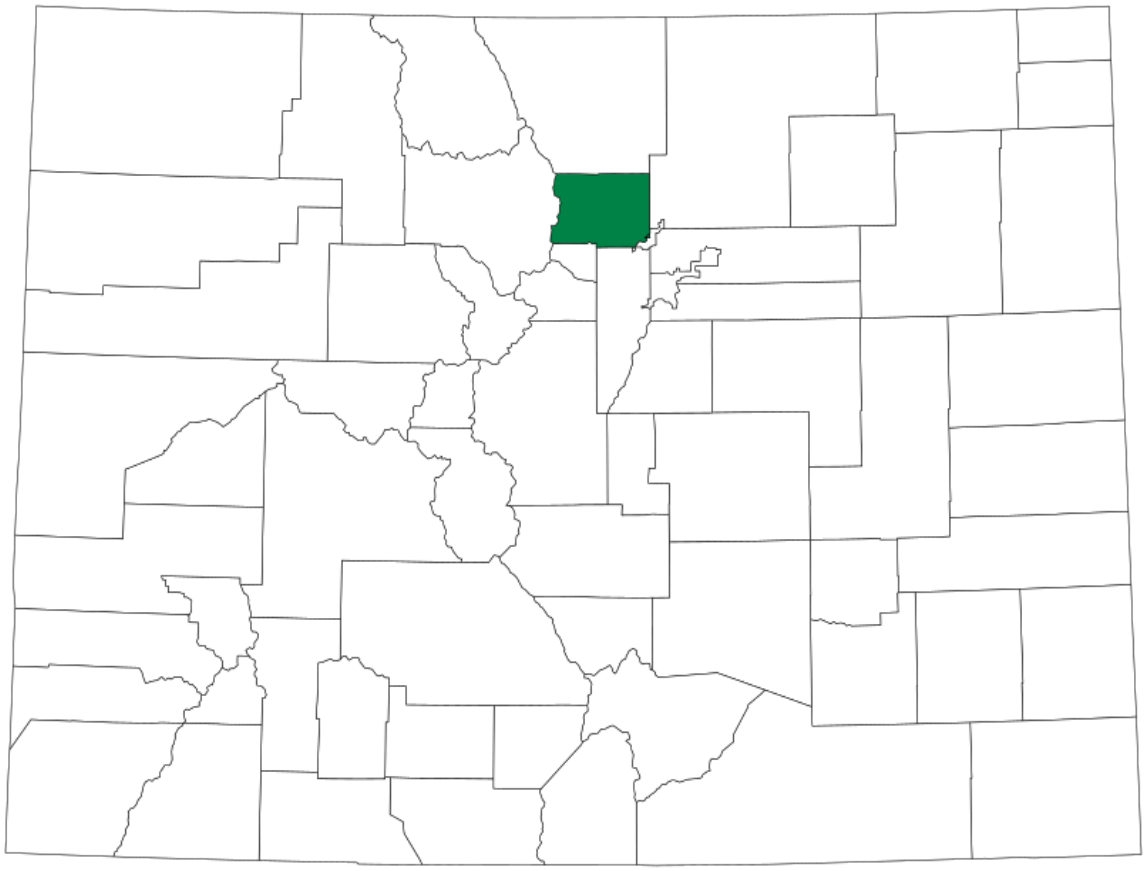
San Matteo

DATA ANALYTICS

2025 Property Assessment Study

Boulder 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 Boulder 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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San Matteo
DATA ANALYTICS

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1. Statistical Overview

Compliance and Evaluations

Boulder 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.

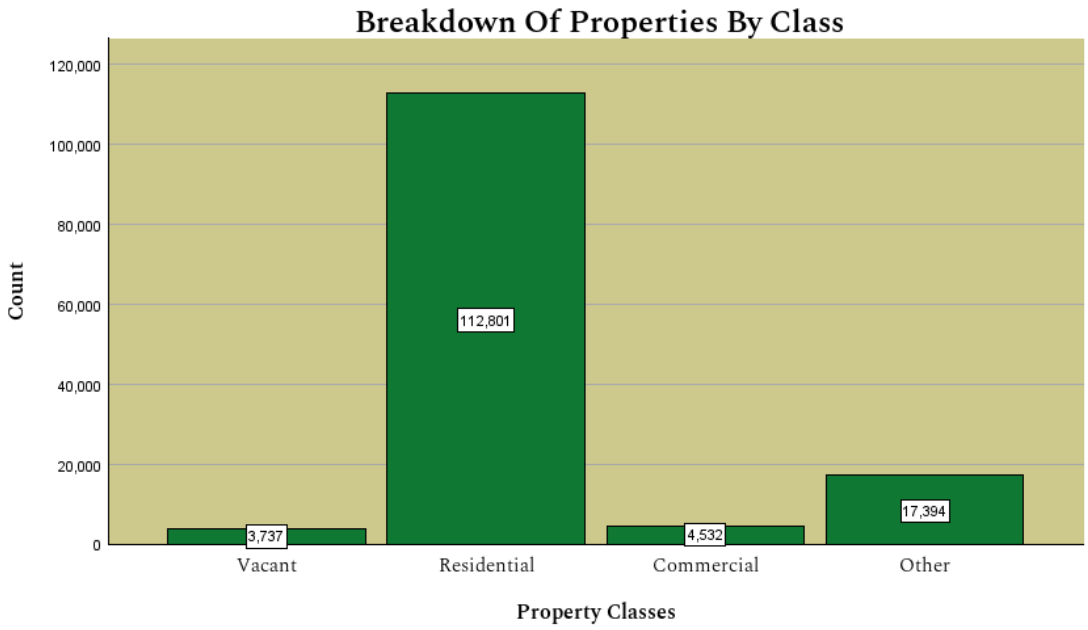
	Result	Value
Vacant Land		
Median Sales Ratio	Pass	1.01
Coefficient of Dispersion	Pass	19.47%
Time Adjustments	Pass	0.189
Price Related Differential	Sufficient	1.07
Price Related Bias	Sufficient	0.00
Sold/Unsold Similarity	Sufficient	
Qualified Sales > 50%	Yes	

	Result	Value
Residential		
Median Sales Ratio	Pass	1.01
Coefficient of Dispersion	Pass	9.09%
Time Adjustments	Pass	0.000
Price Related Differential	Sufficient	1.02
Price Related Bias	Sufficient	-0.01
Sold/Unsold Similarity	Sufficient	
Qualified Sales > 50%	Yes	

	Result	Value
Commercial/Industrial		
Median Sales Ratio	Pass	1.02
Coefficient of Dispersion	Pass	14.11%
Time Adjustments	Pass	0.452
Price Related Differential	Sufficient	1.01
Price Related Bias	Sufficient	0.01
Sold/Unsold Similarity	Sufficient	
Qualified Sales > 50%	Yes	

Property Types

Below is a breakdown of the property types of the 138,464 parcels in Boulder County.



2. Vacant Land

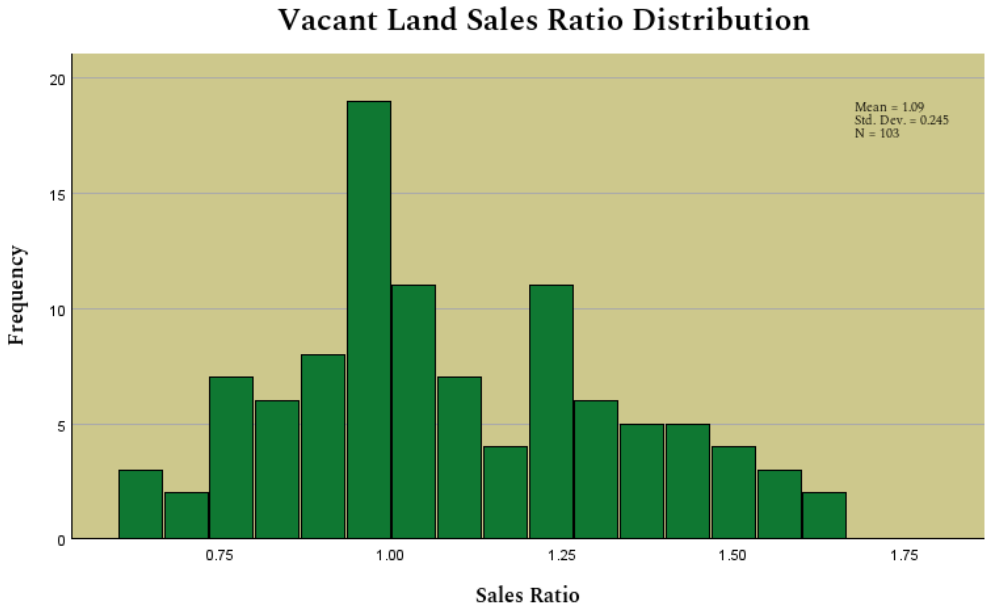
Overview

Boulder was found to be compliant for Vacant Land properties.

	Result	Value
Vacant Land		
Median Sales Ratio	Pass	1.01
Coefficient of Dispersion	Pass	19.47%
Time Adjustments	Pass	0.189
Price Related Differential	Sufficient	1.07
Price Related Bias	Sufficient	0.00
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 Boulder County was calculated to be 1.01, which is within the acceptable statistical range of 0.95 to 1.05 established by the Colorado Board of Equalization (SBOE). We trimmed zero sales during the development of this analysis. The MSR was also calculated for all applicable subclass, neighborhoods, economic areas, size and valuation strata identified by the auditor. See appendix for more details.

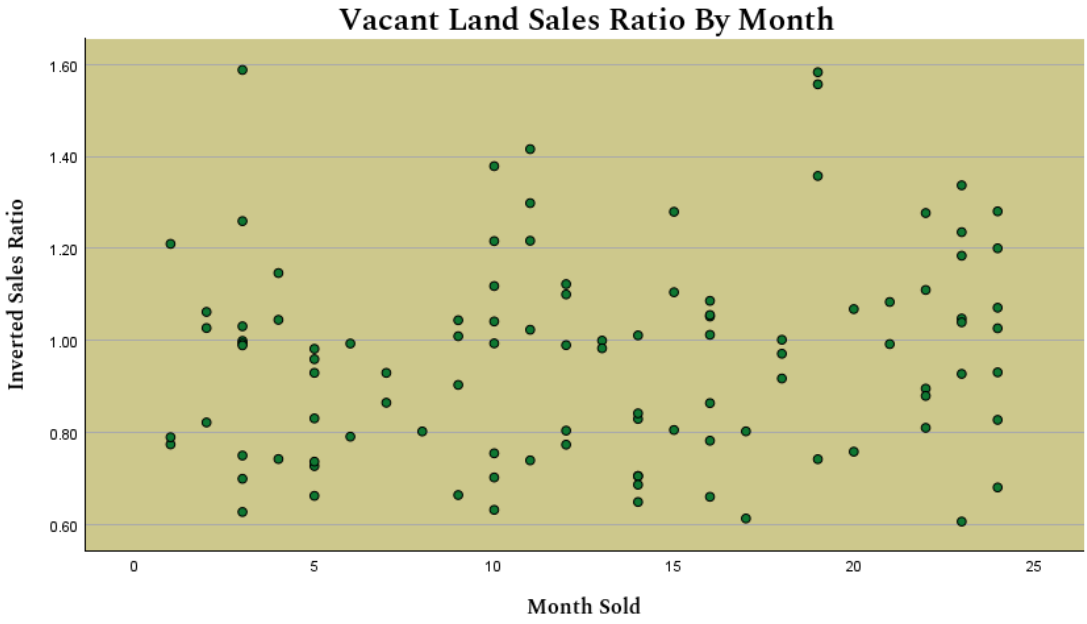


Vacant Land Coefficient of Dispersion

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 Boulder County was calculated at 19.47% which is within the acceptable statistical standard of 20.99% or less established by the Colorado Board of Equalization (SBOE). The COD was also calculated for all applicable class, subclass, neighborhoods, economic areas, and valuation strata identified by the auditor. See appendix for more details.

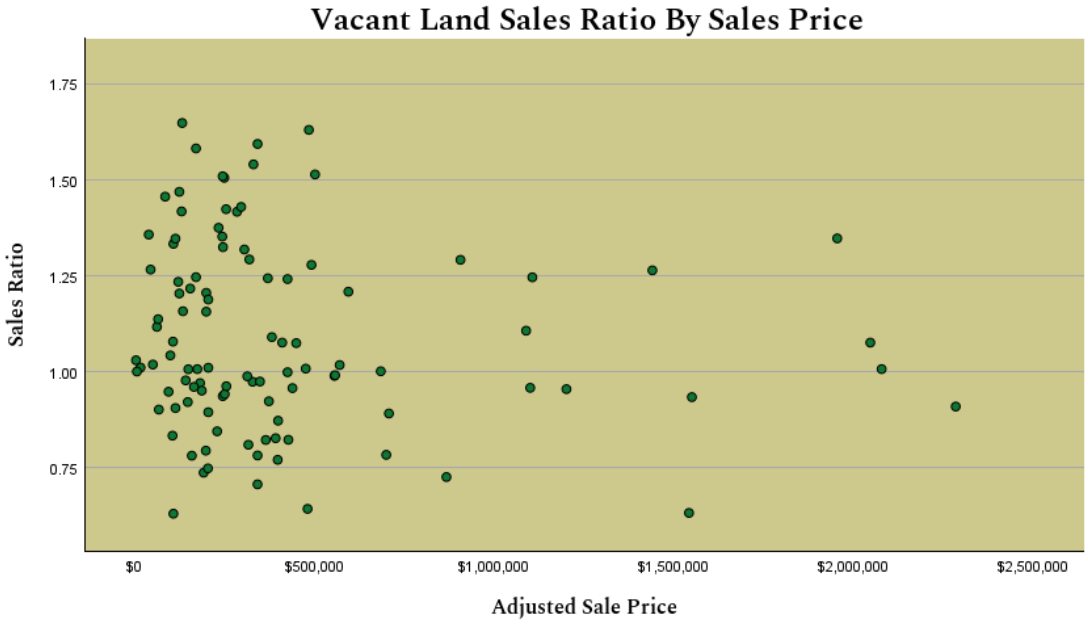
Vacant Land Market (Time) Adjustments

All previous statistics used the time-adjusted sales price to ensure that the effect of time on sales ratios has been appropriately addressed. There should be a consistent and reasonable time adjustment methodology, not one tailored to improve sales ratios. We examined the sales ratios over the 24 - month period of sales. There does not appear to be a significant effect of time on Boulder'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 Boulder County was calculated at 1.07, 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 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 Boulder 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.

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

3. Residential

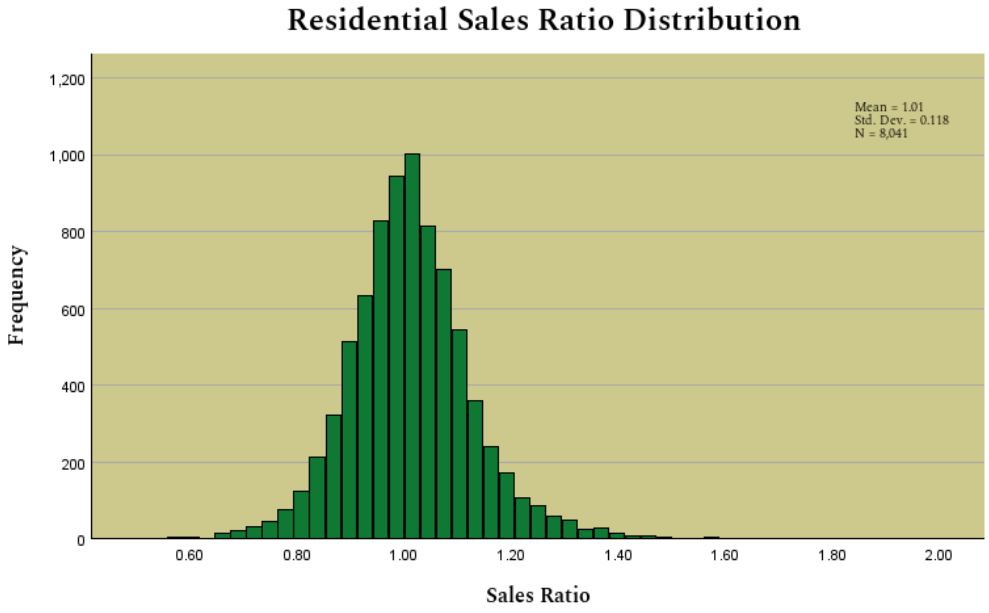
Overview

Boulder County was found to be compliant for Residential properties.

	Result	Value
Residential		
Median Sales Ratio	Pass	1.01
Coefficient of Dispersion	Pass	9.09%
Time Adjustments	Pass	0.000
Price Related Differential	Sufficient	1.02
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 Boulder County was calculated to be 1.01, which is within the acceptable statistical range of 0.95 to 1.05 established by the Colorado Board of Equalization (SBOE). We trimmed zero sales during the development of this analysis. The MSR was also calculated for all applicable subclass, neighborhoods, economic areas, size and valuation strata identified by the auditor. See appendix for more details.



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 Boulder County was calculated at 9.09% which is within the acceptable statistical standard of 15.99% or less established by the Colorado Board of Equalization (SBOE). The COD was also calculated for all applicable class, subclass, neighborhoods, economic areas, and valuation strata identified by the auditor. See appendix for more details.

Residential Market (Time) Adjustments

All previous statistics used the time-adjusted sales price to ensure that the effect of time on sales ratios has been appropriately addressed. There should be a consistent and reasonable time adjustment methodology, not one tailored to improve sales ratios. We examined the sales ratios over the 24 - month period of sales. There does not appear to be a significant effect of time on Boulder 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 Boulder 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.

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 Boulder 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 8,218 residential sales. We have confirmed that more than 50% of all sales were qualified.

4. Commercial and Industrial

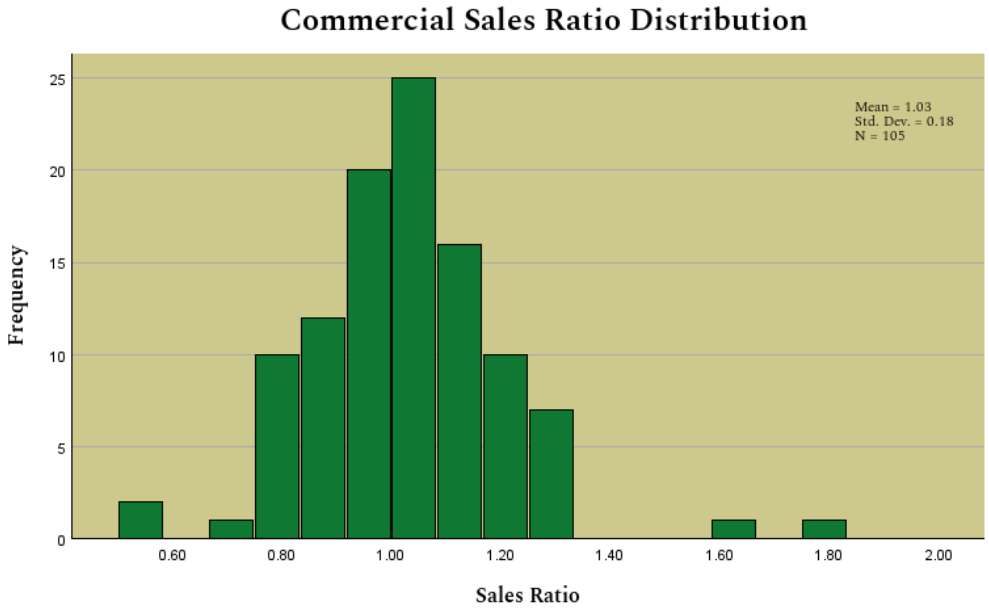
Overview

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

	Result	Value
Commercial and Industrial		
Median Sales Ratio	Pass	1.02
Coefficient of Dispersion	Pass	14.11%
Time Adjustments	Pass	0.452
Price Related Differential	Sufficient	1.01
Price Related Bias	Sufficient	0.01
Sold/Unsold Similarity	Sufficient	
Qualified Sales > 50%	Yes	

Commercial Median Sales Ratio

The median sales ratio (MSR) tests how close the Assessor's valuations (estimates of market value) are to the true market value. The distribution of these sales ratios should be centered around 1.00. The Commercial MSR for Boulder County was calculated to be 1.02, which is within the acceptable statistical range of 0.95 to 1.05 established by the Colorado Board of Equalization (SBOE). We trimmed zero sales during the development of this analysis. The MSR was also calculated for all applicable subclass, neighborhoods, economic areas, size and valuation strata identified by the auditor. See appendix for more details.

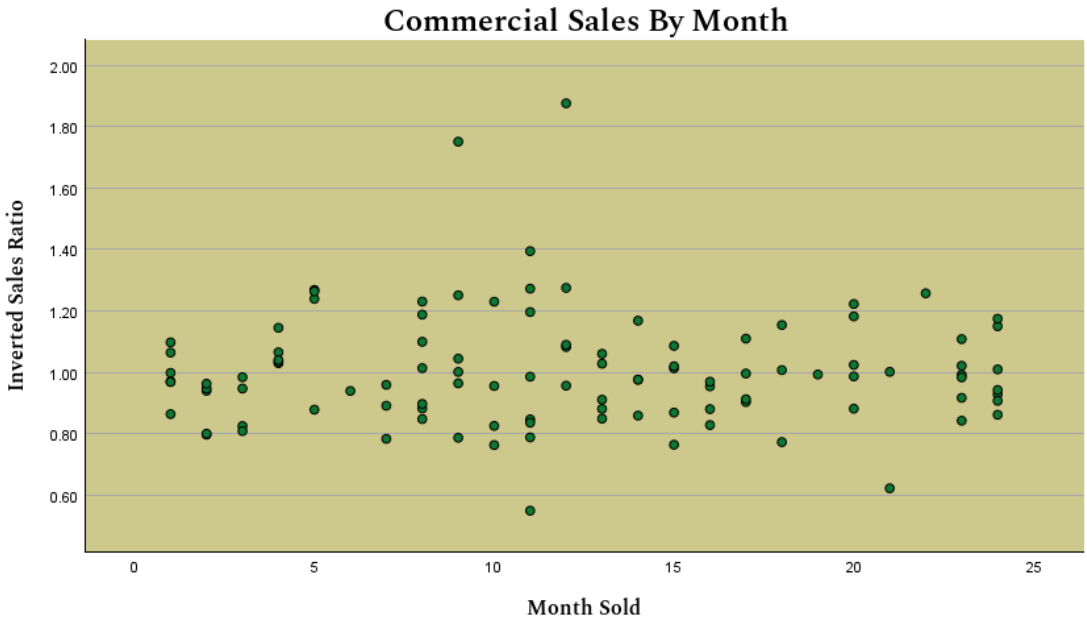


Commercial Coefficient of Dispersion

The Coefficient of Dispersion (COD) tests for undesirable variance in the valuations. The variance in sales ratios should be as small as possible. The COD for Commercial properties in Boulder County was calculated at 14.11% which is within the acceptable statistical standard of 20.99% or less established by the Colorado Board of Equalization (SBOE). The COD was also calculated for all applicable class, subclass, neighborhoods, economic areas, and valuation strata identified by the auditor. See appendix for more details.

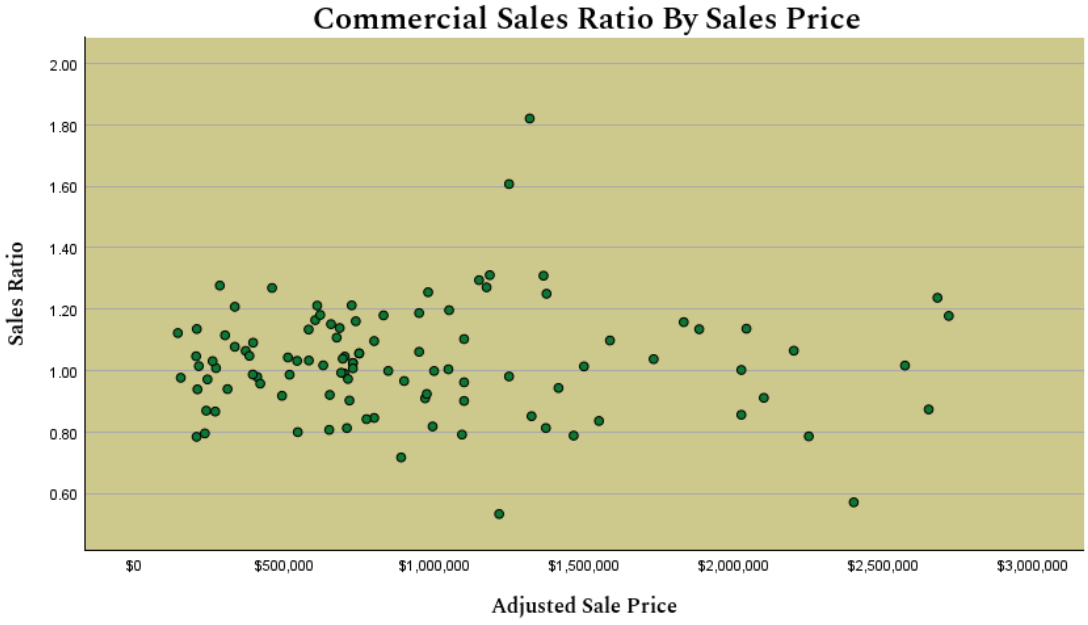
Commercial Market (Time) Adjustments

All previous statistics used the time-adjusted sales price to ensure that the effect of time on sales ratios has been appropriately addressed. There should be a consistent and reasonable time adjustment methodology, not one tailored to improve sales ratios. We examined the sales ratios over the 24 - month period of sales. There does not appear to be a significant effect of time on Boulder 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 Boulder 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 Boulder County, the PRB was calculated at 0.01 which is within the acceptable statistical range of -0.05 to 0.05 established by the International Association of Assessing Officers. The PRB was also analyzed across all applicable categories, including property class, subclass, neighborhood, economic area, size, and valuation strata as identified by the auditor. Additional details are provided in the appendix.

Commercial Sold/Unsold Comparison

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

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

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

Commercial Sales Qualification

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

There were 126 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).

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

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

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

Conclusions

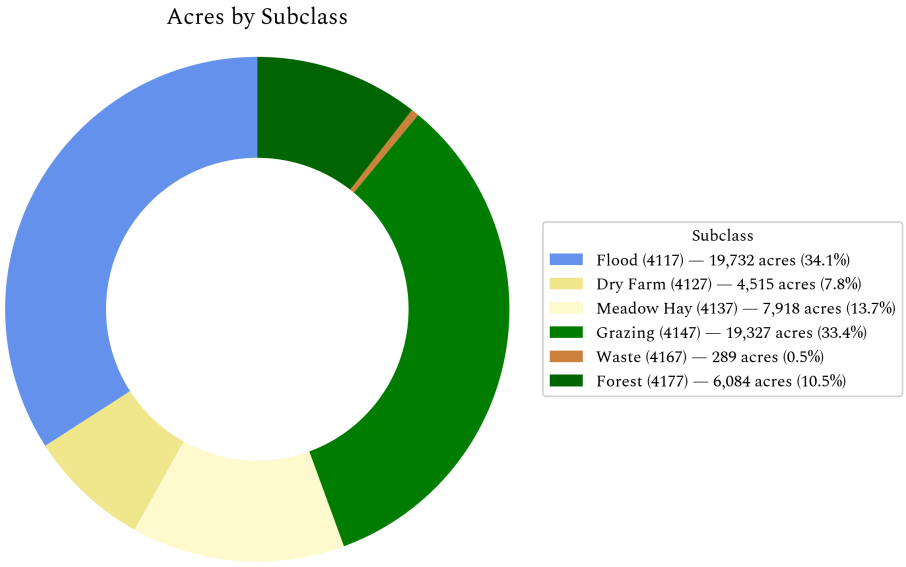
Based on the review and analysis, SMDA considers Boulder County's appraisal practices for agricultural property acceptable and in alignment with statutory requirements. The directives, commodity pricing, and expense figures issued by the Property Tax Administrator were correctly applied throughout the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

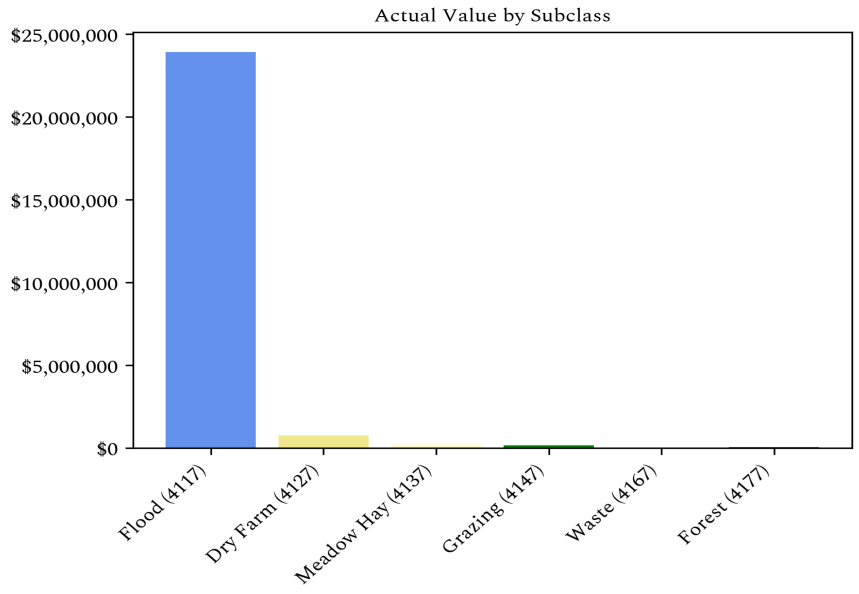
Recommendations

None

Agricultural Land Breakdown

Abstract	Class	Acres	Actual Value	Actual Value/Acre	Assessed Value
4117	Flood	19,731.83	$23,911,233.16	$1,211.81	$6,456,032.95
4127	Dry Farm	4,514.85	$766,836.49	$169.85	$207,045.85
4137	Meadow Hay	7,918.02	$228,606.23	$28.87	$61,723.68
4147	Grazing	19,326.91	$167,748.50	$8.68	$45,292.09
4167	Waste	288.92	$777.42	$2.69	$209.90
4177	Forest	6,084.29	$46,334.18	$7.62	$12,510.23





6. Agriculture Non-Integral

Methodology

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

- Questionnaires
- Field Inspections
- 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, Boulder County applied the following discovery methods:

- Questionnaires
- Field Inspections
- Personal Knowledge of Occupants
- Aerial Photography

Conclusions

Boulder 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

Boulder 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 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 Boulder 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 Boulder, 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, Boulder County used several methods:

- Public record documents
- Local publications
- Personal observation

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.

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

- Accounts close to $56,000 actual value exemption status
- Accounts protested with substantial disagreement
- Non-filing taxpayers
- Businesses with no deletions or additions for 2 or more years
- Accounts with omitted property
- Incomplete or inconsistent declarations
- New businesses filing for the first time
- Accounts with obvious discrepancies

Conclusions

Boulder 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 Boulder 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 Boulder County's assessment procedures for compliance with these guidelines for **agricultural, commercial and ski** 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

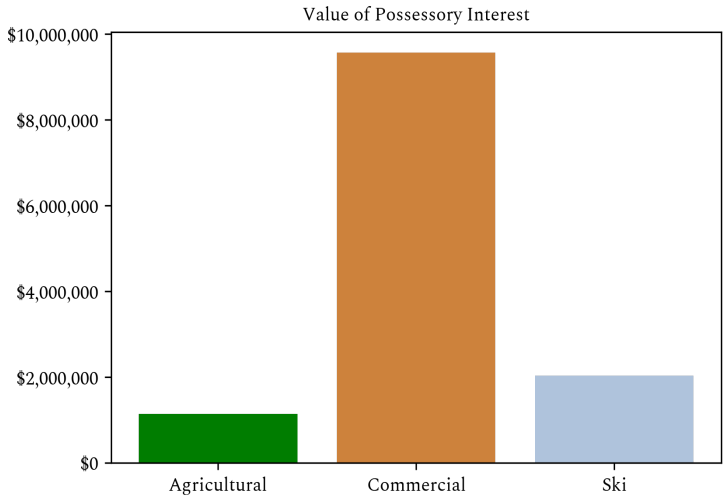
Boulder County established an effective discovery process to ensure that possessory interest properties were added to the tax roll. The county consistently applied the proper procedures and valuation methods according to State guidelines, resulting in accurate and compliant assessments.

Recommendations

None

Possessory Interest Breakdown

Possessory Interest Type	Value
Agricultural	$1,140,500
Commercial	$9,565,840
Ski	$2,027,380



11. Sales Verification

Methodology

As part of the Property Assessment Study, SMDA conducted an evaluation of Boulder 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 Boulder County's sales verification practices for the 2025 valuation period by reviewing a selection of sales from Boulder County's master sales list. A total of 185 unqualified sales were analyzed. Of these, 182 sales provided clear and supportable reasons for disqualification and 3 were switched to qualified after the analysis.

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

Conclusions

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

Recommendations

None

12. Subdivision Discounting

Methodology

SMDA reviewed Boulder 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

Boulder 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.

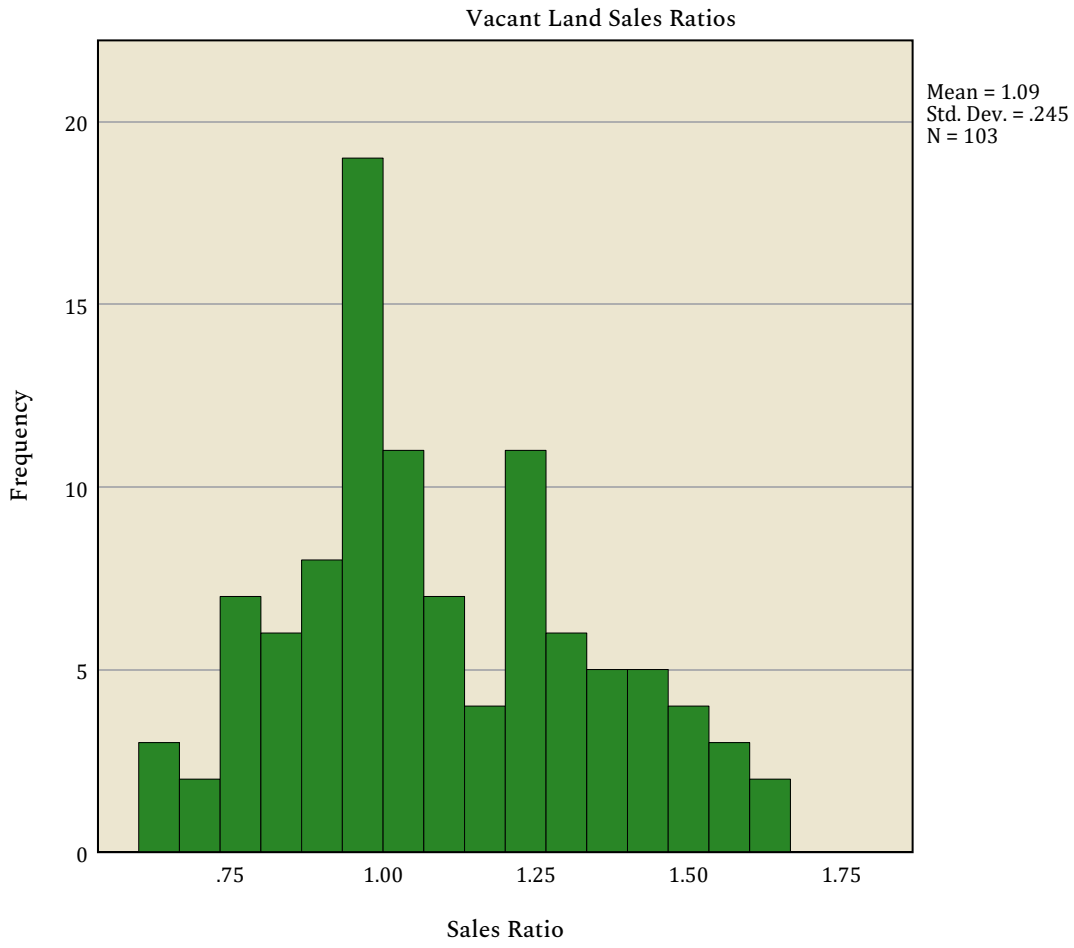
Recommendations

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
106	1.010	.195

Ratio Statistics

Ratio Statistics for Current Total Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
-.002	1.069

OVERALL Vacant Land: Sales Price by Sales Ratio

Regression

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.094	.025		43.577	<.001
	Adjusted Sale Price	-1.260E-8	.000	-.103	-1.061	.291

a. Dependent Variable: Sales Ratio

Graph

OVERALL Vacant Land: Months by Inverted Sales Ratio

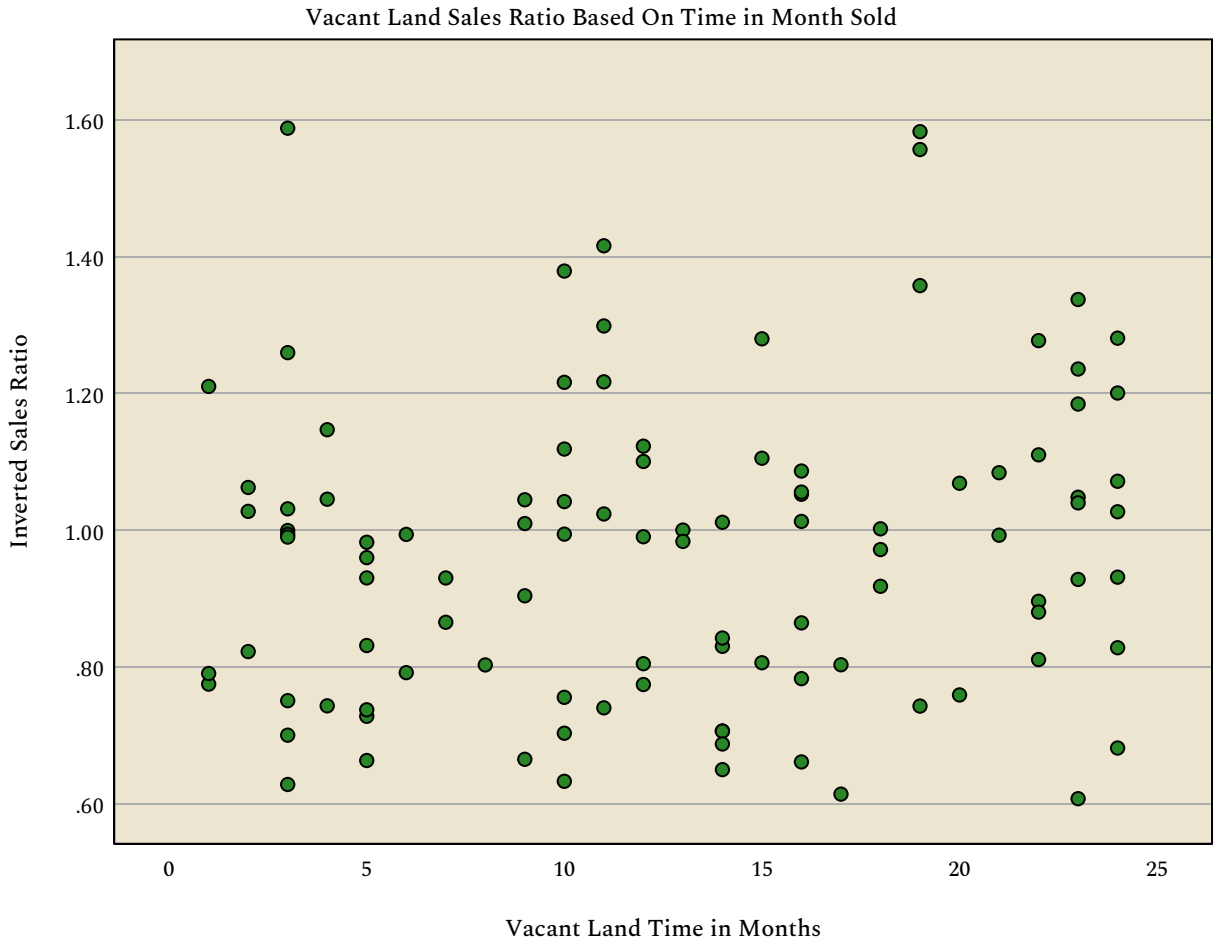
Regression

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.918	.044		20.772	<.001
	Vacant Land Time in Months	.004	.003	.129	1.323	.189

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	106	106	106
	Missing	0	0	0
Mean		$451,990.75	$719,398.11	$267,407.37
Median		$239,957.50	$309,650.00	$46,767.50
Percentiles	2.5	$3,312.50	$13,952.50	-$118,985.05
	25	$133,954.00	$155,525.00	$10,007.25
	50	$239,957.50	$309,650.00	$46,767.50
	75	$449,214.75	$546,125.00	$120,884.00
	97.5	$3,303,190.68	$6,022,612.50	$2,341,659.73

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	3544
Mann-Whitney U	85731.000
Wilcoxon W	6024912.000
Test Statistic	85731.000
Standard Error	9988.180
Standardized Test Statistic	-8.322
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	.003

Hypothesis Test Summary

	Decision
1	Reject the null hypothesis.

a. The significance level is .050.

b. Asymptotic significance is displayed.

Independent-Samples Mann-Whitney U Test

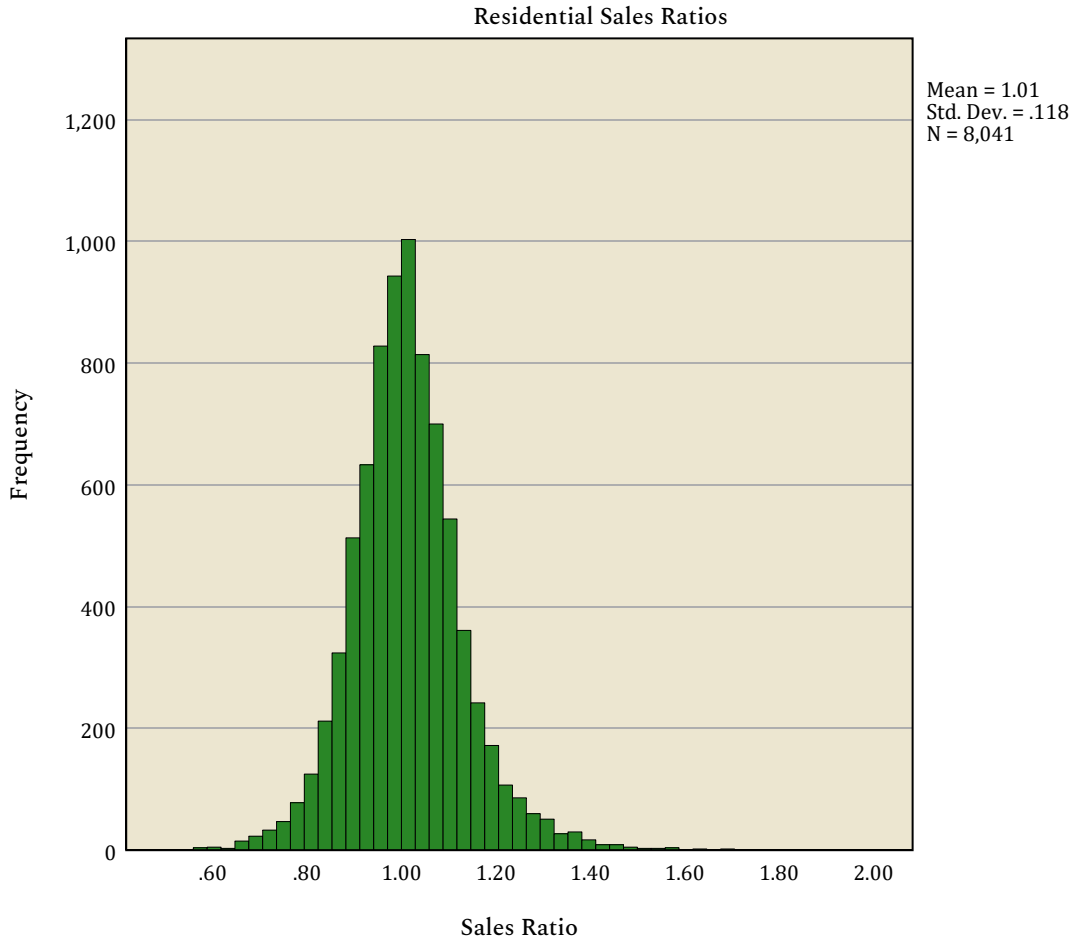
Difference in Total Value across Vacant Land Sold vs. Unsold

Independent-Samples Mann-Whitney U Test Summary

Total N	3252
Mann-Whitney U	121349.500
Wilcoxon W	5109410.500
Test Statistic	121349.500
Standard Error	8970.361
Standardized Test Statistic	-3.018
Asymptotic Sig.(2-sided test)	.003

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
8218	1.005	.091

Ratio Statistics

Ratio Statistics for Current Total Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
-.014	1.017

OVERALL Residential: Sales Price by Sales Ratio

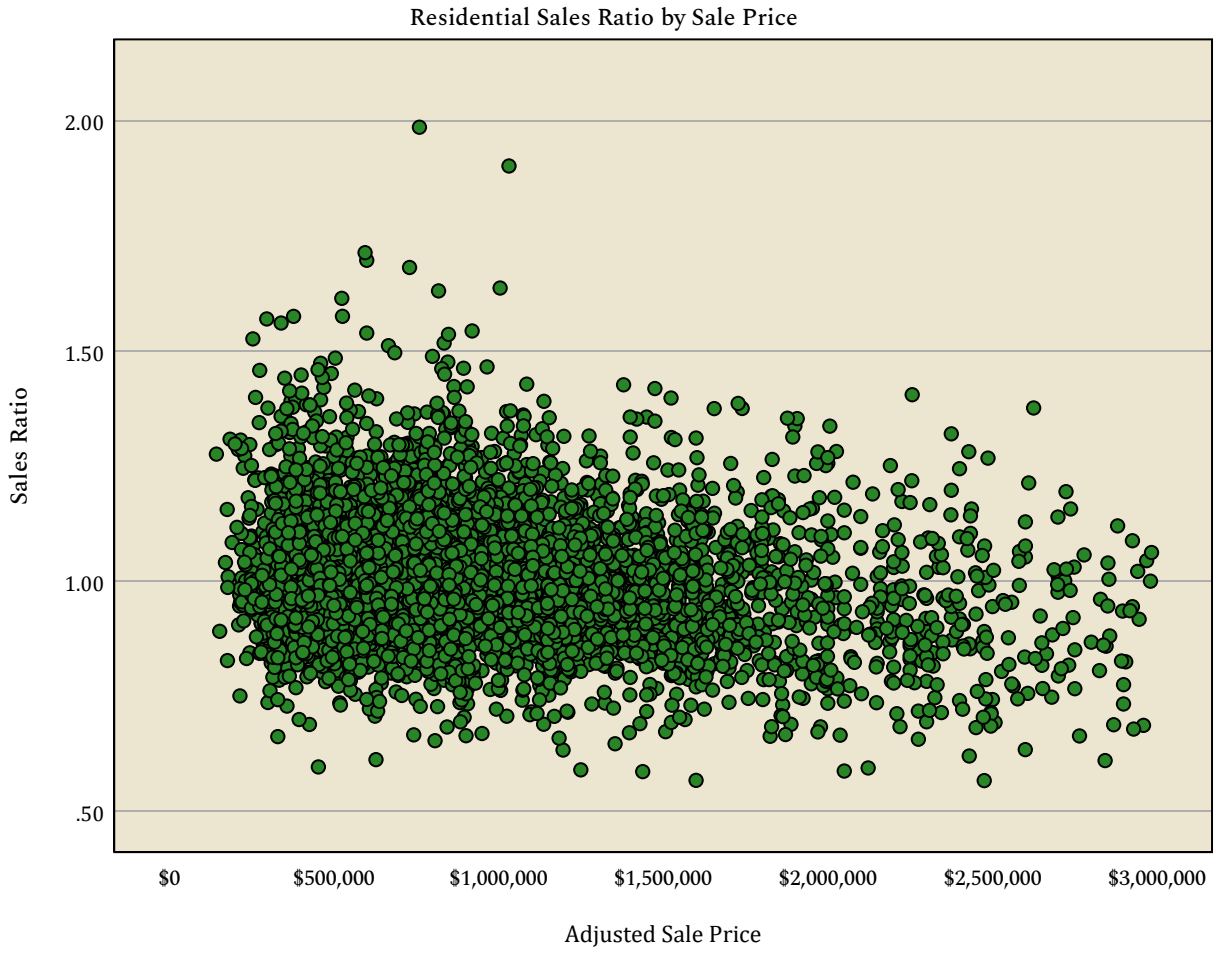
Regression

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.022	.002		533.373	<.001
	Adjusted Sale Price	-1.153E-8	.000	-.098	-8.921	<.001

a. Dependent Variable: Sales Ratio

Graph



OVERALL Residential: Months by Inverted Sales Ratio

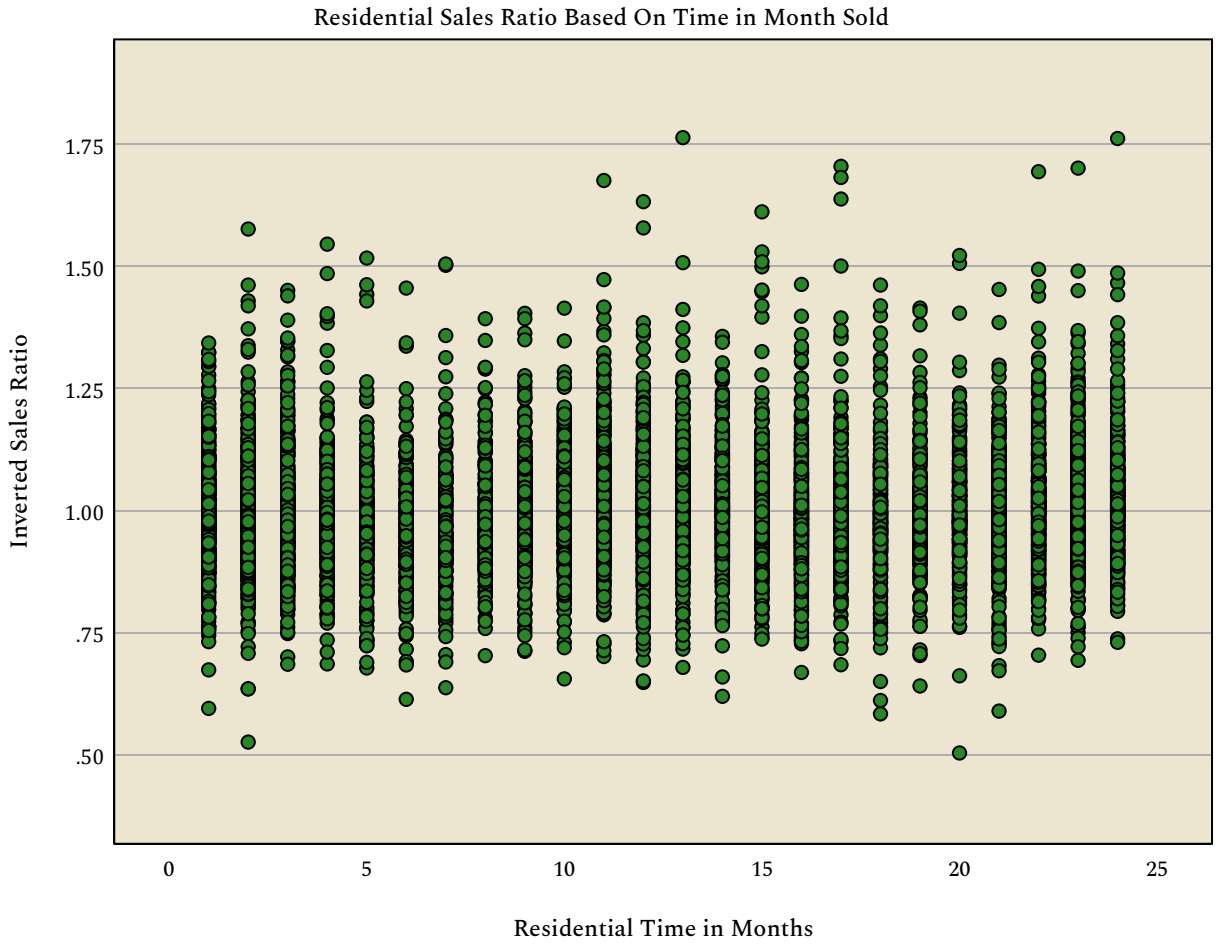
Regression

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.990	.003		331.615	<.001
	Residential Time in Months	.001	.000	.062	5.619	<.001

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	8216	8216	8216
	Missing	2	2	2
Mean		$443.42	$444.56	1.13
Median		$377.73	$383.34	1.01
Percentiles	2.5	$169.32	$218.82	.89
	25	$300.09	$310.21	.98
	50	$377.73	$383.34	1.01
	75	$509.31	$518.30	1.05
	97.5	$995.99	$997.88	1.78

Frequencies

Statistics

		Previous Total Value	Current Total Value	Difference in Total Value
N	Valid	8218	8218	8217
	Missing	0	0	1
Mean		$897,989.44	$915,129.52	$29,255.96
Median		$711,050.00	$730,100.00	$4,727.00
Percentiles	2.5	$259,418.63	$318,542.50	-$130,165.00
	25	$511,000.00	$536,275.00	-$16,900.00
	50	$711,050.00	$730,100.00	$4,727.00
	75	$1,002,273.75	$1,019,400.00	$35,000.00
	97.5	$2,568,932.50	$2,564,547.50	$409,105.00

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	<.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	101920
Mann-Whitney U	263988298.000
Wilcoxon W	4804699754.000
Test Statistic	263988298.000
Standard Error	2315466.303
Standardized Test Statistic	-22.299
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 Current Total Value is the same across categories of Residential Sold vs Unsold.	Independent-Samples Mann-Whitney U Test	.177

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

Current Total Value across Residential Sold vs Unsold

Independent-Samples Mann-Whitney U Test Summary

Total N	101713
Mann-Whitney U	329974310.500
Wilcoxon W	4825437920.500
Test Statistic	329974310.500
Standard Error	2353714.886
Standardized Test Statistic	1.350
Asymptotic Sig.(2-sided test)	.177

OVERALL Residential: Unit Value Comparison

Summarize

Sold vs Unsold

Difference in Total Value

Residential Sold vs Unsold	N	Median	Mean
SOLD	7091	$3,900.00	$16,411.54
UNSOLD	100203	-$4,700.00	$6,313.14
Total	107294	-$4,200.00	$6,980.54

OVERALL Residential: Neighborhood Group

Ratio Statistics

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Median	Coefficient of Dispersion
101	154	1.055	.098
102	90	.996	.099
103	40	.960	.154
105	51	1.046	.210
107	45	1.045	.149
109	71	.990	.144
115	96	.993	.135
120	46	.984	.156
122	97	1.001	.116
124	70	1.067	.092
126	160	.959	.088
128	81	1.013	.078
130	59	.978	.061
132	101	.995	.098
133	36	.986	.121
135	90	1.006	.086
140	128	.998	.099
142	59	.984	.085
145	67	1.025	.120
146	38	1.037	.090
148	145	1.042	.080
150	50	1.002	.092
155	484	1.027	.072
157	54	.941	.071
158	62	.971	.076
160	140	.982	.099
162	31	.968	.117
164	45	1.006	.110

OVERALL Residential: Neighborhood Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Median	Coefficient of Dispersion
170	104	1.023	.127
172	66	1.019	.115
174	118	1.016	.134
178	56	.974	.133
201	127	1.028	.108
202	184	.997	.063
203	175	.994	.085
204	107	.945	.098
205	360	1.013	.064
223	252	1.011	.077
240	82	1.006	.048
241	101	.984	.056
242	312	1.025	.081
243	85	1.016	.061
255	228	1.004	.064
256	269	1.001	.069
257	96	1.003	.060
401	36	.970	.151
405	38	1.005	.078
410	103	1.023	.093
415	60	1.052	.073
420	98	1.023	.070
425	53	1.012	.138
430	62	.965	.086
440	741	1.004	.052
445	77	1.016	.088
450	311	1.021	.081
455	30	1.021	.056
460	51	.981	.127

OVERALL Residential: Neighborhood Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Median	Coefficient of Dispersion
465	113	.978	.078
470	49	.989	.079
480	202	.962	.071
501	127	1.013	.109
820	55	1.031	.139
825	54	1.062	.151
830	61	.991	.142
901	93	.984	.112
903	48	.979	.130
910	38	1.107	.110
911	33	.986	.120
940	36	.984	.143
960	58	.952	.110
962	60	.990	.108
Overall	7999	1.005	.089

Ratio Statistics

OVERALL Residential: Neighborhood Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
101	154	-.017	1.021
102	90	-.040	1.036
103	40	-.041	1.038
105	51	-.167	1.135
107	45	-.080	1.109
109	71	-.054	1.058
115	96	-.095	1.056
120	46	-.065	1.053
122	97	-.051	1.041
124	70	-.062	1.025
126	160	.032	.993
128	81	.006	1.003
130	59	-.005	1.004
132	101	-.034	1.050
133	36	.070	1.006
135	90	-.040	1.010
140	128	.065	.998
142	59	-.059	1.026
145	67	-.081	1.049
146	38	-.048	1.017
148	145	.002	1.010
150	50	-.036	1.012
155	484	-.031	1.009
157	54	-.160	1.030
158	62	-.005	1.007
160	140	-.107	1.027
162	31	-.240	1.043
164	45	-.192	1.015
170	104	-.046	1.065

OVERALL Residential: Neighborhood Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
172	66	-.108	1.039
174	118	-.044	1.039
178	56	-.137	1.044
201	127	-.087	1.025
202	184	-.015	1.004
203	175	.005	1.006
204	107	-.086	1.017
205	360	.027	1.000
223	252	-.069	1.011
240	82	-.103	1.010
241	101	-.027	1.003
242	312	-.060	1.021
243	85	.018	1.003
255	228	.060	1.000
256	269	.004	1.008
257	96	-.014	1.004
401	36	-.175	1.078
405	38	-.147	1.015
410	103	-.139	1.028
415	60	-.024	1.015
420	98	-.016	1.010
425	53	-.229	1.056
430	62	-.037	1.018
440	741	-.038	1.007
445	77	-.124	1.035
450	311	-.023	1.012
455	30	-.006	1.006
460	51	.012	1.019
465	113	.013	1.005

OVERALL Residential: Neighborhood Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
470	49	-.272	1.008
480	202	.014	1.001
501	127	-.012	1.011
820	55	-.128	1.088
825	54	-.015	1.025
830	61	-.187	1.047
901	93	-.057	1.028
903	48	-.132	1.037
910	38	-.150	1.054
911	33	.026	1.010
940	36	.138	.991
960	58	-.026	1.030
962	60	-.072	1.024
Overall	7999	-.014	1.022

OVERALL Residential: Number of Sales by Value Group

Frequencies

Statistics

Groups of Value

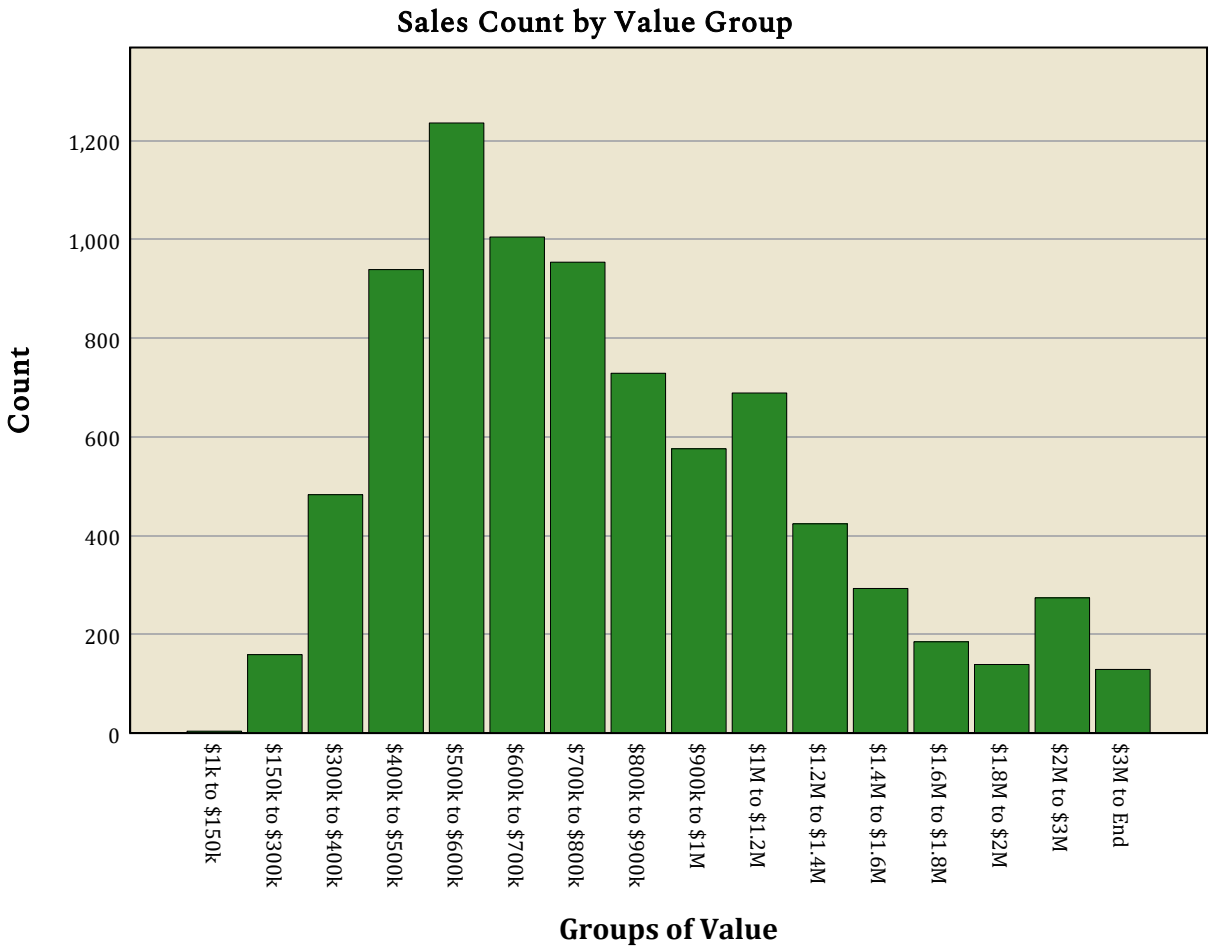
N	Valid	8218
	Missing	0

Groups of Value

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	$1k to $150k	4	.0	.0	.0
	$150k to $300k	159	1.9	1.9	2.0
	$300k to $400k	483	5.9	5.9	7.9
	$400k to $500k	939	11.4	11.4	19.3
	$500k to $600k	1236	15.0	15.0	34.3
	$600k to $700k	1005	12.2	12.2	46.6
	$700k to $800k	954	11.6	11.6	58.2
	$800k to $900k	729	8.9	8.9	67.0
	$900k to $1M	576	7.0	7.0	74.0
	$1M to $1.2M	689	8.4	8.4	82.4
	$1.2M to $1.4M	424	5.2	5.2	87.6
	$1.4M to $1.6M	293	3.6	3.6	91.2
	$1.6M to $1.8M	185	2.3	2.3	93.4
	$1.8M to $2M	139	1.7	1.7	95.1
	$2M to $3M	274	3.3	3.3	98.4
	$3M to End	129	1.6	1.6	100.0
	Total	8218	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	4	.859	1.092
$150k to $300k	159	.942	.102
$300k to $400k	483	.961	.080
$400k to $500k	939	.995	.077
$500k to $600k	1236	1.003	.070
$600k to $700k	1005	1.008	.077
$700k to $800k	954	1.026	.070
$800k to $900k	729	1.020	.079
$900k to $1M	576	1.031	.092
$1M to $1.2M	689	1.024	.106
$1.2M to $1.4M	424	.989	.126
$1.4M to $1.6M	293	.991	.124
$1.6M to $1.8M	185	1.019	.112
$1.8M to $2M	139	.995	.129
$2M to $3M	274	.980	.143
$3M to End	129	.968	.166
Overall	8218	1.005	.091

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	4	-2.412	2.300
$150k to $300k	159	-.360	1.022
$300k to $400k	483	-.424	1.011
$400k to $500k	939	-.574	1.010
$500k to $600k	1236	-.728	1.010
$600k to $700k	1005	-.970	1.013
$700k to $800k	954	-.827	1.010
$800k to $900k	729	-.967	1.011
$900k to $1M	576	-1.058	1.014
$1M to $1.2M	689	-.842	1.019
$1.2M to $1.4M	424	-1.226	1.028
$1.4M to $1.6M	293	-1.113	1.026
$1.6M to $1.8M	185	-.994	1.025
$1.8M to $2M	139	-1.222	1.027
$2M to $3M	274	-.531	1.034
$3M to End	129	-.018	.988
Overall	8218	-.014	1.017

OVERALL Residential: Sales by Building Area Group

Frequencies

Statistics

Groups by Building Area

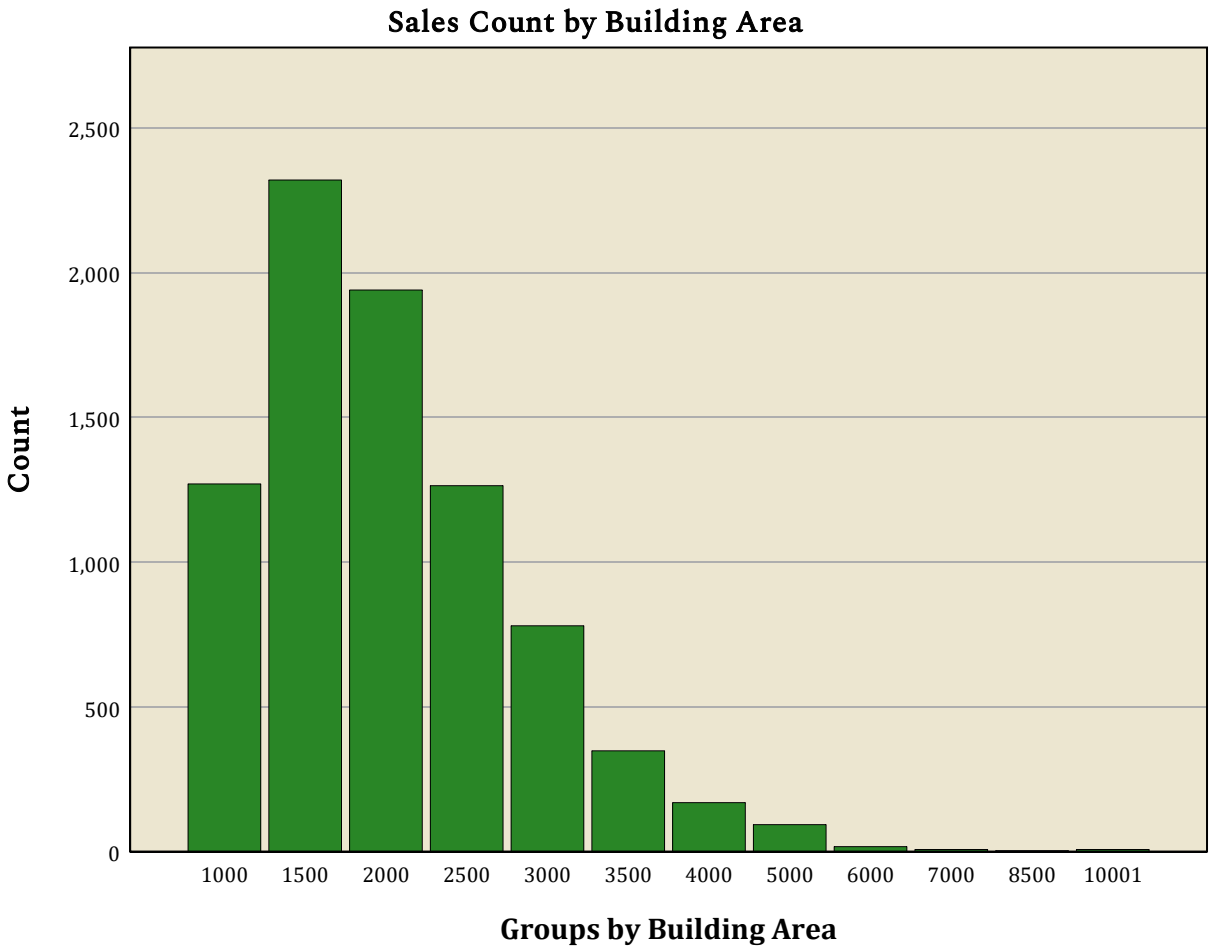
N	Valid	8218
	Missing	0

Groups by Building Area

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1000	1270	15.5	15.5	15.5
	1500	2320	28.2	28.2	43.7
	2000	1940	23.6	23.6	67.3
	2500	1264	15.4	15.4	82.7
	3000	780	9.5	9.5	92.2
	3500	348	4.2	4.2	96.4
	4000	169	2.1	2.1	98.5
	5000	93	1.1	1.1	99.6
	6000	17	.2	.2	99.8
	7000	7	.1	.1	99.9
	8500	3	.0	.0	99.9
	10001	7	.1	.1	100.0
	Total	8218	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	1270	.984	.101
1500	2320	1.005	.088
2000	1940	1.014	.078
2500	1264	1.013	.090
3000	780	1.009	.090
3500	348	.996	.106
4000	169	.989	.126
5000	93	.982	.133
6000	17	.966	.140
7000	7	1.139	.146
8500	3	1.032	.088
10001	7	.926	.311
Overall	8218	1.005	.091

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	1270	-.015	1.014
1500	2320	.001	1.009
2000	1940	-.026	1.014
2500	1264	-.049	1.026
3000	780	-.040	1.021
3500	348	-.064	1.035
4000	169	-.064	1.051
5000	93	-.005	1.035
6000	17	-.057	1.064
7000	7	-.062	1.058
8500	3	-.177	1.023
10001	7	.096	.776
Overall	8218	-.014	1.017

OVERALL Residential: Sales by Economic Area Group

Frequencies

Statistics

economic_area

N	Valid	8218
	Missing	0

economic_area

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	101	153	1.9	1.9	1.9
	102	169	2.1	2.1	3.9
	103	161	2.0	2.0	5.9
	104	104	1.3	1.3	7.1
	105	156	1.9	1.9	9.0
	106	180	2.2	2.2	11.2
	107	131	1.6	1.6	12.8
	108	106	1.3	1.3	14.1
	109	53	.6	.6	14.8
	201	235	2.9	2.9	17.6
	202	268	3.3	3.3	20.9
	301	97	1.2	1.2	22.1
	302	60	.7	.7	22.8
	303	111	1.4	1.4	24.1
	304	15	.2	.2	24.3
	401	175	2.1	2.1	26.5
	402	263	3.2	3.2	29.7
	403	328	4.0	4.0	33.6
	404	563	6.9	6.9	40.5
	405	530	6.4	6.4	46.9
	407	701	8.5	8.5	55.5
	501	102	1.2	1.2	56.7
	502	878	10.7	10.7	67.4
	503	241	2.9	2.9	70.3
	505	11	.1	.1	70.5

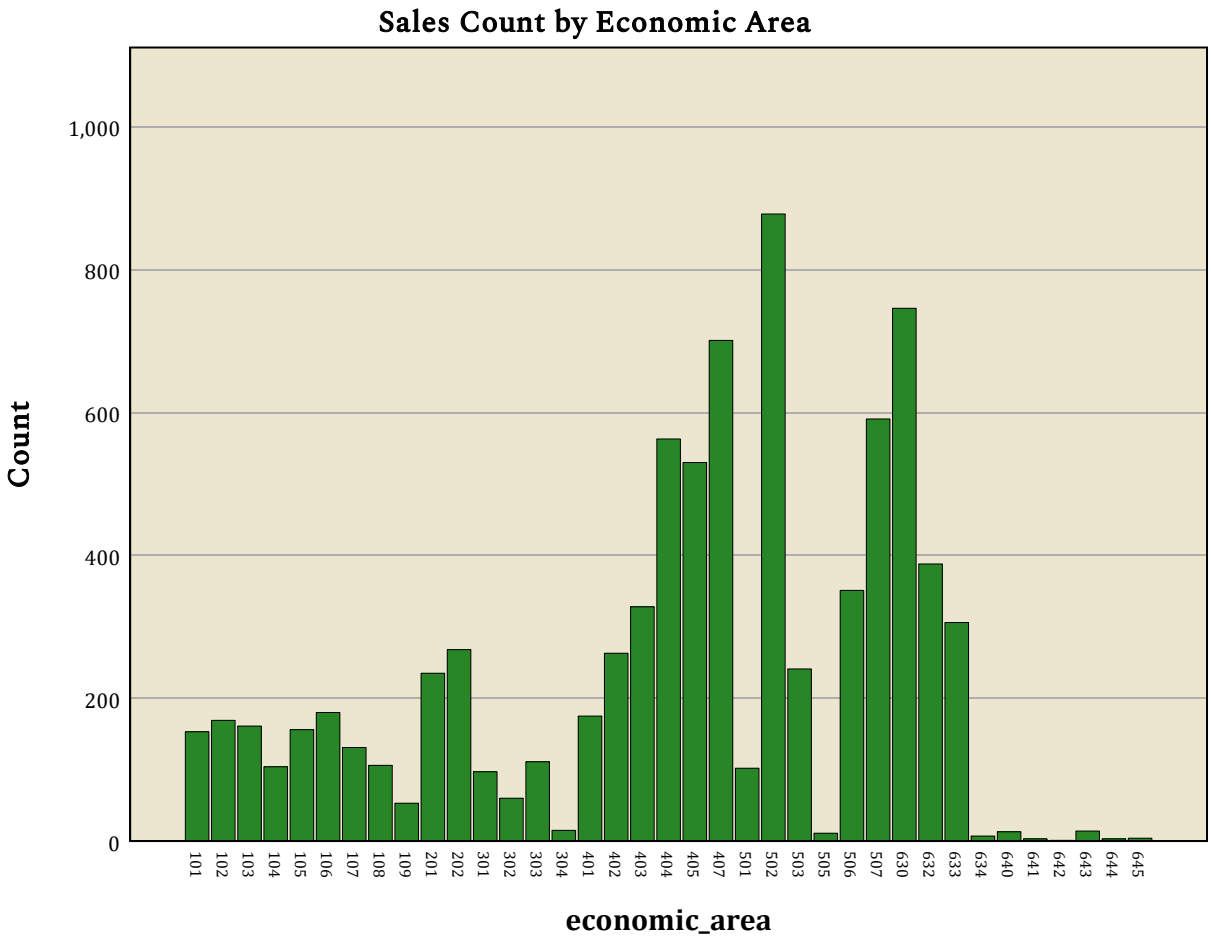
OVERALL Residential: Sales by Economic Area Group

economic_area

	Frequency	Percent	Valid Percent	Cumulative Percent
506	351	4.3	4.3	74.7
507	591	7.2	7.2	81.9
630	746	9.1	9.1	91.0
632	388	4.7	4.7	95.7
633	306	3.7	3.7	99.5
634	7	.1	.1	99.5
640	13	.2	.2	99.7
641	3	.0	.0	99.7
642	1	.0	.0	99.7
643	14	.2	.2	99.9
644	3	.0	.0	100.0
645	4	.0	.0	100.0
Total	8218	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
101	153	.997	.134
102	169	1.032	.128
103	161	1.028	.141
104	104	1.022	.090
105	156	1.031	.098
106	180	.974	.106
107	131	1.002	.142
108	106	1.021	.073
109	53	.983	.079
201	235	.979	.137
202	268	1.004	.123
301	97	1.028	.134
302	60	.995	.141
303	111	1.031	.153
304	15	.880	.156
401	175	1.010	.107
402	263	1.005	.072
403	328	1.004	.102
404	563	1.010	.060
405	530	1.007	.091
407	701	.999	.063
501	102	1.014	.110
502	878	1.000	.082
503	241	1.024	.076
505	11	.937	.125
506	351	1.002	.061
507	591	1.013	.064
630	746	.997	.104

OVERALL Residential: Central Tendencies by Economic Area Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Median	Coefficient of Dispersion
632	388	1.006	.077
633	306	1.001	.077
634	7	1.030	.180
640	13	1.039	.103
641	3	1.196	.447
642	1	.700	.000
643	14	.946	.080
644	3	1.139	.054
645	4	1.215	.143
Overall	8218	1.005	.091

Ratio Statistics

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
101	153	-.071	1.047
102	169	-.114	1.046
103	161	-.122	1.058
104	104	-.144	1.013
105	156	-.157	1.026
106	180	-.133	1.030
107	131	-.122	1.063
108	106	-.052	1.008
109	53	-.052	1.013
201	235	-.093	1.038
202	268	-.076	1.037
301	97	-.105	1.051
302	60	-.212	1.042

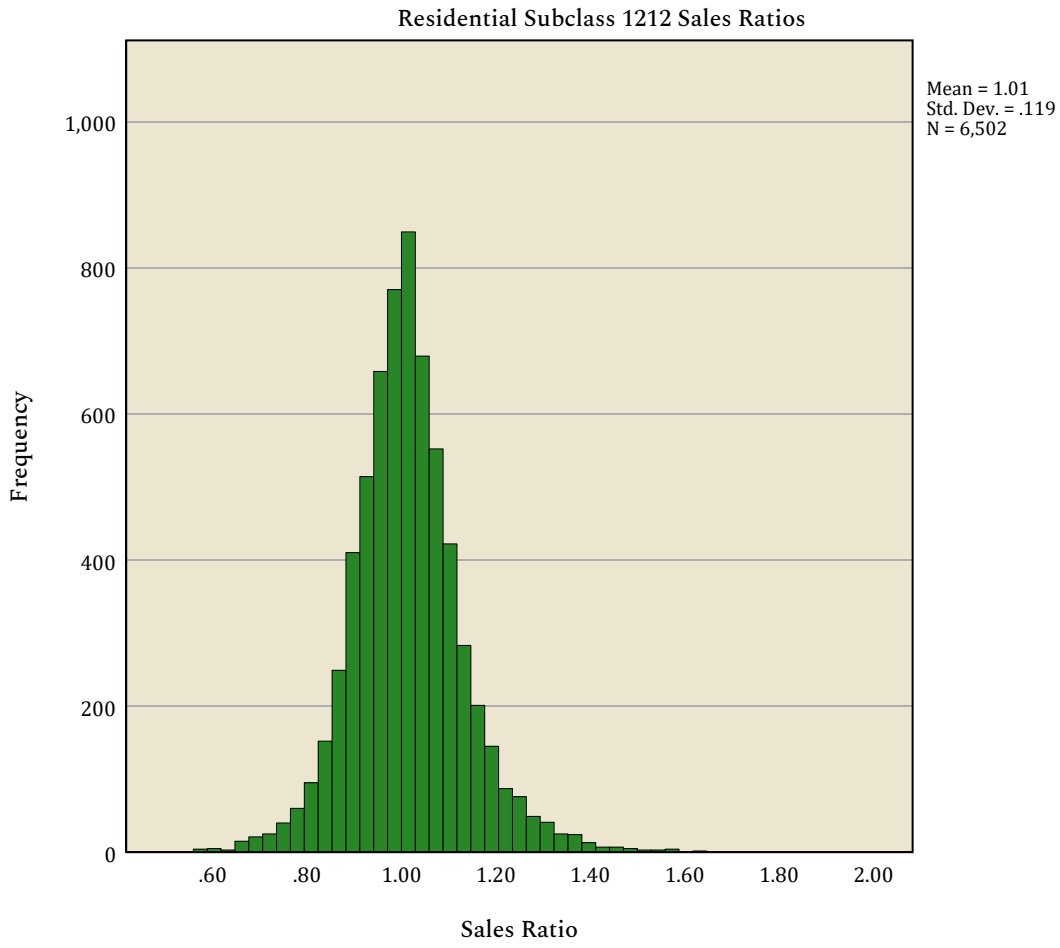
OVERALL Residential: Central Tendencies by Economic Area Group

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Price Related Bias	Price Related Differential
303	111	-.088	1.054
304	15	-.115	1.023
401	175	-.079	1.035
402	263	-.002	1.005
403	328	-.112	1.029
404	563	-.092	1.014
405	530	-.023	1.012
407	701	.026	1.001
501	102	-.015	1.010
502	878	-.048	1.011
503	241	-.053	1.016
505	11	-.514	1.034
506	351	.055	1.001
507	591	.002	1.004
630	746	-.009	1.020
632	388	.002	1.005
633	306	.019	1.004
634	7	.605	1.007
640	13	-.043	1.020
641	3	4.250	1.073
642	1	.	1.000
643	14	-.180	1.025
644	3	.493	.996
645	4	.118	.919
Overall	8218	-.014	1.017

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
6654	1.006	.090

Ratio Statistics

Ratio Statistics for Current Total Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
-.023	1.024

Residential Subclass 1212: Sales Price by Sales Ratio

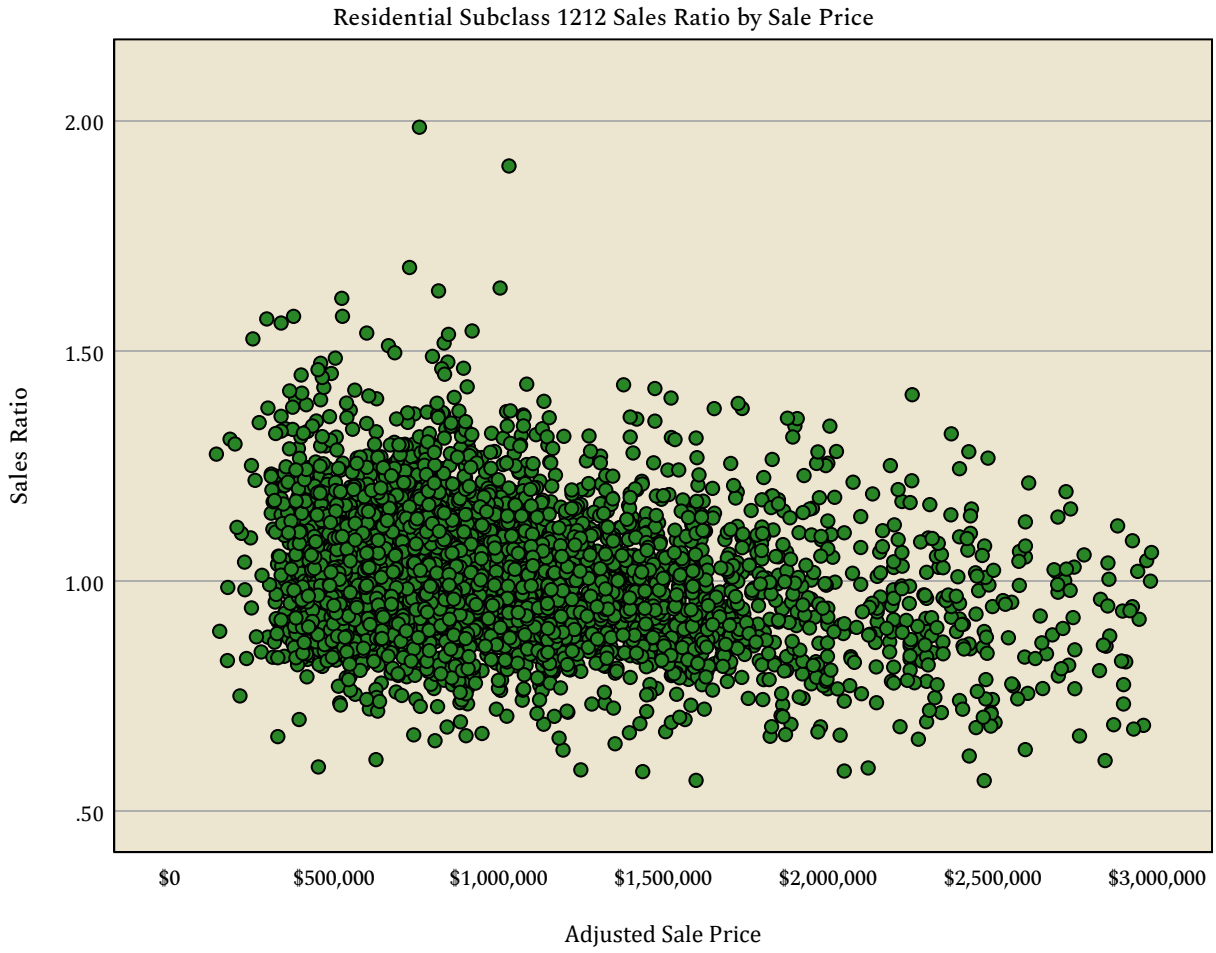
Regression

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.054	.003		396.722	<.001
	Adjusted Sale Price	-4.416E-8	.000	-.238	-19.945	<.001

a. Dependent Variable: Sales Ratio

Graph



Residential Subclass 1212: Months by Inverted Sales Ratio

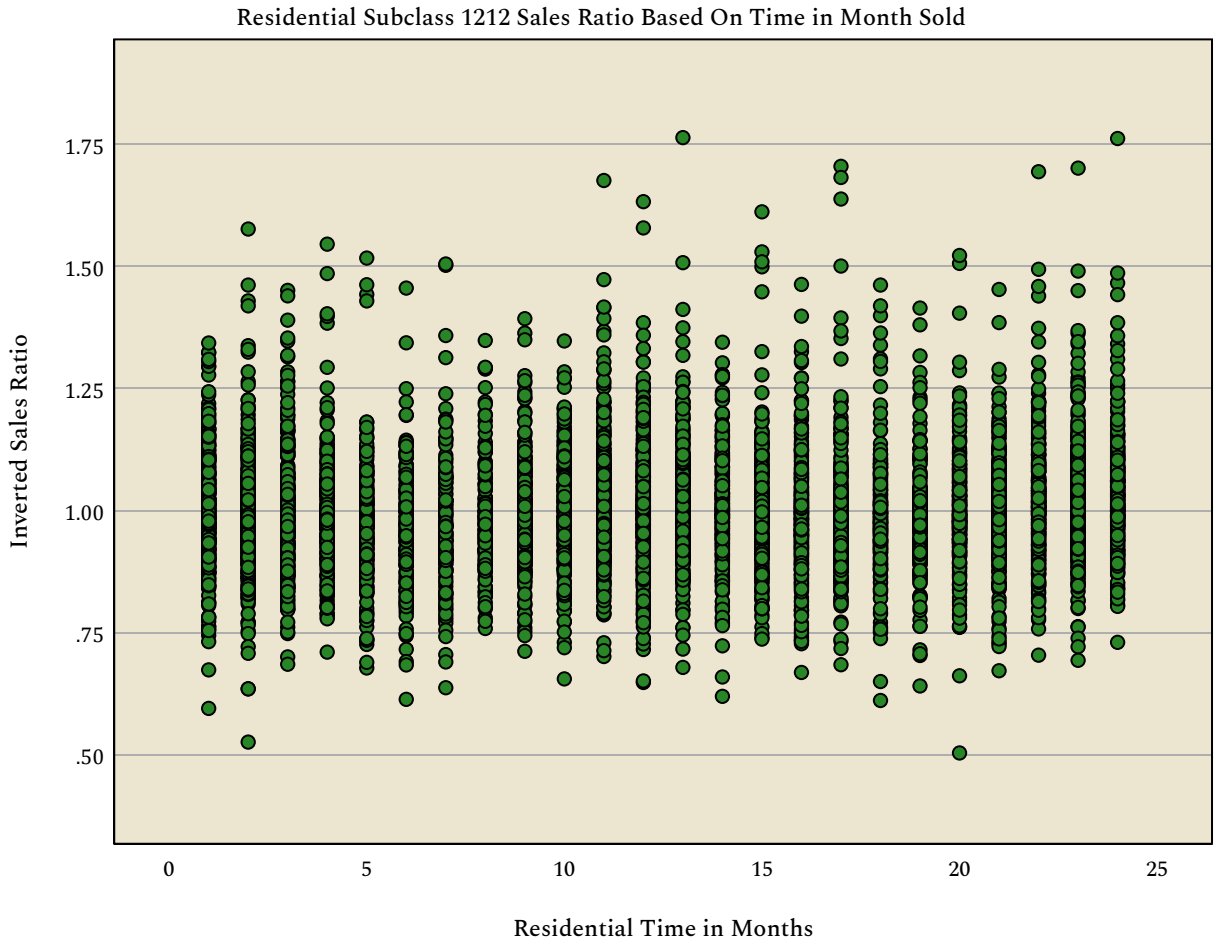
Regression

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.990	.003		291.618	<.001
	Residential Time in Months	.001	.000	.061	4.964	<.001

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	6652	6652	6652
	Missing	2	2	2
Mean		$419.55	$431.45	1.10
Median		$365.25	$370.82	1.00
Percentiles	2.5	$159.48	$216.60	.89
	25	$294.61	$303.65	.98
	50	$365.25	$370.82	1.00
	75	$488.02	$498.92	1.05
	97.5	$991.55	$996.84	2.18

Frequencies

Statistics

		Previous Total Value	Current Total Value	Difference in Total Value
N	Valid	6654	6654	6654
	Missing	0	0	0
Mean		$925,791.86	$952,782.80	$26,990.94
Median		$763,050.00	$778,800.00	$2,150.00
Percentiles	2.5	$308,522.50	$388,000.00	-$128,562.50
	25	$563,375.00	$588,300.00	-$20,000.00
	50	$763,050.00	$778,800.00	$2,150.00
	75	$1,066,625.00	$1,084,975.00	$38,900.00
	97.5	$2,647,587.50	$2,634,425.00	$430,525.00

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	<.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	83164
Mann-Whitney U	167104456.500
Wilcoxon W	3206569984.500
Test Statistic	167104456.500
Standard Error	1675757.551
Standardized Test Statistic	-21.180
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 Current Total Value is the same across categories of Residential Sold vs Unsold.	Independent-Samples Mann-Whitney U Test	.227

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

Current Total Value across Residential Sold vs Unsold

Independent-Samples Mann-Whitney U Test Summary

Total N	83169
Mann-Whitney U	208598664.500
Wilcoxon W	3231168789.500
Test Statistic	208598664.500
Standard Error	1708844.321
Standardized Test Statistic	-1.208
Asymptotic Sig.(2-sided test)	.227

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	5623	1.00	1.02
UNSOLD	81874	.99	1.00
Total	87497	.99	1.00

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	270	1.02	1.04
	Total	270	1.02	1.04
101	SOLD	144	1.02	1.05
	UNSOLD	1950	1.01	1.03
	Total	2094	1.01	1.03
102	SOLD	166	.99	1.01
	UNSOLD	2675	.96	.98
	Total	2841	.96	.98
103	SOLD	154	.96	.97
	UNSOLD	2250	.95	.97
	Total	2404	.95	.97
104	SOLD	104	.94	.97
	UNSOLD	1805	.93	.94
	Total	1909	.93	.95
105	SOLD	155	.94	.96
	UNSOLD	3002	.93	.93
	Total	3157	.93	.93
106	SOLD	179	.98	1.02
	UNSOLD	2739	.96	.98
	Total	2918	.96	.98

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
107	SOLD	115	.97	.99
	UNSOLD	1885	.97	.97
	Total	2000	.97	.97
108	SOLD	106	1.03	1.04
	UNSOLD	1571	1.01	1.01
	Total	1677	1.01	1.01
109	SOLD	53	1.00	1.03
	UNSOLD	742	.99	.99
	Total	795	.99	1.00
201	SOLD	235	1.02	1.14
	UNSOLD	3999	1.00	1.02
	Total	4234	1.00	1.02
202	SOLD	266	.98	1.01
	UNSOLD	3746	.96	.97
	Total	4012	.96	.98
301	SOLD	96	1.04	1.05
	UNSOLD	1667	1.00	1.02
	Total	1763	1.00	1.02
302	SOLD	60	.96	.99
	UNSOLD	1146	.93	.96
	Total	1206	.93	.96
303	SOLD	104	.98	1.01
	UNSOLD	1766	.96	.99
	Total	1870	.96	.99
304	SOLD	14	1.01	1.04
	UNSOLD	350	1.00	1.03
	Total	364	1.00	1.03
401	SOLD	175	1.01	1.04
	UNSOLD	2844	1.01	1.02
	Total	3019	1.01	1.02

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
402	SOLD	172	1.00	1.02
	UNSOLD	2464	1.00	1.01
	Total	2636	1.00	1.01
403	SOLD	316	1.03	1.06
	UNSOLD	5061	1.02	1.03
	Total	5377	1.02	1.03
404	SOLD	297	.99	1.00
	UNSOLD	3513	.98	.99
	Total	3810	.98	.99
405	SOLD	456	.98	1.00
	UNSOLD	7125	.97	.98
	Total	7581	.97	.98
407	SOLD	366	1.05	1.06
	UNSOLD	2996	1.05	1.06
	Total	3362	1.05	1.06
501	SOLD	102	1.02	1.04
	UNSOLD	1306	1.00	1.01
	Total	1408	1.00	1.01
502	SOLD	800	.99	1.02
	UNSOLD	11550	.98	.99
	Total	12350	.98	.99
503	SOLD	227	1.02	1.03
	UNSOLD	3438	1.01	1.02
	Total	3665	1.01	1.02
505	SOLD	11	1.01	1.05
	UNSOLD	185	1.00	1.05
	Total	196	1.01	1.05
506	SOLD	214	1.02	1.03
	UNSOLD	1905	1.02	1.02
	Total	2119	1.02	1.02

Residential Subclass 1212: Unit Comparison Method

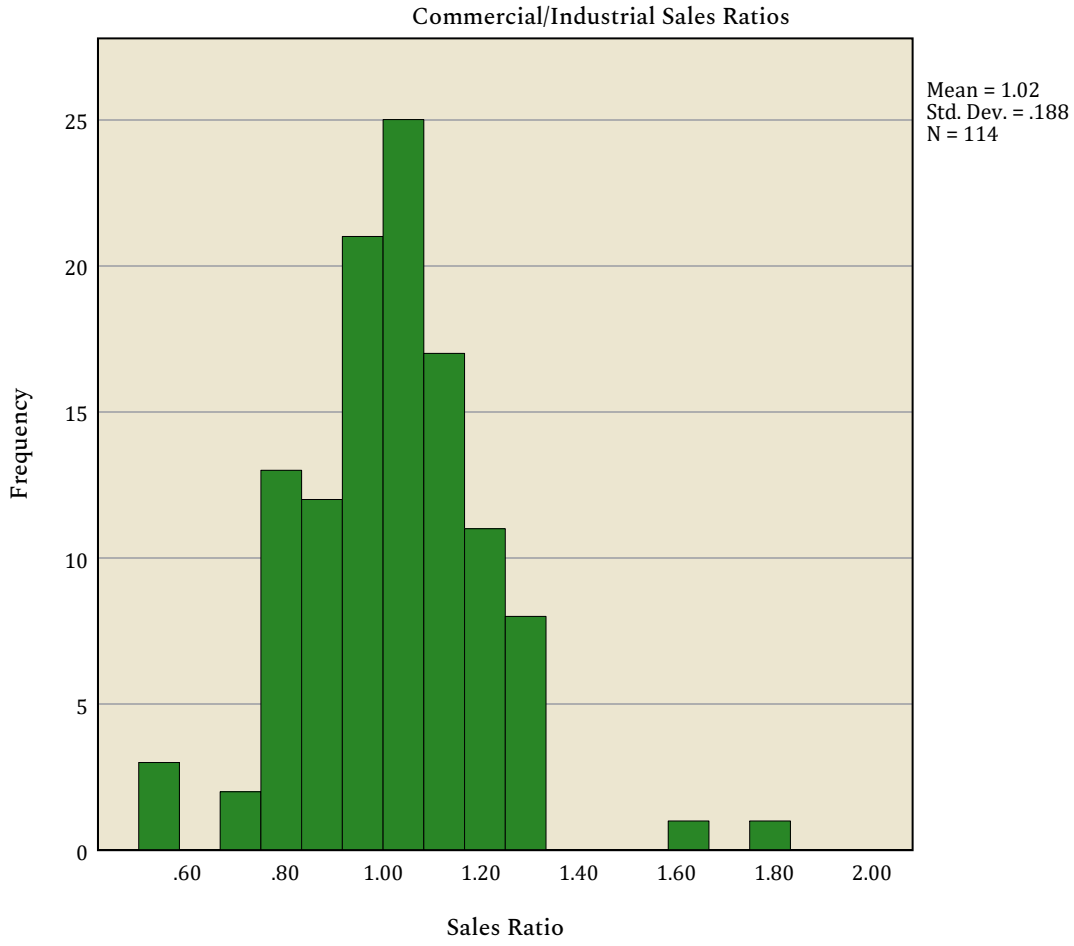
Sold vs Unsold Percent Change for Subclass 1212 by Economic Area

Difference in Price Per Foot

economic_area	Residential Sold vs Unsold	N	Median	Mean
507	SOLD	536	1.00	1.01
	UNSOLD	7753	.99	1.00
	Total	8289	.99	1.00
620	UNSOLD	171	1.00	1.00
	Total	171	1.00	1.00
Total	SOLD	5623	1.00	1.02
	UNSOLD	81874	.99	1.00
	Total	87497	.99	1.00

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
126	1.015	.141

Ratio Statistics

Ratio Statistics for Current Total Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
.007	1.011

OVERALL Commercial/Industrial: Sales Price by Sales Ratio

Regression

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.027	.022		46.974	<.001
	Adjusted Sale Price	-3.868E-9	.000	-.045	-.507	.613

a. Dependent Variable: Sales Ratio

Graph

OVERALL Commercial/Industrial: Months by Inverted Sales Ratio

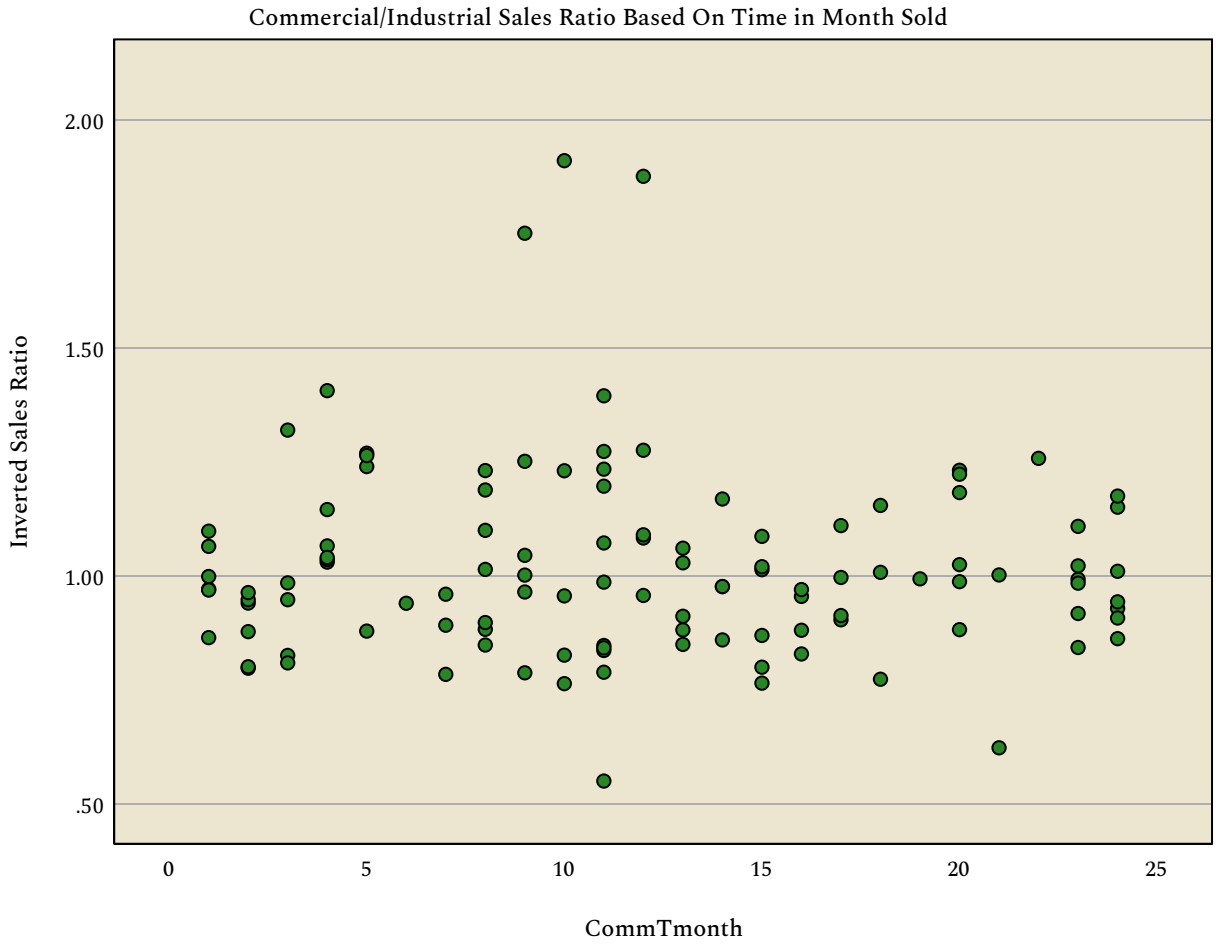
Regression

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.040	.036		29.073	<.001
	CommTmonth	-.002	.003	-.068	-.755	.452

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	0	0	0
	Missing	126	126	126

Frequencies

Statistics

		Previous Total Value	Current Total Value	Difference in Total Value
N	Valid	126	126	126
	Missing	0	0	0
Mean		$1,696,516.99	$1,784,440.15	$87,923.16
Median		$823,100.00	$877,800.00	$19,500.00
Percentiles	2.5	$183,110.00	$166,935.00	-$591,525.00
	25	$510,090.00	$581,150.00	-$25,775.00
	50	$823,100.00	$877,800.00	$19,500.00
	75	$1,885,000.00	$2,013,725.00	$190,905.00
	97.5	$10,084,327.50	$9,272,820.00	$1,105,292.45

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	.029

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	4202
Mann-Whitney U	273519.500
Wilcoxon W	8606922.500
Test Statistic	273519.500
Standard Error	13093.604
Standardized Test Statistic	2.184
Asymptotic Sig.(2-sided test)	.029

Nonparametric Tests

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

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.[a,b]
1	The distribution of Current Total Value is the same across categories of CommSOLDFLG.	Independent-Samples Mann-Whitney U Test	.106

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

Current Total Value across CommSOLDFLG

Independent-Samples Mann-Whitney U Test Summary

Total N	4202
Mann-Whitney U	274373.000
Wilcoxon W	8591454.000
Test Statistic	274373.000
Standard Error	13308.327
Standardized Test Statistic	1.618
Asymptotic Sig.(2-sided test)	.106

OVERALL Commercial/Industrial: Unit Value Comparison

Summarize

Sold vs Unsold

Difference in Total Value

CommSOLDFLG	N	Median	Mean
SOLD	124	$18,100.00	$82,185.63
UNSOLD	4300	$44,405.00	$356,106.92
Total	4424	$43,450.00	$348,429.20

Summarize

Sold vs Unsold

Difference in Total Value

Improvement Abstract Codes	CommSOLDFLG	N	Median	Mean
	UNSOLD	228	$19,040.00	$165,362.98
	Total	228	$19,040.00	$165,362.98
2020	UNSOLD	22	$200.00	-$9,513.64
	Total	22	$200.00	-$9,513.64
2022	UNSOLD	1	$1,103,480.00	$1,103,480.00
	Total	1	$1,103,480.00	$1,103,480.00
2023	UNSOLD	121	$100.00	$10,591.87
	Total	121	$100.00	$10,591.87
2212	SOLD	17	$116,100.00	$171,828.41
	UNSOLD	571	$119,450.00	$366,285.64
	Total	588	$118,825.00	$360,663.57
2215	SOLD	1	$160,000.00	$160,000.00
	UNSOLD	47	$310,000.00	$514,837.53
	Total	48	$307,800.00	$507,445.08
2220	SOLD	11	$103,100.00	$194,036.82
	UNSOLD	519	$98,200.00	$160,958.73
	Total	530	$99,100.00	$161,645.26
2221	SOLD	3	$189,800.00	$184,733.33
	UNSOLD	75	$56,600.00	$110,771.71
	Total	78	$56,950.00	$113,616.38

OVERALL Commercial/Industrial: Unit Value Comparison

Sold vs Unsold

Difference in Total Value

Improvement Abstract Codes	CommSOLDFLG	N	Median	Mean
2222	SOLD	3	$50,700.00	$29,100.00
	UNSOLD	27	$29,100.00	$94,911.11
	Total	30	$35,000.00	$88,330.00
2225	SOLD	1	$206,211.00	$206,211.00
	UNSOLD	23	$0.00	-$3,232,737.70
	Total	24	$0.00	-$3,089,448.17
2230	SOLD	4	$490,450.00	$413,225.00
	UNSOLD	117	$52,100.00	$324,387.42
	Total	121	$61,000.00	$327,324.20
2231	SOLD	1	$289,300.00	$289,300.00
	UNSOLD	61	$126,700.00	$172,446.07
	Total	62	$141,250.00	$174,330.81
2232	SOLD	1	$1,512,200.00	$1,512,200.00
	UNSOLD	60	$18,050.00	$96,760.85
	Total	61	$23,700.00	$119,964.77
2234	SOLD	6	-$35,150.00	-$20,950.00
	UNSOLD	197	$78,500.00	$143,909.60
	Total	203	$76,200.00	$139,036.90
2235	SOLD	4	$12,100.00	$32,325.00
	UNSOLD	427	$46,700.00	$257,380.26
	Total	431	$46,200.00	$255,291.58
2237	SOLD	5	$69,300.00	$55,187.00
	UNSOLD	103	$21,900.00	$97,642.74
	Total	108	$22,500.00	$95,677.19
2238	SOLD	2	$109,450.00	$109,450.00
	UNSOLD	111	$127,000.00	$212,609.98
	Total	113	$127,000.00	$210,784.14
2239	UNSOLD	36	$87,724.50	$548,758.86
	Total	36	$87,724.50	$548,758.86

OVERALL Commercial/Industrial: Unit Value Comparison

Sold vs Unsold

Difference in Total Value

Improvement Abstract Codes	CommSOLDFLG	N	Median	Mean
2240	UNSOLD	2	$72,600.00	$72,600.00
	Total	2	$72,600.00	$72,600.00
2245	SOLD	43	-$8,700.00	$15,615.91
	UNSOLD	800	-$3,400.00	$13,168.48
	Total	843	-$3,400.00	$13,293.32
2250	UNSOLD	2	$0.00	$0.00
	Total	2	$0.00	$0.00
3210	SOLD	6	-$67,950.00	-$56,750.00
	UNSOLD	158	$906,300.00	$2,084,170.21
	Total	164	$890,265.50	$2,005,843.86
3212	UNSOLD	4	$308,700.00	$414,500.00
	Total	4	$308,700.00	$414,500.00
3215	SOLD	10	$95,050.00	-$27,390.00
	UNSOLD	315	$549,800.00	$1,504,848.61
	Total	325	$533,900.00	$1,457,702.80
3220	UNSOLD	3	$218,700.00	$269,106.67
	Total	3	$218,700.00	$269,106.67
3230	SOLD	5	$128,000.00	$71,060.00
	UNSOLD	148	$34,550.00	$109,070.48
	Total	153	$34,600.00	$107,828.31
3235	SOLD	1	-$237,400.00	-$237,400.00
	UNSOLD	122	$286,800.50	$1,306,751.99
	Total	123	$285,801.00	$1,294,197.91
Total	SOLD	124	$18,100.00	$82,185.63
	UNSOLD	4300	$44,405.00	$356,106.92
	Total	4424	$43,450.00	$348,429.20

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	106	1.085	1.038	1.132	1.010
Residential	8218	1.011	1.008	1.014	1.005
Commercial/Industrial	126	1.020	.986	1.054	1.015
Overall	8450	1.012	1.010	1.015	1.006

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	.989	1.106	95.9%	1.015	.933
Residential	1.003	1.008	95.2%	.994	.986
Commercial/Industrial	.987	1.047	96.0%	1.009	.945
Overall	1.003	1.008	95.1%	.995	.986

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	95% Confidence Interval for ...	Price Related Differential	Coefficient of Dispersion
	Upper Bound		
Vacant Land	1.096	1.069	.195
Residential	1.003	1.017	.091
Commercial/Industrial	1.073	1.011	.141
Overall	1.004	1.017	.093

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.