



2015

DENVER COUNTY PROPERTY ASSESSMENT STUDY





September 15, 2015

Mr. Mike Mauer
Director of Research
Colorado Legislative Council
Room 029, State Capitol Building
Denver, Colorado 80203

RE: Final Report for the 2015 Colorado Property Assessment Study

Dear Mr. Mauer:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2015 Colorado Property Assessment Study.

These reports are the result of two analyses: A procedural audit and a statistical audit.

The procedural audit examines all classes of property. It specifically looks at how the assessor develops economic areas, confirms and qualifies sales, develops time adjustments and performs periodic physical property inspections. The audit reviews the procedures for determining subdivision absorption and subdivision discounting. Valuation methodology is examined for residential properties and commercial properties. Procedures are reviewed for producing mines, oil and gas leaseholds and lands producing, producing coal mines, producing earth and stone products, severed mineral interests, and non-producing patented mining claims.

Statistical audits are performed on vacant land, residential properties, commercial/industrial properties and agricultural land. A statistical analysis is performed for personal property compliance on the eleven largest counties: Adams, Arapahoe, Boulder, Denver, Douglas, El Paso, Jefferson, Larimer, Mesa, Pueblo and Weld. The remaining counties receive a personal property procedural study.

Wildrose Appraisal Inc. – Audit Division appreciates the opportunity to be of service to the State of Colorado. Please contact us with any questions or concerns.

A handwritten signature in black ink that reads "Harry J. Fuller". The signature is written in a cursive style.

Harry J. Fuller
Project Manager
Wildrose Appraisal Inc. – Audit Division

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INTRODUCTION



Colorado

The State Board of Equalization (SBOE) reviews assessments for conformance to the Constitution. The SBOE will order revaluations for counties whose valuations do not reflect the proper valuation period level of value.

The statutory basis for the audit is found in C.R.S. 39-1-104 (16)(a)(b) and (c).

The legislative council sets forth two criteria that are the focus of the audit group:

To determine whether each county assessor is applying correctly the constitutional and statutory provisions, compliance requirements of the State Board of Equalization, and the manuals published by the State Property Tax Administrator to arrive at the actual value of each class of property.

To determine if each assessor is applying correctly the provisions of law to the actual values when arriving at valuations for assessment of all locally valued properties subject to the property tax.

The property assessment audit conducts a two-part analysis: A procedural analysis and a statistical analysis.

The procedural analysis includes all classes of property and specifically looks at how the assessor develops economic areas, confirms and qualifies sales, and develops time adjustments. The audit also examines the procedures for adequately discovering, classifying and valuing agricultural outbuildings, discovering subdivision build-out and subdivision discounting procedures. Valuation methodology for vacant land, improved residential properties and commercial properties is examined. Procedures for producing mines, oil and gas leaseholds and lands producing, producing coal mines, producing earth and stone products, severed mineral interests and non-producing patented mining claims are also reviewed.

Statistical analysis is performed on vacant land, residential properties, commercial industrial properties, agricultural land, and personal property. The statistical study results are compared with State Board of Equalization compliance requirements and the manuals published by the State Property Tax Administrator.

Wildrose Audit has completed the Property Assessment Study for 2015 and is pleased to report its findings for Denver County in the following report.

Historical Information

Denver County has a population of approximately 600,158 people with 3922.6 people per square mile, according to the U.S. Census Bureau's 2010 census data. This represents a 8.21 percent change from the 2000 Census.

Denver is the capital and the most populous city of the state of Colorado. Denver is a consolidated city-county located in the South Platte River Valley on the High Plains just east of the Front Range of the Rocky Mountains.

Denver City was founded in November 1858 as a mining town during the Pikes Peak Gold Rush in western Kansas Territory. That summer, a group of gold prospectors from Lawrence, Kansas, arrived and established Montana City on the banks of the South Platte River. This was the first settlement in what was later to become the city of Denver. The site faded quickly, however, and was abandoned in favor of Auraria (named after the gold-mining town of Auraria, Georgia) and St. Charles City by the summer of 1859. The Montana City site is now Grant-Frontier Park and includes mining equipment and a log cabin replica.

On November 22, 1858, General William Larimer, a land speculator from eastern Kansas, placed cottonwood logs to stake a claim on the hill overlooking the confluence of the South Platte River and Cherry Creek, across the creek from the existing mining settlement of Auraria. Larimer named the town site Denver City to curry favor with Kansas Territorial Governor James W. Denver. Larimer hoped that the town's name would help make it the county seat of Arapaho County, but ironically Governor Denver had already resigned from office. The location was accessible to existing trails and was across the South Platte River

from the site of seasonal encampments of the Cheyenne and Arapaho. The site of these first towns is now the site of Confluence Park in downtown Denver. Larimer, along with associates in the St. Charles City Land Company, sold parcels in the town to merchants and miners, with the intention of creating a major city that would cater to new emigrants. Denver City was a frontier town, with an economy based on servicing local miners with gambling, saloons, livestock and goods trading. In the early years, land parcels were often traded for grubstakes or gambled away by miners in Auraria.

The Colorado Territory was created on February 28, 1861. Arapahoe County was formed on November 1, 1861 and Denver City was incorporated on November 7, 1861. Denver City served as the Arapahoe County Seat from 1861 until consolidation in 1902. In 1865, Denver City became the Territorial Capital and became the State Capital when Colorado was admitted to the Union.

In 1901 the Colorado General Assembly voted to split Arapahoe County into three parts: a new consolidated City and County of Denver, a new Adams County, and the remainder of the Arapahoe County to be renamed South Arapahoe County. A ruling by the Colorado Supreme Court, subsequent legislation, and a referendum delayed the creation of the City and County of Denver until November 15, 1902.

Denver has hosted the Democratic National Convention twice, during the years of 1908 and again in 2008, taking the opportunity to promote the city's status on the national, political, and socioeconomic stage.

(Wikipedia.org)

RATIO ANALYSIS

Methodology

All significant classes of properties were analyzed. Sales were collected for each property class over the appropriate sale period, which was typically defined as the 18-month period between January 1, 2013 and June 30, 2014. Counties with less than 30 sales typically extended the sale period back up to 5 years prior to June 30, 2014 in 6-month increments. If there were still fewer than 30 sales, supplemental appraisals were performed and treated as proxy sales. Residential sales for all counties using this method totaled at least 30 per county. For commercial sales, the total number analyzed was allowed, in some cases, to fall below 30. There were no sale quantity issues for counties requiring vacant land analysis or condominium analysis. Although it was required that we examine the median and coefficient of dispersion for all counties, we also calculated the weighted mean and price-related differential for each class of property. Counties were not passed or failed by these

latter measures, but were counseled if there were anomalies noted during our analysis. Qualified sales were based on the qualification code used by each county, which were typically coded as either “Q” or “C.” The ratio analysis included all sales. The data was trimmed for counties with obvious outliers using IAAO standards for data analysis. In every case, we examined the loss in data from trimming to ensure that only true outliers were excluded. Any county with a significant portion of sales excluded by this trimming method was examined further. No county was allowed to pass the audit if more than 5% of the sales were “lost” because of trimming. For the largest 11 counties, the residential ratio statistics were broken down by economic area as well.

Conclusions

For this final analysis report, the minimum acceptable statistical standards allowed by the State Board of Equalization are:

ALLOWABLE STANDARDS RATIO GRID		
Property Class	Unweighted Median Ratio	Coefficient of Dispersion
Commercial/Industrial	Between .95-1.05	Less than 20.99
Condominium	Between .95-1.05	Less than 15.99
Single Family	Between .95-1.05	Less than 15.99
Vacant Land	Between .95-1.05	Less than 20.99

The results for Denver County are:

Denver County Ratio Grid					
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis
Commercial/Industrial	540	0.994	1.149	17.1	Compliant
Condominium	5,844	1.000	1.006	5.4	Compliant
Single Family	14,859	1.001	1.004	4.6	Compliant
Vacant Land	772	0.959	1.036	12.4	Compliant

SINGLE FAMILY Ratio Statistics for currrot / tasp
N = 14,859

Group	Median	Price Related Differential	Coefficient of Dispersion
1	1.002	1.002	.037
2	.999	1.004	.045
3	.999	1.003	.038
4	1.004	1.005	.046
5	1.001	1.005	.060
6	.999	1.004	.045
7	1.003	1.002	.040
8	1.003	1.002	.041
9	.999	1.003	.040
10	.999	1.001	.036
11	1.002	1.008	.070
12	1.002	1.003	.043
13	1.000	1.002	.032
14	.999	1.000	.037
15	1.001	1.003	.049
16	1.002	1.003	.041
17	1.007	1.004	.045
18	1.003	1.004	.051
19	1.000	1.003	.042
20	1.000	1.005	.053
22	1.000	1.002	.038
23	1.001	1.002	.035
24	1.000	1.009	.070
25	1.002	1.004	.048
26	.999	1.019	.048
27	.999	1.002	.037
29	1.002	1.003	.037
30	.997	1.003	.042
31	1.001	1.002	.040
32	1.001	1.005	.049
33	1.001	1.011	.067
Overall	1.001	1.004	.046

After applying the above described methodologies, it is concluded from the sales ratios that Denver County is in compliance

with SBOE, DPT, and Colorado State Statute valuation guidelines.

Recommendations

None



TIME TRENDING VERIFICATION

Methodology

While we recommend that counties use the inverted ratio regression analysis method to account for market (time) trending, some counties have used other IAAO-approved methods, such as the weighted monthly median approach. We are not auditing the methods used, but rather the results of the methods used. Given this range of methodologies used to account for market trending, we concluded that the best validation method was to examine the sale ratios for each class across the appropriate sale period. To be specific, if a county has considered and adjusted correctly for market trending, then the sale ratios should remain stable (i.e. flat) across the sale period. If a residual market trend is detected, then the county may or may not have addressed market

trending adequately, and a further examination is warranted. This validation method also considers the number of sales and the length of the sale period. Counties with few sales across the sale period were carefully examined to determine if the statistical results were valid.

Conclusions

After verification and analysis, it has been determined that Denver County has complied with the statutory requirements to analyze the effects of time on value in their county. Denver County has also satisfactorily applied the results of their time trending analysis to arrive at the time adjusted sales price (TASP).

Recommendations

None

SOLD / UNSOLD ANALYSIS

Methodology

Denver County was tested for the equal treatment of sold and unsold properties to ensure that “sales chasing” has not occurred. The auditors employed a multi-step process to determine if sold and unsold properties were valued in a consistent manner.

We test the hypothesis that the assessor has valued unsold properties consistent with what is observed with the sold properties based on several units of comparison and tests. The units of comparison include the actual value per square foot and the change in value from the previous base year period to the current base year. The first test compares the actual value per square foot between sold and unsold properties by class. The median and mean value per square foot is compared and tested for any significant difference. This is tested using non-parametric methods, such as the Mann-Whitney test for differences in the distributions or medians between sold and unsold groups. It is also examined graphically and from an appraisal perspective. Data can be stratified based on location and subclass. The second test compares the difference in the median change in value from the previous base year to the current base year between sold and unsold properties by class. The same combination of non-parametric and appraisal testing is used as with the first test. A third test employing a valuation model testing a sold/unsold binary variable while controlling for property attributes such as location, size, age and other attributes. The model determines if the sold/unsold variable is statistically and empirically significant. If all three tests indicate a significant difference between sold and unsold properties for a given class, the Auditor may meet with the county to determine if sale chasing is actually occurring,

or if there are other explanations for the observed difference.

If the unsold properties have a higher median value per square foot than the sold properties, or if the median change in value is greater for the unsold properties than the sold properties, the analysis is stopped and the county is concluded to be in compliance with sold and unsold guidelines. All sold and unsold properties in a given class are first tested, although properties with extreme unit values or percent changes can be trimmed to stabilize the analysis. The median is the primary comparison metric, although the mean can also be used as a comparison metric if the distribution supports that type of measure of central tendency.

The first test (unit value method) is applied to both residential and commercial/industrial sold and unsold properties. The second test is applied to sold and unsold vacant land properties. The second test (change in value method) is also applied to residential or commercial sold and unsold properties if the first test results in a significant difference observed and/or tested between sold and unsold properties. The third test (valuation modeling) is used in instances where the results from the first two tests indicate a significant difference between sold and unsold properties. It can also be used when the number of sold and unsold properties is so large that the non-parametric testing is indicating a false rejection of the hypothesis that there is no difference between the sold and unsold property values.

These tests were supported by both tabular and graphics presentations, along with written documentation explaining the methodology used.

Sold/Unsold Results	
Property Class	Results
Commercial/Industrial	Compliant
Condominium	Compliant
Single Family	Compliant
Vacant Land	Compliant

Conclusions

After applying the above described methodologies, it is concluded that Denver County is reasonably treating its sold and unsold properties in the same manner.

Recommendations

None

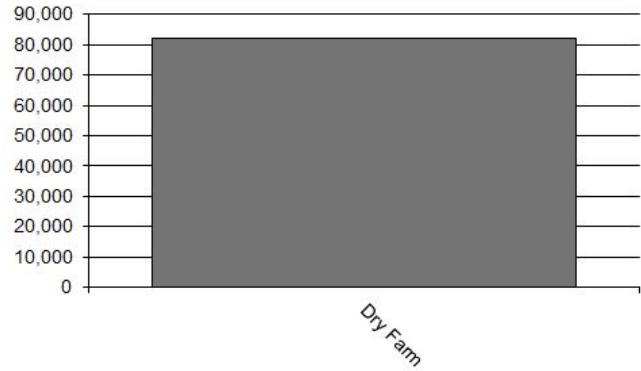
AGRICULTURAL LAND STUDY

Acres By Subclass



Dry Farm
100.00%

Value By Subclass



Agricultural Land

County records were reviewed to determine major land categories such as irrigated farm, dry farm, meadow hay, grazing and other lands. In addition, county records were reviewed in order to determine if: Aerial photographs are available and are being used; soil conservation guidelines have been used to classify lands based on productivity; crop rotations have been documented; typical commodities and yields have been determined; orchard lands have been properly classified and valued; expenses reflect a ten year average and are typical landlord expenses; grazing lands have been properly classified and valued; the number of acres in each class and subclass have been determined; the capitalization rate was properly applied. Also, documentation was required for the valuation methods used and any locally developed yields, carrying capacities, and expenses. Records were also checked to ensure that the commodity prices and expenses, furnished by the Property Tax Administrator (PTA), were applied properly.

(See Assessor Reference Library Volume 3 Chapter 5.)

Conclusions

An analysis of the agricultural land data indicates an acceptable appraisal of this property type. Directives, commodity prices and expenses provided by the PTA were properly applied. County yields compared favorably to those published by Colorado Agricultural Statistics. Expenses used by the county were allowable expenses and were in an acceptable range. Grazing lands carrying capacities were in an acceptable range. The data analyzed resulted in the following ratios:

Denver County Agricultural Land Ratio Grid						
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Total Value	WRA Total Value	Ratio
4127	Dry Farm	1,787	45.99	82,190	82,190	1.00
Total/Avg		1,787	45.99	82,190	821,901	0.00

Recommendations

None

Agricultural Outbuildings

Methodology

Data was collected and reviewed to determine if the guidelines found in the Assessor's Reference Library (ARL) Volume 3, pages 5.74 through 5.77 were being followed.

Property Taxation for the valuation of agricultural outbuildings.

Recommendations

None

Conclusions

Denver County has substantially complied with the procedures provided by the Division of

Agricultural Land Under Improvements

Methodology

Data was collected and reviewed to determine if the guidelines found in the Assessor's Reference Library (ARL) Volume 3, pages 5.19 and 5.20 were being followed.

Conclusions

Denver County has used the following methods to discover land under a residential improvement on a farm or ranch that is determined to be not integral under 39-1-102, C.R.S.:

- Aerial Photography/Pictometry

Denver County has used the following methods to discover the land area under a residential improvement that is determined to be not integral under 39-1-102, C.R.S.:

- No parcels qualified

Denver County has substantially complied with the procedures provided by the Division of Property Taxation for the valuation of land under residential improvements that may or may not be integral to an agricultural operation.

Recommendations

None

SALES VERIFICATION

According to 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.)

Part of the Property Assessment Study is the sales verification analysis. WRA has used the above-cited statutes as a guide in our study of the county's procedures and practices for verifying sales.

WRA reviewed the sales verification procedures in 2015 for Denver County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 60 sales listed as unqualified.

All but five of the sales selected in the sample gave reasons that were clear and supportable. Five sales had insufficient reason for disqualification.

For residential, commercial, and vacant land sales with considerations over \$500, the contractor has examined and reported the ratio of qualified sales to total sales by class and performed the following analyses of unqualified sales:

The contractor has examined the manner in which sales have been classified as qualified or unqualified, including a listing of each step in the sales verification process, any adjustment procedures, and the county official responsible for making the final decision on qualification.

When less than 50 percent of sales are qualified in any of the three property classes (residential, commercial, and vacant land), the contractor analyzed the reasons for disqualifying sales in any subclass that constitutes at least 20 percent of the class, either by number



of properties or by value, from the prior year. The contractor has reviewed with the assessor any analysis indicating that sales data are inadequate, fail to reflect typical properties, or have been disqualified for insufficient cause. In addition, the contractor has reviewed the disqualified sales by assigned code. If there appears to be any inconsistency in the coding, the contractor has conducted further analysis to determine if the sales included in that code have been assigned appropriately.

If 50 percent or more of the sales are qualified, the contractor has reviewed a statistically significant sample of unqualified sales, excluding sales that were disqualified for obvious reasons.

Denver County did not qualify for in-depth subclass analysis.

Conclusions

Denver County appears to be doing a good job of verifying their sales. There are no recommendations.

Recommendations

None

ECONOMIC AREA REVIEW AND EVALUATION

Methodology

Denver County has submitted a written narrative describing the economic areas that make up the county's market areas. Denver County has also submitted a map illustrating these areas. Each of these narratives have been read and analyzed for logic and appraisal sensibility. The maps were also compared to the narrative for consistency between the written description and the map.

Conclusions

After review and analysis, it has been determined that Denver County has adequately

identified homogeneous economic areas comprised of smaller neighborhoods. Each economic area defined is equally subject to a set of economic forces that impact the value of the properties within that geographic area and this has been adequately addressed. Each economic area defined adequately delineates an area that will give "similar values for similar properties in similar areas."

Recommendations

None

NATURAL RESOURCES

DenverCounty is exempt from the Natural Resources Study.

VACANT LAND

Subdivision Discounting

Subdivisions were reviewed in 2015 in Denver County. The review showed that subdivisions were discounted pursuant to the Colorado Revised Statutes in Article 39-1-103 (14). Discounting procedures were applied to all subdivisions where less than 80 percent of all sites were sold using the present worth method. The market approach was applied where 80 percent or more of the subdivision sites were sold. An absorption period was estimated for each subdivision that was discounted. An appropriate discount rate was

developed using the summation method. Subdivision land with structures was appraised at full market value.

Conclusions

Denver County has implemented proper procedures to adequately estimate absorption periods, discount rates, and lot values for qualifying subdivisions.

Recommendations

None

POSSESSORY INTEREST PROPERTIES

Possessory Interest

Possessory interest property discovery and valuation is described in the Assessor's Reference Library (ARL) Volume 3 section 7 in accordance with the requirements of Chapter 39-1-103 (17)(a) (II) C.R.S. Possessory Interest is defined by the Property Tax Administrator's Publication ARL Volume 3, Chapter 7: A private property interest in government-owned property or the right to the occupancy and use of any benefit in government-owned property that has been granted under lease, permit, license, concession, contract, or other agreement.

Denver County has been reviewed for their procedures and adherence to guidelines when assessing and valuing agricultural and

commercial possessory interest properties. The county has also been queried as to their confidence that the possessory interest properties have been discovered and placed on the tax rolls.

Conclusions

Denver County has implemented a discovery process to place possessory interest properties on the roll. They have also correctly and consistently applied the correct procedures and valuation methods in the valuation of possessory interest properties.

Recommendations

None

PERSONAL PROPERTY AUDIT

Denver County was studied for its procedural compliance with the personal property assessment outlined in the Assessor's Reference Library (ARL) Volume 5, and in the State Board of Equalization (SBOE) requirements for the assessment of personal property. The SBOE requires that counties use ARL Volume 5, including current discovery, classification, documentation procedures, current economic lives table, cost factor tables, depreciation table, and level of value adjustment factor table.

The personal property audit standards narrative must be in place and current. A listing of businesses that have been audited by the assessor within the twelve-month period reflected in the plan is given to the auditor. The audited businesses must be in conformity with those described in the plan.

Aggregate ratio will be determined solely from the personal property accounts that have been physically inspected. The minimum assessment sample is one percent or ten schedules, whichever is greater, and the maximum assessment audit sample is 100 schedules.

For the counties having over 100,000 population, WRA selected a sample of all personal property schedules to determine whether the assessor is correctly applying the provisions of law and manuals of the Property Tax Administrator in arriving at the assessment levels of such property. This sample was selected from the personal property schedules audited by the assessor. In no event was the sample selected by the contractor less than 30 schedules. The counties to be included in this study are Adams, Arapahoe, Boulder, Denver, Douglas, El Paso, Jefferson, Larimer, Mesa, Pueblo, and Weld. All other counties received a procedural study.

Denver County is compliant with the guidelines set forth in ARL Volume 5 regarding discovery procedures, using the following methods to discover personal property accounts in the county:

- Public Record Documents
- Local Telephone Directories, Newspapers or Other Local Publications
- Personal Observation, Physical Canvassing or Word of Mouth
- Questionnaires, Letters and/or Phone Calls to Buyer, Seller and/or Realtor

The county uses the Division of Property Taxation (DPT) recommended classification and documentation procedures. The DPT's recommended cost factor tables, depreciation tables and level of value adjustment factor tables are also used.

Denver County submitted their personal property written audit plan and was current for the 2015 valuation period. The number and listing of businesses audited was also submitted and was in conformance with the written audit plan. The following audit triggers were used by the county to select accounts to be audited:

- Businesses in a selected area
- Accounts with obvious discrepancies
- New businesses filing for the first time
- Accounts with greater than 10% change
- Incomplete or inconsistent declarations
- Accounts with omitted property
- Same business type or use
- Businesses with no deletions or additions for 2 or more years



- Non-filing Accounts - Best Information Available
- Accounts close to the \$7,300 actual value exemption status
- Lowest or highest quartile of value per square foot
- Accounts protested with substantial disagreement

Denver County's median ratio is 1.00. This is in compliance with the State Board of Equalization (SBOE) compliance requirements

which range from .90 to 1.10 with no COD requirements.

Conclusions

Denver County has employed adequate discovery, classification, documentation, valuation, and auditing procedures for their personal property assessment and is in statistical compliance with SBOE requirements.

Recommendations

None

WILDROSE AUDITOR STAFF

Harry J. Fuller, *Audit Project Manager*

Suzanne Howard, *Audit Administrative Manager*

Steve Kane, *Audit Statistician*

Carl W. Ross, *Agricultural/Natural Resource Analyst*

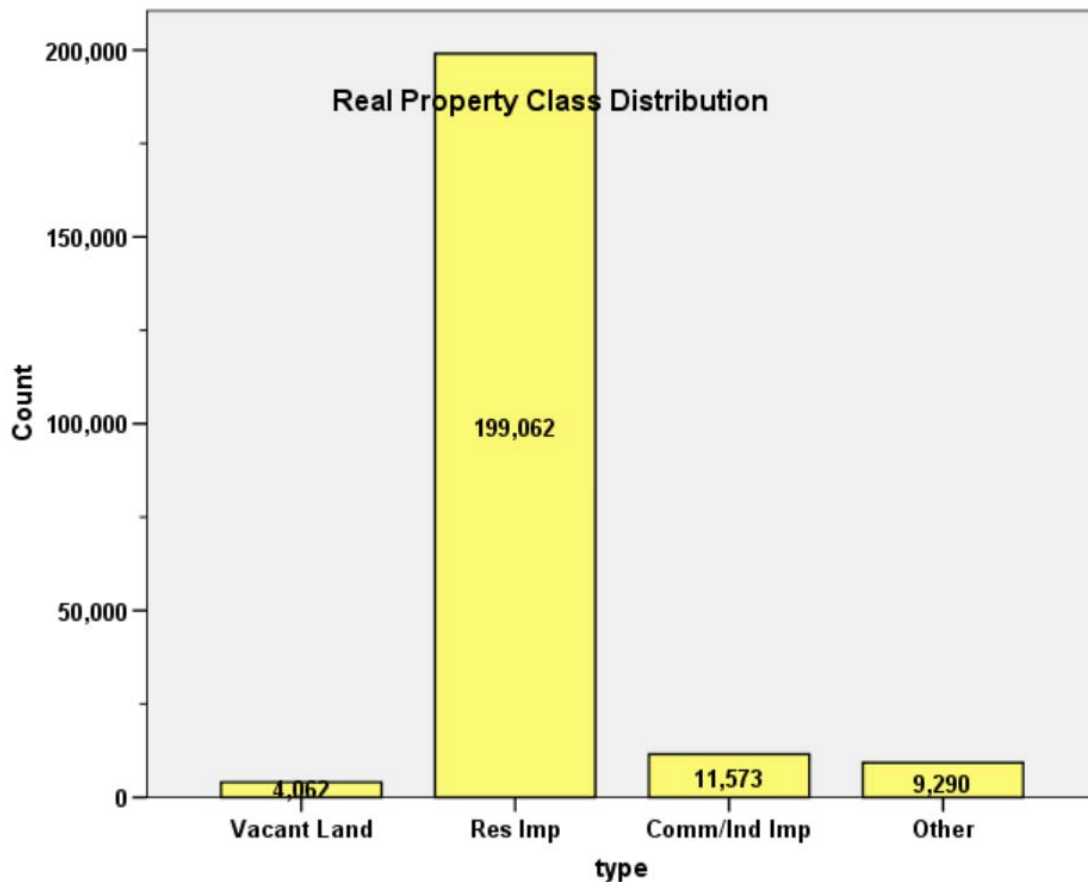
J. Andrew Rodriguez, *Field Analyst*

APPENDICES

STATISTICAL COMPLIANCE REPORT
FOR DENVER COUNTY
2015

I. OVERVIEW

Denver County is an urban county located along Colorado’s Front Range. The county has a total of 223,987 real property parcels, according to data submitted by the county assessor’s office in 2015. The following provides a breakdown of property classes for this county:



The vacant land class of properties was dominated by residential land. Residential lots (coded 100) accounted for 44.3% of all vacant land parcels.

For residential improved properties, single family properties accounted for 65.8% of all residential properties, while condominiums accounted for 22.1% of all residential properties. We broke down our residential analysis by both economic area and residential subclass.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for 5.2% of all such properties in this county.

II. DATA FILES

The following sales analyses were based on the requirements of the 2015 Colorado Property Assessment Study. Information was provided by the Denver Assessor’s Office in April 2015. The data included all 5 property record files as specified by the Auditor.

III. RESIDENTIAL SALES RESULTS

There were 24,304 qualified residential sales in the 24 month sale period ending June 30, 2014. We stratified the sales ratio results by residential subclass and economic area, as follows:

SINGLE FAMILY Ratio Statistics for currtot / tasp
N = 14,859

Group	Median	Price Related Differential	Coefficient of Dispersion
1	1.002	1.002	.037
2	.999	1.004	.045
3	.999	1.003	.038
4	1.004	1.005	.046
5	1.001	1.005	.060
6	.999	1.004	.045
7	1.003	1.002	.040
8	1.003	1.002	.041
9	.999	1.003	.040
10	.999	1.001	.036
11	1.002	1.008	.070
12	1.002	1.003	.043
13	1.000	1.002	.032
14	.999	1.000	.037
15	1.001	1.003	.049
16	1.002	1.003	.041
17	1.007	1.004	.045
18	1.003	1.004	.051
19	1.000	1.003	.042
20	1.000	1.005	.053
22	1.000	1.002	.038
23	1.001	1.002	.035
24	1.000	1.009	.070
25	1.002	1.004	.048
26	.999	1.019	.048
27	.999	1.002	.037
29	1.002	1.003	.037
30	.997	1.003	.042
31	1.001	1.002	.040
32	1.001	1.005	.049
33	1.001	1.011	.067
Overall	1.001	1.004	.046

ROWHOUSE/TOWN HOMES Ratio Statistics for currtot / tasp
N = 3,114

Group	Median	Price Related Differential	Coefficient of Dispersion
41	1.003	1.004	.051
51	1.003	1.006	.058
52	1.006	1.002	.049
53	1.003	1.005	.054
54	1.002	1.004	.049
55	1.002	1.005	.042
Overall	1.003	1.005	.049

DUPLEX/TRIPLEX Ratio Statistics for currtot / tasp
N = 235

Group	Median	Price Related Differential	Coefficient of Dispersion
Overall	1.005	1.011	.090

MULTI-FAM UNITS 4-8 Ratio Statistics for currtot / tasp
N = 92

Group	Median	Price Related Differential	Coefficient of Dispersion
1	.996	1.009	.086
2	1.004	1.018	.092
Overall	1.003	1.013	.088

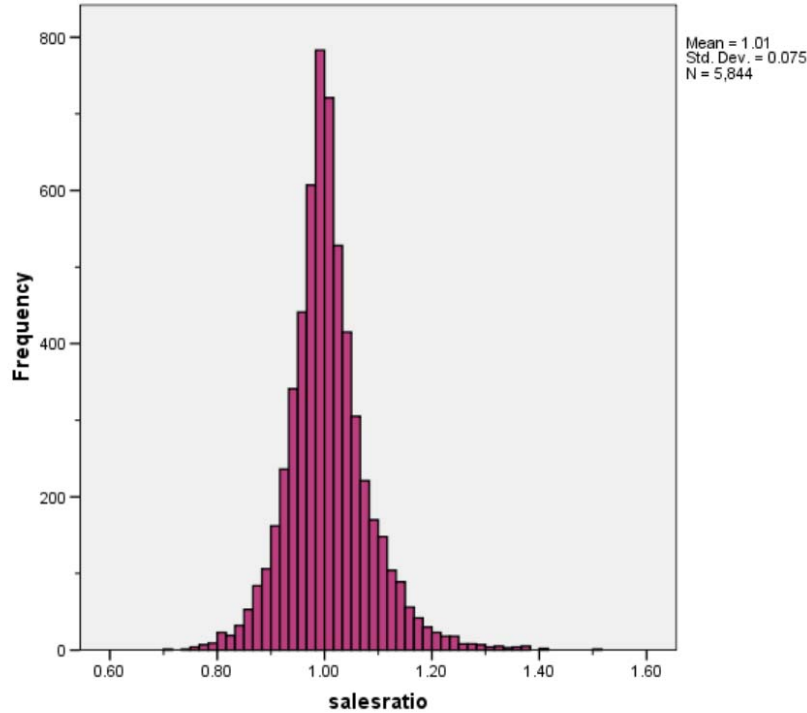
MULTI-FAM UNITS 9 AND UP Ratio Statistics for currtot / tasp
N = 159

Group	Median	Price Related Differential	Coefficient of Dispersion
2	1.003	1.006	.081
3	.983	.995	.083
Overall	.995	.997	.082

CONDOMINIUM Ratio Statistics for currtot / tasp
N = 5,844

Group	Median	Price Related Differential	Coefficient of Dispersion
37	.997	1.004	.050
38	1.000	1.006	.050
39	1.001	1.005	.055
41	.999	1.008	.065
42	1.001	1.007	.054
43	1.002	1.007	.053
44	.999	1.006	.052
45	1.000	1.005	.045
46	1.000	1.004	.049
48	1.002	1.009	.079
50	1.002	1.002	.025
Overall	1.000	1.006	.054

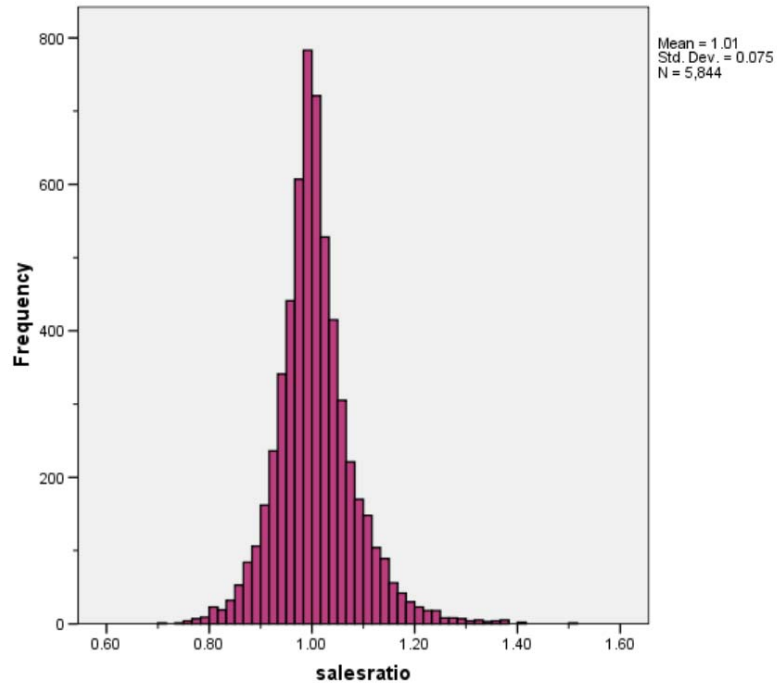
The above ratio statistics were in compliance with the standards set forth by the Colorado State Board of Equalization (SBOE) for the overall residential sales. The following graphs describe further the sales ratio distribution for these properties:



The above graphs indicate that the distribution of the sale ratios was within state mandated limits.

Residential Market Trend Analysis

We next analyzed the residential dataset using the 24-month sale period for any residual market trending and broken down by subclass and economic area, as follows:



SINGLE FAMILY ANALYSIS

Coefficients^a

econarea	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	.(Constant)	.993	.004		271.197	.000
	SalePeriod	.001	.000	.156	3.806	.000
2	.(Constant)	.975	.005		183.207	.000
	SalePeriod	.003	.000	.280	6.291	.000
3	.(Constant)	.991	.004		225.685	.000
	SalePeriod	.001	.000	.130	2.657	.008
4	.(Constant)	.992	.005		199.097	.000
	SalePeriod	.001	.000	.128	2.756	.006
5	.(Constant)	.968	.018		53.506	.000
	SalePeriod	.003	.001	.235	2.384	.019
6	.(Constant)	.994	.004		254.490	.000
	SalePeriod	.001	.000	.129	3.728	.000
7	.(Constant)	.994	.004		256.558	.000
	SalePeriod	.001	.000	.121	3.048	.002
8	.(Constant)	.996	.004		228.977	.000
	SalePeriod	.001	.000	.097	2.228	.026
9	.(Constant)	1.007	.006		176.011	.000
	SalePeriod	.000	.000	-.028	-.530	.597
10	.(Constant)	1.001	.004		244.764	.000
	SalePeriod	2.299E-5	.000	.003	.070	.945

11	^(Constant)	.977	.007		133.707	.000
	SalePeriod	.003	.001	.215	4.920	.000
12	^(Constant)	.993	.006		176.109	.000
	SalePeriod	.001	.000	.073	1.458	.145
13	^(Constant)	.995	.003		306.557	.000
	SalePeriod	.001	.000	.092	2.185	.029
14	^(Constant)	.991	.005		210.665	.000
	SalePeriod	.001	.000	.077	1.556	.120
15	^(Constant)	1.012	.007		136.779	.000
	SalePeriod	-.001	.001	-.071	-1.131	.259
16	^(Constant)	.981	.005		217.255	.000
	SalePeriod	.002	.000	.287	6.416	.000
17	^(Constant)	.997	.005		196.359	.000
	SalePeriod	.001	.000	.094	1.988	.047
18	^(Constant)	.996	.008		125.568	.000
	SalePeriod	.001	.001	.077	1.260	.209
19	^(Constant)	.990	.004		227.619	.000
	SalePeriod	.001	.000	.150	3.689	.000
20	^(Constant)	.996	.009		110.231	.000
	SalePeriod	.001	.001	.092	1.499	.135
21	^(Constant)	1.006	.007		137.146	.000
	SalePeriod	.000	.001	-.037	-.536	.593
22	^(Constant)	.998	.003		340.824	.000
	SalePeriod	.000	.000	.056	1.836	.067
23	^(Constant)	.986	.007		133.505	.000
	SalePeriod	.002	.001	.162	3.938	.000
24	^(Constant)	.997	.005		186.414	.000
	SalePeriod	.001	.000	.093	2.213	.027
25	^(Constant)	1.009	.008		129.161	.000
	SalePeriod	.000	.001	-.039	-.770	.442
26	^(Constant)	.992	.005		213.413	.000
	SalePeriod	.001	.000	.156	3.129	.002
27	^(Constant)	.998	.005		208.267	.000
	SalePeriod	.001	.000	.103	2.095	.037
28	^(Constant)	.986	.006		158.249	.000
	SalePeriod	.001	.000	.180	3.047	.003
29	^(Constant)	.995	.006		154.361	.000
	SalePeriod	.001	.000	.085	1.464	.144
30	^(Constant)	.989	.006		164.872	.000
	SalePeriod	.001	.000	.147	2.915	.004
31	^(Constant)	.994	.013		79.061	.000
	SalePeriod	.002	.001	.120	2.097	.037
32	^(Constant)	.991	.007		144.251	.000
	SalePeriod	.002	.001	.127	3.450	.001
33	^(Constant)	.998	.009		113.815	.000

	SalePeriod	.001	.001	.068	1.020	.309
9204	(Constant)	3.969	.000			
	SalePeriod	-.211	.000	-1.000		

a. Dependent Variable: salesratio

ROWHOUSE/TOWN HOME ANALYSIS

Coefficients^a

econarea	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
51	1	(Constant)	.979	.007		140.488	.000
		SalePeriod	.002	.001	.207	3.934	.000
52	1	(Constant)	.985	.012		83.233	.000
		SalePeriod	.002	.001	.144	1.838	.068
53	1	(Constant)	1.024	.008		127.832	.000
		SalePeriod	.000	.001	-.015	-.374	.708
54	1	(Constant)	.999	.005		209.539	.000
		SalePeriod	.001	.000	.092	2.622	.009
55	1	(Constant)	1.005	.006		167.892	.000
		SalePeriod	9.547E-5	.000	.010	.205	.838
56	1	(Constant)	1.006	.004		256.409	.000
		SalePeriod	-6.023E-7	.000	.000	-.002	.998

a. Dependent Variable: salesratio

DUPLEX/TRIPLEX ANALYSIS

Coefficients^a

econarea	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
1	1	(Constant)	.976	.015		66.715	.000
		SalePeriod	.003	.001	.193	2.991	.003

a. Dependent Variable: salesratio

MULTI-FAM UNITS 4-8 ANALYSIS

Coefficients^a

econarea	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
1	1	(Constant)	1.013	.025		40.286	.000
		SalePeriod	.001	.002	.085	.644	.522
2	1	(Constant)	1.001	.053		19.004	.000
		SalePeriod	.002	.004	.100	.557	.581

a. Dependent Variable: salesratio

MULTI-FAM UNITS 9 AND UP ANALYSIS

Coefficients^a

econarea	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
2	1	(Constant)	1.004	.016		64.143	.000
		SalePeriod	.001	.001	.036	.418	.677
3	1	(Constant)	.996	.047		21.263	.000
		SalePeriod	.001	.003	.092	.413	.684

a. Dependent Variable: salesratio

CONDOMINIUM ANALYSIS

Coefficients^a

econarea	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
37	1	(Constant)	1.001	.006		168.694	.000
		SalePeriod	.000	.000	.045	.970	.333
38	1	(Constant)	.994	.006		160.616	.000
		SalePeriod	.001	.000	.093	1.889	.060
39	1	(Constant)	1.008	.007		146.489	.000
		SalePeriod	.000	.001	-.012	-.253	.800
41	1	(Constant)	.995	.006		160.864	.000
		SalePeriod	.001	.000	.096	2.453	.014
42	1	(Constant)	.999	.005		221.315	.000
		SalePeriod	.001	.000	.087	2.430	.015
43	1	(Constant)	1.004	.005		202.999	.000
		SalePeriod	.000	.000	.041	1.173	.241
44	1	(Constant)	1.010	.005		202.031	.000
		SalePeriod	.000	.000	-.021	-.585	.559
45	1	(Constant)	1.002	.005		211.120	.000
		SalePeriod	.000	.000	.023	.522	.602
46	1	(Constant)	.984	.006		159.299	.000
		SalePeriod	.002	.001	.202	3.746	.000
48	1	(Constant)	.978	.009		111.775	.000
		SalePeriod	.003	.001	.199	4.162	.000
50	1	(Constant)	.989	.005		195.972	.000
		SalePeriod	.001	.000	.144	2.117	.035

a. Dependent Variable: salesratio

The above indicates that market trending was insignificant from either a statistical or a relative magnitude perspective for each subclass and economic area. Based on this analysis, we concluded that Denver County adequately addressed market trending.

Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold residential properties, we compared the median and mean change in value from 2014 to 2015 between sold and unsold groups. The data was analyzed both as a whole and broken down by subclass, as follows:

Abstrimp	Group	N	Median	Mean
1112.00	Unsold	115,801	1.29	1.40
	Sold	14,840	1.34	2.03
1114.00	Unsold	12,927	1.26	1.51
	Sold	2,835	1.28	2.55
1115.00	Unsold	3,552	1.28	1.30
	Sold	217	1.30	1.33
1120.00	Unsold	907	1.34	1.37
	Sold	87	1.32	1.40
1125.00	Unsold	1,307	1.50	1.88
	Sold	157	1.50	1.64
1130.00	Unsold	38,089	1.31	1.34
	Sold	5,842	1.29	1.34
Total	Unsold	172,945	1.29	1.40
	Sold	23,979	1.32	1.91

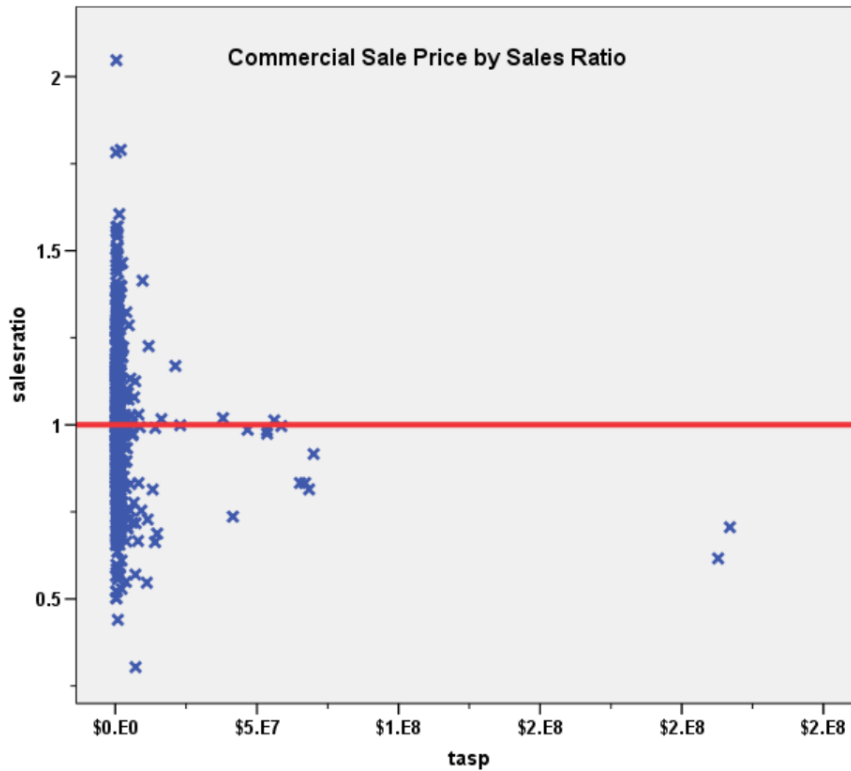
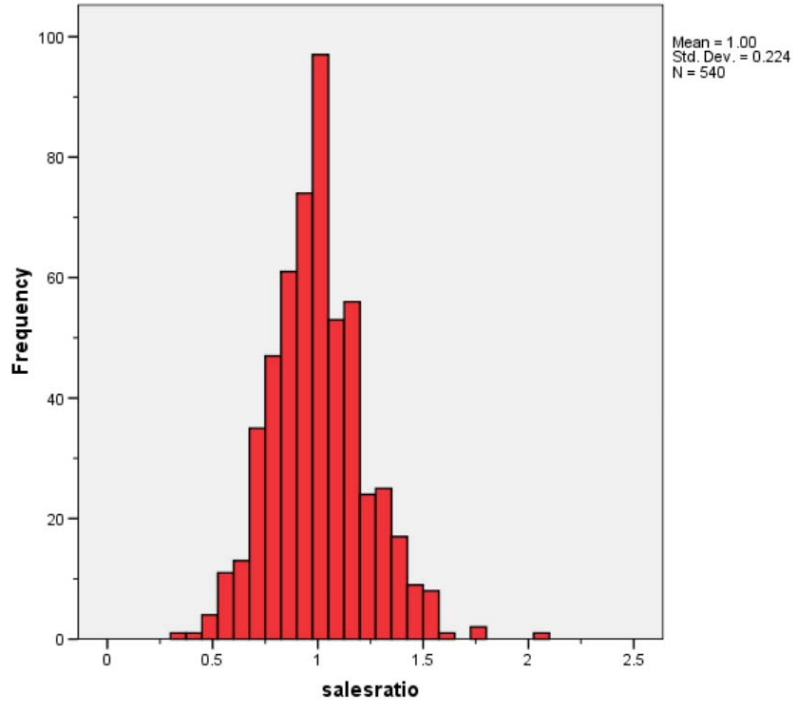
The above results indicate that sold and unsold residential properties were valued in a consistent manner.

IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were 540 qualified commercial/industrial sales in the 24 month sale period ending June 30, 2014. We performed the following sales ratio analysis, as follows:

Median	0.994
Price Related Differential	1.149
Coefficient of Dispersion	17.1

The above table indicates that the Denver County commercial/industrial sale ratios were in compliance with the SBOE standards. The following histogram and scatter plot describe the sales ratio distribution further:



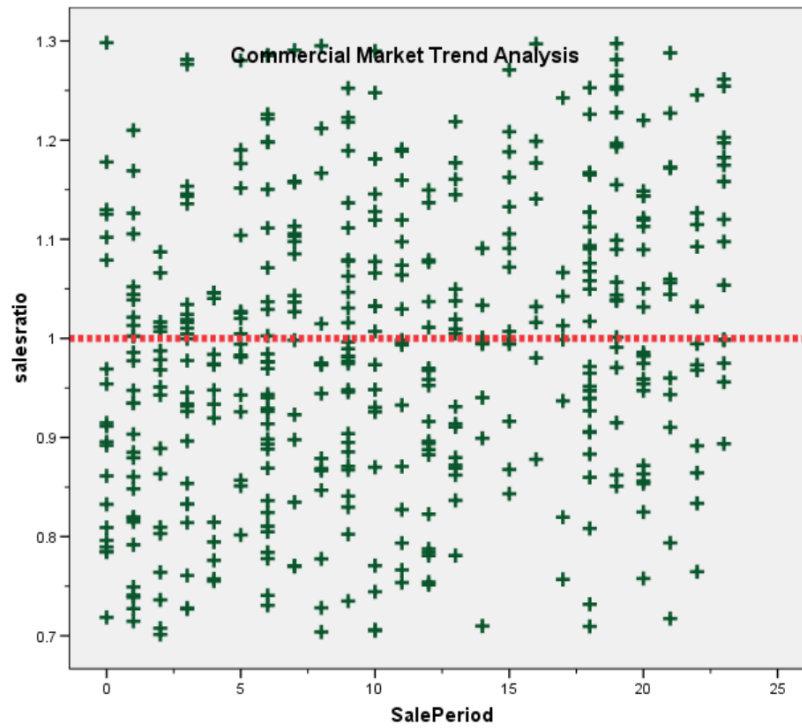
Commercial/Industrial Market Trend Analysis

The 540 commercial/industrial sales were analyzed, examining the sale ratios across the 24 month sale period with the following results:

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.938	.012		76.500	.000
	SalePeriod	.005	.001	.233	5.069	.000

a. Dependent Variable: salesratio



While there was a statistically significant trend, the magnitude of the trend was not significant. We concluded that the assessor has adequately considered market trending adjustments as part of the commercial/industrial valuation.

Sold/Unsold Analysis

We compared the median value per square foot between sold and unsold commercial/industrial properties, as follows:

Group	N	Median	Mean
Unsold	8,551	\$125	\$157
Sold	540	\$112	\$140

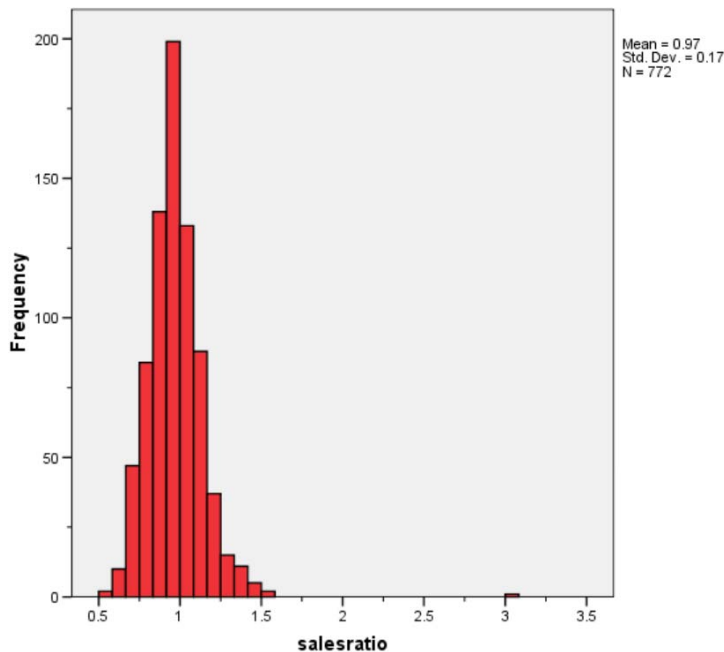
The above results indicated that sold and unsold commercial/industrial properties were valued consistently.

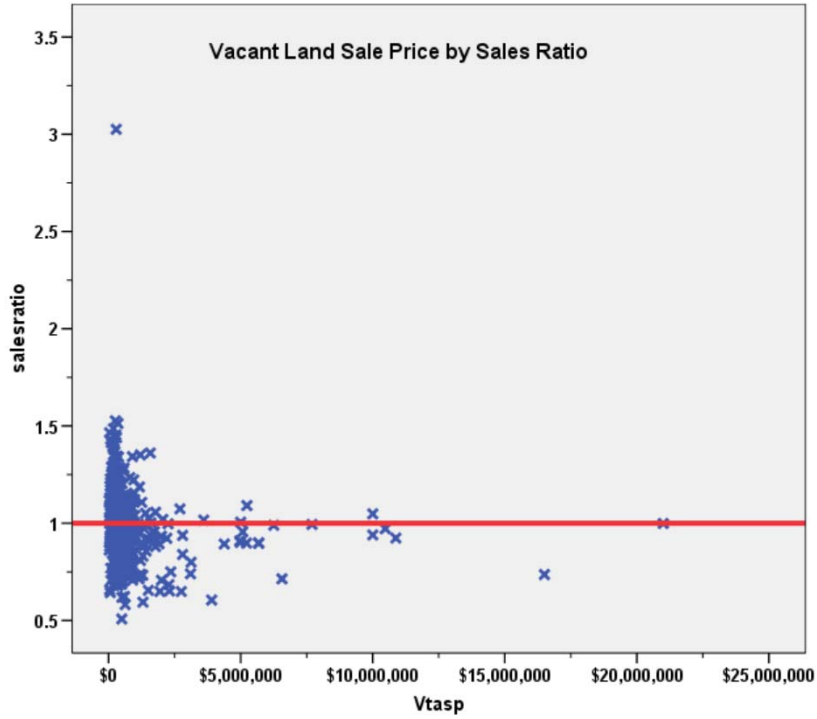
V. VACANT LAND SALE RESULTS

There were 772 qualified vacant land sales in the 24 month sale period ending June 30, 2014. The following sales ratio analysis was performed:

Median	0.959
Price Related Differential	1.036
Coefficient of Dispersion	12.4

The above ratio statistics were in compliance overall with the standards set forth by the Colorado State Board of Equalization (SBOE) for the overall vacant land sales. The following graphs describe further the sales ratio distribution for all of these properties:





The above histogram indicates that the distribution of the vacant land sale ratios was within state mandated limits. No sales were trimmed.

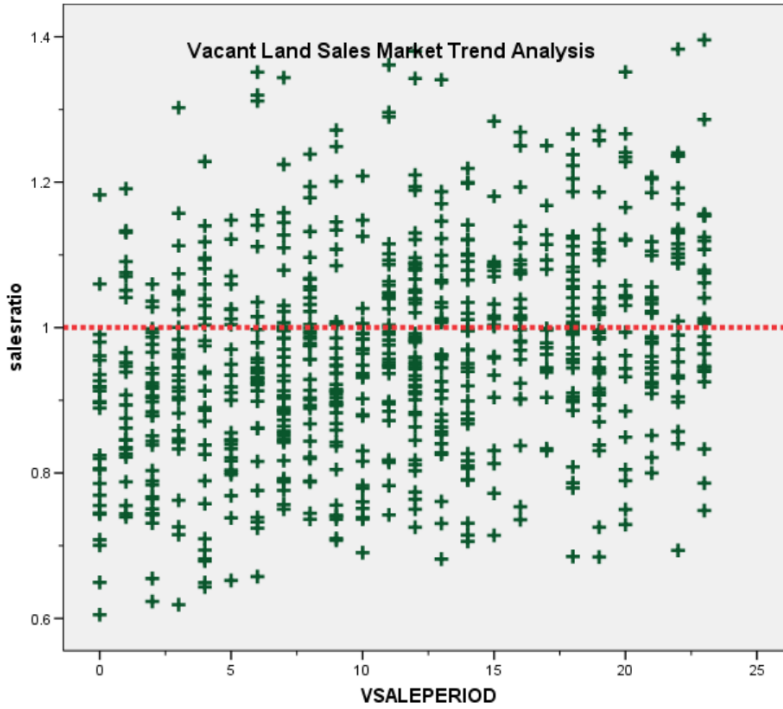
Vacant Land Market Trend Analysis

We next analyzed the vacant land dataset using the 24-month sale period, with the following results:

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	.892	.010	91.328	.000
	VSALEPERIOD	.006	.001	.294	.8455

a. Dependent Variable: salesratio



While there was a statistically significant trend, the magnitude of the trend was not significant. We concluded that the assessor has adequately considered market trending adjustments as part of the vacant land valuation.

Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold vacant land properties, we compared the median change in value for 2014 and 2015 between each group. We stratified the vacant land properties by subdivisions with at least 8 sales and found overall consistency. The following results present the overall comparison results:

nbhd	sold	N	Median	Mean
213	Unsold	1	1.00	1.00
	Sold	10	1.27	1.23
231	Unsold	25	1.13	1.16
	Sold	10	1.11	1.06
235	Unsold	20	1.36	1.32
	Sold	22	1.47	1.52
514	Unsold	8	1.32	1.36
	Sold	9	1.32	1.36
526	Unsold	9	1.19	1.28
	Sold	28	1.19	1.29
530	Unsold	6	1.47	1.42
	Sold	41	1.40	1.43
531	Unsold	5	1.58	1.46
	Sold	10	1.50	1.45
545	Unsold	12	1.44	1.45
	Sold	21	1.53	1.52
593	Unsold	2	1.41	1.41
	Sold	8	1.09	1.11
606	Unsold	4	1.22	1.22
	Sold	9	1.25	1.25
681	Unsold	16	1.02	1.06
	Sold	11	1.05	1.12
Total	Unsold	108	1.29	1.27
	Sold	179	1.33	1.35

The same pattern was found when subdivisions with at least three sales were also analyzed. Overall, we concluded that the county assessor valued sold and unsold vacant land properties consistently.

V. CONCLUSIONS

Based on this 2015 audit statistical analysis, residential, commercial/industrial and vacant land properties were found to be in compliance with state guidelines.

STATISTICAL ABSTRACT

Residential

Ratio Statistics for currtot / tasp

Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for Weighted Mean		Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			Mean Centered
1.006	1.005	1.007	1.001	1.000	1.002	95.1%	1.002	.999	1.006	1.004	.049	7.1%

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.

Commercial Land

Ratio Statistics for currtot / tasp

Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for Weighted Mean		Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			Mean Centered
1.003	.984	1.021	.994	.975	1.007	95.7%	.872	.797	.947	1.149	.171	22.3%

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.

Vacant Land

Ratio Statistics for currnd / vtasp

Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for Weighted Mean		Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			Mean Centered
.970	.958	.982	.959	.948	.972	95.2%	.936	.916	.956	1.036	.124	17.5%

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.

Residential Median Ratio Stratification

Sale Price

Case Processing Summary

	Count	Percent
SPRec \$25K to \$50K	28	.1%
\$50K to \$100K	642	2.6%
\$100K to \$150K	1744	7.2%
\$150K to \$200K	3237	13.3%
\$200K to \$300K	5653	23.3%
\$300K to \$500K	7934	32.6%
\$500K to \$750K	3413	14.0%
\$750K to \$1,000K	873	3.6%
Over \$1,000K	780	3.2%
Overall	24304	100.0%
Excluded	0	
Total	24304	

Ratio Statistics for currtot / tasp

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
\$25K to \$50K	1.073	1.004	.084	10.9%
\$50K to \$100K	1.027	1.001	.082	11.2%
\$100K to \$150K	1.018	1.001	.066	9.0%
\$150K to \$200K	1.003	1.000	.053	7.5%
\$200K to \$300K	1.001	1.000	.048	7.0%
\$300K to \$500K	.999	1.000	.044	6.5%
\$500K to \$750K	.997	1.000	.041	5.8%
\$750K to \$1,000K	.997	1.000	.043	5.8%
Over \$1,000K	.993	.992	.050	7.5%
Overall	1.001	1.004	.049	7.1%

Subclass

Case Processing Summary

	Count	Percent
abstrimp 0	1	.0%
1112	14859	61.1%
1114	3114	12.8%
1115	235	1.0%
1120	92	.4%
1125	159	.7%
1130	5844	24.0%
Overall	24304	100.0%
Excluded	0	
Total	24304	

Ratio Statistics for currtot / tasp

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
0	.911	1.000	.000	.%
1112	1.001	1.004	.046	6.6%
1114	1.003	1.005	.049	8.0%
1115	1.005	1.013	.090	12.2%
1120	1.003	1.013	.088	12.5%
1125	.995	.997	.082	10.5%
1130	1.000	1.006	.054	7.6%
Overall	1.001	1.004	.049	7.1%

Improvement Age

Case Processing Summary

	Count	Percent
AgeRec 0	1	.0%
Over 100	3617	14.9%
75 to 100	2777	11.4%
50 to 75	6313	26.0%
25 to 50	4257	17.5%
5 to 25	5122	21.1%
5 or Newer	2217	9.1%
Overall	24304	100.0%
Excluded	0	
Total	24304	

Ratio Statistics for currtot / tasp

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
0	.911	1.000	.000	.%
Over 100	1.000	1.006	.052	8.3%
75 to 100	1.001	1.004	.047	6.6%
50 to 75	1.002	1.005	.053	7.7%
25 to 50	1.000	1.004	.054	7.5%
5 to 25	1.000	1.003	.043	6.0%
5 or Newer	1.002	.999	.039	5.5%
Overall	1.001	1.004	.049	7.1%

Improved Size

Case Processing Summary

	Count	Percent
ImpSFRec 0	1	.0%
LE 500 sf	183	.8%
500 to 1,000 sf	6783	27.9%
1,000 to 1,500 sf	8310	34.2%
1,500 to 2,000 sf	4536	18.7%
2,000 to 3,000 sf	3352	13.8%
3,000 sf or Higher	1139	4.7%
Overall	24304	100.0%
Excluded	0	
Total	24304	

Ratio Statistics for currtot / tasp

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
0	.911	1.000	.000	.%
LE 500 sf	1.011	.971	.102	22.4%
500 to 1,000 sf	1.001	1.006	.053	7.5%
1,000 to 1,500 sf	1.000	1.005	.049	7.0%
1,500 to 2,000 sf	1.002	1.004	.045	6.2%
2,000 to 3,000 sf	1.001	1.004	.044	6.2%
3,000 sf or Higher	1.001	.999	.048	6.7%
Overall	1.001	1.004	.049	7.1%

Improvement Quality

Case Processing Summary

	Count	Percent
quality	8	.0%
A	7	.0%
Average	16065	66.1%
B	27	.1%
C	428	1.8%
C-	5	.0%
C+	4	.0%
D	22	.1%
Excellent	68	.3%
Fair	164	.7%
Good	6647	27.3%
Superior	859	3.5%
Overall	24304	100.0%
Excluded	0	
Total	24304	

Ratio Statistics for currtot / tasp

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
	1.270	1.028	.484	69.1%
A	.986	.991	.062	11.1%
Average	1.001	1.005	.050	7.1%
B	.990	1.015	.074	10.2%
C	.999	1.002	.089	12.1%
C-	1.104	.998	.027	4.1%
C+	1.077	1.014	.142	19.4%
D	1.014	1.006	.067	8.9%
Excellent	1.001	1.003	.037	5.0%
Fair	1.005	1.009	.079	11.0%
Good	1.001	1.004	.042	5.8%
Superior	1.000	1.004	.045	6.2%
Overall	1.001	1.004	.049	7.1%

Improvement Condition

Case Processing Summary

	Count	Percent
condition	8	.0%
Avg	471	1.9%
AVG	18035	74.2%
Excel	35	.1%
Fair	7	.0%
Good	5189	21.4%
None	2	.0%
Poor	8	.0%
VGood	549	2.3%
Overall	24304	100.0%
Excluded	0	
Total	24304	

Ratio Statistics for currtot / tasp

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
	1.270	1.028	.484	69.1%
Avg	1.003	.994	.088	11.9%
AVG	1.000	1.005	.050	7.0%
Excel	.998	1.000	.040	5.7%
Fair	.958	1.000	.104	13.2%
Good	1.003	1.005	.044	6.1%
None	.991	1.005	.050	7.0%
Poor	1.019	1.093	.064	8.2%
VGood	1.000	1.001	.038	5.1%
Overall	1.001	1.004	.049	7.1%

Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

	Count	Percent
SPRec \$25K to \$50K	2	.4%
\$50K to \$100K	12	2.2%
\$100K to \$150K	12	2.2%
\$150K to \$200K	11	2.0%
\$200K to \$300K	48	8.9%
\$300K to \$500K	105	19.4%
\$500K to \$750K	90	16.7%
\$750K to \$1,000K	68	12.6%
Over \$1,000K	192	35.6%
Overall	540	100.0%
Excluded	0	
Total	540	

Ratio Statistics for currtot / tasp

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
\$25K to \$50K	.982	1.001	.012	1.7%
\$50K to \$100K	1.097	.999	.092	11.3%
\$100K to \$150K	1.038	1.005	.102	13.5%
\$150K to \$200K	.943	.996	.173	21.8%
\$200K to \$300K	1.052	1.001	.171	22.6%
\$300K to \$500K	1.016	1.007	.180	24.1%
\$500K to \$750K	.975	.997	.162	21.5%
\$750K to \$1,000K	.994	.999	.184	23.5%
Over \$1,000K	.976	1.119	.169	22.4%
Overall	.994	1.149	.171	22.5%

Subclass

Case Processing Summary

	Count	Percent
abstrimp 2112	84	15.6%
2120	134	24.8%
2125	10	1.9%
2130	54	10.0%
2135	161	29.8%
2140	1	.2%
2150	1	.2%
2230	79	14.6%
3115	16	3.0%
Overall	540	100.0%
Excluded	0	
Total	540	

Ratio Statistics for currtot / tasp

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
2112	.985	1.030	.152	19.6%
2120	.977	1.164	.170	21.9%
2125	1.189	1.289	.217	28.2%
2130	.983	1.088	.181	23.3%
2135	1.016	1.033	.181	22.6%
2140	.814	1.000	.000	.%
2150	.864	1.000	.000	.%
2230	.975	1.181	.154	24.4%
3115	1.014	1.048	.139	22.8%
Overall	.994	1.149	.171	22.5%

Improvement Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	378	70.0%
	75 to 100	29	5.4%
	50 to 75	35	6.5%
	25 to 50	46	8.5%
	5 to 25	47	8.7%
	5 or Newer	5	.9%
Overall		540	100.0%
Excluded		0	
Total		540	

Ratio Statistics for currtot / tasp

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
Over 100	1.000	1.070	.174	22.8%
75 to 100	1.054	.970	.163	21.9%
50 to 75	1.020	1.014	.175	22.9%
25 to 50	.948	1.198	.162	22.0%
5 to 25	.947	.991	.136	17.2%
5 or Newer	.833	1.014	.025	4.3%
Overall	.994	1.149	.171	22.5%

Improved Size

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	6	1.1%
	500 to 1,000 sf	17	3.1%
	1,000 to 1,500 sf	42	7.8%
	1,500 to 2,000 sf	30	5.6%
	2,000 to 3,000 sf	53	9.8%
	3,000 sf or Higher	392	72.6%
Overall		540	100.0%
Excluded		0	
Total		540	

Ratio Statistics for currtot / tasp

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
LE 500 sf	1.067	.983	.081	9.1%
500 to 1,000 sf	.956	1.070	.141	20.0%
1,000 to 1,500 sf	.934	1.025	.143	18.2%
1,500 to 2,000 sf	1.037	1.002	.179	27.5%
2,000 to 3,000 sf	.947	1.031	.175	22.9%
3,000 sf or Higher	.998	1.163	.174	22.6%
Overall	.994	1.149	.171	22.5%

Improvement Quality

Case Processing Summary

	Count	Percent
quality A	23	4.3%
A-	2	.4%
A+	1	.2%
Average	3	.6%
B	71	13.1%
B-	13	2.4%
B+	5	.9%
C	391	72.4%
C-	4	.7%
C+	12	2.2%
D	2	.4%
X	6	1.1%
X+	7	1.3%
Overall	540	100.0%
Excluded	0	
Total	540	

Ratio Statistics for currtot / tasp

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
A	.975	1.210	.149	28.5%
A-	.884	.892	.146	20.7%
A+	.903	1.000	.000	.%
Average	.969	1.002	.012	1.9%
B	.968	1.074	.172	22.6%
B-	.974	1.070	.142	20.0%
B+	.916	1.130	.136	19.9%
C	1.001	1.033	.172	22.0%
C-	.991	.887	.316	41.7%
C+	.951	1.357	.155	24.8%
D	1.279	.956	.075	10.6%
X	.972	.972	.126	20.3%
X+	1.128	.928	.216	31.8%
Overall	.994	1.149	.171	22.5%

Improvement Condition

Case Processing Summary

		Count	Percent
condition	Avg	492	91.1%
	AVG	2	.4%
	Fair	8	1.5%
	Good	38	7.0%
Overall		540	100.0%
Excluded		0	
Total		540	

Ratio Statistics for currtot / tasp

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
Avg	.998	1.110	.171	22.4%
AVG	.957	1.002	.013	1.8%
Fair	.917	.943	.098	13.7%
Good	.955	1.347	.176	24.7%
Overall	.994	1.149	.171	22.5%

Vacant Land Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT \$25K	1	.1%
	\$25K to \$50K	9	1.2%
	\$50K to \$100K	21	2.7%
	\$100K to \$150K	20	2.6%
	\$150K to \$200K	65	8.4%
	\$200K to \$300K	175	22.7%
	\$300K to \$500K	260	33.7%
	\$500K to \$750K	107	13.9%
	\$750K to \$1,000K	47	6.1%
	Over \$1,000K	67	8.7%
Overall		772	100.0%
Excluded		0	
Total		772	

Ratio Statistics for currInd / Vtasp

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
LT \$25K	.862	1.000	.000	.%
\$25K to \$50K	1.018	1.011	.133	21.2%
\$50K to \$100K	1.034	.993	.155	19.8%
\$100K to \$150K	1.070	1.003	.089	11.3%
\$150K to \$200K	1.033	.999	.123	16.0%
\$200K to \$300K	.985	.999	.134	22.4%
\$300K to \$500K	.948	1.002	.108	14.2%
\$500K to \$750K	.929	1.001	.107	14.2%
\$750K to \$1,000K	.944	.997	.124	15.5%
Over \$1,000K	.918	.994	.125	17.0%
Overall	.959	1.036	.124	17.7%

Subclass

Case Processing Summary

	Count	Percent
abstrInd 100	92	11.9%
101	15	1.9%
200	26	3.4%
300	10	1.3%
510	11	1.4%
1112	420	54.4%
1114	118	15.3%
1115	11	1.4%
1120	1	.1%
1125	3	.4%
1130	1	.1%
2112	7	.9%
2115	1	.1%
2120	3	.4%
2125	1	.1%
2130	38	4.9%
2135	8	1.0%
2140	5	.6%
2150	1	.1%
Overall	772	100.0%
Excluded	0	
Total	772	

Ratio Statistics for currInd / Vtasp

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
100	.918	1.018	.133	17.2%
101	.912	1.001	.155	22.1%
200	.933	.992	.158	20.5%
300	.957	1.059	.148	19.5%
510	.990	1.047	.116	15.0%
1112	.975	1.029	.116	18.1%
1114	.964	.992	.140	16.9%
1115	.922	1.012	.098	13.2%
1120	.986	1.000	.000	.%
1125	.997	1.224	.133	20.9%
1130	.725	1.000	.000	.%
2112	.957	1.000	.100	16.7%
2115	.898	1.000	.000	.%
2120	.918	1.008	.015	2.2%
2125	.806	1.000	.000	.%
2130	.943	1.057	.082	12.6%
2135	.972	1.017	.163	22.6%
2140	.994	.922	.091	15.6%
2150	.808	1.000	.000	.%
Overall	.959	1.036	.124	17.7%