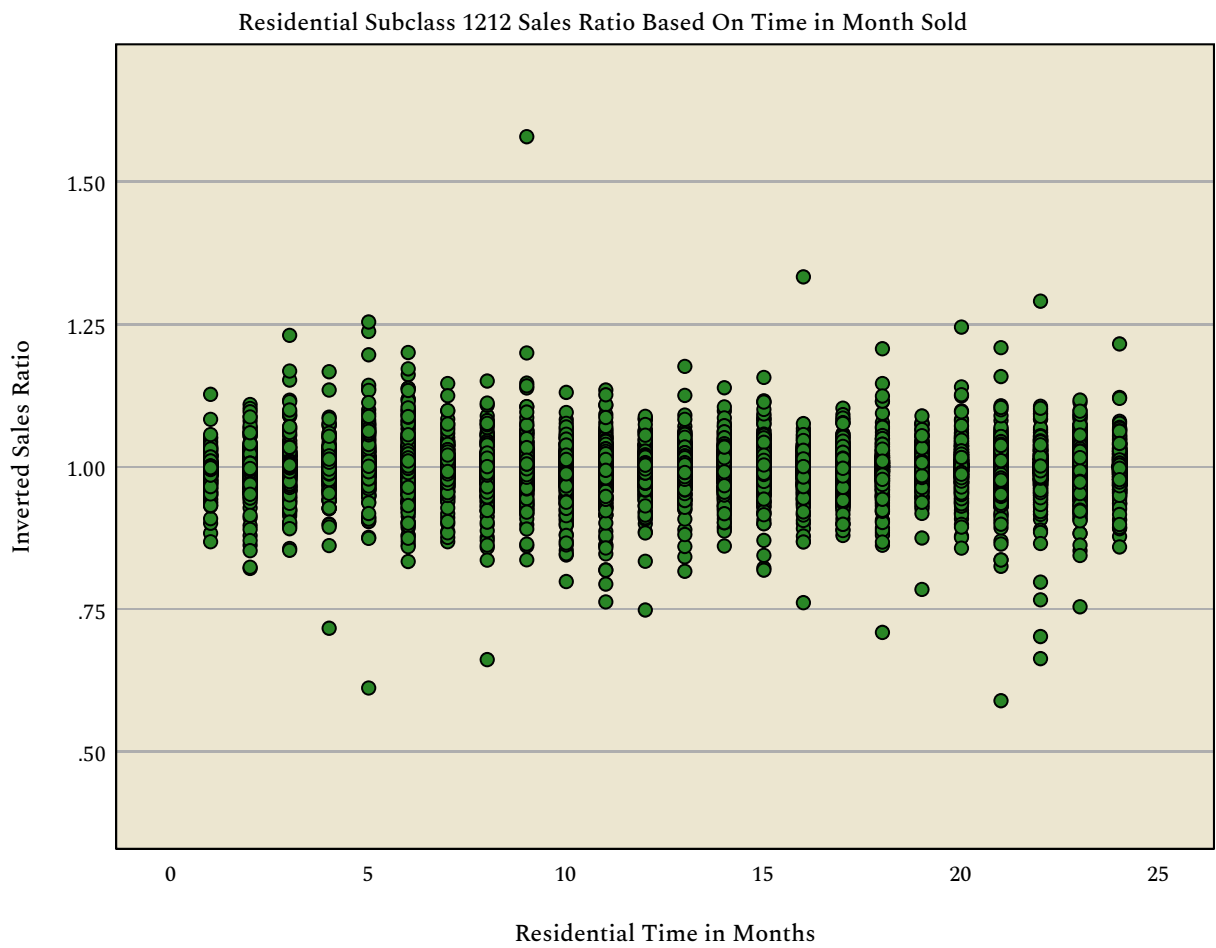
Residential Subclass 1212: Months by Inverted Sales Ratio

Regression

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.999	.000		2011.165	<.001
	Residential Time in Months	-3.721E-5	.000	-.009	-1.069	.285

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	14437	14437	14437
	Missing	0	0	0
Mean		\$363.29	\$362.34	1.04
Median		\$333.58	\$327.24	.98
Percentiles	2.5	\$206.89	\$231.85	.84
	25	\$290.71	\$284.23	.93
	50	\$333.58	\$327.24	.98
	75	\$399.82	\$397.54	1.04
	97.5	\$660.06	\$704.38	1.49

Frequencies

		Statistics		
		Previous Total Value	Current Total Value	Difference in Total Value
N	Valid	14437	14437	14436
	Missing	0	0	1
Mean		\$690,176.73	\$699,613.25	\$16,308.96
Median		\$577,600.00	\$564,100.00	-\$12,400.00
Percentiles	2.5	\$287,790.00	\$328,800.00	-\$109,500.00
	25	\$492,450.00	\$473,350.00	-\$39,800.00
	50	\$577,600.00	\$564,100.00	-\$12,400.00
	75	\$708,950.00	\$720,600.00	\$25,200.00
	97.5	\$1,930,735.00	\$2,092,845.00	\$362,921.30

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	<.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 Residential Sold vs Unsold

Independent-Samples Mann-Whitney U Test Summary

Total N	156739
Mann-Whitney U	673347325.500
Wilcoxon W	11184614861.500
Test Statistic	673347325.500
Standard Error	4716845.119
Standardized Test Statistic	-37.807
Asymptotic Sig.(2-sided test)	<.001

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	<.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 Residential Sold vs Unsold

Independent-Samples Mann-Whitney U Test Summary

Total N	156756
Mann-Whitney U	807050397.000
Wilcoxon W	11266330425.000
Test Statistic	807050397.000
Standard Error	4786058.562
Standardized Test Statistic	-14.565
Asymptotic Sig.(2-sided test)	<.001

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	<.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 Price Per Foot across Residential Sold vs Unsold

Independent-Samples Mann-Whitney U Test Summary

Total N	156756
Mann-Whitney U	671480553.500
Wilcoxon W	11227598203.500
Test Statistic	671480553.500
Standard Error	4663072.396
Standardized Test Statistic	-34.483
Asymptotic Sig.(2-sided test)	<.001

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	12759	.97	.99
UNSOLD	152249	.95	.96
Total	165008	.95	.96

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	58	.98	.98
	UNSOLD	778	.97	1.04
	Total	836	.97	1.03
0	UNSOLD	54	.97	.98
	Total	54	.97	.98
1	SOLD	1	1.02	1.02
	UNSOLD	43	.94	.94
	Total	44	.94	.94
10	SOLD	1567	1.03	1.06
	UNSOLD	20970	.97	.97
	Total	22537	.97	.98
102	UNSOLD	9	1.20	1.21
	Total	9	1.20	1.21
109	UNSOLD	4	1.42	1.42
	Total	4	1.42	1.42
11	SOLD	1028	.98	1.00
	UNSOLD	10360	.97	.98
	Total	11388	.97	.98
115	UNSOLD	2	1.09	1.09
	Total	2	1.09	1.09

Residential Subclass 1212: Unit Comparison Method

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
116	UNSOLD	1	1.17	1.17
	Total	1	1.17	1.17
117	UNSOLD	1	1.09	1.09
	Total	1	1.09	1.09
119	UNSOLD	1	1.00	1.00
	Total	1	1.00	1.00
12	SOLD	305	1.11	1.12
	UNSOLD	3472	1.08	1.11
	Total	3777	1.08	1.11
13	SOLD	359	1.00	1.02
	UNSOLD	4402	.97	.97
	Total	4761	.97	.97
14	SOLD	670	1.00	1.02
	UNSOLD	8097	.96	.96
	Total	8767	.96	.97
15	SOLD	98	.93	.94
	UNSOLD	1395	.91	.92
	Total	1493	.91	.92
16	SOLD	539	1.02	1.04
	UNSOLD	6599	.97	.98
	Total	7138	.97	.98
17	SOLD	1063	.94	.94
	UNSOLD	12650	.93	.93
	Total	13713	.93	.93
18	SOLD	1503	.96	.97
	UNSOLD	16495	.94	.94
	Total	17998	.94	.94
19	SOLD	174	.99	.98
	UNSOLD	1469	.96	.97
	Total	1643	.96	.97

Residential Subclass 1212: Unit Comparison Method

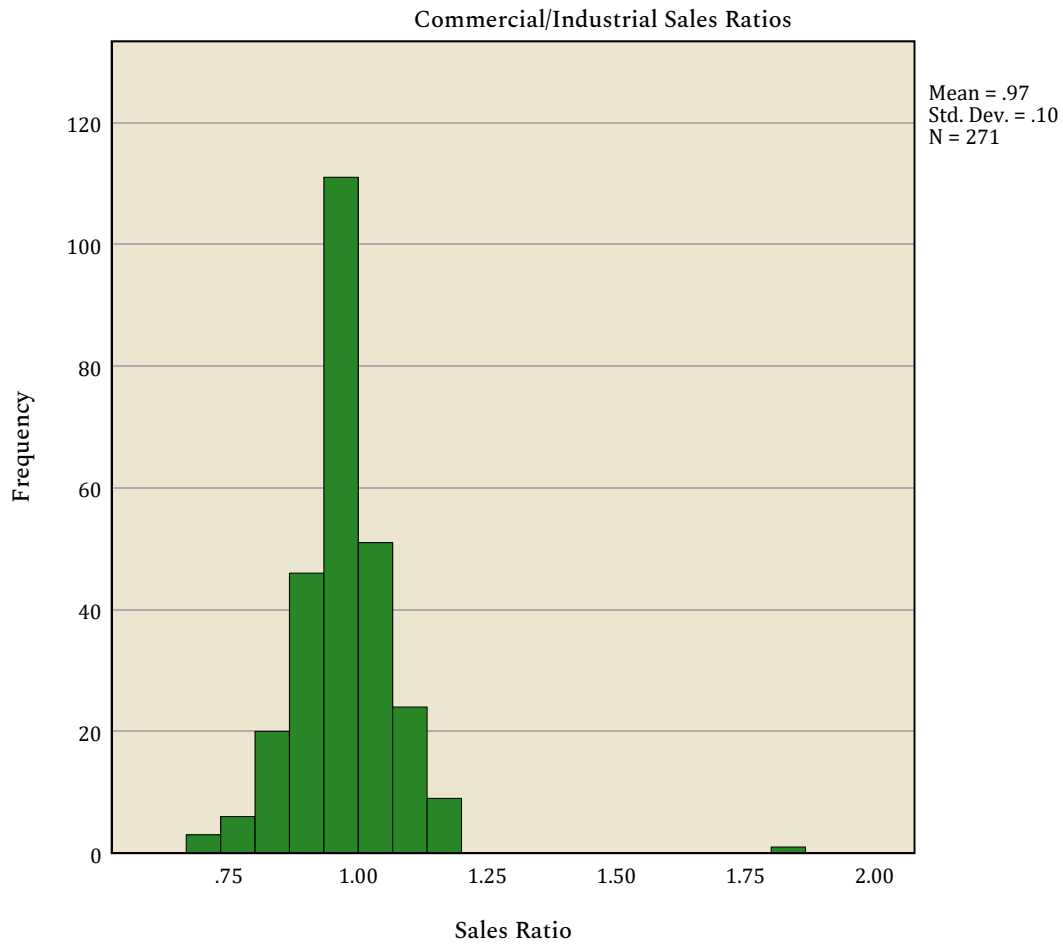
Sold vs Unsold Percent Change for Subclass 1212 by Economic Area

Difference in Price Per Foot

economic_area	Residential Sold vs Unsold	N	Median	Mean
2	SOLD	72	1.01	1.06
	UNSOLD	985	.94	.96
	Total	1057	.95	.96
20	SOLD	802	.98	.99
	UNSOLD	11306	.97	.97
	Total	12108	.97	.97
21	SOLD	369	1.01	1.04
	UNSOLD	5455	.97	.98
	Total	5824	.97	.99
3	SOLD	236	.98	.99
	UNSOLD	2478	.96	.96
	Total	2714	.96	.96
4	SOLD	394	.95	.96
	UNSOLD	4992	.92	.92
	Total	5386	.92	.92
5	SOLD	612	.95	.96
	UNSOLD	7040	.92	.93
	Total	7652	.93	.93
6	SOLD	177	.91	.93
	UNSOLD	2263	.90	.91
	Total	2440	.90	.91
7	SOLD	482	.97	.97
	UNSOLD	5666	.94	.94
	Total	6148	.94	.94
8	SOLD	2250	.95	.95
	UNSOLD	25262	.93	.93
	Total	27512	.93	.93
Total	SOLD	12759	.97	.99
	UNSOLD	152249	.95	.96
	Total	165008	.95	.96

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
312	.975	.068

Ratio Statistics

Ratio Statistics for Current Total
Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
-.001	.996

OVERALL Commercial/Industrial: Sales Price by Sales Ratio

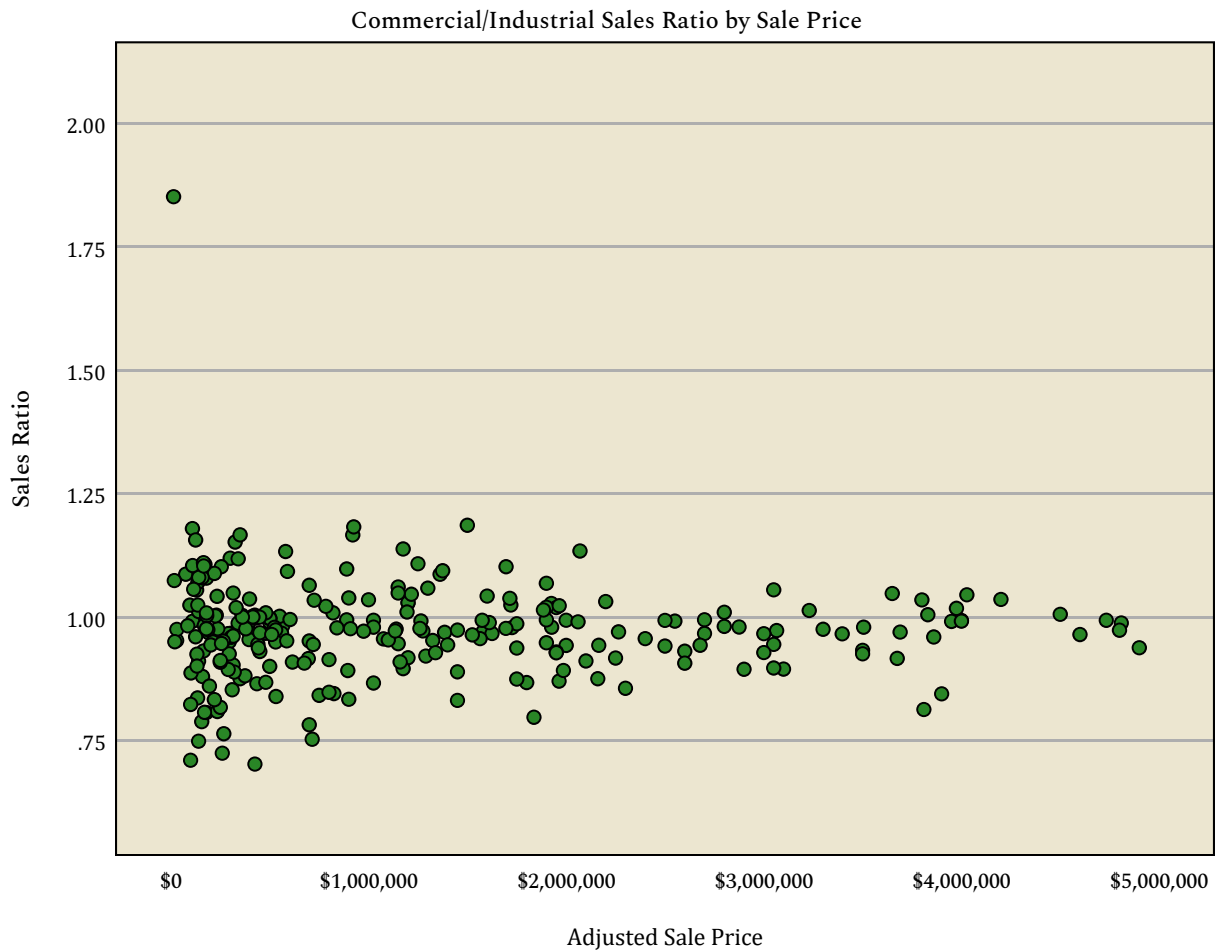
Regression

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.970	.007		135.961	<.001
	Adjusted Sale Price	5.977E-10	.000	.023	.398	.691

a. Dependent Variable: Sales Ratio

Graph



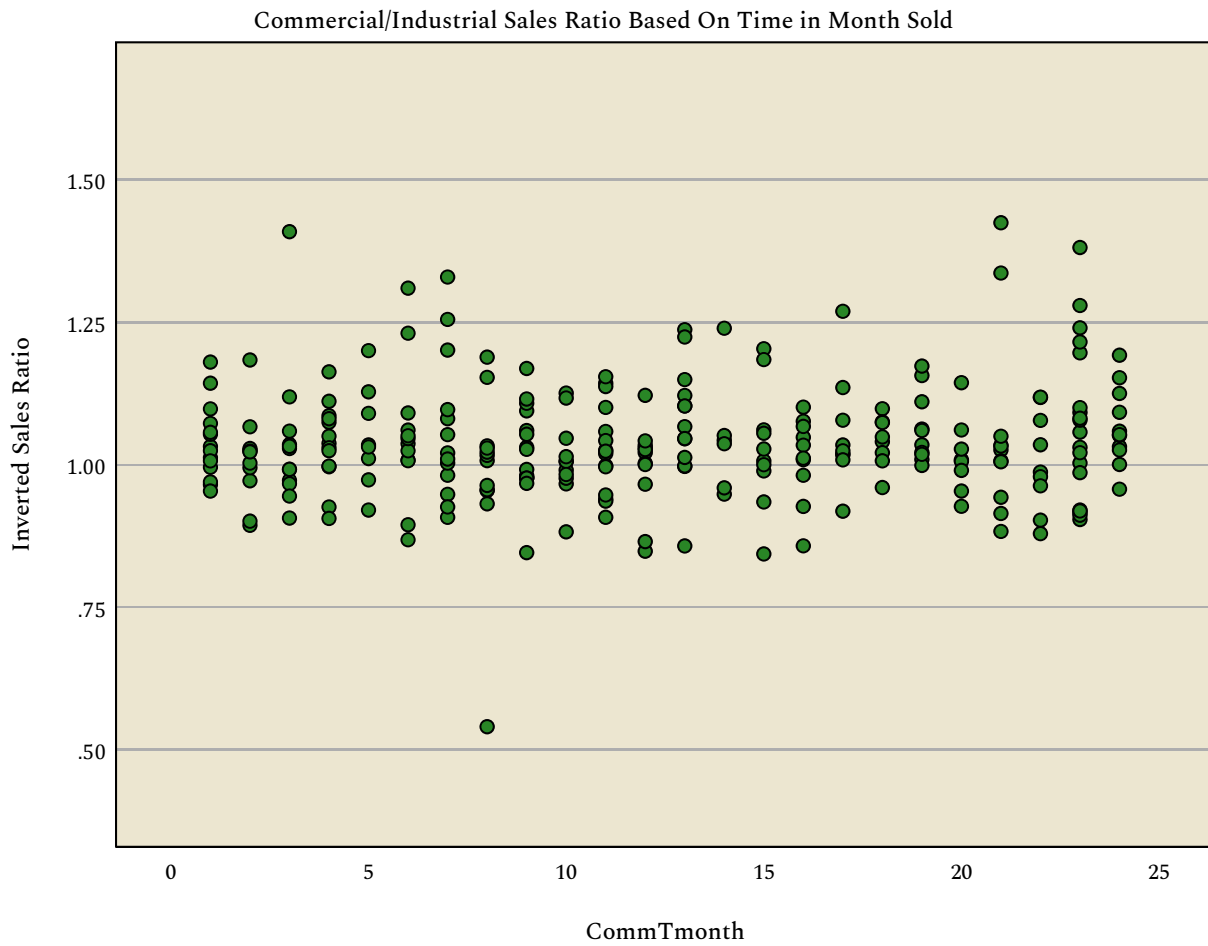
OVERALL Commercial/Industrial: Months by Inverted Sales Ratio

Regression

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.051	.026		40.014	<.001
	CommTmonth	.000	.002	-.006	-.103	.918

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	311	311	311
	Missing	1	1	1
Mean		\$230.20	\$292.90	1.29
Median		\$187.33	\$220.12	1.14
Percentiles	2.5	\$85.87	\$87.81	.86
	25	\$150.00	\$180.39	1.06
	50	\$187.33	\$220.12	1.14
	75	\$250.00	\$320.40	1.35
	97.5	\$614.56	\$959.33	2.44

Frequencies

		Statistics		
		Previous Total Value	Current Total Value	Difference in Total Value
N	Valid	312	312	312
	Missing	0	0	0
Mean		\$1,980,091.03	\$2,451,411.99	\$471,320.96
Median		\$809,110.00	\$1,063,750.00	\$95,000.00
Percentiles	2.5	\$78,190.38	\$82,083.38	-\$579,575.00
	25	\$272,875.00	\$330,330.00	\$10,285.00
	50	\$809,110.00	\$1,063,750.00	\$95,000.00
	75	\$2,069,500.00	\$2,605,750.00	\$450,725.00
	97.5	\$13,197,575.00	\$15,983,525.00	\$3,858,075.00

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	.009

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	5908
Mann-Whitney U	710551.000
Wilcoxon W	16561816.000
Test Statistic	710551.000
Standard Error	27720.390
Standardized Test Statistic	-2.598
Asymptotic Sig.(2-sided test)	.009

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	<.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	5968
Mann-Whitney U	686409.000
Wilcoxon W	16831812.000
Test Statistic	686409.000
Standard Error	28429.708
Standardized Test Statistic	-4.436
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	<.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	5968
Mann-Whitney U	614464.500
Wilcoxon W	16896535.500
Test Statistic	614464.500
Standard Error	27229.796
Standardized Test Statistic	-4.885
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	303	1.14	1.28
UNSOLD	5981	1.10	1.11
Total	6284	1.10	1.12

Summarize

Sold vs Unsold

Difference in Price Per Foot

Improvement Abstract Codes	CommSOLDFLG	N	Median	Mean
2020	UNSOLD	25	.01	.02
	Total	25	.01	.02
2212	SOLD	27	1.20	1.37
	UNSOLD	925	1.09	1.10
	Total	952	1.09	1.11
2215	SOLD	4	1.37	1.26
	UNSOLD	76	.99	.98
	Total	80	.99	.99
2220	SOLD	28	1.14	1.27
	UNSOLD	641	1.00	.99
	Total	669	1.00	1.00
2225	UNSOLD	69	1.00	1.14
	Total	69	1.00	1.14
2230	SOLD	64	1.36	1.51
	UNSOLD	1378	1.13	1.17
	Total	1442	1.13	1.19
2235	SOLD	62	1.13	1.28
	UNSOLD	1122	1.12	1.13
	Total	1184	1.12	1.14

OVERALL Commercial/Industrial: Unit Value Comparison

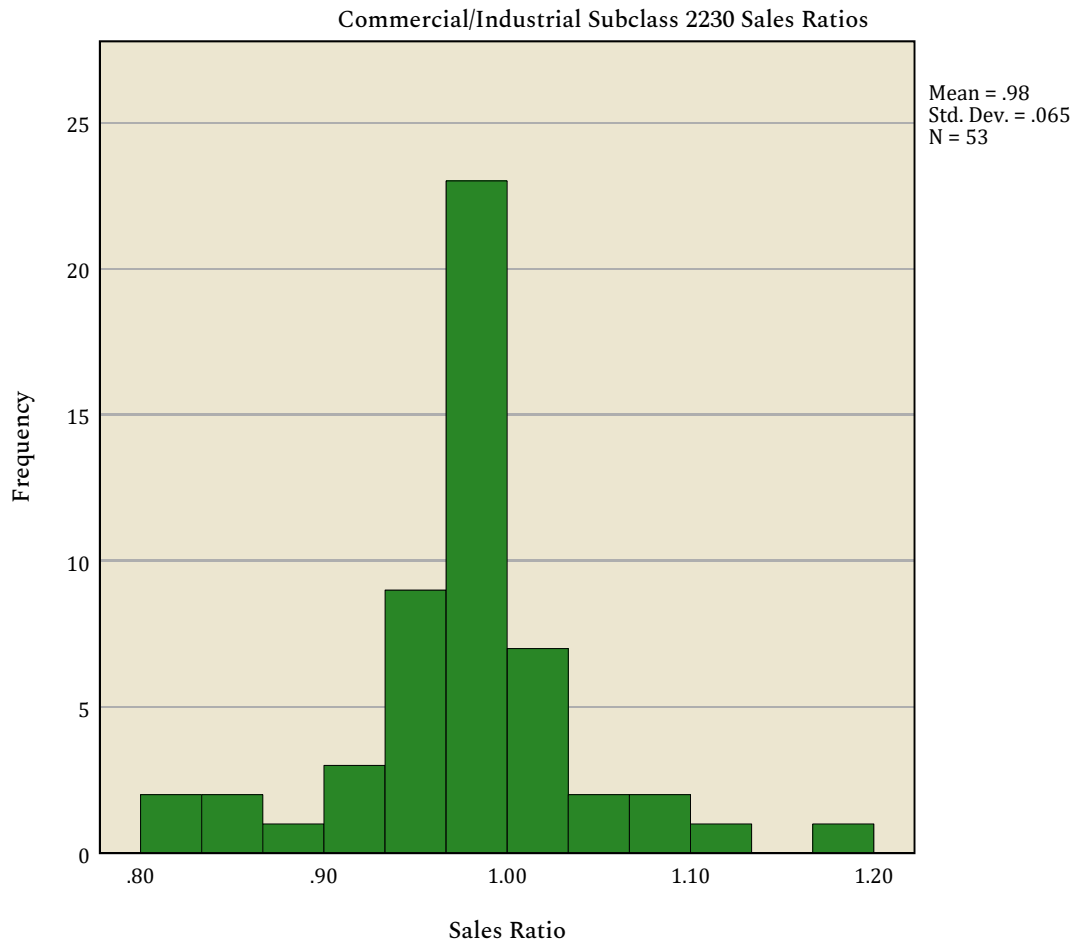
Sold vs Unsold

Difference in Price Per Foot

Improvement Abstract Codes	CommSOLDFLG	N	Median	Mean
2240	UNSOLD	3	1.17	1.15
	Total	3	1.17	1.15
2245	SOLD	117	1.10	1.13
	UNSOLD	1684	1.09	1.13
	Total	1801	1.09	1.13
2250	SOLD	1	1.12	1.12
	UNSOLD	40	1.00	1.09
	Total	41	1.00	1.09
3215	UNSOLD	18	1.12	1.07
	Total	18	1.12	1.07
Total	SOLD	303	1.14	1.28
	UNSOLD	5981	1.10	1.11
	Total	6284	1.10	1.12

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
64	.975	.057

Ratio Statistics

Ratio Statistics for Current Total
Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
.011	1.005

Commercial/Industrial Subclass 2230: Sales Price by Sales Ratio

Regression

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.962	.020		49.264	<.001
	Adjusted Sale Price	-9.239E-10	.000	-.032	-.251	.803

a. Dependent Variable: Sales Ratio

Graph



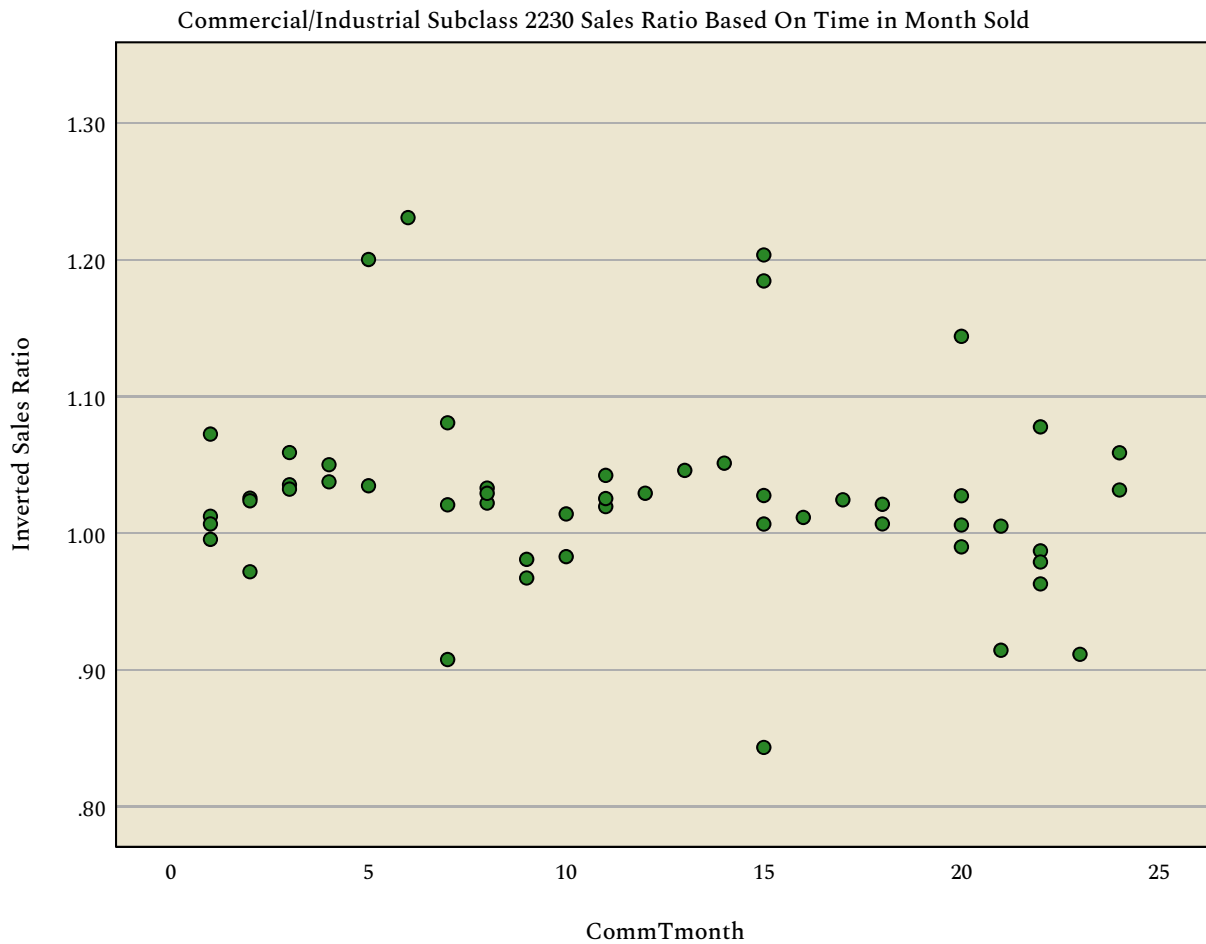
Commercial/Industrial Subclass 2230: Months by Inverted Sales Ratio

Regression

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.160	.112		10.324	<.001
	CommTmonth	-.006	.008	-.087	-.685	.496

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	64	64	64
	Missing	0	0	0
Mean		\$331.06	\$484.77	1.51
Median		\$298.53	\$402.14	1.36
Percentiles	2.5	\$67.82	\$88.76	.63
	25	\$217.89	\$300.05	1.14
	50	\$298.53	\$402.14	1.36
	75	\$399.92	\$564.74	1.86
	97.5	\$993.73	\$1,297.89	2.76

Frequencies

		Statistics		
		Previous Total Value	Current Total Value	Difference in Total Value
N	Valid	64	64	64
	Missing	0	0	0
Mean		\$2,302,056.84	\$3,274,744.17	\$972,687.33
Median		\$1,656,780.50	\$1,879,000.00	\$534,000.00
Percentiles	2.5	\$203,622.75	\$314,677.13	-\$1,263,024.62
	25	\$849,500.00	\$1,236,000.00	\$259,750.00
	50	\$1,656,780.50	\$1,879,000.00	\$534,000.00
	75	\$2,558,000.00	\$3,672,375.00	\$1,113,750.00
	97.5	\$13,040,500.00	\$18,514,750.00	\$7,686,625.00

Commercial/Industrial Subclass 2230: 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	1352
Mann-Whitney U	18386.500
Wilcoxon W	860139.500
Test Statistic	18386.500
Standard Error	2829.563
Standardized Test Statistic	-6.107
Asymptotic Sig.(2-sided test)	<.001

Nonparametric Tests

Commercial/Industrial Subclass 2230: 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	.004

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	1367
Mann-Whitney U	30517.000
Wilcoxon W	885295.000
Test Statistic	30517.000
Standard Error	2989.951
Standardized Test Statistic	-2.907
Asymptotic Sig.(2-sided test)	.004

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

Commercial/Industrial Subclass 2230: 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	1368
Mann-Whitney U	18550.500
Wilcoxon W	889090.500
Test Statistic	18550.500
Standard Error	2709.419
Standardized Test Statistic	-5.080
Asymptotic Sig.(2-sided test)	<.001

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	64	1.36	1.51
UNSOLD	1402	1.13	1.17
Total	1466	1.13	1.19

Commercial/Industrial Subclass 2230: Economic Area Analysis

Ratio Statistics

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Median	Coefficient of Dispersion
	4	.840	.207
0	3	.960	.022
102	14	.975	.084
103	1	.979	.000
104	5	.539	.526
106	4	.994	.042
107	6	.958	.143
108	5	.994	.156
109	15	.976	.122
110	1	.862	.000
112	3	1.094	.080
113	3	1.012	.045
115	25	.975	.235
116	1	1.102	.000
117	5	1.005	.084
118	1	1.039	.000
Overall	96	.974	.160

Ratio Statistics

Commercial/Industrial Subclass 2230: Economic Area Analysis

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
	4	.153	.962
0	3	.045	.990
102	14	.065	.969
103	1	.	1.000
104	5	-.004	1.062
106	4	-.068	1.019
107	6	.121	.984
108	5	-.004	1.021
109	15	-.033	1.036
110	1	.	1.000
112	3	-.038	1.026
113	3	-.012	1.005
115	25	-.020	1.077
116	1	.	1.000
117	5	-.057	1.017
118	1	.	1.000
Overall	96	.001	1.036

Summarize

Commercial/Industrial Subclass 2230: Economic Area Analysis

Sold vs Unsold Percent Change for Subclass 2230 by Economic Area

Difference in Price Per Foot

economic_area	CommSOLDFLG	N	Median	Mean
	SOLD	2	1.25	1.25
	UNSOLD	155	1.07	1.07
	Total	157	1.07	1.07
0	SOLD	3	1.56	1.63
	UNSOLD	29	1.14	1.17
	Total	32	1.15	1.21
101	UNSOLD	5	1.16	1.24
	Total	5	1.16	1.24
102	SOLD	11	1.33	1.46
	UNSOLD	167	1.20	1.24
	Total	178	1.21	1.26
103	SOLD	1	1.29	1.29
	UNSOLD	17	1.10	1.17
	Total	18	1.13	1.18
104	UNSOLD	84	1.11	1.14
	Total	84	1.11	1.14
105	UNSOLD	4	1.08	1.08
	Total	4	1.08	1.08
106	SOLD	3	1.00	1.15
	UNSOLD	81	1.16	1.19
	Total	84	1.16	1.18
107	SOLD	3	1.73	1.89
	UNSOLD	58	1.12	1.17
	Total	61	1.13	1.21
108	SOLD	3	1.28	1.57
	UNSOLD	74	1.15	1.17
	Total	77	1.15	1.19
109	SOLD	11	1.65	1.72
	UNSOLD	167	1.17	1.28
	Total	178	1.19	1.31

Commercial/Industrial Subclass 2230: Economic Area Analysis

Sold vs Unsold Percent Change for Subclass 2230 by Economic Area

Difference in Price Per Foot

economic_area	CommSOLDFLG	N	Median	Mean
11	UNSOLD	1	1.18	1.18
	Total	1	1.18	1.18
110	SOLD	1	1.08	1.08
	UNSOLD	31	1.11	1.12
	Total	32	1.09	1.12
111	UNSOLD	5	1.00	1.09
	Total	5	1.00	1.09
112	SOLD	2	.98	.98
	UNSOLD	26	1.10	1.12
	Total	28	1.10	1.11
113	SOLD	3	1.75	1.53
	UNSOLD	6	1.06	1.06
	Total	9	1.07	1.22
114	UNSOLD	16	1.09	1.11
	Total	16	1.09	1.11
115	SOLD	16	1.39	1.46
	UNSOLD	347	1.11	1.15
	Total	363	1.11	1.17
116	SOLD	1	1.33	1.33
	UNSOLD	16	1.13	1.24
	Total	17	1.14	1.25
117	SOLD	3	1.52	1.58
	UNSOLD	95	1.14	1.15
	Total	98	1.14	1.16
118	SOLD	1	1.93	1.93
	UNSOLD	5	1.04	1.08
	Total	6	1.11	1.22
119	UNSOLD	6	1.03	1.12
	Total	6	1.03	1.12
14	UNSOLD	1	1.23	1.23
	Total	1	1.23	1.23

Commercial/Industrial Subclass 2230: Economic Area Analysis

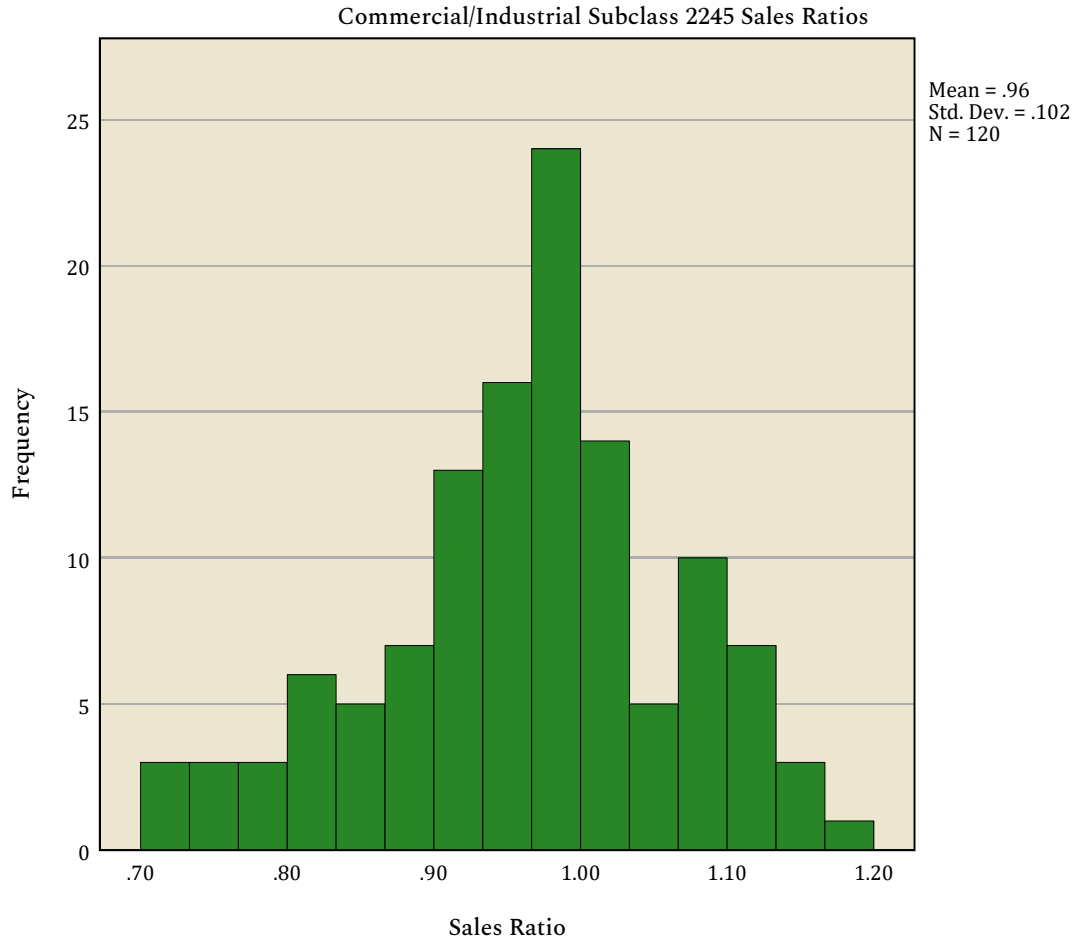
Sold vs Unsold Percent Change for Subclass 2230 by Economic Area

Difference in Price Per Foot

economic_area	CommSOLDFLG	N	Median	Mean
15	UNSOLD	2	1.20	1.20
	Total	2	1.20	1.20
19	UNSOLD	1	1.17	1.17
	Total	1	1.17	1.17
4	UNSOLD	1	1.61	1.61
	Total	1	1.61	1.61
6	UNSOLD	1	1.08	1.08
	Total	1	1.08	1.08
8	UNSOLD	1	1.01	1.01
	Total	1	1.01	1.01
Total	SOLD	64	1.36	1.51
	UNSOLD	1402	1.13	1.17
	Total	1466	1.13	1.19

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
120	.971	.080

Ratio Statistics

Ratio Statistics for Current Total
Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
-.008	1.015

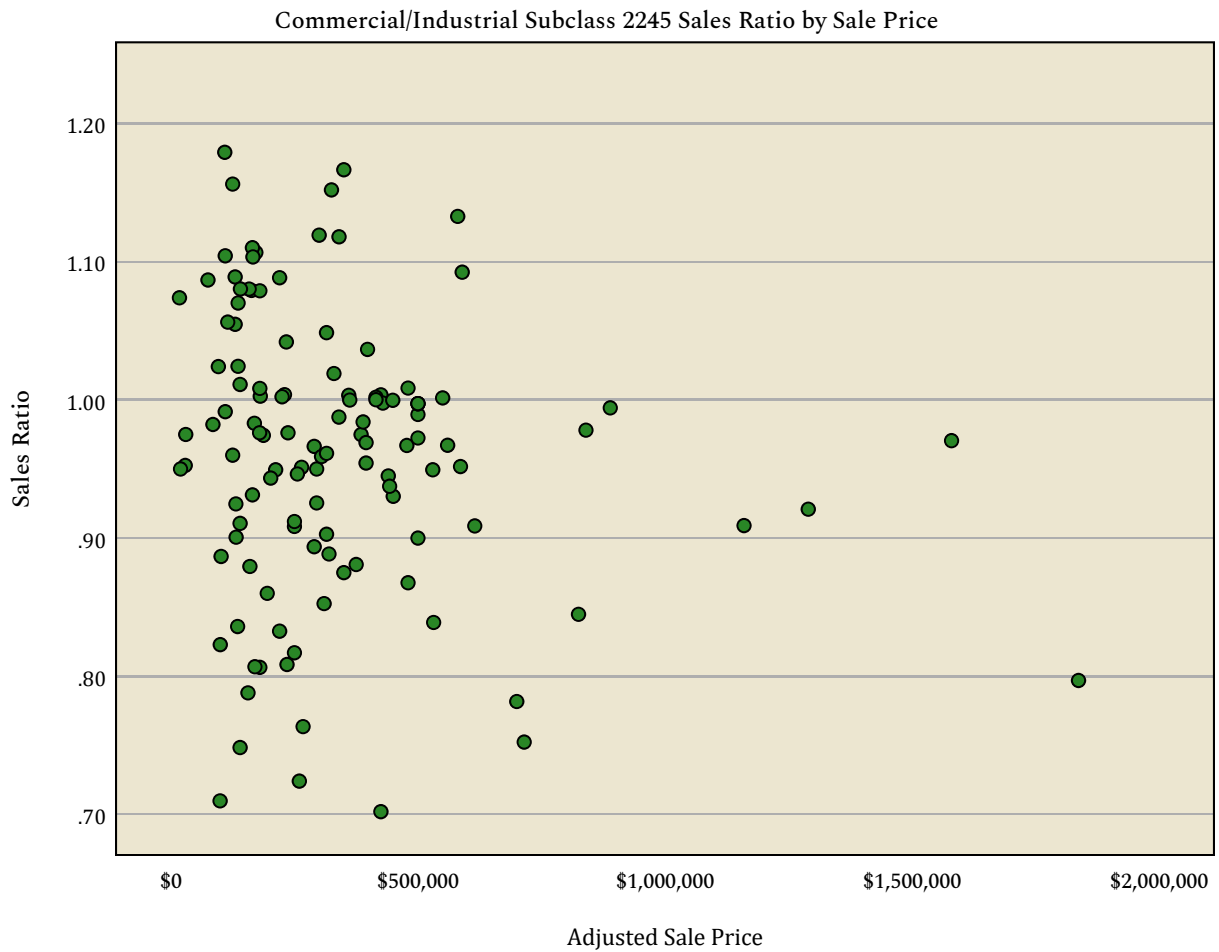
Commercial/Industrial Subclass 2245: Sales Price by Sales Ratio

Regression

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.983	.014		67.854	<.001
	Adjusted Sale Price	-6.167E-8	.000	-.170	-1.871	.064

a. Dependent Variable: Sales Ratio

Graph



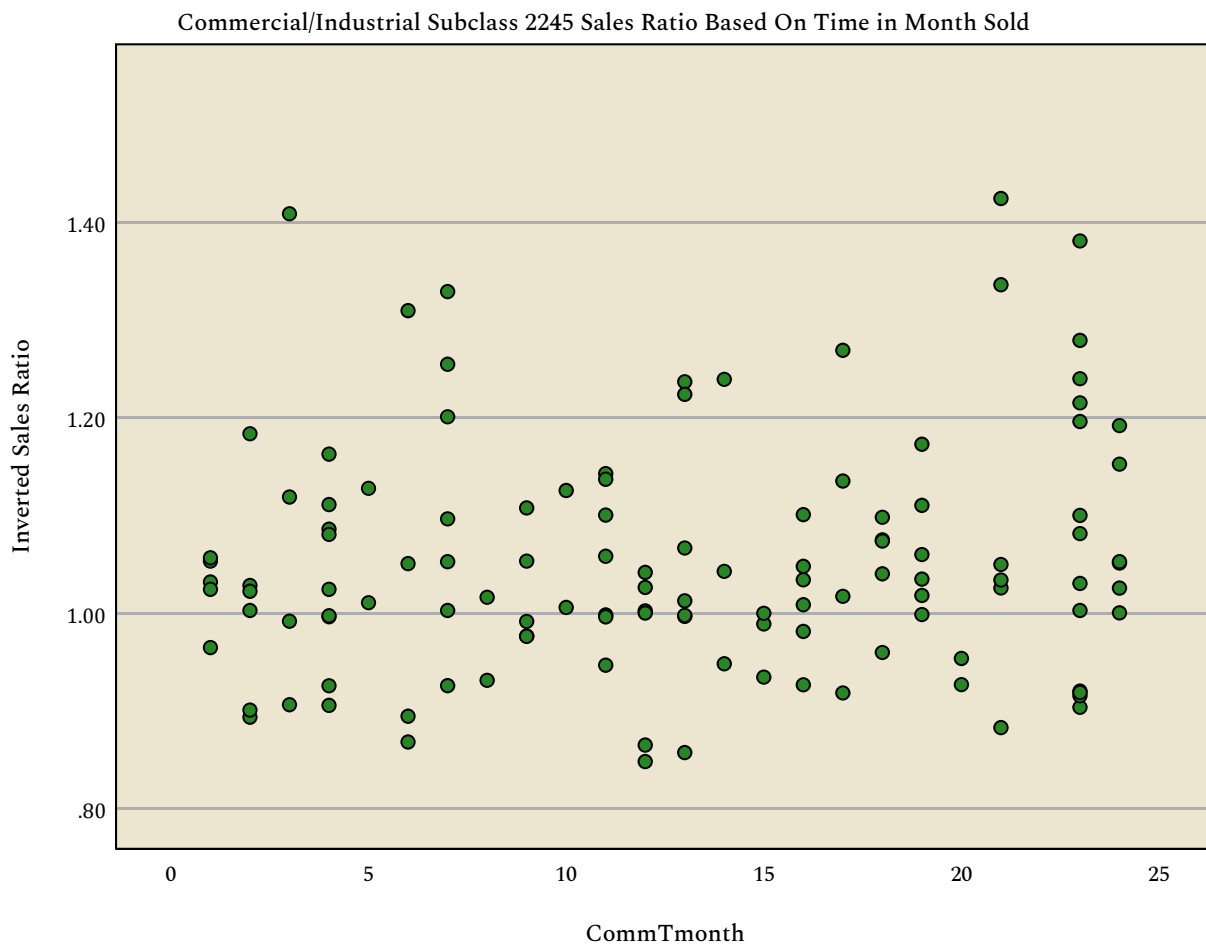
Commercial/Industrial Subclass 2245: Months by Inverted Sales Ratio

Regression

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.028	.022		46.766	<.001
	CommTmonth	.002	.001	.116	1.269	.207

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	120	120	120
	Missing	0	0	0
Mean		\$192.26	\$217.71	1.16
Median		\$177.50	\$200.00	1.10
Percentiles	2.5	\$73.41	\$125.00	.89
	25	\$155.00	\$185.00	1.01
	50	\$177.50	\$200.00	1.10
	75	\$240.00	\$270.00	1.23
	97.5	\$329.25	\$330.00	2.42

Frequencies

		Statistics		
		Previous Total Value	Current Total Value	Difference in Total Value
N	Valid	120	120	120
	Missing	0	0	0
Mean		\$287,711.44	\$321,608.88	\$33,897.43
Median		\$215,125.00	\$255,392.50	\$22,075.00
Percentiles	2.5	\$25,452.38	\$27,665.63	-\$79,022.00
	25	\$129,131.25	\$147,155.00	\$164.00
	50	\$215,125.00	\$255,392.50	\$22,075.00
	75	\$375,431.25	\$416,310.00	\$37,250.00
	97.5	\$1,079,308.50	\$1,184,613.75	\$275,598.40

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	.366

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 CommSOLDFLG

Independent-Samples Mann-Whitney U Test Summary

Total N	1695
Mann-Whitney U	81270.500
Wilcoxon W	1341348.500
Test Statistic	81270.500
Standard Error	4901.008
Standardized Test Statistic	-.903
Asymptotic Sig.(2-sided test)	.366

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	.581

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	1654
Mann-Whitney U	81549.500
Wilcoxon W	1275834.500
Test Statistic	81549.500
Standard Error	4810.976
Standardized Test Statistic	-.551
Asymptotic Sig.(2-sided test)	.581

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	.037

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	1670
Mann-Whitney U	73624.000
Wilcoxon W	1295890.000
Test Statistic	73624.000
Standard Error	4800.662
Standardized Test Statistic	-2.082
Asymptotic Sig.(2-sided test)	.037

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	117	1.10	1.13
UNSOLD	1685	1.09	1.13
Total	1802	1.09	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
0	5	.911	.111
102	3	.244	1.259
104	5	.988	.045
109	28	.672	.611
110	10	.973	.108
112	18	.992	.075
113	10	.949	.634
115	29	.961	.102
116	5	1.088	.157
117	55	.925	.224
Overall	168	.952	.243

Ratio Statistics

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
0	5	.248	1.003
102	3	-.853	3.994
104	5	-.004	1.002
109	28	-.127	1.319
110	10	.123	.971
112	18	-.074	1.026
113	10	.521	1.297
115	29	-.020	1.019
116	5	-.188	1.081
117	55	-.069	1.340
Overall	168	-.065	1.410

Commercial/Industrial Subclass 2245: Economic Area Analysis

Summarize

Sold vs Unsold Percent Change for Subclass 2245 by Economic Area

Difference in Price Per Foot

economic_area	CommSOLDFLG	N	Median	Mean
0	SOLD	5	1.23	1.23
	UNSOLD	43	1.23	1.14
	Total	48	1.23	1.15
102	SOLD	1	.97	.97
	UNSOLD	19	1.00	1.00
	Total	20	1.00	.99
104	SOLD	5	.97	.99
	UNSOLD	27	1.03	.98
	Total	32	1.03	.98
108	UNSOLD	17	1.00	1.01
	Total	17	1.00	1.01
109	SOLD	11	1.09	1.09
	UNSOLD	115	1.09	1.14
	Total	126	1.09	1.14
110	SOLD	9	1.00	1.03
	UNSOLD	99	1.00	1.03
	Total	108	1.00	1.03
112	SOLD	16	1.00	1.02
	UNSOLD	135	1.00	.99
	Total	151	1.00	1.00
113	SOLD	3	1.10	1.09
	UNSOLD	158	1.10	1.06
	Total	161	1.10	1.06
114	UNSOLD	8	.90	.97
	Total	8	.90	.97
115	SOLD	24	1.10	1.12
	UNSOLD	303	1.10	1.13
	Total	327	1.10	1.13

Commercial/Industrial Subclass 2245: Economic Area Analysis

Sold vs Unsold Percent Change for Subclass 2245 by Economic Area

Difference in Price Per Foot

economic_area	CommSOLDFLG	N	Median	Mean
116	SOLD	4	1.00	1.00
	UNSOLD	27	1.00	1.02
	Total	31	1.00	1.02
117	SOLD	39	1.22	1.24
	UNSOLD	734	1.11	1.19
	Total	773	1.11	1.19
Total	SOLD	117	1.10	1.13
	UNSOLD	1685	1.09	1.13
	Total	1802	1.09	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	74	.999	.966	1.031	1.000
Residential	17935	1.002	1.002	1.003	1.000
Commercial/Industrial	312	.972	.960	.984	.975
Overall	18321	1.002	1.001	1.002	1.000

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	.985	1.002	95.3%	.961	.926
Residential	1.000	1.000	95.1%	.994	.989
Commercial/Industrial	.968	.979	95.3%	.975	.962
Overall	1.000	1.000	95.1%	.993	.988

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	95% Confidence Interval for ...	Price Related Differential	Coefficient of Dispersion
	Upper Bound		
Vacant Land	.996	1.039	.089
Residential	.998	1.009	.019
Commercial/Industrial	.989	.996	.068
Overall	.997	1.009	.020

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.