Division of Property Valuation

2016

Kansas Real Estate Ratio Study

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ABBREVIATIONS

Ag.	Agricultural
BMed.	Broadened Median Ratio
BOTA	Board of Tax Appeals
C/I	Commercial/Industrial
COD	Coefficient of Dispersion
Comm.	Commercial
Ex.	Exempt
IAAO	International Association of Assessing Officers
Impr.	Improvement
Ind.	Industrial
K.S.A.	Kansas Statutes Annotated
LOC	Level of confidence
N/A	Not applicable
NP	Not-for-profit
PRB	Price-Related Bias
PRD	Price-Related Differential
PVD	Property Valuation Division
Res.	Residential
S	Supplemental sales
T	Time trended
Ut.	Utility
w	With

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INTRODUCTION

This publication contains the Official 2016 Kansas Appraisal/Sales Ratio Study that is based upon real estate transfers occurring from January 1, 2016, through December 31, 2016. This study is conducted annually by the Kansas Department of Revenue, Division of Property Valuation for all 105 Kansas Counties.
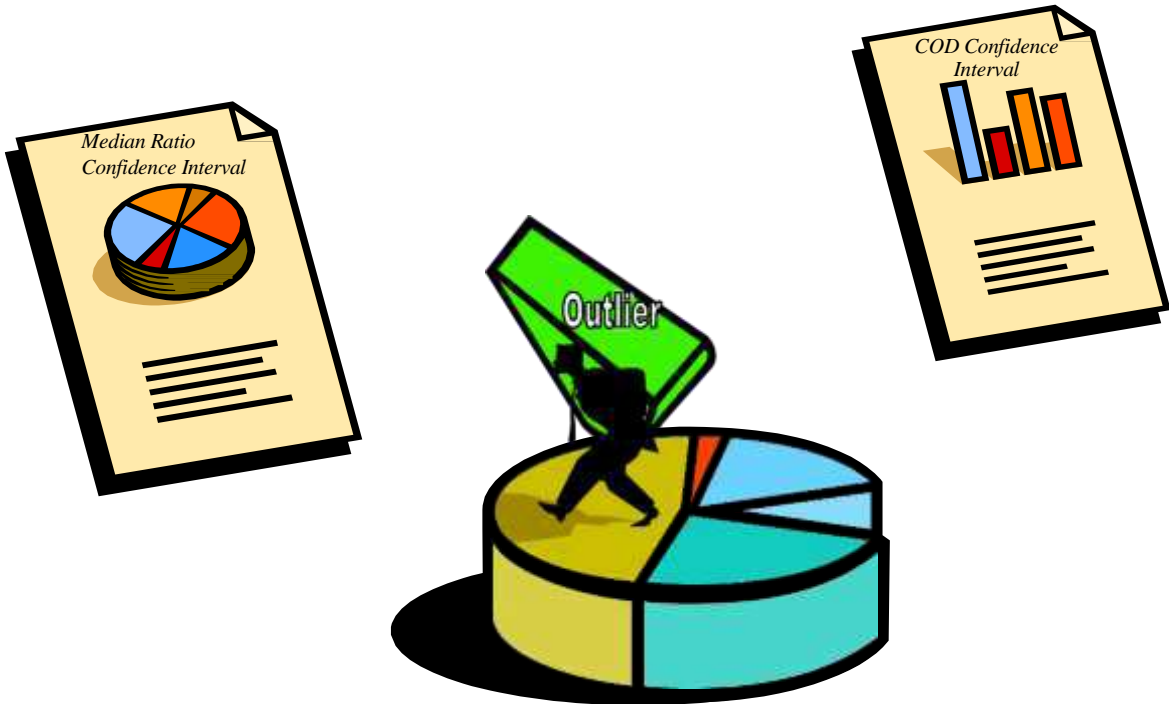

http://www.ksrevenue.org/pvdratiostats.html

Section 1

Year 2016

Official Appraisal/Sales Ratio Study

Median Ratio Confidence Interval

COD Confidence Interval

Outlier

Purpose and Overview

Fundamental to the administration of the property tax is the concept that all property should be appraised and assessed on a uniform basis. The Kansas Constitution requires that all taxable property be appraised and assessed uniformly as to class. Uniformity of like property assures an equitable distribution of the property tax burden.

The *purpose* of the 2016 Official *Kansas Appraisal/Sales Ratio Study* is to meet the requirements pursuant to K.S.A. 79-1489. It also provides statistical information used to evaluate appraisal *level* and *uniformity* for substantial statutory compliance as set forth in Property Valuation's Directive #14-046 pursuant to the provisions of L. 1992, ch. 249, §1. A copy of the Kansas Statutes and Directives is located in Section IV of this publication.

The study includes sales that are *valid* arm's-length transactions. Supplemental sales from the four prior years have been included for the commercial/industrial subclass if less than six valid commercial sales were available in the year 2016. In addition, the sales were trimmed of outliers prior to the computation of some statistical measures. A further explanation of the validation and trimming procedures are discussed in Section III of this publication.

In 1994, changes in statute permitted the use of a sampling process for the residential subclass of property in counties with a total parcel count in excess of 15,000 parcels. These counties must also have experienced at least 200 valid residential sales based on previous studies to be considered for sampling. The 2016 ratio study has used a representative sampling for those counties meeting the statutory criteria. A brief explanation of the sampling process is included in Section III of this publication.

The letter *T* denotes the subclass (residential or commercial/industrial) where sale prices have been *trended* back to January 1, 2016, the date of appraisal, where inflation or deflationary market trends were identifiable and documented by the county.

The ratios analyzed in this study are appraisal/sales ratios computed by dividing the appraised value of real estate as determined by the county appraiser by the total selling price of the real property. A perfect ratio would be 100.0. Care should be taken when reviewing the agricultural subclass. Agricultural land is appraised according to its *use* value; therefore, for *Agricultural Land Only* and *Agricultural with/Improvements* no ideal ratio exists. The total statistical measures can be misleading because the ratios for agricultural land are included with the ratios of all other real property subclasses to determine the county *TOTAL with/Agricultural & Farm* category.

We are grateful to the Kansas County Appraisers and their professional organization for their cooperation in this annual task. Our appreciation further extends to our support staff at the Department of Revenue, our associates within the Division and to the Ratio Study Technical Advisory Committee for their service and guidance.

2016 Ratio Study Technical Advisory Com mittee		
Dr. John Boyer Prof. of Statistics 101 Dickens Hall Kansas State University Manhattan, KS 66506	Dr. Ronald L. Wasserstein Executive Director American Statistical Assn. 732 N Washington St. Alexandria, Virginia 22314-3402	Dr. Paul Byrne Assoc. Prof. of Economics Washburn University School of Business Henderson 310-P 1700 SW College Ave. Topeka, KS 66621

2016 County Appraiser's Ratio Study Committee

Chairman: Jerry Denny, Gray County Appraiser-

Members: Barry Porter   Truette McQueen
                Republic-Cloud   Ottawa
                County Appraiser   County Appraiser

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

001 : ALLEN COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	100.8	97.5	to	110.8	23.7	19.8	to	28.8	1.10	1.06	to	1.14	112	13
Comm./Ind.	84.4	72.4	to	111.7	22.3	14.2	to	44.2	1.12	1.04	to	1.27	7	0
Vacant Lot													0	
Farm & Home	44.3		N/A		58.2		N/A		1.14		N/A		8	0
Ag. Land Only	5.4		N/A		59.6		N/A		1.24		N/A		9	0
Ag. (Impr.+ Land)	7.4		N/A		45.4		N/A		1.17		N/A		13	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	96.9		N/A		34.4		N/A		1.31		N/A		141	13
Total Market	99.9		N/A		23.7		N/A		1.10		N/A		120	14

002 : ANDERSON COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	99.7	93.9	to	112.2	19.6	15.9	to	24.5	1.05	1.01	to	1.10	60	7
Comm./Ind.	76.6	62.7	to	116.3	24.7	16.3	to	30.7	0.98	0.84	to	1.05	4	0
Vacant Lot	60.5		N/A		70.2		N/A		2.76		N/A		6	0
Farm & Home	76.7		N/A		38.5		N/A		0.90		N/A		9	0
Ag. Land Only	3.9		N/A		64.3		N/A		0.98		N/A		8	0
Ag. (Impr.+ Land)	7.4		N/A		50.7		N/A		0.90		N/A		12	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	90.1		N/A		38.1		N/A		1.24		N/A		92	7
Total Market	97.5		N/A		23.4		N/A		1.05		N/A		71	8

003 : ATCHISON COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	101.9	99.4	to	105.9	15.4	13.2	to	18.1	1.07	1.05	to	1.10	154	16
Comm./Ind.	99.1	84.1	to	105.3	13.2	8.6	to	20.2	1.10	1.01	to	1.19	14	1
Vacant Lot	186.3		N/A		79.6		N/A		1.49		N/A		6	1
Farm & Home	85.7		N/A		36.0		N/A		1.42		N/A		5	0
Ag. Land Only	13.1		N/A		33.2		N/A		1.05		N/A		6	0
Ag. (Impr.+ Land)	11.2		N/A		34.7		N/A		1.08		N/A		7	0
Other/Ex/Ut/NP/M	324.8		N/A				N/A				N/A		2	1
Total w/Ag.&F&H	100.6		N/A		15.0		N/A		1.08		N/A		189	33
Total Market	102.2		N/A		15.1		N/A		1.08		N/A		177	24

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

004 : BARBER COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	92.0	81.4	to	101.9	22.3	16.9	to	29.2	1.07	1.01	to	1.16	48	4
Comm./Ind.	111.9	75.9	to	125.5	15.2	5.2	to	44.5	1.05	0.99	to	1.23	6	0
Vacant Lot	215.0		N/A				N/A				N/A		1	0
Farm & Home	77.1		N/A		50.2		N/A		2.27		N/A		7	0
Ag. Land Only	3.7		N/A		61.4		N/A		1.34		N/A		7	0
Ag. (Impr.+ Land)	3.7		N/A		61.4		N/A		1.34		N/A		7	0
Other/Ex/Ut/NP/M	130.3		N/A				N/A				N/A		1	0
Total w/Ag.&F&H	90.9		N/A		37.3		N/A		1.83		N/A		71	5
Total Market	94.5		N/A		23.1		N/A		1.09		N/A		57	6

005 : BARTON COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	98.0	96.2	to	99.5	16.8	15.1	to	18.7	1.04	1.02	to	1.05	299	18
Comm./Ind.	95.9	84.9	to	129.2	24.7	14.3	to	41.1	1.04	0.92	to	1.36	17	1
Vacant Lot	87.9		N/A		36.7		N/A		1.17		N/A		12	0
Farm & Home	70.8		N/A		22.3		N/A		1.03		N/A		11	0
Ag. Land Only	12.4		N/A		26.9		N/A		1.14		N/A		12	0
Ag. (Impr.+ Land)	12.5		N/A		25.1		N/A		1.10		N/A		16	1
Other/Ex/Ut/NP/M	109.8		N/A		9.2		N/A		1.08		N/A		2	0
Total w/Ag.&F&H	96.6		N/A		16.9		N/A		1.04		N/A		358	45
Total Market	97.9		N/A		16.9		N/A		1.04		N/A		331	24

006 : BOURBON COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	99.3	95.9	to	105.1	22.7	19.4	to	26.7	1.08	1.04	to	1.12	152	15
Comm./Ind.	84.8	56.2	to	98.3	19.0	10.5	to	38.9	0.97	0.84	to	1.15	7	0
Vacant Lot	78.0		N/A		41.4		N/A		1.10		N/A		17	2
Farm & Home	58.1		N/A		52.0		N/A		1.51		N/A		19	0
Ag. Land Only	3.6		N/A		104.0		N/A		0.89		N/A		25	0
Ag. (Impr.+ Land)	3.7		N/A		108.7		N/A		0.91		N/A		32	0
Other/Ex/Ut/NP/M	96.9		N/A				N/A				N/A		1	0
Total w/Ag.&F&H	92.6		N/A		38.9		N/A		1.23		N/A		229	19
Total Market	98.2		N/A		23.0		N/A		1.05		N/A		178	20

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0 COD: 20.0 or less PRD: .98 to 1.03

007 : BROWN COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	104.0	95.5	to	110.3	27.7	22.6	to	35.5	1.16	1.09	to	1.27	94	14
Comm./Ind.	112.8	95.0	to	120.2	24.8	14.4	to	53.8	1.02	0.84	to	1.42	13	1
Vacant Lot	100.7		N/A		299.1		N/A		3.81		N/A		5	0
Farm & Home	101.5		N/A		17.8		N/A		1.08		N/A		3	0
Ag. Land Only	11.2		N/A		36.6		N/A		0.97		N/A		15	1
Ag. (Impr.+ Land)	11.0		N/A		32.7		N/A		0.97		N/A		16	1
Other/Ex/Ut/NP/M	89.1		N/A				N/A				N/A		2	1
Total w/Ag.&F&H	98.7		N/A		36.6		N/A		1.81		N/A		134	19
Total Market	104.0		N/A		28.6		N/A		1.13		N/A		115	17

008 : BUTLER COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	95.8	94.0	to	97.5	10.6	9.5	to	11.8	1.02	1.01	to	1.03	256	20
Comm./Ind.	83.5	74.1	to	103.4	26.1	18.5	to	36.8	1.05	0.95	to	1.19	25	1
Vacant Lot	74.1		N/A		53.7		N/A		1.09		N/A		75	5
Farm & Home	69.0		N/A		31.8		N/A		1.04		N/A		43	0
Ag. Land Only	0.4		N/A		291.3		N/A		0.63		N/A		38	2
Ag. (Impr.+ Land)	0.4		N/A		292.8		N/A		0.62		N/A		43	3
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	90.8		N/A		19.8		N/A		1.02		N/A		447	72
Total Market	94.6		N/A		12.6		N/A		1.02		N/A		361	62

009 : CHASE COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	114.1	105.6	to	136.0	23.8	15.3	to	34.9	1.17	1.08	to	1.32	23	3
Comm./Ind.	100.6	66.4	to	127.4	20.3	9.6	to	36.6	0.92	0.82	to	1.04	7	1
Vacant Lot	108.0		N/A		38.0		N/A		1.56		N/A		3	0
Farm & Home													0	
Ag. Land Only	9.0		N/A		54.7		N/A		0.96		N/A		4	0
Ag. (Impr.+ Land)	9.0		N/A		54.7		N/A		0.96		N/A		4	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	106.4		N/A		35.7		N/A		1.24		N/A		38	4
Total Market	108.1		N/A		28.0		N/A		1.09		N/A		34	4

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

010 : CHAUTAUQUA COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	121.2	93.7	to	164.0	29.2	19.1	to	48.8	1.11	0.99	to	1.39	15	2
Comm./Ind.	101.2	90.6	to	137.2	16.9	10.6	to	24.3	1.02	0.94	to	1.17	6	0
Vacant Lot	60.5	N/A				N/A				N/A			1	0
Farm & Home	31.7	N/A			93.0	N/A			1.95	N/A			10	0
Ag. Land Only	2.4	N/A			27.2	N/A			0.95	N/A			13	0
Ag. (Impr.+ Land)	2.4	N/A			30.5	N/A			0.98	N/A			17	1
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	43.2	N/A			138.6	N/A			2.85	N/A			50	2
Total Market	108.9	N/A			27.3	N/A			1.23	N/A			23	3

011 : CHEROKEE COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	102.0	98.8	to	104.6	14.4	12.4	to	17.1	1.01	0.99	to	1.04	158	28
Comm./Ind.	106.2	89.1	to	109.4	5.5	1.6	to	10.8	1.08	1.01	to	1.13	4	0
Vacant Lot	109.4	N/A			58.7	N/A			2.21	N/A			17	0
Farm & Home	65.6	N/A			29.3	N/A			1.06	N/A			13	2
Ag. Land Only	8.9	N/A			41.2	N/A			1.04	N/A			11	0
Ag. (Impr.+ Land)	8.9	N/A			41.1	N/A			0.97	N/A			13	0
Other/Ex/Ut/NP/M	53.9	N/A				N/A				N/A			1	0
Total w/Ag.&F&H	99.3	N/A			19.7	N/A			1.06	N/A			207	40
Total Market	102.0	N/A			16.9	N/A			1.02	N/A			181	29

012 : CHEYENNE COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	96.9	91.8	to	102.1	17.5	12.6	to	24.9	1.08	1.01	to	1.19	38	4
Comm./Ind.	80.8	50.8	to	103.3	29.9	16.7	to	65.2	2.00	1.02	to	2.62	8	0
Vacant Lot	4800.0	N/A				N/A				N/A			1	0
Farm & Home	319.6	N/A				N/A				N/A			1	0
Ag. Land Only	6.6	N/A			25.7	N/A			0.97	N/A			11	2
Ag. (Impr.+ Land)	6.6	N/A			34.1	N/A			0.98	N/A			13	1
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	91.1	N/A			41.7	N/A			1.88	N/A			62	5
Total Market	95.4	N/A			20.5	N/A			1.37	N/A			48	5

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

013 : CLARK COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	107.3	90.4	to	122.2	21.6	16.5	to	30.9	1.08	1.02	to	1.17	24	2
Comm./Ind.	89.3	37.0	to	118.2	31.4	13.8	to	87.6	1.37	1.18	to	1.78	5	0
Vacant Lot													0	
Farm & Home	85.8		N/A				N/A				N/A		1	0
Ag. Land Only	9.7		N/A		90.1		N/A		0.92		N/A		5	0
Ag. (Impr.+ Land)	9.7		N/A		90.1		N/A		0.92		N/A		5	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	91.2		N/A		37.7		N/A		1.78		N/A		36	2
Total Market	103.3		N/A		23.4		N/A		1.12		N/A		30	3

014 : CLAY COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	103.1	98.2	to	105.8	17.9	14.7	to	21.8	1.07	1.04	to	1.11	94	11
Comm./Ind.	87.8	67.5	to	142.2	18.7	9.5	to	37.6	1.00	0.92	to	1.10	9	1
Vacant Lot	123.5		N/A		19.4		N/A		1.12		N/A		6	0
Farm & Home	25.3		N/A		4.2		N/A		1.02		N/A		2	0
Ag. Land Only	4.8		N/A		58.9		N/A		0.94		N/A		3	0
Ag. (Impr.+ Land)	11.7		N/A		35.2		N/A		0.90		N/A		6	0
Other/Ex/Ut/NP/M	518.0		N/A				N/A				N/A		1	0
Total w/Ag.&F&H	100.9		N/A		21.6		N/A		1.12		N/A		119	18
Total Market	101.5		N/A		19.7		N/A		1.08		N/A		111	13

015 : CLOUD COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	96.4	93.2	to	100.2	13.8	11.6	to	16.5	1.04	1.01	to	1.07	98	10
Comm./Ind.	88.0	65.1	to	120.2	28.7	19.0	to	52.3	1.25	1.04	to	1.62	11	0
Vacant Lot													0	
Farm & Home	56.6		N/A				N/A				N/A		1	0
Ag. Land Only	10.5		N/A		21.8		N/A		1.09		N/A		6	0
Ag. (Impr.+ Land)	10.5		N/A		21.8		N/A		1.09		N/A		6	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	94.9		N/A		16.2		N/A		1.08		N/A		117	15
Total Market	96.1		N/A		14.7		N/A		1.07		N/A		110	12

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

016 : COFFEY COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	96.3	93.9 to	99.8	14.8	12.2 to	17.8	1.02	1.00 to	1.05	93	9
Comm./Ind.	104.9	56.3 to	144.3	24.5	9.3 to	51.1	0.91	0.77 to	1.06	5	0
Vacant Lot	99.6	N/A		4.2	N/A		0.99	N/A		4	0
Farm & Home	68.0	N/A		48.3	N/A		1.04	N/A		6	0
Ag. Land Only	9.2	N/A		49.2	N/A		1.32	N/A		21	0
Ag. (Impr.+ Land)	9.2	N/A		49.2	N/A		1.32	N/A		21	0
Other/Ex/Ut/NP/M	362.7	N/A			N/A			N/A		1	0
Total w/Ag.&F&H	93.0	N/A		20.8	N/A		1.03	N/A		131	26
Total Market	96.6	N/A		15.1	N/A		1.02	N/A		104	11

017 : COMANCHE COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	94.5	82.7 to	133.9	26.6	17.3 to	38.1	1.09	1.02 to	1.21	19	2
Comm./Ind.	89.0	55.2 to	100.4	20.2	9.4 to	49.5	1.29	0.93 to	1.57	8	0
Vacant Lot	77.5	N/A			N/A			N/A		1	0
Farm & Home	59.6	N/A		18.9	N/A		1.18	N/A		2	0
Ag. Land Only	2.7	N/A		86.9	N/A		0.99	N/A		7	0
Ag. (Impr.+ Land)	3.1	N/A		62.7	N/A		0.97	N/A		10	0
Other/Ex/Ut/NP/M										0	
Total w/Ag.&F&H	77.5	N/A		51.6	N/A		2.99	N/A		41	2
Total Market	93.5	N/A		24.7	N/A		1.12	N/A		29	3

018 : COWLEY COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	97.0	95.2 to	98.3	16.1	14.5 to	17.9	1.03	1.02 to	1.05	324	25
Comm./Ind.	117.5	53.9 to	140.5	21.3	7.2 to	59.5	1.69	1.03 to	2.11	5	0
Vacant Lot	87.8	N/A		31.9	N/A		1.22	N/A		21	4
Farm & Home	44.9	N/A		43.2	N/A		1.13	N/A		14	0
Ag. Land Only	7.1	N/A		89.6	N/A		1.01	N/A		10	1
Ag. (Impr.+ Land)	4.5	N/A		83.8	N/A		1.05	N/A		13	1
Other/Ex/Ut/NP/M										0	
Total w/Ag.&F&H	95.8	N/A		17.4	N/A		1.06	N/A		378	49
Total Market	96.7	N/A		16.9	N/A		1.05	N/A		351	31

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

019 : CRAWFORD COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	97.4	95.8	to	99.6	14.5	12.7	to	16.5	1.03	1.01	to	1.06	204	21
Comm./Ind.	92.1	81.3	to	99.5	16.0	10.6	to	25.3	1.13	0.98	to	1.31	23	1
Vacant Lot	76.3		N/A		57.5		N/A		1.41		N/A		30	4
Farm & Home	47.8		N/A		31.5		N/A		1.00		N/A		15	0
Ag. Land Only	7.2		N/A		64.3		N/A		1.09		N/A		21	2
Ag. (Impr.+ Land)	6.6		N/A		73.4		N/A		1.10		N/A		26	2
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	93.7		N/A		20.6		N/A		1.06		N/A		299	47
Total Market	96.9		N/A		16.2		N/A		1.06		N/A		258	32

020 : DECATUR COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	105.4	91.1	to	112.9	26.4	20.6	to	36.3	1.13	1.05	to	1.25	41	2
Comm./Ind.	72.4	61.7	to	114.3	35.4	23.9	to	95.8	1.17	1.04	to	1.50	7	0
Vacant Lot	334.0		N/A		39.2		N/A		1.62		N/A		4	0
Farm & Home	46.3		N/A		120.6		N/A		1.89		N/A		5	0
Ag. Land Only	8.6		N/A		11.5		N/A		0.98		N/A		8	1
Ag. (Impr.+ Land)	8.7		N/A		16.4		N/A		1.02		N/A		9	1
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	95.3		N/A		42.8		N/A		1.63		N/A		67	7
Total Market	105.4		N/A		29.3		N/A		1.09		N/A		53	5

021 : DICKINSON COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	99.2	96.6	to	103.4	16.6	14.6	to	18.9	1.02	1.00	to	1.04	182	20
Comm./Ind.	90.3	76.1	to	139.2	25.0	8.0	to	49.8	1.12	0.97	to	1.43	6	0
Vacant Lot	148.8		N/A		30.8		N/A		2.24		N/A		4	0
Farm & Home	68.3		N/A		32.5		N/A		1.10		N/A		22	1
Ag. Land Only	10.3		N/A		38.5		N/A		0.94		N/A		12	0
Ag. (Impr.+ Land)	10.3		N/A		39.4		N/A		0.90		N/A		14	0
Other/Ex/Ut/NP/M	136.8		N/A				N/A				N/A		1	0
Total w/Ag.&F&H	96.6		N/A		21.9		N/A		1.07		N/A		230	31
Total Market	99.2		N/A		17.6		N/A		1.03		N/A		194	22

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

022 : DONIPHAN COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	98.4	84.6 to	103.7	21.8	16.5 to	30.2	1.00	0.96 to	1.05	54	5
Comm./Ind.	139.0	109.6 to	222.7	36.2	20.2 to	74.4	1.17	1.01 to	1.52	9	0
Vacant Lot	76.3	N/A		5.3	N/A		1.00	N/A		2	0
Farm & Home	58.8	N/A		160.0	N/A		2.14	N/A		4	0
Ag. Land Only	10.9	N/A		51.0	N/A		0.91	N/A		5	0
Ag. (Impr.+ Land)	12.8	N/A		37.4	N/A		0.90	N/A		7	0
Other/Ex/Ut/NP/M										0	
Total w/Ag.&F&H	96.6	N/A		30.6	N/A		1.28	N/A		77	11
Total Market	100.2	N/A		22.2	N/A		1.00	N/A		66	9

023 : DOUGLAS COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	95.9	94.2 to	97.2	7.9	7.2 to	8.6	1.07	1.00 to	1.16	310	24
Comm./Ind.	89.3	83.8 to	92.9	15.5	11.5 to	20.7	1.08	1.03 to	1.14	36	0
Vacant Lot	85.3	N/A		22.8	N/A		1.08	N/A		94	7
Farm & Home	74.7	N/A		27.1	N/A		1.04	N/A		22	0
Ag. Land Only	1.5	N/A		126.9	N/A		0.77	N/A		29	0
Ag. (Impr.+ Land)	1.5	N/A		141.2	N/A		0.74	N/A		32	1
Other/Ex/Ut/NP/M	95.2	N/A			N/A			N/A		1	0
Total w/Ag.&F&H	92.4	N/A		10.6	N/A		1.08	N/A		496	79
Total Market	93.7	N/A		9.2	N/A		1.07	N/A		442	56

024 : EDWARDS COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	111.1	92.9 to	119.4	29.2	22.0 to	37.9	1.23	1.13 to	1.39	36	0
Comm./Ind.	102.6	90.5 to	134.8	26.6	12.3 to	61.7	1.16	1.01 to	1.53	7	0
Vacant Lot	180.0	N/A		50.5	N/A		1.32	N/A		5	0
Farm & Home	58.4	N/A		240.2	N/A		2.68	N/A		3	0
Ag. Land Only	6.6	N/A		31.3	N/A		0.91	N/A		11	1
Ag. (Impr.+ Land)	6.6	N/A		31.9	N/A		0.90	N/A		15	3
Other/Ex/Ut/NP/M										0	
Total w/Ag.&F&H	91.2	N/A		54.4	N/A		3.01	N/A		67	2
Total Market	108.8	N/A		32.9	N/A		1.23	N/A		49	1

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

025 : ELK COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	87.4	75.7 to	97.2	20.8	14.6 to	31.5	1.00	0.93 to	1.08	33	5
Comm./Ind.	82.1	73.1 to	136.6	28.5	16.8 to	47.5	0.97	0.83 to	1.15	7	0
Vacant Lot										0	
Farm & Home	28.3	N/A		58.8	N/A		1.36	N/A		7	1
Ag. Land Only	3.8	N/A		45.1	N/A		0.90	N/A		6	1
Ag. (Impr.+ Land)	3.8	N/A		45.1	N/A		0.90	N/A		6	1
Other/Ex/Ut/NP/M										0	
Total w/Ag.&F&H	74.9	N/A		45.5	N/A		1.65	N/A		54	3
Total Market	86.2	N/A		22.3	N/A		1.01	N/A		41	6

026 : ELLIS COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	100.4	99.4 to	101.7	6.2	5.4 to	7.1	1.00	0.99 to	1.00	200	33
Comm./Ind.	94.9	71.5 to	108.2	21.2	15.1 to	36.7	0.98	0.91 to	1.05	19	0
Vacant Lot	20.8	N/A		142.6	N/A		1.15	N/A		35	2
Farm & Home	60.2	N/A		34.9	N/A		1.02	N/A		6	0
Ag. Land Only	7.0	N/A		44.4	N/A		1.03	N/A		11	0
Ag. (Impr.+ Land)	7.7	N/A		37.1	N/A		1.03	N/A		15	1
Other/Ex/Ut/NP/M										0	
Total w/Ag.&F&H	98.8	N/A		11.8	N/A		1.00	N/A		276	47
Total Market	99.3	N/A		10.0	N/A		0.99	N/A		255	40

027 : ELLSWORTH COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	98.6	94.9 to	102.6	13.0	10.0 to	16.9	1.03	1.00 to	1.06	53	4
Comm./Ind.	81.6	40.9 to	116.8	43.3	22.7 to	234.6	1.21	0.97 to	1.65	7	0
Vacant Lot	155.0	N/A		30.8	N/A		1.49	N/A		4	0
Farm & Home	78.6	N/A		10.6	N/A		0.95	N/A		5	0
Ag. Land Only	9.6	N/A		48.7	N/A		1.15	N/A		10	1
Ag. (Impr.+ Land)	9.9	N/A		28.4	N/A		0.98	N/A		13	2
Other/Ex/Ut/NP/M										0	
Total w/Ag.&F&H	94.5	N/A		31.5	N/A		1.23	N/A		83	5
Total Market	98.6	N/A		14.8	N/A		1.05	N/A		65	9

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

028 : FINNEY COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	96.5	94.1	to	98.7	10.2	9.0	to	11.5	1.00	1.00	to	1.01	199	24
Comm./Ind.	81.2	70.4	to	86.0	13.6	10.0	to	19.5	0.96	0.90	to	1.01	23	2
Vacant Lot	86.5	N/A			25.6	N/A			0.95	N/A			25	1
Farm & Home	67.2	N/A			16.1	N/A			1.03	N/A			5	0
Ag. Land Only	10.2	N/A			27.1	N/A			0.98	N/A			8	1
Ag. (Impr.+ Land)	10.2	N/A			27.1	N/A			0.98	N/A			8	1
Other/Ex/Ut/NP/M	44.4	N/A			68.3	N/A			0.79	N/A			2	0
Total w/Ag.&F&H	93.7	N/A			13.7	N/A			1.01	N/A			263	31
Total Market	94.5	N/A			12.9	N/A			1.00	N/A			250	26

029 : FORD COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	92.3	90.0	to	94.5	11.1	9.9	to	12.6	0.99	0.98	to	1.00	194	13
Comm./Ind.	84.1	74.1	to	90.7	24.9	18.2	to	36.7	0.88	0.79	to	0.99	23	1
Vacant Lot	75.0	N/A			23.7	N/A			1.03	N/A			15	0
Farm & Home	39.5	N/A			212.2	N/A			1.14	N/A			8	1
Ag. Land Only	9.0	N/A			43.1	N/A			0.99	N/A			14	1
Ag. (Impr.+ Land)	9.3	N/A			34.9	N/A			1.07	N/A			17	2
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	89.0	N/A			14.5	N/A			0.98	N/A			258	30
Total Market	90.9	N/A			12.9	N/A			0.98	N/A			233	17

030 : FRANKLIN COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	98.5	95.8	to	100.3	13.0	11.7	to	14.6	1.03	1.02	to	1.05	302	43
Comm./Ind.	122.5	92.0	to	132.8	18.9	9.8	to	40.8	0.96	0.87	to	1.07	10	0
Vacant Lot	103.1	N/A			24.7	N/A			0.98	N/A			23	2
Farm & Home	57.5	N/A			32.8	N/A			1.06	N/A			33	1
Ag. Land Only	4.6	N/A			70.7	N/A			0.82	N/A			23	0
Ag. (Impr.+ Land)	5.1	N/A			65.7	N/A			0.95	N/A			29	1
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	95.0	N/A			16.6	N/A			1.06	N/A			398	79
Total Market	99.0	N/A			14.5	N/A			1.04	N/A			336	46

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

031 : GEARY COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	100.5	99.3	to	102.5	8.7	7.8	to	9.7	1.01	1.01	to	1.02	291	39
Comm./Ind.	90.9	58.1	to	144.1	30.3	17.3	to	59.3	1.09	1.00	to	1.22	5	0
Vacant Lot	273.0		N/A		123.4		N/A		7.71		N/A		7	0
Farm & Home	69.4		N/A		6.2		N/A		0.99		N/A		2	0
Ag. Land Only	6.0		N/A		65.7		N/A		0.73		N/A		3	0
Ag. (Impr.+ Land)	8.6		N/A		49.5		N/A		0.85		N/A		4	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	100.1		N/A		9.1		N/A		1.02		N/A		310	50
Total Market	100.5		N/A		9.2		N/A		1.02		N/A		304	44

032 : GOVE COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	87.8	74.7	to	95.8	23.0	16.1	to	34.8	1.04	0.98	to	1.12	26	1
Comm./Ind.	80.1	38.9	to	115.9	24.0	10.3	to	79.3	1.24	1.03	to	1.69	5	0
Vacant Lot													0	
Farm & Home	27.6		N/A		94.9		N/A		1.38		N/A		4	0
Ag. Land Only	56.9		N/A		57.1		N/A		1.96		N/A		3	0
Ag. (Impr.+ Land)	56.9		N/A		57.1		N/A		1.96		N/A		3	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	80.1		N/A		33.2		N/A		1.15		N/A		39	1
Total Market	85.5		N/A		26.0		N/A		1.02		N/A		32	1

033 : GRAHAM COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	77.7	72.1	to	92.7	17.9	13.9	to	24.5	1.02	0.97	to	1.09	25	1
Comm./Ind.	90.0	60.9	to	114.2	21.3	10.4	to	36.6	1.04	0.91	to	1.14	6	0
Vacant Lot													0	
Farm & Home	32.3		N/A				N/A				N/A		1	0
Ag. Land Only	4.5		N/A		101.6		N/A		1.04		N/A		8	0
Ag. (Impr.+ Land)	3.8		N/A		69.3		N/A		0.79		N/A		9	1
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	72.7		N/A		41.7		N/A		1.77		N/A		42	0
Total Market	78.6		N/A		19.4		N/A		1.03		N/A		32	2

25

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

034 : GRANT COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	98.9	92.0	to	100.3	11.3	9.1	to	13.8	1.03	1.01	to	1.04	66	4
Comm./Ind.	84.7	81.2	to	124.8	13.3	4.7	to	21.5	1.01	0.94	to	1.11	5	0
Vacant Lot	60.0	N/A				N/A				N/A			1	0
Farm & Home	40.9	N/A			75.7	N/A			0.81	N/A			2	0
Ag. Land Only	7.1	N/A			36.3	N/A			0.78	N/A			6	0
Ag. (Impr.+ Land)	4.7	N/A			67.3	N/A			0.76	N/A			8	0
Other/Ex/Ut/NP/M	129.5	N/A				N/A				N/A			1	0
Total w/Ag.&F&H	93.9	N/A			13.1	N/A			1.02	N/A			84	13
Total Market	98.2	N/A			12.3	N/A			1.02	N/A			74	5

035 : GRAY COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	94.9	88.9	to	98.8	13.1	10.9	to	16.0	1.01	0.99	to	1.04	63	1
Comm./Ind.	107.1	58.2	to	139.2	25.2	10.1	to	51.3	1.34	1.21	to	1.50	5	0
Vacant Lot	48.7	N/A				N/A				N/A			1	0
Farm & Home	77.3	N/A			4.5	N/A			0.98	N/A			2	0
Ag. Land Only	9.0	N/A			19.7	N/A			0.93	N/A			9	0
Ag. (Impr.+ Land)	9.2	N/A			25.9	N/A			0.97	N/A			10	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	89.4	N/A			15.6	N/A			1.05	N/A			82	11
Total Market	94.8	N/A			15.5	N/A			1.04	N/A			70	1

036 : GREELEY COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	111.4	81.8	to	152.9	25.0	15.5	to	52.2	1.07	1.03	to	1.14	8	1
Comm./Ind.	98.5	85.5	to	145.6	20.3	3.8	to	23.1	0.85	0.77	to	1.12	5	0
Vacant Lot	110.4	N/A				N/A				N/A			1	0
Farm & Home	23.6	N/A				N/A				N/A			1	0
Ag. Land Only	7.2	N/A			13.0	N/A			1.06	N/A			8	0
Ag. (Impr.+ Land)	7.2	N/A			13.0	N/A			1.06	N/A			8	0
Other/Ex/Ut/NP/M	404.2	N/A				N/A				N/A			1	0
Total w/Ag.&F&H	83.5	N/A			59.1	N/A			1.23	N/A			25	2
Total Market	105.3	N/A			27.9	N/A			0.83	N/A			16	2

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

037 : GREENWOOD COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	103.5	97.3	to	110.1	20.6	15.8	to	27.9	1.05	0.99	to	1.13	49	3
Comm./Ind.	108.2	86.4	to	111.3	5.6	1.5	to	11.6	1.03	1.00	to	1.10	5	0
Vacant Lot	235.0	N/A			64.9	N/A			4.28	N/A			6	1
Farm & Home	99.9	N/A			41.5	N/A			1.19	N/A			5	0
Ag. Land Only	2.9	N/A			26.5	N/A			1.10	N/A			11	1
Ag. (Impr.+ Land)	2.8	N/A			16.4	N/A			1.01	N/A			12	2
Other/Ex/Ut/NP/M	161.5	N/A			29.0	N/A			1.39	N/A			5	0
Total w/Ag.&F&H	102.1	N/A			38.4	N/A			1.93	N/A			83	7
Total Market	108.0	N/A			21.9	N/A			1.08	N/A			66	9

038 : HAMILTON COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	89.6	79.4	to	101.9	20.9	14.9	to	32.5	1.05	0.99	to	1.12	20	0
Comm./Ind.	107.8	71.3	to	323.3	80.8	37.5	to	218.3	1.63	1.05	to	2.93	6	0
Vacant Lot	78.3	N/A				N/A				N/A			1	0
Farm & Home	23.7	N/A			30.2	N/A			0.95	N/A			3	0
Ag. Land Only	8.1	N/A			8.6	N/A			1.04	N/A			6	0
Ag. (Impr.+ Land)	8.1	N/A			8.6	N/A			1.04	N/A			6	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	81.1	N/A			44.8	N/A			1.20	N/A			37	1
Total Market	89.6	N/A			20.6	N/A			1.03	N/A			28	3

039 : HARPER COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	99.2	93.7	to	109.9	18.8	13.8	to	25.9	1.11	1.06	to	1.18	50	7
Comm./Ind.	102.2	91.4	to	125.5	14.7	8.4	to	28.1	0.94	0.83	to	1.05	10	1
Vacant Lot	172.0	N/A			71.9	N/A			1.44	N/A			5	0
Farm & Home	95.7	N/A			15.7	N/A			1.17	N/A			3	0
Ag. Land Only	3.9	N/A			185.0	N/A			1.73	N/A			5	0
Ag. (Impr.+ Land)	3.5	N/A			173.5	N/A			1.60	N/A			6	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	98.1	N/A			21.5	N/A			1.07	N/A			75	15
Total Market	100.8	N/A			20.9	N/A			1.09	N/A			66	10

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

040 : HARVEY COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	98.5	96.8	to	100.2	10.9	9.6	to	12.5	1.04	1.01	to	1.09	216	32
Comm./Ind.	82.9	73.9	to	107.9	29.1	22.4	to	43.2	0.88	0.74	to	1.21	27	2
Vacant Lot	73.6		N/A		83.8		N/A		1.62		N/A		20	2
Farm & Home	74.1		N/A		19.3		N/A		1.10		N/A		9	0
Ag. Land Only	5.3		N/A		70.4		N/A		0.83		N/A		17	1
Ag. (Impr.+ Land)	4.7		N/A		74.5		N/A		0.85		N/A		20	1
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	96.0		N/A		14.9		N/A		1.03		N/A		293	58
Total Market	97.7		N/A		13.6		N/A		1.01		N/A		264	42

041 : HASKELL COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	92.9	81.9	to	97.3	15.5	11.2	to	23.3	0.98	0.95	to	1.01	23	0
Comm./Ind.	99.4	59.2	to	129.0	22.5	11.7	to	38.7	1.04	0.99	to	1.22	4	0
Vacant Lot	246.0		N/A				N/A				N/A		1	0
Farm & Home	41.8		N/A				N/A				N/A		1	0
Ag. Land Only	2.2		N/A				N/A				N/A		1	0
Ag. (Impr.+ Land)	2.2		N/A				N/A				N/A		1	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	92.5		N/A		18.2		N/A		1.01		N/A		31	3
Total Market	92.9		N/A		16.8		N/A		0.99		N/A		29	2

042 : HODGEMAN COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	98.7	72.7	to	106.3	16.3	8.4	to	35.7	1.02	0.96	to	1.12	11	0
Comm./Ind.	69.9	50.8	to	121.2	25.0	14.5	to	46.8	1.22	1.07	to	1.59	9	1
Vacant Lot	140.0		N/A				N/A				N/A		1	0
Farm & Home	35.2		N/A		27.8		N/A		0.81		N/A		3	0
Ag. Land Only	3.1		N/A		90.7		N/A		1.01		N/A		6	0
Ag. (Impr.+ Land)	5.8		N/A		56.4		N/A		0.93		N/A		8	1
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	65.5		N/A		61.3		N/A		1.93		N/A		33	1
Total Market	90.3		N/A		29.5		N/A		0.99		N/A		22	1

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

043 : JACKSON COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	93.4	88.5	to	101.3	17.8	14.9	to	21.4	1.03	1.01	to	1.06	93	9
Comm./Ind.	74.0	63.2	to	88.5	14.6	9.2	to	23.3	0.97	0.90	to	1.11	12	1
Vacant Lot	57.2	N/A			80.7	N/A			1.66	N/A			5	0
Farm & Home	72.7	N/A			15.8	N/A			1.03	N/A			37	4
Ag. Land Only	5.5	N/A			88.3	N/A			0.74	N/A			16	0
Ag. (Impr.+ Land)	7.7	N/A			61.9	N/A			0.77	N/A			17	0
Other/Ex/Ut/NP/M	48.4	N/A				N/A				N/A			1	0
Total w/Ag.&F&H	84.1	N/A			27.0	N/A			1.13	N/A			166	17
Total Market	91.3	N/A			20.6	N/A			0.97	N/A			112	11

044 : JEFFERSON COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	93.3	90.6	to	95.7	14.1	12.4	to	16.1	1.04	1.02	to	1.05	195	18
Comm./Ind.	99.7	77.3	to	126.1	14.8	8.6	to	25.3	1.11	1.05	to	1.24	9	1
Vacant Lot	219.5	N/A			66.8	N/A			2.98	N/A			22	1
Farm & Home	71.4	N/A			24.2	N/A			1.02	N/A			46	2
Ag. Land Only	2.4	N/A			93.7	N/A			0.74	N/A			18	2
Ag. (Impr.+ Land)	3.5	N/A			116.4	N/A			0.94	N/A			26	0
Other/Ex/Ut/NP/M	.	N/A				N/A				N/A			1	0
Total w/Ag.&F&H	89.6	N/A			19.2	N/A			1.06	N/A			300	57
Total Market	94.5	N/A			15.4	N/A			1.04	N/A			228	33

045 : JEWELL COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	124.1	88.0	to	138.7	28.7	18.3	to	44.2	1.02	0.91	to	1.22	20	1
Comm./Ind.	121.3	76.3	to	155.0	21.8	7.7	to	63.6	0.97	0.91	to	1.03	6	0
Vacant Lot													0	
Farm & Home	49.1	N/A			75.9	N/A			1.50	N/A			5	0
Ag. Land Only	10.3	N/A			14.5	N/A			0.96	N/A			9	1
Ag. (Impr.+ Land)	10.3	N/A			14.5	N/A			0.96	N/A			9	1
Other/Ex/Ut/NP/M	13.0	N/A				N/A				N/A			1	0
Total w/Ag.&F&H	84.9	N/A			61.8	N/A			2.57	N/A			42	1
Total Market	121.3	N/A			32.5	N/A			0.98	N/A			28	1

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Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

046 : JOHNSON COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	92.7	91.2 to	93.5	8.2	7.5 to	9.0	1.00	0.99 to	1.01	352	24
Comm./Ind.	86.4	81.8 to	93.0	22.3	19.6 to	26.0	1.13	1.06 to	1.22	138	6
Vacant Lot	64.7	N/A		25.6	N/A		1.10	N/A		508	43
Farm & Home	57.5	N/A		23.6	N/A		1.17	N/A		28	3
Ag. Land Only	0.1	N/A		396.0	N/A		0.65	N/A		193	38
Ag. (Impr.+ Land)	0.1	N/A		630.3	N/A		0.62	N/A		199	39
Other/Ex/Ut/NP/M	90.5	N/A		21.7	N/A		1.10	N/A		2	0
Total w/Ag.&F&H	73.6	N/A		38.7	N/A		0.96	N/A		1,229	31
Total Market	82.9	N/A		22.4	N/A		1.00	N/A		1,002	55

047 : KEARNY COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	89.9	76.6 to	96.1	20.1	14.8 to	26.8	1.07	1.03 to	1.14	32	1
Comm./Ind.	81.8	57.7 to	151.5	40.9	15.9 to	86.1	0.86	0.69 to	1.03	6	0
Vacant Lot	74.4	N/A		31.9	N/A		1.13	N/A		2	0
Farm & Home	39.1	N/A			N/A			N/A		1	0
Ag. Land Only	15.1	N/A		26.2	N/A		0.90	N/A		3	0
Ag. (Impr.+ Land)	15.1	N/A		26.2	N/A		0.90	N/A		3	0
Other/Ex/Ut/NP/M										0	
Total w/Ag.&F&H	80.3	N/A		30.0	N/A		1.10	N/A		45	2
Total Market	88.2	N/A		21.2	N/A		1.03	N/A		41	3

048 : KINGMAN COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	105.1	100.1 to	116.9	20.7	16.5 to	26.6	1.08	1.03 to	1.13	60	5
Comm./Ind.	104.4	98.0 to	174.0	19.2	8.9 to	31.0	0.81	0.77 to	1.01	5	0
Vacant Lot										0	
Farm & Home	53.3	N/A		12.5	N/A		1.03	N/A		11	2
Ag. Land Only	7.5	N/A		42.0	N/A		1.07	N/A		10	0
Ag. (Impr.+ Land)	7.5	N/A		51.4	N/A		1.05	N/A		12	0
Other/Ex/Ut/NP/M										0	
Total w/Ag.&F&H	97.2	N/A		39.9	N/A		1.25	N/A		89	2
Total Market	104.3	N/A		20.6	N/A		1.03	N/A		66	6

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

049 : KIOWA COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	91.9	89.5	to	112.0	17.7	11.9	to	30.5	1.05	1.02	to	1.10	14	0
Comm./Ind.	89.8	66.8	to	109.1	16.1	5.5	to	30.9	1.23	0.98	to	1.50	6	0
Vacant Lot	68.6	N/A				N/A				N/A			1	0
Farm & Home	107.3	N/A			16.8	N/A			0.99	N/A			2	0
Ag. Land Only	7.1	N/A			86.9	N/A			0.64	N/A			2	0
Ag. (Impr.+ Land)	7.1	N/A			86.9	N/A			0.64	N/A			2	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	90.0	N/A			20.8	N/A			1.19	N/A			26	2
Total Market	90.5	N/A			17.7	N/A			1.19	N/A			22	1

050 : LABETTE COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	103.8	99.4	to	109.7	23.5	20.3	to	27.8	1.11	1.08	to	1.16	177	23
Comm./Ind.	95.8	72.6	to	173.3	51.5	34.0	to	98.3	1.32	1.08	to	1.75	13	1
Vacant Lot	192.8	N/A			70.9	N/A			1.56	N/A			6	0
Farm & Home	47.0	N/A			29.9	N/A			0.98	N/A			14	0
Ag. Land Only	3.4	N/A			57.1	N/A			0.86	N/A			10	0
Ag. (Impr.+ Land)	3.3	N/A			56.6	N/A			0.90	N/A			13	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	99.5	N/A			34.6	N/A			1.32	N/A			224	24
Total Market	104.7	N/A			29.5	N/A			1.18	N/A			197	21

051 : LANE COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	85.3	64.6	to	120.8	35.0	22.3	to	57.7	1.18	1.06	to	1.40	13	0
Comm./Ind.	97.2	56.1	to	220.6	57.0	17.1	to	185.7	1.87	1.18	to	4.52	6	0
Vacant Lot	130.0	N/A			15.2	N/A			0.95	N/A			3	1
Farm & Home	39.7	N/A			20.7	N/A			1.10	N/A			3	0
Ag. Land Only	5.1	N/A			31.8	N/A			1.14	N/A			3	0
Ag. (Impr.+ Land)	5.6	N/A			2520.0	N/A			24.40	N/A			4	0
Other/Ex/Ut/NP/M	221.6	N/A				N/A				N/A			1	0
Total w/Ag.&F&H	85.3	N/A			51.9	N/A			1.83	N/A			31	3
Total Market	93.5	N/A			39.0	N/A			1.26	N/A			24	2

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

052 : LEAVENWORTH COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	95.2	93.9	to	96.6	6.1	5.4	to	6.9	1.00	1.00	to	1.01	218	32
Comm./Ind.	102.7	90.0	to	129.7	26.1	17.3	to	43.1	1.32	1.08	to	1.70	15	0
Vacant Lot	96.8	N/A			13.9	N/A			1.09	N/A			81	15
Farm & Home	68.9	N/A			19.2	N/A			1.01	N/A			60	3
Ag. Land Only	0.7	N/A			84.5	N/A			0.81	N/A			52	3
Ag. (Impr.+ Land)	0.8	N/A			87.1	N/A			0.83	N/A			54	3
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	91.7	N/A			14.8	N/A			1.08	N/A			429	81
Total Market	95.9	N/A			7.2	N/A			1.00	N/A			315	62

053 : LINCOLN COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	116.2	95.5	to	132.1	23.7	15.4	to	38.8	1.27	1.08	to	1.48	19	3
Comm./Ind.	97.6	89.5	to	115.3	7.9	2.6	to	18.3	1.02	0.97	to	1.10	10	2
Vacant Lot													0	
Farm & Home	27.4	N/A			34.4	N/A			1.00	N/A			2	0
Ag. Land Only	4.7	N/A			78.4	N/A			0.78	N/A			4	0
Ag. (Impr.+ Land)	3.1	N/A			102.9	N/A			1.06	N/A			5	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	97.1	N/A			39.5	N/A			1.73	N/A			37	4
Total Market	100.3	N/A			19.3	N/A			1.13	N/A			30	6

054 : LINN COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	88.8	85.1	to	93.9	19.0	16.0	to	22.8	1.03	1.00	to	1.07	115	12
Comm./Ind.	82.3	65.2	to	106.2	18.6	11.4	to	33.0	0.98	0.86	to	1.07	6	0
Vacant Lot	68.7	N/A			59.7	N/A			1.33	N/A			144	17
Farm & Home	47.3	N/A			47.9	N/A			1.16	N/A			29	0
Ag. Land Only	3.8	N/A			90.4	N/A			0.92	N/A			21	1
Ag. (Impr.+ Land)	4.6	N/A			66.8	N/A			0.97	N/A			28	2
Other/Ex/Ut/NP/M	122.6	N/A				N/A				N/A			1	0
Total w/Ag.&F&H	77.1	N/A			46.1	N/A			1.42	N/A			324	25
Total Market	83.4	N/A			37.0	N/A			0.98	N/A			267	22

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

055 : LOGAN COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	98.2	89.5	to	101.0	11.5	8.8	to	15.4	1.02	1.00	to	1.05	53	9
Comm./Ind.	85.9	56.4	to	123.0	39.5	24.1	to	86.0	1.66	1.19	to	2.46	7	0
Vacant Lot	100.0	N/A			6.1	N/A			1.00	N/A			3	0
Farm & Home	51.1	N/A				N/A				N/A			1	0
Ag. Land Only	12.2	N/A			17.6	N/A			1.00	N/A			8	0
Ag. (Impr.+ Land)	11.2	N/A			21.6	N/A			1.11	N/A			9	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	93.1	N/A			22.0	N/A			1.25	N/A			74	11
Total Market	97.9	N/A			14.7	N/A			1.23	N/A			64	9

056 : LYON COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	94.6	92.2	to	98.8	15.0	13.4	to	17.0	1.15	1.03	to	1.36	208	18
Comm./Ind.	116.2	91.9	to	132.0	25.1	15.6	to	41.5	0.90	0.77	to	1.18	18	1
Vacant Lot	115.4	N/A			38.1	N/A			1.25	N/A			21	2
Farm & Home	76.7	N/A			19.7	N/A			1.05	N/A			20	1
Ag. Land Only	4.8	N/A			91.6	N/A			1.18	N/A			18	0
Ag. (Impr.+ Land)	4.1	N/A			96.1	N/A			1.18	N/A			21	0
Other/Ex/Ut/NP/M	112.8	N/A			6.0	N/A			1.03	N/A			2	0
Total w/Ag.&F&H	93.2	N/A			18.3	N/A			1.11	N/A			292	42
Total Market	97.1	N/A			17.3	N/A			1.10	N/A			251	23

057 : MARION COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	98.4	95.8	to	103.7	13.9	11.8	to	16.6	1.04	1.02	to	1.07	130	19
Comm./Ind.	94.5	61.6	to	102.2	19.3	10.0	to	37.5	1.37	1.26	to	1.48	7	0
Vacant Lot	94.7	N/A			37.7	N/A			1.39	N/A			9	1
Farm & Home	68.7	N/A			27.4	N/A			1.12	N/A			12	0
Ag. Land Only	9.9	N/A			29.4	N/A			1.00	N/A			12	1
Ag. (Impr.+ Land)	9.9	N/A			31.2	N/A			0.99	N/A			14	2
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	95.5	N/A			17.9	N/A			1.11	N/A			173	33
Total Market	98.1	N/A			14.6	N/A			1.09	N/A			147	23

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

058 : MARSHALL COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	97.6	93.1 to	100.2	12.4	10.2 to	15.1	1.02	1.00 to	1.05	108	20
Comm./Ind.	78.7	59.3 to	102.3	28.5	17.8 to	48.3	1.17	1.01 to	1.37	10	0
Vacant Lot	58.9	N/A		68.4	N/A		1.48	N/A		7	0
Farm & Home	48.0	N/A		37.0	N/A		1.10	N/A		7	0
Ag. Land Only	7.0	N/A		40.7	N/A		1.00	N/A		15	0
Ag. (Impr.+ Land)	7.0	N/A		40.7	N/A		1.00	N/A		15	0
Other/Ex/Ut/NP/M	28.8	N/A			N/A			N/A		1	0
Total w/Ag.&F&H	91.8	N/A		32.4	N/A		1.64	N/A		149	5
Total Market	96.4	N/A		18.0	N/A		1.08	N/A		127	15

059 : MCPHERSON COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	97.6	96.2 to	99.0	8.7	7.7 to	9.9	1.00	1.00 to	1.01	191	15
Comm./Ind.	82.8	57.0 to	113.4	28.9	20.3 to	53.1	1.05	0.98 to	1.15	15	0
Vacant Lot	90.3	N/A		32.7	N/A		1.06	N/A		12	2
Farm & Home	81.1	N/A		22.8	N/A		1.05	N/A		22	0
Ag. Land Only	8.1	N/A		50.3	N/A		0.93	N/A		18	0
Ag. (Impr.+ Land)	8.1	N/A		52.8	N/A		1.02	N/A		22	0
Other/Ex/Ut/NP/M	2116.3	N/A			N/A			N/A		1	0
Total w/Ag.&F&H	95.2	N/A		10.9	N/A		1.01	N/A		264	45
Total Market	97.3	N/A		9.6	N/A		1.00	N/A		220	24

060 : MEADE COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	87.6	77.1 to	108.5	29.4	21.1 to	41.3	1.20	1.10 to	1.34	24	0
Comm./Ind.	65.2	53.6 to	95.3	14.3	3.6 to	31.2	0.76	0.74 to	1.05	5	0
Vacant Lot										0	
Farm & Home	87.8	N/A		4.2	N/A		1.01	N/A		3	0
Ag. Land Only	6.6	N/A		3.7	N/A		1.00	N/A		3	0
Ag. (Impr.+ Land)	6.6	N/A		3.7	N/A		1.00	N/A		3	0
Other/Ex/Ut/NP/M	3602.0	N/A			N/A			N/A		1	0
Total w/Ag.&F&H	82.3	N/A		29.0	N/A		1.17	N/A		38	4
Total Market	82.3	N/A		32.0	N/A		1.06	N/A		32	1

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

061 : MIAMI COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	94.2	93.1	to	95.7	9.2	8.5	to	10.0	1.00	1.00	to	1.01	488	65
Comm./Ind.	96.7	80.0	to	123.1	18.6	11.3	to	31.4	1.17	1.05	to	1.43	9	0
Vacant Lot	88.5	N/A			42.7	N/A			1.19	N/A			47	2
Farm & Home	68.4	N/A			18.9	N/A			1.09	N/A			47	4
Ag. Land Only	1.6	N/A			101.0	N/A			0.97	N/A			45	2
Ag. (Impr.+ Land)	2.1	N/A			104.9	N/A			1.03	N/A			57	5
Other/Ex/Ut/NP/M	304.0	N/A				N/A				N/A			1	0
Total w/Ag.&F&H	91.6	N/A			13.0	N/A			1.03	N/A			650	123
Total Market	94.1	N/A			9.7	N/A			1.01	N/A			546	89

062 : MITCHELL COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	93.7	85.6	to	100.0	19.3	15.8	to	24.3	1.05	1.01	to	1.11	59	3
Comm./Ind.	75.5	71.6	to	115.5	26.4	17.3	to	48.3	1.08	0.94	to	1.41	8	0
Vacant Lot	123.3	N/A			59.3	N/A			1.64	N/A			3	0
Farm & Home	60.1	N/A			18.4	N/A			1.01	N/A			4	0
Ag. Land Only	7.4	N/A			36.8	N/A			1.00	N/A			4	0
Ag. (Impr.+ Land)	7.4	N/A			36.8	N/A			1.00	N/A			4	0
Other/Ex/Ut/NP/M	37.3	N/A				N/A				N/A			1	0
Total w/Ag.&F&H	87.2	N/A			24.9	N/A			1.10	N/A			80	6
Total Market	92.2	N/A			22.7	N/A			1.06	N/A			72	3

063 : MONTGOMERY COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	113.9	105.3	to	120.5	24.9	22.0	to	28.7	1.09	1.05	to	1.12	198	24
Comm./Ind.	108.8	101.0	to	134.4	24.3	18.5	to	36.5	1.08	0.98	to	1.23	22	1
Vacant Lot	84.0	N/A			155.2	N/A			3.07	N/A			18	1
Farm & Home	75.7	N/A			35.4	N/A			1.05	N/A			13	1
Ag. Land Only	4.6	N/A			13.3	N/A			0.99	N/A			8	1
Ag. (Impr.+ Land)	4.6	N/A			14.7	N/A			0.97	N/A			10	1
Other/Ex/Ut/NP/M	194.2	N/A			1.3	N/A			1.01	N/A			2	0
Total w/Ag.&F&H	107.9	N/A			31.8	N/A			1.15	N/A			264	29
Total Market	112.5	N/A			27.1	N/A			1.07	N/A			241	31

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

064 : MORRIS COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	100.0	90.4	to	105.6	23.9	17.6	to	31.3	1.07	1.02	to	1.14	52	5
Comm./Ind.	71.1	60.0	to	98.7	25.3	15.8	to	58.7	1.03	0.92	to	1.28	8	0
Vacant Lot	147.5	N/A				N/A				N/A			1	0
Farm & Home	61.9	N/A			27.5	N/A			1.07	N/A			4	0
Ag. Land Only	0.9	N/A			22.5	N/A			1.12	N/A			3	0
Ag. (Impr.+ Land)	1.0	N/A			383.5	N/A			0.36	N/A			4	0
Other/Ex/Ut/NP/M	94.3	N/A			77.4	N/A			2.58	N/A			3	1
Total w/Ag.&F&H	93.0	N/A			25.2	N/A			1.04	N/A			73	13
Total Market	98.7	N/A			29.7	N/A			1.05	N/A			65	5

065 : MORTON COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	99.7	94.4	to	105.9	11.1	7.8	to	16.6	1.02	0.98	to	1.07	19	1
Comm./Ind.	88.3	56.8	to	134.3	33.0	20.5	to	60.4	1.19	1.00	to	1.43	6	0
Vacant Lot	73.6	N/A			81.5	N/A			2.15	N/A			2	0
Farm & Home	37.4	N/A				N/A				N/A			1	0
Ag. Land Only	5.6	N/A				N/A				N/A			1	0
Ag. (Impr.+ Land)	5.6	N/A				N/A				N/A			1	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	97.9	N/A			22.5	N/A			1.10	N/A			30	2
Total Market	98.3	N/A			18.4	N/A			1.07	N/A			28	2

066 : NEMAHA COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	90.7	84.8	to	95.5	16.9	14.3	to	20.4	1.03	1.01	to	1.07	97	9
Comm./Ind.	112.0	82.3	to	146.7	27.7	18.8	to	47.9	0.96	0.83	to	1.10	10	0
Vacant Lot	93.7	N/A			1052.9	N/A			12.72	N/A			5	0
Farm & Home	44.8	N/A			40.8	N/A			1.50	N/A			10	0
Ag. Land Only	4.2	N/A			66.7	N/A			0.87	N/A			17	1
Ag. (Impr.+ Land)	4.4	N/A			73.0	N/A			0.80	N/A			20	1
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	84.4	N/A			35.5	N/A			1.53	N/A			143	10
Total Market	92.2	N/A			17.9	N/A			1.02	N/A			113	13

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

067 : NEOSHO COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	101.6	97.2	to	104.7	17.5	15.1	to	20.6	1.06	1.03	to	1.10	131	12
Comm./Ind.	104.2	92.0	to	124.1	19.1	12.5	to	40.0	1.23	1.00	to	1.49	12	1
Vacant Lot	104.3		N/A		57.1		N/A		1.37		N/A		6	0
Farm & Home	67.7		N/A		29.8		N/A		1.10		N/A		10	1
Ag. Land Only	3.0		N/A		46.4		N/A		0.90		N/A		14	0
Ag. (Impr.+ Land)	3.1		N/A		43.4		N/A		0.96		N/A		17	1
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	97.2		N/A		19.5		N/A		1.11		N/A		177	32
Total Market	101.5		N/A		17.9		N/A		1.10		N/A		150	15

068 : NESS COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	97.9	96.1	to	104.6	11.3	8.0	to	16.3	1.05	1.01	to	1.11	31	4
Comm./Ind.	82.3	77.4	to	99.5	14.5	8.8	to	32.7	0.89	0.76	to	0.98	7	0
Vacant Lot	57.3		N/A		13.3		N/A		1.00		N/A		3	1
Farm & Home													0	
Ag. Land Only	7.9		N/A		25.1		N/A		1.04		N/A		4	0
Ag. (Impr.+ Land)	8.3		N/A		27.6		N/A		1.06		N/A		5	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	96.2		N/A		17.1		N/A		1.01		N/A		47	8
Total Market	96.9		N/A		16.0		N/A		1.00		N/A		42	4

069 : NORTON COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	85.5	79.9	to	92.0	15.2	12.3	to	19.3	1.05	1.01	to	1.09	62	8
Comm./Ind.	78.1	52.4	to	108.4	30.3	15.7	to	92.2	0.94	0.81	to	1.07	10	1
Vacant Lot	55.7		N/A		335.3		N/A		3.52		N/A		4	0
Farm & Home	75.7		N/A		43.2		N/A		1.60		N/A		2	0
Ag. Land Only	8.9		N/A		47.0		N/A		1.18		N/A		7	0
Ag. (Impr.+ Land)	8.9		N/A		47.0		N/A		1.18		N/A		7	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	81.7		N/A		25.5		N/A		1.06		N/A		86	11
Total Market	84.6		N/A		16.2		N/A		1.05		N/A		77	14

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

070 : OSAGE COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	97.9	93.8	to	104.5	20.1	17.5	to	23.1	1.05	1.03	to	1.08	177	16
Comm./Ind.	72.5	57.2	to	117.4	34.7	12.3	to	40.7	1.03	0.83	to	1.27	8	0
Vacant Lot	104.4		N/A		52.4		N/A		1.04		N/A		9	0
Farm & Home	68.1		N/A		27.1		N/A		1.11		N/A		33	0
Ag. Land Only	5.5		N/A		93.2		N/A		1.06		N/A		23	2
Ag. (Impr.+ Land)	5.2		N/A		83.8		N/A		1.04		N/A		27	3
Other/Ex/Ut/NP/M	238.8		N/A		68.6		N/A		1.15		N/A		3	0
Total w/Ag.&F&H	91.1		N/A		23.5		N/A		1.10		N/A		258	49
Total Market	98.5		N/A		22.4		N/A		1.06		N/A		198	20

071 : OSBORNE COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	113.2	94.4	to	121.9	25.8	18.5	to	38.5	1.00	0.94	to	1.09	29	4
Comm./Ind.	99.0	55.3	to	133.4	27.5	12.7	to	60.2	0.87	0.66	to	1.04	6	0
Vacant Lot	62.2		N/A		23.5		N/A		1.04		N/A		4	0
Farm & Home	89.6		N/A		44.3		N/A		1.41		N/A		2	0
Ag. Land Only	6.0		N/A		72.1		N/A		1.29		N/A		2	0
Ag. (Impr.+ Land)	10.2		N/A		26.7		N/A		1.02		N/A		5	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	95.4		N/A		40.9		N/A		1.69		N/A		47	3
Total Market	100.2		N/A		33.2		N/A		0.94		N/A		40	3

072 : OTTAWA COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	94.7	81.7	to	100.0	17.4	13.5	to	22.8	1.02	0.99	to	1.05	50	2
Comm./Ind.	113.7	99.4	to	153.7	10.8	2.6	to	20.1	1.07	1.02	to	1.18	5	0
Vacant Lot	51.6		N/A		95.8		N/A		0.97		N/A		2	0
Farm & Home	77.9		N/A		28.2		N/A		1.06		N/A		7	0
Ag. Land Only	11.1		N/A		31.6		N/A		0.99		N/A		10	0
Ag. (Impr.+ Land)	11.3		N/A		38.4		N/A		1.10		N/A		11	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	83.2		N/A		35.3		N/A		1.18		N/A		76	2
Total Market	98.5		N/A		16.9		N/A		1.04		N/A		58	4

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

073 : PAWNEE COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	104.6	98.3 to	112.3	15.3	12.5 to	19.4	1.03	1.00 to	1.06	61	5
Comm./Ind.	101.0	86.4 to	176.0	34.3	16.6 to	62.7	1.02	0.88 to	1.15	7	0
Vacant Lot	70.4	N/A		11.9	N/A		1.01	N/A		2	0
Farm & Home	87.7	N/A		3.0	N/A		1.01	N/A		3	0
Ag. Land Only	12.5	N/A		17.4	N/A		1.19	N/A		14	1
Ag. (Impr.+ Land)	12.3	N/A		17.9	N/A		1.16	N/A		17	1
Other/Ex/Ut/NP/M										0	
Total w/Ag.&F&H	95.4	N/A		28.8	N/A		1.21	N/A		91	11
Total Market	102.8	N/A		15.9	N/A		1.01	N/A		71	8

074 : PHILLIPS COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	81.6	73.5 to	91.4	23.5	19.4 to	30.0	1.03	0.99 to	1.08	60	3
Comm./Ind.	68.8	46.2 to	95.9	39.8	23.4 to	70.3	1.13	0.99 to	1.36	10	0
Vacant Lot	29.7	N/A			N/A			N/A		1	0
Farm & Home	31.1	N/A		51.2	N/A		1.38	N/A		4	0
Ag. Land Only	8.5	N/A		29.4	N/A		0.93	N/A		8	0
Ag. (Impr.+ Land)	8.5	N/A		29.4	N/A		0.93	N/A		8	0
Other/Ex/Ut/NP/M										0	
Total w/Ag.&F&H	73.7	N/A		36.4	N/A		1.26	N/A		84	3
Total Market	80.1	N/A		26.1	N/A		1.03	N/A		72	4

075 : POTTAWATOMIE COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	96.5	95.4 to	97.6	7.9	7.2 to	8.7	1.00	1.00 to	1.01	314	33
Comm./Ind.	89.2	78.2 to	107.8	16.9	13.2 to	24.0	1.19	1.03 to	1.34	14	0
Vacant Lot	75.6	N/A		40.4	N/A		1.23	N/A		45	0
Farm & Home	62.9	N/A		25.5	N/A		1.06	N/A		20	1
Ag. Land Only	3.1	N/A		133.1	N/A		1.11	N/A		20	2
Ag. (Impr.+ Land)	3.7	N/A		106.8	N/A		1.10	N/A		22	2
Other/Ex/Ut/NP/M										0	
Total w/Ag.&F&H	94.0	N/A		11.9	N/A		1.05	N/A		416	52
Total Market	95.5	N/A		9.6	N/A		1.05	N/A		374	42

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

076 : PRATT COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	98.6	95.5	to	103.4	13.2	10.8	to	16.6	1.02	1.00	to	1.04	83	11
Comm./Ind.	77.0	70.5	to	110.2	5.3	2.9	to	8.5	1.02	0.99	to	1.07	6	1
Vacant Lot	46.0	N/A			43.2	N/A			1.49	N/A			3	0
Farm & Home	68.3	N/A			43.2	N/A			1.05	N/A			5	0
Ag. Land Only	9.0	N/A			37.5	N/A			1.12	N/A			12	0
Ag. (Impr.+ Land)	9.0	N/A			40.3	N/A			1.14	N/A			13	0
Other/Ex/Ut/NP/M	123.8	N/A				N/A				N/A			1	0
Total w/Ag.&F&H	94.8	N/A			17.8	N/A			1.04	N/A			112	22
Total Market	97.1	N/A			15.2	N/A			1.02	N/A			94	12

077 : RAWLINS COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	82.9	79.8	to	88.5	10.2	6.9	to	14.7	0.98	0.94	to	1.01	23	3
Comm./Ind.	80.5	56.9	to	117.3	27.8	17.9	to	55.8	0.93	0.81	to	1.06	7	0
Vacant Lot	100.0	N/A			166.3	N/A			3.42	N/A			3	0
Farm & Home	37.6	N/A			25.0	N/A			0.81	N/A			3	0
Ag. Land Only	8.6	N/A			16.1	N/A			1.04	N/A			6	1
Ag. (Impr.+ Land)	8.3	N/A			17.2	N/A			1.02	N/A			8	1
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	78.9	N/A			38.5	N/A			1.49	N/A			45	1
Total Market	82.2	N/A			18.4	N/A			0.95	N/A			34	3

078 : RENO COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	97.6	95.1	to	100.5	11.6	10.2	to	13.2	1.02	1.00	to	1.03	216	27
Comm./Ind.	103.2	83.8	to	122.6	32.6	22.1	to	51.1	1.26	1.01	to	1.76	24	1
Vacant Lot	55.5	N/A			68.4	N/A			0.98	N/A			34	3
Farm & Home	58.7	N/A			64.5	N/A			1.20	N/A			17	2
Ag. Land Only	6.5	N/A			60.1	N/A			0.90	N/A			43	1
Ag. (Impr.+ Land)	6.7	N/A			59.2	N/A			0.94	N/A			48	1
Other/Ex/Ut/NP/M	318.1	N/A			70.0	N/A			1.46	N/A			2	0
Total w/Ag.&F&H	93.7	N/A			33.0	N/A			1.18	N/A			342	20
Total Market	96.7	N/A			13.9	N/A			1.03	N/A			277	48

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

079 : REPUBLIC COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	97.0	89.2	to	104.7	21.8	17.4	to	28.0	1.06	1.00	to	1.13	60	5
Comm./Ind.	87.1	67.6	to	100.0	18.0	11.5	to	28.4	0.92	0.85	to	1.03	10	0
Vacant Lot	136.7	N/A			43.4	N/A			1.07	N/A			3	0
Farm & Home	383.5	N/A				N/A				N/A			1	0
Ag. Land Only	10.3	N/A			20.6	N/A			1.18	N/A			14	1
Ag. (Impr.+ Land)	10.3	N/A			20.6	N/A			1.18	N/A			14	1
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	89.7	N/A			36.4	N/A			1.95	N/A			89	6
Total Market	95.7	N/A			22.1	N/A			1.03	N/A			74	7

080 : RICE COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	92.5	88.2	to	96.2	17.8	14.7	to	21.7	1.02	1.00	to	1.06	100	9
Comm./Ind.	94.8	82.0	to	107.5	14.2	7.0	to	31.8	1.04	1.00	to	1.11	8	0
Vacant Lot	167.3	N/A			62.0	N/A			5.94	N/A			8	1
Farm & Home	75.7	N/A			21.1	N/A			1.09	N/A			8	0
Ag. Land Only	11.0	N/A			41.5	N/A			1.11	N/A			11	0
Ag. (Impr.+ Land)	11.0	N/A			50.9	N/A			1.11	N/A			15	1
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	89.3	N/A			29.8	N/A			1.35	N/A			140	10
Total Market	93.5	N/A			18.3	N/A			1.03	N/A			117	15

081 : RILEY COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	98.7	97.2	to	99.9	7.2	6.5	to	8.0	1.01	1.00	to	1.02	249	22
Comm./Ind.	89.4	81.7	to	100.0	20.5	13.4	to	32.7	0.97	0.86	to	1.14	19	1
Vacant Lot	28.0	N/A			58.8	N/A			1.33	N/A			49	3
Farm & Home	66.7	N/A			20.1	N/A			1.03	N/A			7	0
Ag. Land Only	6.7	N/A			49.3	N/A			0.94	N/A			3	0
Ag. (Impr.+ Land)	6.7	N/A			62.1	N/A			1.22	N/A			7	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	95.7	N/A			10.1	N/A			1.01	N/A			332	60
Total Market	96.5	N/A			9.2	N/A			1.00	N/A			318	57

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

082 : ROOKS COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	91.0	79.7 to	99.0	27.2	21.1 to	34.8	1.13	1.05 to	1.25	46	0
Comm./Ind.	56.9	50.9 to	109.7	26.3	9.0 to	46.3	1.10	0.93 to	1.41	5	0
Vacant Lot	15.9	N/A			N/A			N/A		1	0
Farm & Home	38.5	N/A		77.7	N/A		1.68	N/A		2	0
Ag. Land Only	13.0	N/A		6.3	N/A		1.01	N/A		4	0
Ag. (Impr.+ Land)	13.0	N/A		6.3	N/A		1.01	N/A		4	0
Other/Ex/Ut/NP/M										0	
Total w/Ag.&F&H	82.1	N/A		37.3	N/A		1.37	N/A		59	1
Total Market	88.2	N/A		29.6	N/A		1.15	N/A		53	1

083 : RUSH COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	105.5	99.9 to	120.8	25.6	18.5 to	35.8	1.10	1.02 to	1.22	36	2
Comm./Ind.	93.3	63.1 to	114.6	30.3	19.6 to	55.1	1.30	1.08 to	1.63	13	0
Vacant Lot	29.7	N/A			N/A			N/A		1	0
Farm & Home	54.3	N/A		73.4	N/A		0.84	N/A		2	0
Ag. Land Only	7.6	N/A		13.8	N/A		1.06	N/A		2	0
Ag. (Impr.+ Land)	8.1	N/A		24.5	N/A		1.02	N/A		6	0
Other/Ex/Ut/NP/M										0	
Total w/Ag.&F&H	99.4	N/A		37.5	N/A		1.33	N/A		59	2
Total Market	100.8	N/A		26.7	N/A		1.11	N/A		51	4

084 : RUSSELL COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	95.9	90.5 to	99.2	11.9	9.9 to	14.5	1.00	0.98 to	1.02	89	11
Comm./Ind.	86.3	62.2 to	114.0	28.5	18.8 to	46.7	1.05	0.93 to	1.23	15	1
Vacant Lot	25.7	N/A		152.7	N/A		1.70	N/A		4	0
Farm & Home	33.5	N/A		14.1	N/A		0.97	N/A		2	0
Ag. Land Only	5.3	N/A		68.4	N/A		1.01	N/A		6	0
Ag. (Impr.+ Land)	8.8	N/A		67.8	N/A		1.07	N/A		9	0
Other/Ex/Ut/NP/M										0	
Total w/Ag.&F&H	91.0	N/A		20.5	N/A		1.00	N/A		120	15
Total Market	95.2	N/A		16.3	N/A		1.00	N/A		109	11

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0　　　　　COD: 20.0 or less　　　　　PRD: .98 to 1.03

085 : SALINE COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	98.8	96.5 to	100.3	13.7	12.2 to	15.5	1.03	1.02 to	1.05	247	21
Comm./Ind.	98.7	79.3 to	108.0	25.2	18.6 to	34.5	1.17	0.94 to	1.45	29	0
Vacant Lot	60.8	N/A		111.4	N/A		2.08	N/A		7	0
Farm & Home	50.5	N/A		21.2	N/A		1.02	N/A		9	1
Ag. Land Only	0.6	N/A		425.0	N/A		0.57	N/A		32	1
Ag. (Impr.+ Land)	0.6	N/A		499.3	N/A		0.59	N/A		36	1
Other/Ex/Ut/NP/M	187.0	N/A			N/A			N/A		1	0
Total w/Ag.&F&H	95.5	N/A		16.1	N/A		1.07	N/A		330	63
Total Market	98.7	N/A		14.9	N/A		1.05	N/A		285	29

086 : SCOTT COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	85.5	79.8 to	88.4	14.0	11.5 to	17.5	0.99	0.97 to	1.02	66	3
Comm./Ind.	68.9	57.1 to	138.5	43.6	11.9 to	56.2	0.92	0.75 to	1.31	7	0
Vacant Lot	74.0	N/A		13.6	N/A		0.96	N/A		4	0
Farm & Home	62.5	N/A			N/A			N/A		1	0
Ag. Land Only	10.0	N/A		2.9	N/A		0.99	N/A		4	0
Ag. (Impr.+ Land)	10.0	N/A		2.9	N/A		0.99	N/A		4	0
Other/Ex/Ut/NP/M										0	
Total w/Ag.&F&H	82.8	N/A		15.9	N/A		1.00	N/A		83	9
Total Market	84.1	N/A		15.7	N/A		0.99	N/A		78	5

087 : SEDGWICK COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	91.3	90.2 to	93.2	9.7	8.8 to	10.7	1.02	1.01 to	1.03	347	46
Comm./Ind.	89.8	86.6 to	93.9	22.5	19.5 to	26.1	1.07	1.00 to	1.15	137	7
Vacant Lot	81.8	N/A		39.9	N/A		1.17	N/A		349	23
Farm & Home	69.8	N/A		31.0	N/A		1.18	N/A		25	0
Ag. Land Only	1.1	N/A		206.3	N/A		0.99	N/A		86	4
Ag. (Impr.+ Land)	1.1	N/A		185.9	N/A		0.87	N/A		92	5
Other/Ex/Ut/NP/M	112.6	N/A		41.8	N/A		1.32	N/A		12	1
Total w/Ag.&F&H	86.2	N/A		27.0	N/A		1.06	N/A		969	129
Total Market	89.5	N/A		19.8	N/A		1.06	N/A		852	116

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03
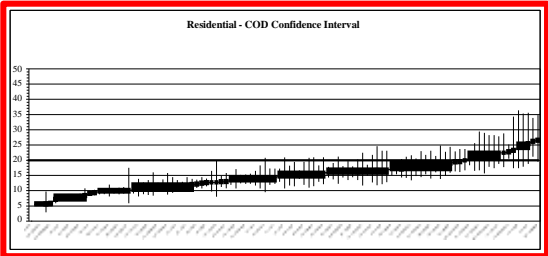
088 : SEWARD COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	98.1	96.1	to	100.6	9.4	8.2	to	10.9	1.00	0.99	to	1.01	160	20
Comm./Ind.	87.3	77.2	to	112.7	16.8	8.2	to	26.0	1.02	0.91	to	1.10	10	1
Vacant Lot	80.0	N/A			36.1	N/A			0.91	N/A			7	0
Farm & Home	38.4	N/A			37.7	N/A			0.76	N/A			2	0
Ag. Land Only	1.1	N/A			85.7	N/A			0.86	N/A			4	0
Ag. (Impr.+ Land)	1.1	N/A			85.7	N/A			0.86	N/A			4	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	96.9	N/A			11.5	N/A			1.01	N/A			184	23
Total Market	97.2	N/A			11.3	N/A			1.00	N/A			178	18

089 : SHAWNEE COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	96.7	95.1	to	98.7	9.1	8.2	to	10.1	1.01	1.00	to	1.02	321	49
Comm./Ind.	101.8	97.0	to	106.3	18.6	14.9	to	23.7	1.07	1.01	to	1.14	64	5
Vacant Lot	84.1	N/A			47.2	N/A			1.32	N/A			109	9
Farm & Home	69.7	N/A			15.3	N/A			1.03	N/A			17	1
Ag. Land Only	2.7	N/A			232.8	N/A			0.81	N/A			16	1
Ag. (Impr.+ Land)	3.7	N/A			109.3	N/A			0.86	N/A			21	1
Other/Ex/Ut/NP/M	124.1	N/A			12.0	N/A			1.02	N/A			2	0
Total w/Ag.&F&H	95.2	N/A			15.2	N/A			1.04	N/A			535	100
Total Market	96.6	N/A			14.2	N/A			1.04	N/A			497	84

090 : SHERIDAN COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	91.6	81.1	to	98.1	11.9	8.7	to	16.0	0.98	0.93	to	1.03	22	1
Comm./Ind.	80.1	50.2	to	97.4	20.0	7.7	to	37.8	0.86	0.71	to	1.11	6	0
Vacant Lot													0	
Farm & Home	37.5	N/A			52.4	N/A			1.13	N/A			4	0
Ag. Land Only													0	
Ag. (Impr.+ Land)	14.6	N/A				N/A				N/A			1	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	81.3	N/A			18.0	N/A			1.07	N/A			34	4
Total Market	85.3	N/A			13.0	N/A			0.97	N/A			29	3

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

091 : SHERMAN COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	94.6	87.0	to	100.5	19.3	15.8	to	24.5	1.02	0.98	to	1.06	72	7
Comm./Ind.	97.8	82.0	to	125.0	21.4	9.8	to	51.7	1.24	1.06	to	1.80	8	0
Vacant Lot	72.9		N/A		58.9		N/A		2.04		N/A		4	0
Farm & Home	53.7		N/A				N/A				N/A		1	0
Ag. Land Only	9.0		N/A		21.1		N/A		0.95		N/A		5	0
Ag. (Impr.+ Land)	9.0		N/A		21.1		N/A		0.95		N/A		5	0
Other/Ex/Ut/NP/M	120.2		N/A				N/A				N/A		1	0
Total w/Ag.&F&H	91.5		N/A		20.8		N/A		1.06		N/A		92	14
Total Market	95.8		N/A		20.8		N/A		1.07		N/A		86	8

092 : SMITH COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	83.8	77.6	to	110.6	36.7	30.0	to	51.2	1.13	1.04	to	1.25	33	0
Comm./Ind.	157.1	49.5	to	187.2	40.4	17.8	to	149.0	1.68	1.09	to	3.27	7	0
Vacant Lot	288.0		N/A		19.3		N/A		1.05		N/A		3	1
Farm & Home	25.0		N/A		33.1		N/A		1.54		N/A		5	0
Ag. Land Only	11.2		N/A		18.3		N/A		1.02		N/A		5	0
Ag. (Impr.+ Land)	11.2		N/A		18.3		N/A		1.02		N/A		5	0
Other/Ex/Ut/NP/M	204.9		N/A				N/A				N/A		1	0
Total w/Ag.&F&H	82.0		N/A		62.5		N/A		1.77		N/A		55	1
Total Market	97.1		N/A		45.8		N/A		1.24		N/A		45	2

093 : STAFFORD COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	101.5	96.7	to	108.7	9.9	7.4	to	14.2	1.08	1.03	to	1.13	38	7
Comm./Ind.	85.4	67.2	to	147.3	34.5	9.1	to	65.6	1.13	0.98	to	1.38	6	0
Vacant Lot	100.0		N/A		7.7		N/A		0.94		N/A		5	0
Farm & Home	83.0		N/A		21.0		N/A		1.12		N/A		5	0
Ag. Land Only	7.7		N/A		40.7		N/A		1.04		N/A		8	0
Ag. (Impr.+ Land)	7.7		N/A		40.7		N/A		1.04		N/A		8	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	95.0		N/A		20.8		N/A		1.22		N/A		63	10
Total Market	99.2		N/A		11.1		N/A		1.06		N/A		50	9

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

094 : STANTON COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	101.9	75.3	to	138.6	24.2	15.1	to	38.6	1.06	1.02	to	1.16	9	1
Comm./Ind.	80.0	39.7	to	128.8	31.5	1.7	to	60.1	1.45	1.10	to	2.29	5	0
Vacant Lot	32.1	N/A			64.9	N/A			2.55	N/A			2	0
Farm & Home	112.5	N/A			23.4	N/A			1.09	N/A			3	0
Ag. Land Only	10.7	N/A				N/A				N/A			1	0
Ag. (Impr.+ Land)	10.7	N/A				N/A				N/A			1	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	80.0	N/A			44.5	N/A			1.08	N/A			21	1
Total Market	80.0	N/A			41.5	N/A			1.08	N/A			17	1

095 : STEVENS COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	99.7	90.6	to	115.0	17.2	13.4	to	23.6	1.06	1.02	to	1.12	35	2
Comm./Ind.	95.0	68.3	to	118.1	24.1	16.1	to	42.7	1.12	1.02	to	1.28	10	1
Vacant Lot	11.3	N/A				N/A				N/A			1	0
Farm & Home	61.7	N/A			38.1	N/A			1.08	N/A			2	0
Ag. Land Only	14.7	N/A			99.4	N/A			0.90	N/A			11	1
Ag. (Impr.+ Land)	14.7	N/A			99.4	N/A			0.90	N/A			11	1
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	90.0	N/A			35.8	N/A			1.09	N/A			60	2
Total Market	99.3	N/A			18.5	N/A			1.10	N/A			47	5

096 : SUMNER COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	100.6	97.4	to	103.7	17.2	15.2	to	19.5	1.03	1.00	to	1.05	245	36
Comm./Ind.	94.2	88.2	to	117.5	15.6	11.5	to	24.4	1.07	0.99	to	1.18	10	0
Vacant Lot	161.6	N/A			81.5	N/A			5.05	N/A			13	2
Farm & Home	60.0	N/A			40.8	N/A			0.99	N/A			7	0
Ag. Land Only	7.9	N/A			46.8	N/A			0.96	N/A			38	0
Ag. (Impr.+ Land)	8.2	N/A			45.6	N/A			0.95	N/A			40	0
Other/Ex/Ut/NP/M	300.0	N/A				N/A				N/A			1	0
Total w/Ag.&F&H	96.3	N/A			27.7	N/A			1.21	N/A			317	54
Total Market	100.6	N/A			18.6	N/A			1.03	N/A			270	43

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

097 : THOMAS COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	95.0	92.3 to	99.5	12.0	10.1 to	14.3	1.01	0.99 to	1.04	109	9
Comm./Ind.	96.3	53.5 to	118.9	28.7	17.1 to	59.9	1.06	0.92 to	1.23	8	0
Vacant Lot	59.3	N/A		54.4	N/A		1.08	N/A		4	0
Farm & Home										0	
Ag. Land Only	7.7	N/A		26.1	N/A		0.98	N/A		9	0
Ag. (Impr.+ Land)	8.1	N/A		24.7	N/A		0.96	N/A		12	2
Other/Ex/Ut/NP/M										0	
Total w/Ag.&F&H	93.2	N/A		14.2	N/A		1.03	N/A		134	19
Total Market	94.6	N/A		13.2	N/A		1.03	N/A		122	11

098 : TREGO COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	94.5	85.4 to	101.2	19.4	14.0 to	28.3	1.08	1.02 to	1.17	36	5
Comm./Ind.	97.9	62.3 to	188.9	31.1	15.8 to	65.3	1.02	0.69 to	1.28	9	1
Vacant Lot	76.3	N/A			N/A			N/A		1	0
Farm & Home	39.7	N/A			N/A			N/A		1	0
Ag. Land Only	9.4	N/A		27.3	N/A		0.88	N/A		3	0
Ag. (Impr.+ Land)	10.4	N/A		26.0	N/A		0.99	N/A		6	0
Other/Ex/Ut/NP/M	109.0	N/A			N/A			N/A		1	0
Total w/Ag.&F&H	88.4	N/A		34.9	N/A		1.19	N/A		55	4
Total Market	94.5	N/A		20.9	N/A		1.08	N/A		48	7

099 : WABAUNSEE COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval		COD	Confidence Interval		PRD	Confidence Interval		Valid Sales	Trim Sales
Residential	96.9	93.8 to	98.9	10.8	8.6 to	13.6	1.03	1.01 to	1.05	66	7
Comm./Ind.	107.8	70.4 to	144.4	29.0	18.1 to	57.6	1.16	1.01 to	1.39	7	0
Vacant Lot	112.0	N/A		27.1	N/A		0.94	N/A		3	0
Farm & Home	65.2	N/A		27.2	N/A		1.08	N/A		10	0
Ag. Land Only	3.8	N/A		63.3	N/A		0.79	N/A		8	0
Ag. (Impr.+ Land)	5.1	N/A		49.0	N/A		0.85	N/A		9	0
Other/Ex/Ut/NP/M										0	
Total w/Ag.&F&H	93.6	N/A		17.2	N/A		1.07	N/A		97	17
Total Market	97.3	N/A		12.5	N/A		1.04	N/A		78	10

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

100 : WALLACE COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	93.1	84.0	to	107.0	12.5	7.2	to	26.6	0.97	0.91	to	1.03	10	1
Comm./Ind.	72.3		N/A		27.4		N/A		0.79		N/A		2	0
Vacant Lot													0	
Farm & Home	55.9		N/A		32.0		N/A		0.99		N/A		2	0
Ag. Land Only	7.2		N/A		18.1		N/A		1.02		N/A		2	0
Ag. (Impr.+ Land)	7.2		N/A		18.1		N/A		1.02		N/A		2	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	84.9		N/A		37.2		N/A		1.50		N/A		17	0
Total Market	91.0		N/A		14.2		N/A		0.94		N/A		13	2

101 : WASHINGTON COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	108.2	104.1	to	139.9	44.0	32.7	to	60.6	1.35	1.21	to	1.57	43	2
Comm./Ind.	85.7	51.8	to	139.7	38.9	19.2	to	81.1	1.28	1.04	to	1.69	8	0
Vacant Lot	54.1		N/A		14.8		N/A		1.05		N/A		3	0
Farm & Home	41.3		N/A		65.2		N/A		1.22		N/A		4	0
Ag. Land Only	7.1		N/A		30.0		N/A		1.00		N/A		8	0
Ag. (Impr.+ Land)	7.1		N/A		35.4		N/A		1.00		N/A		11	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	96.8		N/A		53.7		N/A		2.44		N/A		70	4
Total Market	104.7		N/A		39.8		N/A		1.22		N/A		55	4

102 : WICHITA COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	95.0	80.3	to	102.1	14.9	11.5	to	20.9	1.03	0.99	to	1.09	25	3
Comm./Ind.	102.5	90.5	to	137.9	19.7	9.8	to	34.6	1.00	0.87	to	1.12	7	0
Vacant Lot													0	
Farm & Home													0	
Ag. Land Only	7.7		N/A		12.5		N/A		0.96		N/A		7	1
Ag. (Impr.+ Land)	7.7		N/A		12.5		N/A		0.96		N/A		7	1
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	87.9		N/A		31.6		N/A		1.78		N/A		40	4
Total Market	95.0		N/A		14.7		N/A		1.05		N/A		33	5

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

103 : WILSON COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	100.5	91.0	to	113.6	22.2	17.8	to	28.8	1.07	1.02	to	1.13	65	11
Comm./Ind.	102.2	80.7	to	145.9	29.2	19.6	to	54.0	1.02	0.96	to	1.10	8	0
Vacant Lot	101.5	N/A			52.5	N/A			2.84	N/A			10	2
Farm & Home	60.1	N/A			29.1	N/A			1.02	N/A			9	0
Ag. Land Only	4.3	N/A			53.6	N/A			0.91	N/A			8	0
Ag. (Impr.+ Land)	4.8	N/A			43.2	N/A			0.92	N/A			9	0
Other/Ex/Ut/NP/M	634.0	N/A				N/A				N/A			1	0
Total w/Ag.&F&H	91.7	N/A			36.9	N/A			1.27	N/A			104	14
Total Market	99.7	N/A			27.6	N/A			1.15	N/A			86	14

104 : WOODSON COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	95.9	83.9	to	119.5	23.4	17.6	to	36.0	1.11	1.03	to	1.25	21	2
Comm./Ind.	109.1	81.3	to	130.1	18.2	10.1	to	34.4	1.30	1.04	to	1.69	11	2
Vacant Lot	114.4	N/A				N/A				N/A			1	0
Farm & Home	29.9	N/A			42.5	N/A			1.15	N/A			3	0
Ag. Land Only	4.3	N/A			32.3	N/A			1.12	N/A			5	0
Ag. (Impr.+ Land)	4.3	N/A			40.8	N/A			0.97	N/A			7	0
Other/Ex/Ut/NP/M													0	
Total w/Ag.&F&H	86.0	N/A			44.1	N/A			1.85	N/A			44	4
Total Market	106.0	N/A			22.3	N/A			1.19	N/A			34	5

105 : WYANDOTTE COUNTY

PROPERTY CLASS	Median Ratio	Confidence Interval			COD	Confidence Interval			PRD	Confidence Interval			Valid Sales	Trim Sales
Residential	94.4	91.7	to	96.8	17.1	15.4	to	19.0	1.03	1.02	to	1.05	320	36
Comm./Ind.	84.9	77.0	to	92.7	24.9	20.9	to	31.3	1.08	1.01	to	1.16	64	3
Vacant Lot	64.2	N/A			36.7	N/A			0.92	N/A			81	9
Farm & Home	58.1	N/A			23.6	N/A			0.96	N/A			11	0
Ag. Land Only	1.0	N/A			1,743.0	N/A			1.19	N/A			18	0
Ag. (Impr.+ Land)	0.7	N/A			2,102.3	N/A			1.11	N/A			20	0
Other/Ex/Ut/NP/M	89.0	N/A			31.6	N/A			1.00	N/A			6	0
Total w/Ag.&F&H	88.8	N/A			22.5	N/A			1.03	N/A			503	68
Total Market	91.0	N/A			21.5	N/A			1.04	N/A			472	53

Confidence intervals have been calculated for the Residential and Commercial/Industrial subclasses only

Median Ratio: 90.0 to 110.0   COD: 20.0 or less   PRD: .98 to 1.03

			STATE TOTALS					
PROPERTY CLASS	Median Ratio	Confidence Interval	COD	Confidence Interval	PRD	Confidence Interval	Valid Sales	Trim Sales
Residential	98.4	N/A	17.7	N/A	1.05	N/A	11,795	1,248
Comm./Ind.	92.5	N/A	23.3	N/A	1.10	N/A	1,396	53
Vacant Lot	76.4	N/A	42.8	N/A	1.17	N/A	2,150	195
Farm & Home	64.4	N/A	34.3	N/A	1.12	N/A	957	28
Ag. Land Only	4.2	N/A	109.4	N/A	0.9	N/A	1,426	75
Ag. (Impr.+ Land)	4.7	N/A	96.6	N/A	0.93	N/A	1,646	96
Other/Ex/Ut/NP/M	122.6	N/A	53	N/A	1.31	N/A	73	10
Total w/Ag.&F&H	92.5	N/A	19.4	N/A	1.06	N/A	17,997	3,190
Total Market	95.7	N/A	16.5	N/A	1.05	N/A	15,394	1,979

Charts & Graphs

Charts and Graphs

Overview

The summary statistics provided in this ratio study report include the standard industry measures used to evaluate appraisal performance: these consist of the Median Ratio, Coefficient of Dispersion *(COD),* Price-Related Differential *(PRD)* and their confidence intervals. This study also uses trended sales prices and supplemental sales where needed. Additional sales validation documentation has been reviewed and outliers have been trimmed for the uniformity measurement *(COD).*

The information provided by this 2016 Final Ratio Study, *pages 15-49,* indicates that a large portion of the residential and commercial/industrial subclasses of property meet the important mass appraisal standards.

GRAPHICS:

The following pie charts depict an overall appraisal performance for residential and commercial properties based on accepted standards. Weighting calculations are based on the 2016 certified assessed values. These numbers are weighted by county abstract assessed valuation.

1. *Exhibit I* depicts the residential and commercial *median ratios.* The residential and commercial charts indicate that greater than 99 percent of the residential and commercial value statewide falls within a range of 90.0 percent to 110.0 percent which is the recognized standard according to IAAO *(International Association of Assessing Officers).*

2. *Exhibit II* presents the residential and commercial *coefficient of dispersion (COD).* The acceptable standard for Kansas is a range of 0 to 20.0 for the COD. This chart indicates that 99.3 percent of the residential property value and 91.7 percent of the commercial/industrial property values fall within counties with a COD of 20.0 or less.

3. *Exhibit III* is a display of residential and commercial appraisal bias. The *price-related differential* provides only an indication, not proof, of appraisal bias. When sample sizes are small, a price-related differential outside the acceptable range may occur simply

because of random sampling error[1]. The acceptable range for the PRD is between .98 and 1.03. This chart indicates that 95.6 percent of the commercial property value and greater than 97 percent of the residential property values fall within the acceptable range for the PRD.

4. Residential and commercial bar charts have been prepared to show the confidence interval widths for the Median Ratio, Coefficient of Dispersion *(COD)* and the Price-Related Differential *(PRD)*. Confidence intervals provide a range of values that can be used to estimate performance measures for each county with a specified degree of probability. A county with many sales in the study will tend to have a more compressed confidence interval. A county with fewer sales and greater dispersion in the real estate market will tend to have wider confidence intervals.

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[1] International Association of Assessing Officers, 1990. *Property appraisal & assessment administration.* Chicago: International Association of Assessing Officers.

Pie Charts Based Upon Total Appraised Value

Exhibit 1
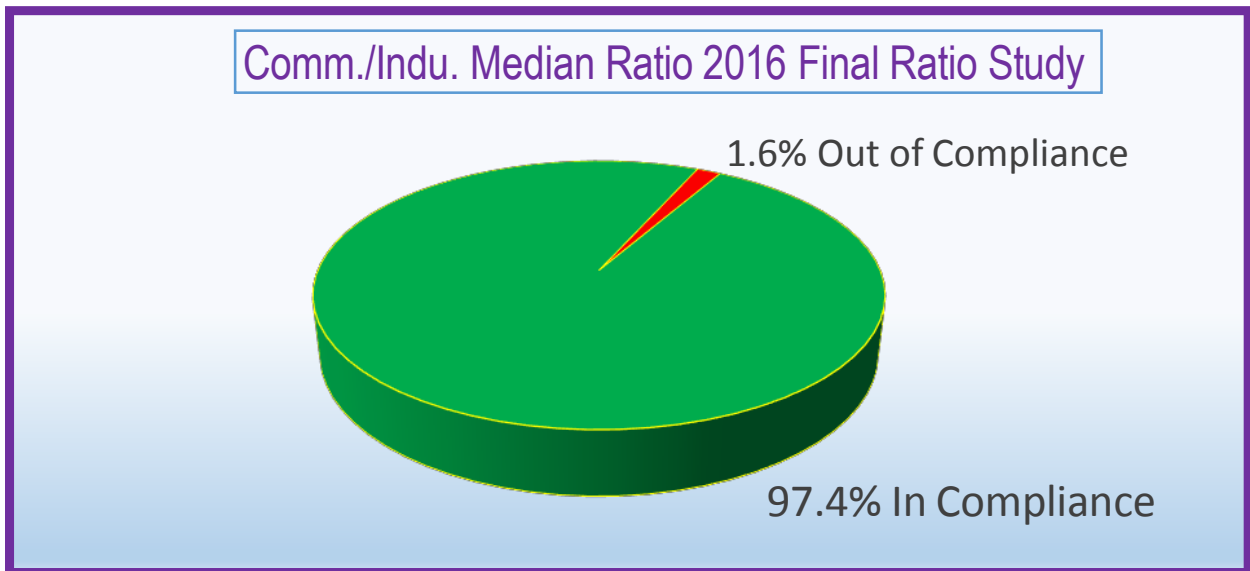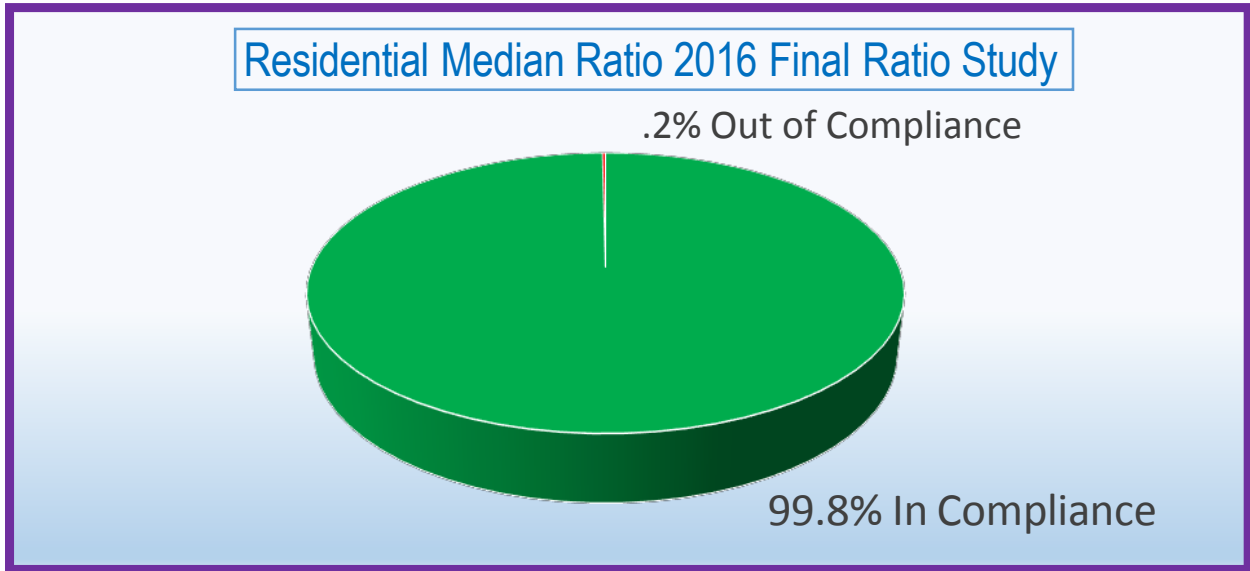
Residential Median Ratio 2016 Final Ratio Study

.2% Out of Compliance

99.8% In Compliance

Comm./Indu. Median Ratio 2016 Final Ratio Study

1.6% Out of Compliance

97.4% In Compliance

Pie Charts Based Upon Total Appraised Value

Exhibit 2

Residential COD 2016 Final Ratio Study

1.7% Out of Compliance

98.3% In Compliance

Comm./Indu. COD 2016 Final Ratio Study

10.7% Out of Compliance

89.3% In Compliance
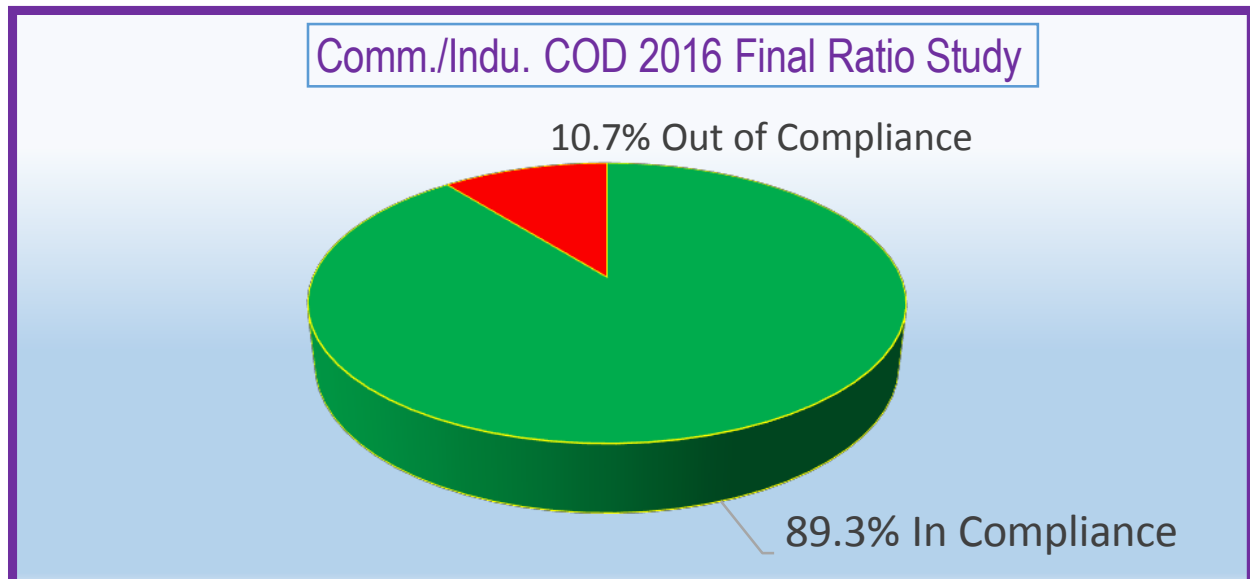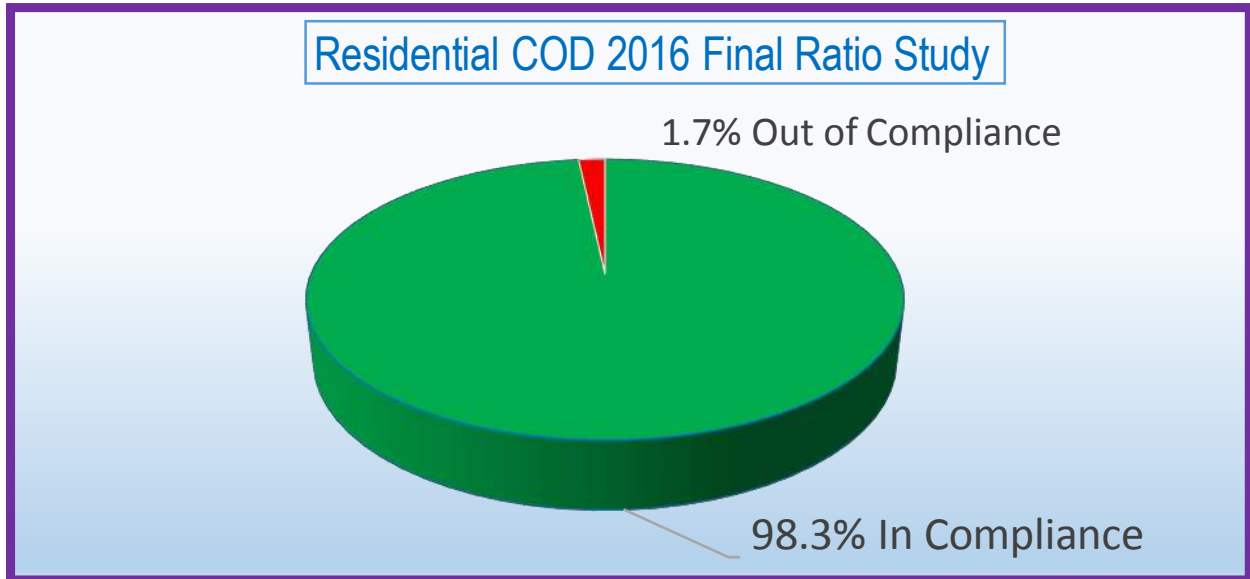
Pie Charts Based Upon Total Appraised Value

Exhibit 3

Residential PRD 2016 Final Ratio Study

3.0% Out of Compliance

97.0% In Compliance

Comm./Indu. PRD 2016 Final Ratio Study

38.8% Out of Compliance

61.2% In Compliance

Residential - Median Ratio Confidence Interval

Residential - COD Confidence Interval

Residential - PRD Confidence Interval
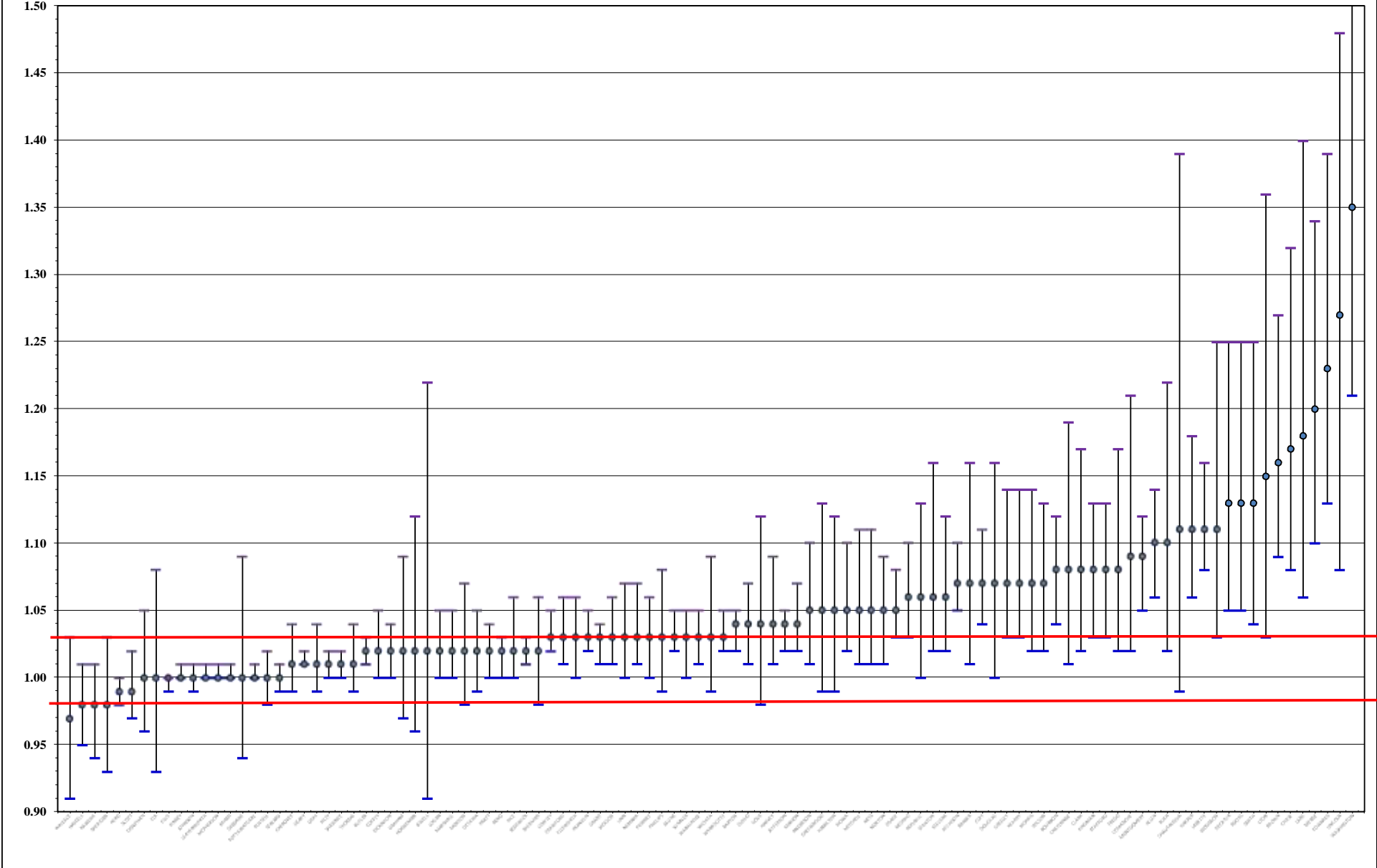
Commercial/Industrial - Median Ratio Confidence Interval

Commercial/Industrial - COD Confidence Interval

Commercial/Industrial - PRD Confidence Interval
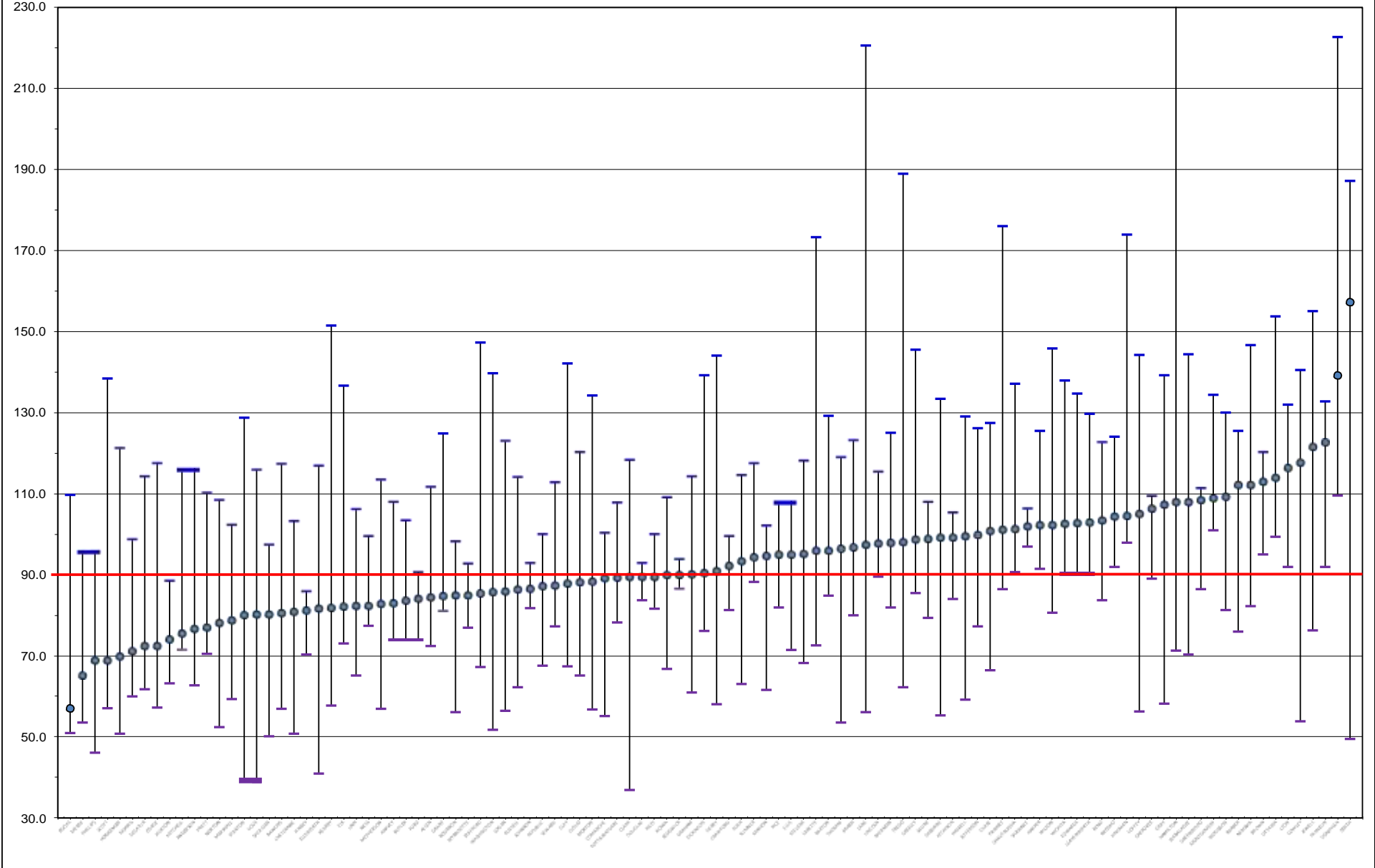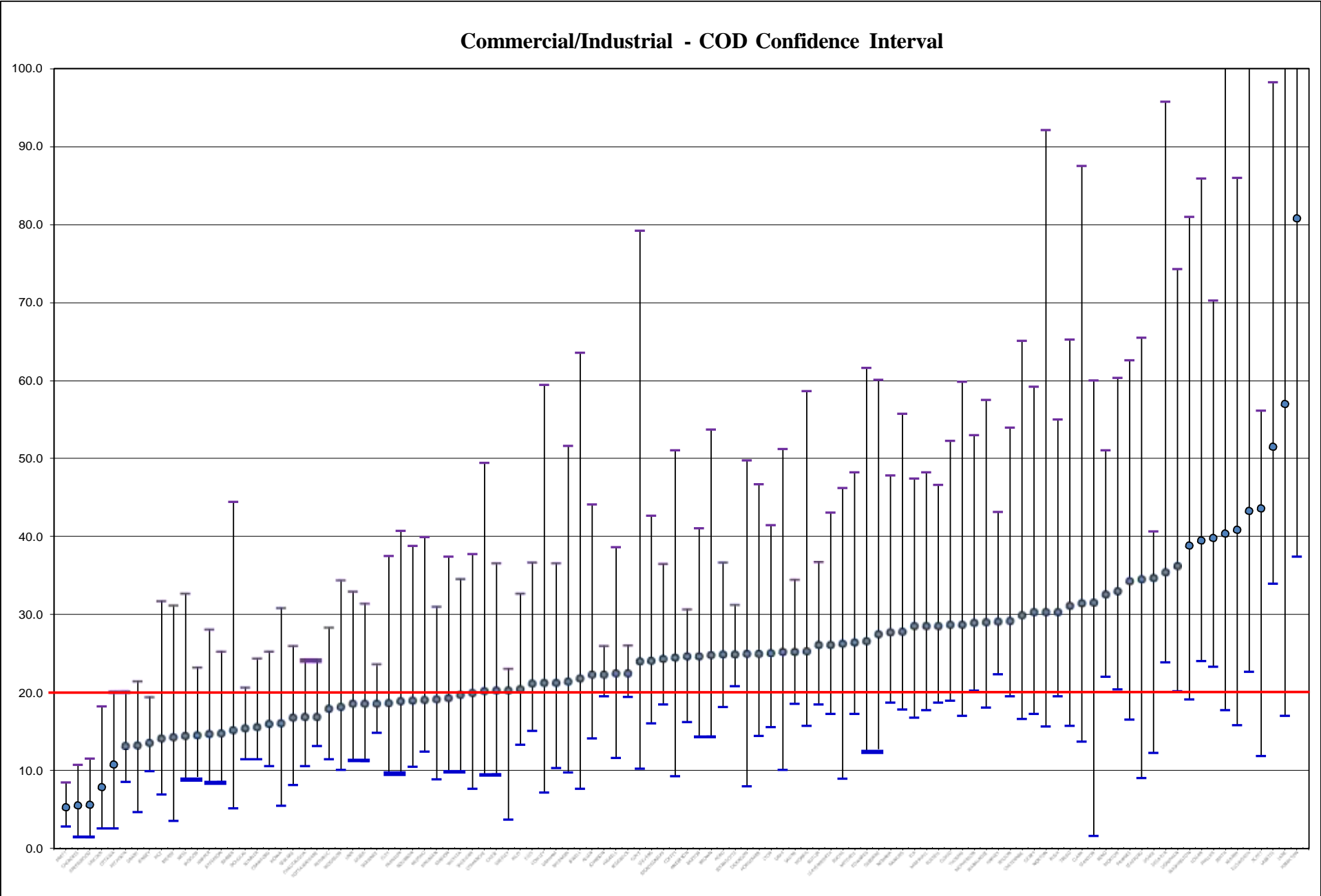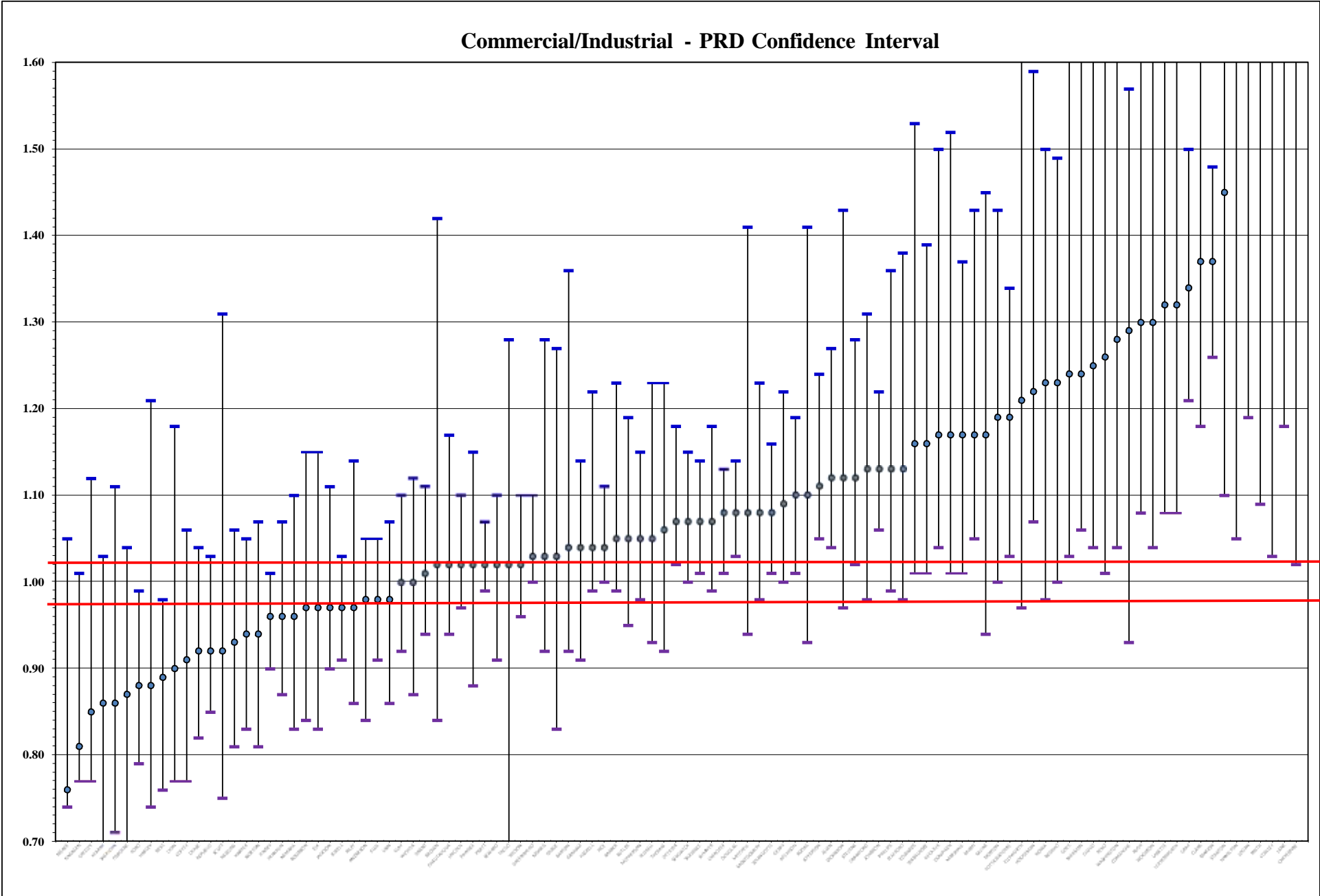
Detailed Statistics

Residential and Commercial/Industrial

Subclass

Detailed Sample Statistics for the Residential and Commercial Subclasses

001 : ALLEN			002 : ANDERSON		
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	112	7	Original Number of Sales	60	4
Trimmed Outliers	13	0	Trimmed Outliers	7	0
Number of Ratios: Outliers Removed	99	7	Number of Ratios: Outliers Removed	53	4
Minimum Ratio	36.1	65.8	Minimum Ratio	60.7	62.5
Maximum Ratio	1985.0	140.5	Maximum Ratio	2692.0	117.9
Minimum Sale Price	200	19,500	Minimum Sale Price	1,000	36,500
Maximum Sale Price	245,000	117,500	Maximum Sale Price	245,000	265,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	100.8	84.4	Median Ratio	99.7	76.6
Lower Median Confidence Interval	97.5	72.4	Lower Median Confidence Interval	93.9	62.7
Upper Median Confidence Interval	110.8	111.7	Upper Median Confidence Interval	112.2	116.3
Broadened Median Ratio	100.9	86.9	Broadened Median Ratio	100.1	81.2
Coefficient of Dispersion (COD)	23.7	22.3	Coefficient of Dispersion (COD)	19.6	24.7
Lower COD Confidence Interval	19.8	14.2	Lower COD Confidence Interval	15.9	16.3
Upper COD Confidence Interval	28.8	44.2	Upper COD Confidence Interval	24.5	30.7
Value Weighted COD	16.4	18.0	Value Weighted COD	19.3	30.8
Coefficient of Concentration @10%	31.3	28.6	Coefficient of Concentration @10%	31.7	0.0
Coefficient of Concentration @15%	40.2	57.1	Coefficient of Concentration @15%	40.0	50.0
Coefficient of Concentration @20%	50.9	57.1	Coefficient of Concentration @20%	48.3	75.0
Coefficient of Concentration @50%	75.9	85.7	Coefficient of Concentration @50%	86.7	75.0
Coefficient of Concentration @100%	87.5	100.0	Coefficient of Concentration @100%	88.3	100.0
Coefficient of Interquartile Deviation	24.5	23.3	Coefficient of Interquartile Deviation	19.9	30.4
Median Percent Deviation	19.2	14.9	Median Percent Deviation	20.4	15.9
Lower Quartile (25th Percentile)	88.5	72.4	Lower Quartile (25th Percentile)	83.2	63.5
Upper Quartile	137.9	111.7	Upper Quartile	122.9	110.1
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptW	Normality Test	RejectK	AcceptW
Relative Skewness	0.86	0.84	Relative Skewness	0.45	0.64
Relative Kurtosis	3.82	2.56	Relative Kurtosis	2.84	1.82
Arithmetic Mean Ratio	106.0	93.0	Arithmetic Mean Ratio	98.8	83.4
Weighted Mean Ratio	96.6	83.1	Weighted Mean Ratio	93.7	85.0
Geometric Mean Ratio	101.4	90.2	Geometric Mean Ratio	95.9	80.7
Harmonic Mean Ratio	96.7	87.7	Harmonic Mean Ratio	93.0	78.4
Standard Deviation	32.3	26.0	Standard Deviation	24.4	25.3
Coefficient of Variation (COV)	30.4	27.9	Coefficient of Variation (COV)	24.7	30.3
Price-Related Differential (PRD)	1.10	1.12	Price-Related Differential (PRD)	1.05	0.98
Lower PRD Confidence Interval	1.06	1.04	Lower PRD Confidence Interval	1.01	0.84
Upper PRD Confidence interval	1.14	1.27	Upper PRD Confidence interval	1.10	1.05
Coeff. of Price-Related Bias (PRB)	-0.80	-0.19	Coeff. of Price-Related Bias (PRB)	-0.53	0.00
Lower PRB Confidence Interval	-1.09	-0.52	Lower PRB Confidence Interval	-1.14	0.00
Upper PRB Confidence Interval	-0.51	0.13	Upper PRB Confidence Interval	0.07	0.00
Average Sale Price	55,902	53,000	Average Sale Price	80,599	137,959
Average Appraised Value	53,978	44,063	Average Appraised Value	75,552	117,298

Detailed Sample Statistics for the Residential and Commercial Subclasses

003 : ATCHISON		*S-10*	004 : BARBER		*S-5*
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	154	14	Original Number of Sales	48	6
Trimmed Outliers	16	1	Trimmed Outliers	4	0
Number of Ratios: Outliers Removed	138	13	Number of Ratios: Outliers Removed	44	6
Minimum Ratio	34.2	68.7	Minimum Ratio	42.1	53.8
Maximum Ratio	652.4	260.3	Maximum Ratio	260.1	134.6
Minimum Sale Price	2,688	7,000	Minimum Sale Price	6,000	16,500
Maximum Sale Price	330,000	875,000	Maximum Sale Price	550,000	75,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	101.9	99.1	Median Ratio	92.0	111.9
Lower Median Confidence Interval	99.4	84.1	Lower Median Confidence Interval	81.4	75.9
Upper Median Confidence Interval	105.9	105.3	Upper Median Confidence Interval	101.9	125.5
Broadened Median Ratio	101.7	98.5	Broadened Median Ratio	92.1	110.3
Coefficient of Dispersion (COD)	15.4	13.2	Coefficient of Dispersion (COD)	22.3	15.2
Lower COD Confidence Interval	13.2	8.6	Lower COD Confidence Interval	16.9	5.2
Upper COD Confidence Interval	18.1	20.2	Upper COD Confidence Interval	29.2	44.5
Value Weighted COD	11.9	16.2	Value Weighted COD	21.7	17.1
Coefficient of Concentration @10%	40.3	50.0	Coefficient of Concentration @10%	22.9	50.0
Coefficient of Concentration @15%	56.5	50.0	Coefficient of Concentration @15%	41.7	66.7
Coefficient of Concentration @20%	67.5	64.3	Coefficient of Concentration @20%	52.1	66.7
Coefficient of Concentration @50%	85.1	92.9	Coefficient of Concentration @50%	81.3	83.3
Coefficient of Concentration @100%	92.9	92.9	Coefficient of Concentration @100%	91.7	100.0
Coefficient of Interquartile Deviation	15.7	15.4	Coefficient of Interquartile Deviation	21.7	15.2
Median Percent Deviation	12.4	14.0	Median Percent Deviation	19.0	8.2
Lower Quartile (25th Percentile)	91.0	78.1	Lower Quartile (25th Percentile)	75.5	87.0
Upper Quartile	122.9	108.5	Upper Quartile	115.4	120.9
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptK	Normality Test	RejectK	Rej-Mo3
Relative Skewness	0.93	-0.12	Relative Skewness	0.54	-1.06
Relative Kurtosis	4.03	1.91	Relative Kurtosis	3.47	3.13
Arithmetic Mean Ratio	104.4	94.7	Arithmetic Mean Ratio	90.8	104.4
Weighted Mean Ratio	97.5	86.4	Weighted Mean Ratio	84.7	99.8
Geometric Mean Ratio	102.4	93.4	Geometric Mean Ratio	86.8	100.6
Harmonic Mean Ratio	100.5	92.1	Harmonic Mean Ratio	82.7	95.7
Standard Deviation	21.2	16.1	Standard Deviation	27.1	27.5
Coefficient of Variation (COV)	20.3	17.0	Coefficient of Variation (COV)	29.8	26.3
Price-Related Differential (PRD)	1.07	1.10	Price-Related Differential (PRD)	1.07	1.05
Lower PRD Confidence Interval	1.05	1.01	Lower PRD Confidence Interval	1.01	0.99
Upper PRD Confidence interval	1.10	1.19	Upper PRD Confidence interval	1.16	1.23
Coeff. of Price-Related Bias (PRB)	-0.32	-0.19	Coeff. of Price-Related Bias (PRB)	-0.18	-0.08
Lower PRB Confidence Interval	-0.41	-0.35	Lower PRB Confidence Interval	-0.30	-0.50
Upper PRB Confidence Interval	-0.23	-0.03	Upper PRB Confidence Interval	-0.06	0.34
Average Sale Price	94,272	173,122	Average Sale Price	86,383	36,583
Average Appraised Value	91,943	149,605	Average Appraised Value	73,148	36,507

Detailed Sample Statistics for the Residential and Commercial Subclasses

005 : BARTON			006 : BOURBON		
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	299	17	Original Number of Sales	152	7
Trimmed Outliers	18	1	Trimmed Outliers	15	0
Number of Ratios: Outliers Removed	281	16	Number of Ratios: Outliers Removed	137	7
Minimum Ratio	16.6	27.3	Minimum Ratio	29.0	54.2
Maximum Ratio	355.4	266.6	Maximum Ratio	713200.0	110.5
Minimum Sale Price	7,500	5,000	Minimum Sale Price	10	10,000
Maximum Sale Price	420,000	700,000	Maximum Sale Price	255,000	513,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	98.0	95.9	Median Ratio	99.3	84.8
Lower Median Confidence Interval	96.2	84.9	Lower Median Confidence Interval	95.9	56.2
Upper Median Confidence Interval	99.5	129.2	Upper Median Confidence Interval	105.1	98.3
Broadened Median Ratio	98.0	96.1	Broadened Median Ratio	99.3	86.6
Coefficient of Dispersion (COD)	16.8	24.7	Coefficient of Dispersion (COD)	22.7	19.0
Lower COD Confidence Interval	15.1	14.3	Lower COD Confidence Interval	19.4	10.5
Upper COD Confidence Interval	18.7	41.1	Upper COD Confidence Interval	26.7	38.9
Value Weighted COD	13.8	34.0	Value Weighted COD	16.5	16.3
Coefficient of Concentration @10%	40.8	35.3	Coefficient of Concentration @10%	32.9	28.6
Coefficient of Concentration @15%	52.2	52.9	Coefficient of Concentration @15%	46.1	42.9
Coefficient of Concentration @20%	62.2	52.9	Coefficient of Concentration @20%	53.9	57.1
Coefficient of Concentration @50%	87.6	76.5	Coefficient of Concentration @50%	79.6	100.0
Coefficient of Concentration @100%	97.7	94.1	Coefficient of Concentration @100%	89.5	100.0
Coefficient of Interquartile Deviation	15.5	25.6	Coefficient of Interquartile Deviation	23.4	24.8
Median Percent Deviation	14.1	14.0	Median Percent Deviation	16.8	15.9
Lower Quartile (25th Percentile)	84.8	84.5	Lower Quartile (25th Percentile)	85.9	56.2
Upper Quartile	115.1	133.6	Upper Quartile	132.3	98.3
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectK	Normality Test	RejectK	AcceptW
Relative Skewness	0.38	0.45	Relative Skewness	0.76	-0.29
Relative Kurtosis	3.65	3.86	Relative Kurtosis	3.93	1.78
Arithmetic Mean Ratio	98.9	101.5	Arithmetic Mean Ratio	102.7	82.7
Weighted Mean Ratio	95.5	97.2	Weighted Mean Ratio	95.4	85.0
Geometric Mean Ratio	96.4	94.7	Geometric Mean Ratio	98.4	80.2
Harmonic Mean Ratio	93.6	85.6	Harmonic Mean Ratio	93.7	77.5
Standard Deviation	22.3	35.9	Standard Deviation	30.4	21.2
Coefficient of Variation (COV)	22.5	35.4	Coefficient of Variation (COV)	29.6	25.6
Price-Related Differential (PRD)	1.04	1.04	Price-Related Differential (PRD)	1.08	0.97
Lower PRD Confidence Interval	1.02	0.92	Lower PRD Confidence Interval	1.04	0.84
Upper PRD Confidence interval	1.05	1.36	Upper PRD Confidence interval	1.12	1.15
Coeff. of Price-Related Bias (PRB)	-0.08	-0.12	Coeff. of Price-Related Bias (PRB)	-10.11	0.03
Lower PRB Confidence Interval	-0.12	-0.27	Lower PRB Confidence Interval	-79.38	-0.10
Upper PRB Confidence Interval	-0.04	0.04	Upper PRB Confidence Interval	59.17	0.17
Average Sale Price	95,062	208,469	Average Sale Price	71,498	153,000
Average Appraised Value	90,741	202,631	Average Appraised Value	68,230	129,994

Detailed Sample Statistics for the Residential and Commercial Subclasses

007 : BROWN		S-10	008 : BUTLER		
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	94	13	Original Number of Sales	256	25
Trimmed Outliers	14	1	Trimmed Outliers	20	1
Number of Ratios: Outliers Removed	80	12	Number of Ratios: Outliers Removed	236	24
Minimum Ratio	29.2	29.9	Minimum Ratio	41.6	44.6
Maximum Ratio	8400.0	209.9	Maximum Ratio	662.2	277.0
Minimum Sale Price	525	7,000	Minimum Sale Price	5,700	12,500
Maximum Sale Price	616,000	330,000	Maximum Sale Price	1,525,000	700,000
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	104.0	112.8	Median Ratio	95.8	83.5
Lower Median Confidence Interval	95.5	95.0	Lower Median Confidence Interval	94.0	74.1
Upper Median Confidence Interval	110.3	120.2	Upper Median Confidence Interval	97.5	103.4
Broadened Median Ratio	104.2	108.1	Broadened Median Ratio	95.8	84.2
Coefficient of Dispersion (COD)	27.7	24.8	Coefficient of Dispersion (COD)	10.6	26.1
Lower COD Confidence Interval	22.6	14.4	Lower COD Confidence Interval	9.5	18.5
Upper COD Confidence Interval	35.5	53.8	Upper COD Confidence Interval	11.8	36.8
Value Weighted COD	20.2	30.5	Value Weighted COD	9.3	23.4
Coefficient of Concentration @10%	23.4	30.8	Coefficient of Concentration @10%	56.3	32.0
Coefficient of Concentration @15%	31.9	46.2	Coefficient of Concentration @15%	67.6	40.0
Coefficient of Concentration @20%	44.7	53.8	Coefficient of Concentration @20%	77.3	44.0
Coefficient of Concentration @50%	74.5	76.9	Coefficient of Concentration @50%	94.5	84.0
Coefficient of Concentration @100%	81.9	100.0	Coefficient of Concentration @100%	98.0	96.0
Coefficient of Interquartile Deviation	30.4	21.7	Coefficient of Interquartile Deviation	8.8	26.5
Median Percent Deviation	21.7	15.8	Median Percent Deviation	9.1	23.0
Lower Quartile (25th Percentile)	85.0	81.9	Lower Quartile (25th Percentile)	87.6	70.6
Upper Quartile	148.2	130.8	Upper Quartile	104.6	114.9
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectW	RejectK	Normality Test	RejectK	RejectK
Relative Skewness	1.32	-0.57	Relative Skewness	0.20	0.77
Relative Kurtosis	5.22	2.62	Relative Kurtosis	3.16	2.84
Arithmetic Mean Ratio	106.3	99.9	Arithmetic Mean Ratio	95.6	90.2
Weighted Mean Ratio	91.5	98.2	Weighted Mean Ratio	93.8	85.9
Geometric Mean Ratio	100.1	92.2	Geometric Mean Ratio	94.6	85.9
Harmonic Mean Ratio	93.9	82.0	Harmonic Mean Ratio	93.7	82.0
Standard Deviation	38.8	35.2	Standard Deviation	13.1	29.3
Coefficient of Variation (COV)	36.5	35.2	Coefficient of Variation (COV)	13.7	32.5
Price-Related Differential (PRD)	1.16	1.02	Price-Related Differential (PRD)	1.02	1.05
Lower PRD Confidence Interval	1.09	0.84	Lower PRD Confidence Interval	1.01	0.95
Upper PRD Confidence interval	1.27	1.42	Upper PRD Confidence interval	1.03	1.19
Coeff. of Price-Related Bias (PRB)	-0.96	-0.03	Coeff. of Price-Related Bias (PRB)	-0.15	-0.04
Lower PRB Confidence Interval	-2.23	-0.16	Lower PRB Confidence Interval	-0.21	-0.20
Upper PRB Confidence Interval	0.31	0.10	Upper PRB Confidence Interval	-0.10	0.11
Average Sale Price	84,259	111,292	Average Sale Price	153,110	210,918
Average Appraised Value	77,107	109,256	Average Appraised Value	143,691	181,105

Detailed Sample Statistics for the Residential and Commercial Subclasses

009 : CHASE		*S-6*	010 : CHAUTAUQUA		*S-4*
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	23	7	Original Number of Sales	15	6
Trimmed Outliers	3	1	Trimmed Outliers	2	0
Number of Ratios: Outliers Removed	20	6	Number of Ratios: Outliers Removed	13	6
Minimum Ratio	71.4	59.2	Minimum Ratio	48.3	89.3
Maximum Ratio	894.8	258.9	Maximum Ratio	1233.3	146.4
Minimum Sale Price	2,500	3,500	Minimum Sale Price	150	3,500
Maximum Sale Price	260,000	150,000	Maximum Sale Price	75,000	37,500
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	114.1	100.6	Median Ratio	121.2	101.2
Lower Median Confidence Interval	105.6	66.4	Lower Median Confidence Interval	93.7	90.6
Upper Median Confidence Interval	136.0	127.4	Upper Median Confidence Interval	164.0	137.2
Broadened Median Ratio	113.9	99.1	Broadened Median Ratio	120.3	104.2
Coefficient of Dispersion (COD)	23.8	20.3	Coefficient of Dispersion (COD)	29.2	16.9
Lower COD Confidence Interval	15.3	9.6	Lower COD Confidence Interval	19.1	10.6
Upper COD Confidence Interval	34.9	36.6	Upper COD Confidence Interval	48.8	24.3
Value Weighted COD	18.3	11.4	Value Weighted COD	24.0	17.1
Coefficient of Concentration @10%	34.8	42.9	Coefficient of Concentration @10%	20.0	50.0
Coefficient of Concentration @15%	34.8	42.9	Coefficient of Concentration @15%	33.3	66.7
Coefficient of Concentration @20%	52.2	42.9	Coefficient of Concentration @20%	40.0	66.7
Coefficient of Concentration @50%	73.9	85.7	Coefficient of Concentration @50%	66.7	100.0
Coefficient of Concentration @100%	87.0	85.7	Coefficient of Concentration @100%	86.7	100.0
Coefficient of Interquartile Deviation	38.5	30.3	Coefficient of Interquartile Deviation	38.3	20.4
Median Percent Deviation	19.2	26.6	Median Percent Deviation	26.2	10.5
Lower Quartile (25th Percentile)	95.4	66.4	Lower Quartile (25th Percentile)	93.7	91.3
Upper Quartile	183.3	127.4	Upper Quartile	186.6	132.6
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectW	AcceptW	Normality Test	RejectK	AcceptW
Relative Skewness	0.92	-0.02	Relative Skewness	0.35	0.72
Relative Kurtosis	3.05	1.82	Relative Kurtosis	2.43	1.98
Arithmetic Mean Ratio	118.2	91.7	Arithmetic Mean Ratio	119.0	109.7
Weighted Mean Ratio	101.0	99.8	Weighted Mean Ratio	107.4	107.4
Geometric Mean Ratio	113.2	88.6	Geometric Mean Ratio	111.0	107.8
Harmonic Mean Ratio	108.7	85.5	Harmonic Mean Ratio	102.6	106.2
Standard Deviation	37.1	25.5	Standard Deviation	44.4	22.8
Coefficient of Variation (COV)	31.4	27.8	Coefficient of Variation (COV)	37.3	20.8
Price-Related Differential (PRD)	1.17	0.92	Price-Related Differential (PRD)	1.11	1.02
Lower PRD Confidence Interval	1.08	0.82	Lower PRD Confidence Interval	0.99	0.94
Upper PRD Confidence interval	1.32	1.04	Upper PRD Confidence interval	1.39	1.17
Coeff. of Price-Related Bias (PRB)	-0.56	-0.13	Coeff. of Price-Related Bias (PRB)	-0.97	-0.02
Lower PRB Confidence Interval	-1.03	-0.58	Lower PRB Confidence Interval	-1.47	-0.24
Upper PRB Confidence Interval	-0.10	0.33	Upper PRB Confidence Interval	-0.47	0.20
Average Sale Price	74,710	48,000	Average Sale Price	33,938	18,000
Average Appraised Value	75,452	47,912	Average Appraised Value	36,435	19,330

Detailed Sample Statistics for the Residential and Commercial Subclasses

011 : CHEROKEE			012 : CHEYENNE		S-8
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	158	4	Original Number of Sales	38	8
Trimmed Outliers	28	0	Trimmed Outliers	4	0
Number of Ratios: Outliers Removed	130	4	Number of Ratios: Outliers Removed	34	8
Minimum Ratio	31.6	88.2	Minimum Ratio	35.3	30.3
Maximum Ratio	1356.0	109.6	Maximum Ratio	363.3	119.4
Minimum Sale Price	2,500	8,500	Minimum Sale Price	1,200	3,000
Maximum Sale Price	349,000	200,000	Maximum Sale Price	190,000	1,425,000
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	102.0	106.2	Median Ratio	96.9	80.8
Lower Median Confidence Interval	98.8	89.1	Lower Median Confidence Interval	91.8	50.8
Upper Median Confidence Interval	104.6	109.4	Upper Median Confidence Interval	102.1	103.3
Broadened Median Ratio	102.0	103.8	Broadened Median Ratio	97.1	79.5
Coefficient of Dispersion (COD)	14.4	5.5	Coefficient of Dispersion (COD)	17.5	29.9
Lower COD Confidence Interval	12.4	1.6	Lower COD Confidence Interval	12.6	16.7
Upper COD Confidence Interval	17.1	10.8	Upper COD Confidence Interval	24.9	65.2
Value Weighted COD	11.5	10.9	Value Weighted COD	17.9	56.0
Coefficient of Concentration @10%	41.8	75.0	Coefficient of Concentration @10%	39.5	0.0
Coefficient of Concentration @15%	52.5	75.0	Coefficient of Concentration @15%	50.0	37.5
Coefficient of Concentration @20%	62.0	100.0	Coefficient of Concentration @20%	57.9	37.5
Coefficient of Concentration @50%	81.0	100.0	Coefficient of Concentration @50%	81.6	87.5
Coefficient of Concentration @100%	91.1	100.0	Coefficient of Concentration @100%	92.1	100.0
Coefficient of Interquartile Deviation	13.5	7.8	Coefficient of Interquartile Deviation	15.5	29.2
Median Percent Deviation	13.1	2.0	Median Percent Deviation	14.5	25.8
Lower Quartile (25th Percentile)	89.8	92.5	Lower Quartile (25th Percentile)	81.0	53.5
Upper Quartile	117.4	109.0	Upper Quartile	111.0	100.6
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectA	Normality Test	RejectK	AcceptK
Relative Skewness	0.11	-1.04	Relative Skewness	-0.45	-0.18
Relative Kurtosis	3.69	2.25	Relative Kurtosis	3.19	1.98
Arithmetic Mean Ratio	99.3	102.5	Arithmetic Mean Ratio	93.4	77.4
Weighted Mean Ratio	98.2	95.2	Weighted Mean Ratio	86.8	38.7
Geometric Mean Ratio	97.3	102.2	Geometric Mean Ratio	90.0	71.7
Harmonic Mean Ratio	95.1	101.8	Harmonic Mean Ratio	85.9	65.1
Standard Deviation	19.7	9.7	Standard Deviation	23.4	29.4
Coefficient of Variation (COV)	19.8	9.5	Coefficient of Variation (COV)	25.0	38.0
Price-Related Differential (PRD)	1.01	1.08	Price-Related Differential (PRD)	1.08	2.00
Lower PRD Confidence Interval	0.99	1.01	Lower PRD Confidence Interval	1.01	1.02
Upper PRD Confidence interval	1.04	1.13	Upper PRD Confidence interval	1.19	2.62
Coeff. of Price-Related Bias (PRB)	-0.17	0.00	Coeff. of Price-Related Bias (PRB)	-0.29	-0.09
Lower PRB Confidence Interval	-0.32	0.00	Lower PRB Confidence Interval	-0.45	-0.22
Upper PRB Confidence Interval	-0.02	0.00	Upper PRB Confidence Interval	-0.13	0.04
Average Sale Price	75,484	81,750	Average Sale Price	62,578	211,938
Average Appraised Value	74,106	77,815	Average Appraised Value	54,329	81,939

Detailed Sample Statistics for the Residential and Commercial Subclasses

013 : CLARK		*S-5*	014 : CLAY		*S-4*
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	24	5	Original Number of Sales	94	9
Trimmed Outliers	2	0	Trimmed Outliers	11	1
Number of Ratios: Outliers Removed	22	5	Number of Ratios: Outliers Removed	83	8
Minimum Ratio	66.4	37.0	Minimum Ratio	17.9	61.9
Maximum Ratio	261.0	118.2	Maximum Ratio	434.2	213.8
Minimum Sale Price	4,000	10,000	Minimum Sale Price	4,000	16,000
Maximum Sale Price	130,000	95,000	Maximum Sale Price	330,000	262,500
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	107.3	89.3	Median Ratio	103.1	87.8
Lower Median Confidence Interval	90.4	37.0	Lower Median Confidence Interval	98.2	67.5
Upper Median Confidence Interval	122.2	118.2	Upper Median Confidence Interval	105.8	142.2
Broadened Median Ratio	108.0	88.6	Broadened Median Ratio	102.7	89.7
Coefficient of Dispersion (COD)	21.6	31.4	Coefficient of Dispersion (COD)	17.9	18.7
Lower COD Confidence Interval	16.5	13.8	Lower COD Confidence Interval	14.7	9.5
Upper COD Confidence Interval	30.9	87.6	Upper COD Confidence Interval	21.8	37.6
Value Weighted COD	17.8	40.7	Value Weighted COD	15.6	13.8
Coefficient of Concentration @10%	16.7	20.0	Coefficient of Concentration @10%	36.2	44.4
Coefficient of Concentration @15%	41.7	20.0	Coefficient of Concentration @15%	48.9	55.6
Coefficient of Concentration @20%	50.0	20.0	Coefficient of Concentration @20%	55.3	55.6
Coefficient of Concentration @50%	83.3	80.0	Coefficient of Concentration @50%	85.1	77.8
Coefficient of Concentration @100%	91.7	100.0	Coefficient of Concentration @100%	94.7	88.9
Coefficient of Interquartile Deviation	21.9	39.2	Coefficient of Interquartile Deviation	18.3	26.3
Median Percent Deviation	18.6	32.3	Median Percent Deviation	16.0	10.3
Lower Quartile (25th Percentile)	86.3	47.9	Lower Quartile (25th Percentile)	90.0	73.3
Upper Quartile	133.2	118.0	Upper Quartile	127.7	119.5
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptW	Normality Test	RejectW	RejectK
Relative Skewness	0.66	-0.27	Relative Skewness	0.48	1.15
Relative Kurtosis	2.75	1.48	Relative Kurtosis	3.43	3.76
Arithmetic Mean Ratio	107.1	84.2	Arithmetic Mean Ratio	102.8	89.6
Weighted Mean Ratio	99.3	61.3	Weighted Mean Ratio	96.0	90.0
Geometric Mean Ratio	103.8	77.0	Geometric Mean Ratio	99.9	87.0
Harmonic Mean Ratio	100.8	69.3	Harmonic Mean Ratio	96.8	84.7
Standard Deviation	27.9	36.0	Standard Deviation	24.6	24.6
Coefficient of Variation (COV)	26.0	42.8	Coefficient of Variation (COV)	23.9	27.5
Price-Related Differential (PRD)	1.08	1.37	Price-Related Differential (PRD)	1.07	1.00
Lower PRD Confidence Interval	1.02	1.18	Lower PRD Confidence Interval	1.04	0.92
Upper PRD Confidence interval	1.17	1.78	Upper PRD Confidence interval	1.11	1.10
Coeff. of Price-Related Bias (PRB)	-0.21	-0.29	Coeff. of Price-Related Bias (PRB)	-0.32	0.06
Lower PRB Confidence Interval	-0.35	-0.64	Lower PRB Confidence Interval	-0.40	-0.33
Upper PRB Confidence Interval	-0.06	0.07	Upper PRB Confidence Interval	-0.23	0.45
Average Sale Price	42,831	48,600	Average Sale Price	100,438	106,700
Average Appraised Value	42,548	29,774	Average Appraised Value	96,449	96,066

Detailed Sample Statistics for the Residential and Commercial Subclasses

015 : CLOUD		*S-9*	016 : COFFEY		*S-4*
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	98	11	Original Number of Sales	93	5
Trimmed Outliers	10	0	Trimmed Outliers	9	0
Number of Ratios: Outliers Removed	88	11	Number of Ratios: Outliers Removed	84	5
Minimum Ratio	56.8	53.1	Minimum Ratio	48.9	56.3
Maximum Ratio	720.3	165.3	Maximum Ratio	436.2	144.3
Minimum Sale Price	2,700	17,500	Minimum Sale Price	5,000	10,000
Maximum Sale Price	235,000	909,000	Maximum Sale Price	305,000	220,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	96.4	88.0	Median Ratio	96.3	104.9
Lower Median Confidence Interval	93.2	65.1	Lower Median Confidence Interval	93.9	56.3
Upper Median Confidence Interval	100.2	120.2	Upper Median Confidence Interval	99.8	144.3
Broadened Median Ratio	96.6	89.9	Broadened Median Ratio	96.3	96.2
Coefficient of Dispersion (COD)	13.8	28.7	Coefficient of Dispersion (COD)	14.8	24.5
Lower COD Confidence Interval	11.6	19.0	Lower COD Confidence Interval	12.2	9.3
Upper COD Confidence Interval	16.5	52.3	Upper COD Confidence Interval	17.8	51.1
Value Weighted COD	12.9	20.4	Value Weighted COD	12.2	15.7
Coefficient of Concentration @10%	41.8	27.3	Coefficient of Concentration @10%	41.9	40.0
Coefficient of Concentration @15%	52.0	36.4	Coefficient of Concentration @15%	53.8	40.0
Coefficient of Concentration @20%	68.4	45.5	Coefficient of Concentration @20%	62.4	40.0
Coefficient of Concentration @50%	89.8	81.8	Coefficient of Concentration @50%	90.3	100.0
Coefficient of Concentration @100%	95.9	100.0	Coefficient of Concentration @100%	97.8	100.0
Coefficient of Interquartile Deviation	13.5	31.3	Coefficient of Interquartile Deviation	13.9	30.6
Median Percent Deviation	13.2	26.0	Median Percent Deviation	13.5	31.7
Lower Quartile (25th Percentile)	82.2	65.1	Lower Quartile (25th Percentile)	83.6	64.0
Upper Quartile	108.2	120.2	Upper Quartile	110.3	128.2
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectK	Normality Test	RejectW	AcceptW
Relative Skewness	0.17	0.72	Relative Skewness	0.43	0.09
Relative Kurtosis	3.02	2.67	Relative Kurtosis	3.31	1.75
Arithmetic Mean Ratio	93.8	95.6	Arithmetic Mean Ratio	94.7	97.9
Weighted Mean Ratio	90.3	76.6	Weighted Mean Ratio	92.7	107.6
Geometric Mean Ratio	92.3	90.4	Geometric Mean Ratio	92.9	92.7
Harmonic Mean Ratio	90.8	85.7	Harmonic Mean Ratio	91.1	87.6
Standard Deviation	16.8	34.0	Standard Deviation	18.7	34.7
Coefficient of Variation (COV)	17.9	35.6	Coefficient of Variation (COV)	19.7	35.5
Price-Related Differential (PRD)	1.04	1.25	Price-Related Differential (PRD)	1.02	0.91
Lower PRD Confidence Interval	1.01	1.04	Lower PRD Confidence Interval	1.00	0.77
Upper PRD Confidence interval	1.07	1.62	Upper PRD Confidence interval	1.05	1.06
Coeff. of Price-Related Bias (PRB)	-0.18	-0.06	Coeff. of Price-Related Bias (PRB)	-0.12	0.09
Lower PRB Confidence Interval	-0.30	-0.22	Lower PRB Confidence Interval	-0.19	-0.22
Upper PRB Confidence Interval	-0.06	0.10	Upper PRB Confidence Interval	-0.04	0.39
Average Sale Price	78,329	144,955	Average Sale Price	112,211	65,500
Average Appraised Value	70,712	110,967	Average Appraised Value	104,004	70,510

Detailed Sample Statistics for the Residential and Commercial Subclasses

017 : COMANCHE		*S-7*	018 : COWLEY		
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	19	8	Original Number of Sales	324	5
Trimmed Outliers	2	0	Trimmed Outliers	25	0
Number of Ratios: Outliers Removed	17	8	Number of Ratios: Outliers Removed	299	5
Minimum Ratio	40.0	37.4	Minimum Ratio	24.5	53.9
Maximum Ratio	323.5	102.8	Maximum Ratio	685.4	140.5
Minimum Sale Price	4,000	6,000	Minimum Sale Price	2,500	16,750
Maximum Sale Price	85,000	140,000	Maximum Sale Price	365,000	1,200,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	94.5	89.0	Median Ratio	97.0	117.5
Lower Median Confidence Interval	82.7	55.2	Lower Median Confidence Interval	95.2	53.9
Upper Median Confidence Interval	133.9	100.4	Upper Median Confidence Interval	98.3	140.5
Broadened Median Ratio	95.1	88.3	Broadened Median Ratio	97.0	111.3
Coefficient of Dispersion (COD)	26.6	20.2	Coefficient of Dispersion (COD)	16.1	21.3
Lower COD Confidence Interval	17.3	9.4	Lower COD Confidence Interval	14.5	7.2
Upper COD Confidence Interval	38.1	49.5	Upper COD Confidence Interval	17.9	59.5
Value Weighted COD	24.1	35.8	Value Weighted COD	13.5	48.2
Coefficient of Concentration @10%	26.3	25.0	Coefficient of Concentration @10%	42.3	40.0
Coefficient of Concentration @15%	36.8	50.0	Coefficient of Concentration @15%	54.0	40.0
Coefficient of Concentration @20%	42.1	75.0	Coefficient of Concentration @20%	63.9	60.0
Coefficient of Concentration @50%	68.4	87.5	Coefficient of Concentration @50%	89.5	80.0
Coefficient of Concentration @100%	89.5	100.0	Coefficient of Concentration @100%	96.6	100.0
Coefficient of Interquartile Deviation	35.1	22.5	Coefficient of Interquartile Deviation	14.9	26.6
Median Percent Deviation	28.8	14.1	Median Percent Deviation	13.6	19.6
Lower Quartile (25th Percentile)	78.4	60.0	Lower Quartile (25th Percentile)	84.7	71.5
Upper Quartile	144.8	100.1	Upper Quartile	113.6	134.0
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectK	Normality Test	RejectK	AcceptW
Relative Skewness	0.27	-0.84	Relative Skewness	0.35	-0.60
Relative Kurtosis	2.17	2.32	Relative Kurtosis	3.30	1.96
Arithmetic Mean Ratio	96.7	80.9	Arithmetic Mean Ratio	96.8	105.7
Weighted Mean Ratio	88.4	62.5	Weighted Mean Ratio	93.7	62.5
Geometric Mean Ratio	91.2	77.0	Geometric Mean Ratio	94.5	100.2
Harmonic Mean Ratio	85.5	72.3	Harmonic Mean Ratio	92.1	93.9
Standard Deviation	32.9	23.8	Standard Deviation	21.0	34.6
Coefficient of Variation (COV)	34.0	29.4	Coefficient of Variation (COV)	21.7	32.7
Price-Related Differential (PRD)	1.09	1.29	Price-Related Differential (PRD)	1.03	1.69
Lower PRD Confidence Interval	1.02	0.93	Lower PRD Confidence Interval	1.02	1.03
Upper PRD Confidence interval	1.21	1.57	Upper PRD Confidence interval	1.05	2.11
Coeff. of Price-Related Bias (PRB)	-0.24	-0.05	Coeff. of Price-Related Bias (PRB)	-0.13	-0.11
Lower PRB Confidence Interval	-0.54	-0.24	Lower PRB Confidence Interval	-0.18	-0.26
Upper PRB Confidence Interval	0.05	0.15	Upper PRB Confidence Interval	-0.09	0.05
Average Sale Price	42,500	33,313	Average Sale Price	88,110	277,050
Average Appraised Value	37,552	20,823	Average Appraised Value	82,560	173,264

Detailed Sample Statistics for the Residential and Commercial Subclasses

019 : CRAWFORD			020 : DECATUR		*S-6*
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	204	23	Original Number of Sales	41	7
Trimmed Outliers	21	1	Trimmed Outliers	2	0
Number of Ratios: Outliers Removed	183	22	Number of Ratios: Outliers Removed	39	7
Minimum Ratio	22.2	28.5	Minimum Ratio	29.9	37.6
Maximum Ratio	1270.0	130.5	Maximum Ratio	304.7	121.8
Minimum Sale Price	1,000	7,500	Minimum Sale Price	800	6,000
Maximum Sale Price	330,000	1,458,000	Maximum Sale Price	150,000	100,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	97.4	92.1	Median Ratio	105.4	72.4
Lower Median Confidence Interval	95.8	81.3	Lower Median Confidence Interval	91.1	61.7
Upper Median Confidence Interval	99.6	99.5	Upper Median Confidence Interval	112.9	114.3
Broadened Median Ratio	97.4	94.3	Broadened Median Ratio	103.3	83.2
Coefficient of Dispersion (COD)	14.5	16.0	Coefficient of Dispersion (COD)	26.4	35.4
Lower COD Confidence Interval	12.7	10.6	Lower COD Confidence Interval	20.6	23.9
Upper COD Confidence Interval	16.5	25.3	Upper COD Confidence Interval	36.3	95.8
Value Weighted COD	13.3	21.9	Value Weighted COD	22.0	31.9
Coefficient of Concentration @10%	44.1	43.5	Coefficient of Concentration @10%	29.3	28.6
Coefficient of Concentration @15%	56.4	56.5	Coefficient of Concentration @15%	36.6	42.9
Coefficient of Concentration @20%	65.7	65.2	Coefficient of Concentration @20%	43.9	42.9
Coefficient of Concentration @50%	90.2	91.3	Coefficient of Concentration @50%	85.4	57.1
Coefficient of Concentration @100%	94.1	100.0	Coefficient of Concentration @100%	95.1	100.0
Coefficient of Interquartile Deviation	12.1	14.3	Coefficient of Interquartile Deviation	24.1	36.3
Median Percent Deviation	12.1	11.7	Median Percent Deviation	20.9	48.0
Lower Quartile (25th Percentile)	85.2	73.9	Lower Quartile (25th Percentile)	75.7	61.7
Upper Quartile	108.9	100.2	Upper Quartile	126.4	114.3
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectK	Normality Test	RejectK	AcceptW
Relative Skewness	0.08	-0.55	Relative Skewness	0.44	-0.06
Relative Kurtosis	3.10	3.16	Relative Kurtosis	3.30	1.57
Arithmetic Mean Ratio	94.6	90.6	Arithmetic Mean Ratio	101.1	83.5
Weighted Mean Ratio	91.6	80.2	Weighted Mean Ratio	89.6	71.6
Geometric Mean Ratio	92.7	87.9	Geometric Mean Ratio	95.1	77.8
Harmonic Mean Ratio	90.7	84.8	Harmonic Mean Ratio	88.3	71.8
Standard Deviation	18.6	20.7	Standard Deviation	34.4	31.8
Coefficient of Variation (COV)	19.6	22.8	Coefficient of Variation (COV)	34.0	38.1
Price-Related Differential (PRD)	1.03	1.13	Price-Related Differential (PRD)	1.13	1.17
Lower PRD Confidence Interval	1.01	0.98	Lower PRD Confidence Interval	1.05	1.04
Upper PRD Confidence interval	1.06	1.31	Upper PRD Confidence interval	1.25	1.50
Coeff. of Price-Related Bias (PRB)	-0.36	0.00	Coeff. of Price-Related Bias (PRB)	-0.10	-0.12
Lower PRB Confidence Interval	-0.48	-0.07	Lower PRB Confidence Interval	-0.18	-0.51
Upper PRB Confidence Interval	-0.24	0.07	Upper PRB Confidence Interval	-0.01	0.26
Average Sale Price	90,606	190,811	Average Sale Price	55,634	44,071
Average Appraised Value	83,022	152,964	Average Appraised Value	49,824	31,570

Detailed Sample Statistics for the Residential and Commercial Subclasses

021 : DICKINSON			022 : DONIPHAN		*S-9*
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	182	6	Original Number of Sales	54	9
Trimmed Outliers	20	0	Trimmed Outliers	5	0
Number of Ratios: Outliers Removed	162	6	Number of Ratios: Outliers Removed	49	9
Minimum Ratio	15.6	69.4	Minimum Ratio	21.7	91.1
Maximum Ratio	713.5	176.2	Maximum Ratio	305.2	326.8
Minimum Sale Price	2,500	24,500	Minimum Sale Price	5,000	15,000
Maximum Sale Price	395,000	750,000	Maximum Sale Price	232,500	145,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	99.2	90.3	Median Ratio	98.4	139.0
Lower Median Confidence Interval	96.6	76.1	Lower Median Confidence Interval	84.6	109.6
Upper Median Confidence Interval	103.4	139.2	Upper Median Confidence Interval	103.7	222.7
Broadened Median Ratio	99.2	91.0	Broadened Median Ratio	98.5	136.3
Coefficient of Dispersion (COD)	16.6	25.0	Coefficient of Dispersion (COD)	21.8	36.2
Lower COD Confidence Interval	14.6	8.0	Lower COD Confidence Interval	16.5	20.2
Upper COD Confidence Interval	18.9	49.8	Upper COD Confidence Interval	30.2	74.4
Value Weighted COD	14.3	14.1	Value Weighted COD	17.1	24.5
Coefficient of Concentration @10%	38.5	50.0	Coefficient of Concentration @10%	29.6	33.3
Coefficient of Concentration @15%	48.4	66.7	Coefficient of Concentration @15%	42.6	33.3
Coefficient of Concentration @20%	59.3	66.7	Coefficient of Concentration @20%	53.7	44.4
Coefficient of Concentration @50%	86.3	83.3	Coefficient of Concentration @50%	81.5	66.7
Coefficient of Concentration @100%	93.4	100.0	Coefficient of Concentration @100%	92.6	88.9
Coefficient of Interquartile Deviation	16.0	22.8	Coefficient of Interquartile Deviation	19.0	37.7
Median Percent Deviation	16.1	10.7	Median Percent Deviation	18.3	21.1
Lower Quartile (25th Percentile)	86.7	79.5	Lower Quartile (25th Percentile)	75.1	111.2
Upper Quartile	118.5	120.7	Upper Quartile	112.5	216.0
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectW	Normality Test	AcceptK	RejectW
Relative Skewness	0.53	1.45	Relative Skewness	-0.02	1.18
Relative Kurtosis	3.13	3.63	Relative Kurtosis	3.58	3.32
Arithmetic Mean Ratio	100.0	101.8	Arithmetic Mean Ratio	91.5	164.6
Weighted Mean Ratio	97.9	90.8	Weighted Mean Ratio	91.2	140.1
Geometric Mean Ratio	97.8	97.1	Geometric Mean Ratio	86.4	152.0
Harmonic Mean Ratio	95.6	93.5	Harmonic Mean Ratio	79.6	142.1
Standard Deviation	21.4	38.1	Standard Deviation	28.0	75.2
Coefficient of Variation (COV)	21.4	37.4	Coefficient of Variation (COV)	30.6	45.7
Price-Related Differential (PRD)	1.02	1.12	Price-Related Differential (PRD)	1.00	1.17
Lower PRD Confidence Interval	1.00	0.97	Lower PRD Confidence Interval	0.96	1.01
Upper PRD Confidence interval	1.04	1.43	Upper PRD Confidence interval	1.05	1.52
Coeff. of Price-Related Bias (PRB)	-0.34	0.02	Coeff. of Price-Related Bias (PRB)	0.00	-0.11
Lower PRB Confidence Interval	-0.43	-0.33	Lower PRB Confidence Interval	-0.16	-0.52
Upper PRB Confidence Interval	-0.25	0.37	Upper PRB Confidence Interval	0.16	0.29
Average Sale Price	118,473	181,750	Average Sale Price	73,702	64,447
Average Appraised Value	115,939	164,945	Average Appraised Value	67,223	90,279

Detailed Sample Statistics for the Residential and Commercial Subclasses

023 : DOUGLAS			024 : EDWARDS		*S-6*
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	310	36	Original Number of Sales	36	7
Trimmed Outliers	24	0	Trimmed Outliers	0	0
Number of Ratios: Outliers Removed	286	36	Number of Ratios: Outliers Removed	36	7
Minimum Ratio	33.5	50.2	Minimum Ratio	60.0	52.0
Maximum Ratio	421.9	126.1	Maximum Ratio	204.4	183.0
Minimum Sale Price	13,000	75,000	Minimum Sale Price	3,500	4,000
Maximum Sale Price	20,250,000	8,978,557	Maximum Sale Price	190,000	51,751
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	95.9	89.3	Median Ratio	111.1	102.6
Lower Median Confidence Interval	94.2	83.8	Lower Median Confidence Interval	92.9	90.5
Upper Median Confidence Interval	97.2	92.9	Upper Median Confidence Interval	119.4	134.8
Broadened Median Ratio	95.9	89.3	Broadened Median Ratio	110.7	100.3
Coefficient of Dispersion (COD)	7.9	15.5	Coefficient of Dispersion (COD)	29.2	26.6
Lower COD Confidence Interval	7.2	11.5	Lower COD Confidence Interval	22.0	12.3
Upper COD Confidence Interval	8.6	20.7	Upper COD Confidence Interval	37.9	61.7
Value Weighted COD	12.2	13.3	Value Weighted COD	29.0	18.2
Coefficient of Concentration @10%	63.5	41.7	Coefficient of Concentration @10%	36.1	28.6
Coefficient of Concentration @15%	79.4	55.6	Coefficient of Concentration @15%	36.1	57.1
Coefficient of Concentration @20%	87.1	66.7	Coefficient of Concentration @20%	38.9	57.1
Coefficient of Concentration @50%	95.2	100.0	Coefficient of Concentration @50%	88.9	85.7
Coefficient of Concentration @100%	98.4	100.0	Coefficient of Concentration @100%	100.0	100.0
Coefficient of Interquartile Deviation	7.1	13.3	Coefficient of Interquartile Deviation	32.7	21.6
Median Percent Deviation	7.0	12.7	Median Percent Deviation	31.6	11.8
Lower Quartile (25th Percentile)	89.0	75.2	Lower Quartile (25th Percentile)	75.3	90.5
Upper Quartile	102.6	98.9	Upper Quartile	147.9	134.8
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectK	Normality Test	RejectW	AcceptW
Relative Skewness	0.08	-0.14	Relative Skewness	0.64	0.61
Relative Kurtosis	3.10	2.73	Relative Kurtosis	2.46	2.85
Arithmetic Mean Ratio	95.1	88.3	Arithmetic Mean Ratio	115.2	108.7
Weighted Mean Ratio	89.0	81.6	Weighted Mean Ratio	93.5	93.4
Geometric Mean Ratio	94.6	86.3	Geometric Mean Ratio	108.3	102.2
Harmonic Mean Ratio	94.1	84.1	Harmonic Mean Ratio	102.0	95.6
Standard Deviation	9.5	18.4	Standard Deviation	41.5	41.0
Coefficient of Variation (COV)	10.0	20.9	Coefficient of Variation (COV)	36.1	37.7
Price-Related Differential (PRD)	1.07	1.08	Price-Related Differential (PRD)	1.23	1.16
Lower PRD Confidence Interval	1.00	1.03	Lower PRD Confidence Interval	1.13	1.01
Upper PRD Confidence interval	1.16	1.14	Upper PRD Confidence interval	1.39	1.53
Coeff. of Price-Related Bias (PRB)	-0.11	-0.06	Coeff. of Price-Related Bias (PRB)	-0.14	-0.24
Lower PRB Confidence Interval	-0.15	-0.10	Lower PRB Confidence Interval	-0.22	-0.53
Upper PRB Confidence Interval	-0.08	-0.01	Upper PRB Confidence Interval	-0.06	0.05
Average Sale Price	281,454	1,276,268	Average Sale Price	48,074	26,107
Average Appraised Value	250,461	1,041,219	Average Appraised Value	44,928	24,391

Detailed Sample Statistics for the Residential and Commercial Subclasses

025:ELK		S-6
GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	33	7
Trimmed Outliers	5	0
Number of Ratios: Outliers Removed	28	7
Minimum Ratio	11.3	57.5
Maximum Ratio	292.3	139.5
Minimum Sale Price	2,500	7,000
Maximum Sale Price	120,000	45,000
DISTRIBUTION FREE STATISTICS		
Median Ratio	87.4	82.1
Lower Median Confidence Interval	75.7	73.1
Upper Median Confidence Interval	97.2	136.6
Broadened Median Ratio	88.6	82.8
Coefficient of Dispersion (COD)	20.8	28.5
Lower COD Confidence Interval	14.6	16.8
Upper COD Confidence Interval	31.5	47.5
Value Weighted COD	19.9	31.7
Coefficient of Concentration @10%	21.2	28.6
Coefficient of Concentration @15%	42.4	57.1
Coefficient of Concentration @20%	54.5	57.1
Coefficient of Concentration @50%	75.8	71.4
Coefficient of Concentration @100%	90.9	100.0
Coefficient of Interquartile Deviation	19.5	38.6
Median Percent Deviation	18.6	12.4
Lower Quartile (25th Percentile)	66.1	73.1
Upper Quartile	100.2	136.6
PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptW
Relative Skewness	-0.43	0.61
Relative Kurtosis	3.30	1.81
Arithmetic Mean Ratio	80.9	93.6
Weighted Mean Ratio	81.0	96.8
Geometric Mean Ratio	76.8	89.2
Harmonic Mean Ratio	71.5	85.3
Standard Deviation	23.1	32.1
Coefficient of Variation (COV)	28.6	34.3
Price-Related Differential (PRD)	1.00	0.97
Lower PRD Confidence Interval	0.93	0.83
Upper PRD Confidence interval	1.08	1.15
Coeff. of Price-Related Bias (PRB)	-0.05	0.11
Lower PRB Confidence Interval	-0.26	-0.25
Upper PRB Confidence Interval	0.15	0.47
Average Sale Price	33,796	17,500
Average Appraised Value	27,381	16,941

026:ELLIS		
GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	200	19
Trimmed Outliers	33	0
Number of Ratios: Outliers Removed	167	19
Minimum Ratio	42.9	57.4
Maximum Ratio	324.0	157.1
Minimum Sale Price	5,000	20,000
Maximum Sale Price	576,500	1,893,000
DISTRIBUTION FREE STATISTICS		
Median Ratio	100.4	94.9
Lower Median Confidence Interval	99.4	71.5
Upper Median Confidence Interval	101.7	108.2
Broadened Median Ratio	100.4	98.3
Coefficient of Dispersion (COD)	6.2	21.2
Lower COD Confidence Interval	5.4	15.1
Upper COD Confidence Interval	7.1	36.7
Value Weighted COD	6.0	16.6
Coefficient of Concentration @10%	65.5	31.6
Coefficient of Concentration @15%	75.5	42.1
Coefficient of Concentration @20%	81.5	52.6
Coefficient of Concentration @50%	95.0	94.7
Coefficient of Concentration @100%	99.5	100.0
Coefficient of Interquartile Deviation	5.5	20.7
Median Percent Deviation	6.0	16.1
Lower Quartile (25th Percentile)	96.1	71.0
Upper Quartile	107.1	110.2
PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectK
Relative Skewness	0.27	0.36
Relative Kurtosis	3.42	2.87
Arithmetic Mean Ratio	100.6	95.1
Weighted Mean Ratio	100.9	97.6
Geometric Mean Ratio	100.2	91.7
Harmonic Mean Ratio	99.9	88.3
Standard Deviation	8.4	26.2
Coefficient of Variation (COV)	8.3	27.5
Price-Related Differential (PRD)	1.00	0.98
Lower PRD Confidence Interval	0.99	0.91
Upper PRD Confidence interval	1.00	1.05
Coeff. of Price-Related Bias (PRB)	-0.09	0.06
Lower PRB Confidence Interval	-0.14	-0.02
Upper PRB Confidence Interval	-0.05	0.14
Average Sale Price	173,029	386,342
Average Appraised Value	174,525	376,914

Detailed Sample Statistics for the Residential and Commercial Subclasses

027 : ELLSWORTH		*S-4*	028 : FINNEY		
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	53	7	Original Number of Sales	199	23
Trimmed Outliers	4	0	Trimmed Outliers	24	2
Number of Ratios: Outliers Removed	49	7	Number of Ratios: Outliers Removed	175	21
Minimum Ratio	30.8	15.6	Minimum Ratio	6.0	50.9
Maximum Ratio	680.0	144.3	Maximum Ratio	285.2	131.1
Minimum Sale Price	1,500	16,000	Minimum Sale Price	3,200	24,500
Maximum Sale Price	155,000	235,000	Maximum Sale Price	640,000	1,700,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	98.6	81.6	Median Ratio	96.5	81.2
Lower Median Confidence Interval	94.9	40.9	Lower Median Confidence Interval	94.1	70.4
Upper Median Confidence Interval	102.6	116.8	Upper Median Confidence Interval	98.7	86.0
Broadened Median Ratio	98.6	82.6	Broadened Median Ratio	96.5	80.0
Coefficient of Dispersion (COD)	13.0	43.3	Coefficient of Dispersion (COD)	10.2	13.6
Lower COD Confidence Interval	10.0	22.7	Lower COD Confidence Interval	9.0	10.0
Upper COD Confidence Interval	16.9	234.6	Upper COD Confidence Interval	11.5	19.5
Value Weighted COD	12.8	30.0	Value Weighted COD	9.5	13.4
Coefficient of Concentration @10%	52.8	14.3	Coefficient of Concentration @10%	54.3	39.1
Coefficient of Concentration @15%	54.7	14.3	Coefficient of Concentration @15%	66.3	65.2
Coefficient of Concentration @20%	67.9	14.3	Coefficient of Concentration @20%	73.9	69.6
Coefficient of Concentration @50%	92.5	71.4	Coefficient of Concentration @50%	91.5	91.3
Coefficient of Concentration @100%	94.3	100.0	Coefficient of Concentration @100%	99.5	100.0
Coefficient of Interquartile Deviation	12.3	46.5	Coefficient of Interquartile Deviation	9.2	11.6
Median Percent Deviation	8.4	43.1	Median Percent Deviation	9.3	13.3
Lower Quartile (25th Percentile)	92.1	40.9	Lower Quartile (25th Percentile)	88.6	69.7
Upper Quartile	116.4	116.8	Upper Quartile	106.4	88.6
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptW	Normality Test	RejectK	AcceptK
Relative Skewness	0.09	-0.06	Relative Skewness	0.15	-0.20
Relative Kurtosis	3.38	1.86	Relative Kurtosis	3.09	2.39
Arithmetic Mean Ratio	99.4	80.8	Arithmetic Mean Ratio	96.4	76.9
Weighted Mean Ratio	96.9	66.5	Weighted Mean Ratio	95.9	80.4
Geometric Mean Ratio	97.9	66.3	Geometric Mean Ratio	95.5	75.8
Harmonic Mean Ratio	96.2	49.3	Harmonic Mean Ratio	94.7	74.6
Standard Deviation	17.5	44.9	Standard Deviation	12.6	13.2
Coefficient of Variation (COV)	17.6	55.6	Coefficient of Variation (COV)	13.1	17.2
Price-Related Differential (PRD)	1.03	1.21	Price-Related Differential (PRD)	1.00	0.96
Lower PRD Confidence Interval	1.00	0.97	Lower PRD Confidence Interval	1.00	0.90
Upper PRD Confidence interval	1.06	1.65	Upper PRD Confidence interval	1.01	1.01
Coeff. of Price-Related Bias (PRB)	-0.34	-0.19	Coeff. of Price-Related Bias (PRB)	-0.02	0.04
Lower PRB Confidence Interval	-0.54	-0.65	Lower PRB Confidence Interval	-0.06	-0.03
Upper PRB Confidence Interval	-0.13	0.26	Upper PRB Confidence Interval	0.02	0.12
Average Sale Price	91,793	106,286	Average Sale Price	162,187	274,409
Average Appraised Value	88,949	70,654	Average Appraised Value	155,606	220,734

Detailed Sample Statistics for the Residential and Commercial Subclasses

029 : FORD			030 : FRANKLIN		
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	194	23	Original Number of Sales	302	10
Trimmed Outliers	13	1	Trimmed Outliers	43	0
Number of Ratios: Outliers Removed	181	22	Number of Ratios: Outliers Removed	259	10
Minimum Ratio	36.8	40.7	Minimum Ratio	48.7	61.6
Maximum Ratio	172.6	189.9	Maximum Ratio	892.9	170.9
Minimum Sale Price	10,000	22,000	Minimum Sale Price	4,000	12,500
Maximum Sale Price	310,000	1,500,000	Maximum Sale Price	425,000	625,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	92.3	84.1	Median Ratio	98.5	122.5
Lower Median Confidence Interval	90.0	74.1	Lower Median Confidence Interval	95.8	92.0
Upper Median Confidence Interval	94.5	90.7	Upper Median Confidence Interval	100.3	132.8
Broadened Median Ratio	92.3	84.2	Broadened Median Ratio	98.5	122.7
Coefficient of Dispersion (COD)	11.1	24.9	Coefficient of Dispersion (COD)	13.0	18.9
Lower COD Confidence Interval	9.9	18.2	Lower COD Confidence Interval	11.7	9.8
Upper COD Confidence Interval	12.6	36.7	Upper COD Confidence Interval	14.6	40.8
Value Weighted COD	10.0	25.0	Value Weighted COD	11.8	14.8
Coefficient of Concentration @10%	49.0	34.8	Coefficient of Concentration @10%	45.0	60.0
Coefficient of Concentration @15%	68.0	39.1	Coefficient of Concentration @15%	57.0	60.0
Coefficient of Concentration @20%	78.9	47.8	Coefficient of Concentration @20%	67.2	70.0
Coefficient of Concentration @50%	96.9	87.0	Coefficient of Concentration @50%	85.1	100.0
Coefficient of Concentration @100%	100.0	95.7	Coefficient of Concentration @100%	91.1	100.0
Coefficient of Interquartile Deviation	10.2	27.6	Coefficient of Interquartile Deviation	13.9	15.8
Median Percent Deviation	10.2	22.2	Median Percent Deviation	12.3	8.6
Lower Quartile (25th Percentile)	80.9	65.4	Lower Quartile (25th Percentile)	87.3	93.9
Upper Quartile	99.8	111.9	Upper Quartile	114.7	132.5
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptK	Normality Test	RejectK	AcceptK
Relative Skewness	-0.13	0.13	Relative Skewness	0.50	-0.31
Relative Kurtosis	3.13	2.31	Relative Kurtosis	4.23	2.64
Arithmetic Mean Ratio	91.2	82.6	Arithmetic Mean Ratio	96.2	116.1
Weighted Mean Ratio	91.9	93.4	Weighted Mean Ratio	93.1	120.7
Geometric Mean Ratio	90.3	78.5	Geometric Mean Ratio	94.8	111.5
Harmonic Mean Ratio	89.2	74.2	Harmonic Mean Ratio	93.3	106.3
Standard Deviation	13.1	25.8	Standard Deviation	16.7	32.2
Coefficient of Variation (COV)	14.4	31.3	Coefficient of Variation (COV)	17.4	27.7
Price-Related Differential (PRD)	0.99	0.88	Price-Related Differential (PRD)	1.03	0.96
Lower PRD Confidence Interval	0.98	0.79	Lower PRD Confidence Interval	1.02	0.87
Upper PRD Confidence interval	1.00	0.99	Upper PRD Confidence interval	1.05	1.07
Coeff. of Price-Related Bias (PRB)	-0.02	0.10	Coeff. of Price-Related Bias (PRB)	-0.50	0.02
Lower PRB Confidence Interval	-0.06	0.00	Lower PRB Confidence Interval	-0.59	-0.11
Upper PRB Confidence Interval	0.01	0.21	Upper PRB Confidence Interval	-0.41	0.15
Average Sale Price	123,480	279,105	Average Sale Price	132,510	159,300
Average Appraised Value	113,469	260,705	Average Appraised Value	123,416	192,268

Detailed Sample Statistics for the Residential and Commercial Subclasses

031 : GEARY			032 : GOVE		*S-5*
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	291	5	Original Number of Sales	26	5
Trimmed Outliers	39	0	Trimmed Outliers	1	0
Number of Ratios: Outliers Removed	252	5	Number of Ratios: Outliers Removed	25	5
Minimum Ratio	.	58.1	Minimum Ratio	40.5	38.9
Maximum Ratio	565.3	144.1	Maximum Ratio	325.0	115.9
Minimum Sale Price	4,000	40,000	Minimum Sale Price	4,000	14,000
Maximum Sale Price	367,800	175,000	Maximum Sale Price	150,000	120,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	100.5	90.9	Median Ratio	87.8	80.1
Lower Median Confidence Interval	99.3	58.1	Lower Median Confidence Interval	74.7	38.9
Upper Median Confidence Interval	102.5	144.1	Upper Median Confidence Interval	95.8	115.9
Broadened Median Ratio	100.4	94.0	Broadened Median Ratio	87.1	79.8
Coefficient of Dispersion (COD)	8.7	30.3	Coefficient of Dispersion (COD)	23.0	24.0
Lower COD Confidence Interval	7.8	17.3	Lower COD Confidence Interval	16.1	10.3
Upper COD Confidence Interval	9.7	59.3	Upper COD Confidence Interval	34.8	79.3
Value Weighted COD	8.0	28.4	Value Weighted COD	19.9	31.3
Coefficient of Concentration @10%	59.5	20.0	Coefficient of Concentration @10%	30.8	20.0
Coefficient of Concentration @15%	71.1	20.0	Coefficient of Concentration @15%	46.2	60.0
Coefficient of Concentration @20%	78.4	20.0	Coefficient of Concentration @20%	57.7	60.0
Coefficient of Concentration @50%	91.1	80.0	Coefficient of Concentration @50%	88.5	80.0
Coefficient of Concentration @100%	95.5	100.0	Coefficient of Concentration @100%	96.2	100.0
Coefficient of Interquartile Deviation	8.6	37.9	Coefficient of Interquartile Deviation	21.9	30.0
Median Percent Deviation	8.0	33.5	Median Percent Deviation	17.7	12.6
Lower Quartile (25th Percentile)	94.4	63.8	Lower Quartile (25th Percentile)	60.3	54.4
Upper Quartile	111.6	132.7	Upper Quartile	98.8	102.5
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptW	Normality Test	RejectK	AcceptW
Relative Skewness	0.45	0.26	Relative Skewness	0.40	-0.15
Relative Kurtosis	3.74	1.56	Relative Kurtosis	3.34	2.24
Arithmetic Mean Ratio	100.6	96.8	Arithmetic Mean Ratio	83.0	78.8
Weighted Mean Ratio	99.2	89.0	Weighted Mean Ratio	80.1	63.6
Geometric Mean Ratio	99.9	91.5	Geometric Mean Ratio	79.0	74.2
Harmonic Mean Ratio	99.3	86.6	Harmonic Mean Ratio	74.9	69.1
Standard Deviation	11.6	35.8	Standard Deviation	25.9	28.1
Coefficient of Variation (COV)	11.5	36.9	Coefficient of Variation (COV)	31.2	35.7
Price-Related Differential (PRD)	1.01	1.09	Price-Related Differential (PRD)	1.04	1.24
Lower PRD Confidence Interval	1.01	1.00	Lower PRD Confidence Interval	0.98	1.03
Upper PRD Confidence interval	1.02	1.22	Upper PRD Confidence interval	1.12	1.69
Coeff. of Price-Related Bias (PRB)	-0.42	-0.08	Coeff. of Price-Related Bias (PRB)	-0.26	-0.23
Lower PRB Confidence Interval	-0.50	-1.14	Lower PRB Confidence Interval	-0.49	-0.67
Upper PRB Confidence Interval	-0.34	0.99	Upper PRB Confidence Interval	-0.03	0.21
Average Sale Price	161,983	87,200	Average Sale Price	74,262	51,160
Average Appraised Value	160,638	77,604	Average Appraised Value	59,498	32,552

Detailed Sample Statistics for the Residential and Commercial Subclasses

033 : GRAHAM		S-5	034 : GRANT		
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	25	6	Original Number of Sales	66	5
Trimmed Outliers	1	0	Trimmed Outliers	4	0
Number of Ratios: Outliers Removed	24	6	Number of Ratios: Outliers Removed	62	5
Minimum Ratio	8.1	60.7	Minimum Ratio	49.8	81.2
Maximum Ratio	121.6	127.9	Maximum Ratio	320.3	124.8
Minimum Sale Price	7,000	10,000	Minimum Sale Price	10,000	55,000
Maximum Sale Price	179,000	75,000	Maximum Sale Price	330,000	681,000
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	77.7	90.0	Median Ratio	98.9	84.7
Lower Median Confidence Interval	72.1	60.9	Lower Median Confidence Interval	92.0	81.2
Upper Median Confidence Interval	92.7	114.2	Upper Median Confidence Interval	100.3	124.8
Broadened Median Ratio	77.6	86.9	Broadened Median Ratio	98.8	88.8
Coefficient of Dispersion (COD)	17.9	21.3	Coefficient of Dispersion (COD)	11.3	13.3
Lower COD Confidence Interval	13.9	10.4	Lower COD Confidence Interval	9.1	4.7
Upper COD Confidence Interval	24.5	36.6	Upper COD Confidence Interval	13.8	21.5
Value Weighted COD	16.4	23.8	Value Weighted COD	10.5	10.4
Coefficient of Concentration @10%	32.0	33.3	Coefficient of Concentration @10%	50.0	60.0
Coefficient of Concentration @15%	44.0	50.0	Coefficient of Concentration @15%	65.2	80.0
Coefficient of Concentration @20%	60.0	50.0	Coefficient of Concentration @20%	72.7	80.0
Coefficient of Concentration @50%	92.0	100.0	Coefficient of Concentration @50%	95.5	100.0
Coefficient of Concentration @100%	100.0	100.0	Coefficient of Concentration @100%	97.0	100.0
Coefficient of Interquartile Deviation	19.4	25.8	Coefficient of Interquartile Deviation	9.1	16.6
Median Percent Deviation	17.6	21.9	Median Percent Deviation	9.8	4.2
Lower Quartile (25th Percentile)	67.5	60.9	Lower Quartile (25th Percentile)	87.6	82.8
Upper Quartile	97.6	107.4	Upper Quartile	105.6	111.0
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptW	Normality Test	RejectK	RejectW
Relative Skewness	0.47	0.29	Relative Skewness	0.26	1.13
Relative Kurtosis	2.47	2.03	Relative Kurtosis	2.72	2.66
Arithmetic Mean Ratio	82.6	88.4	Arithmetic Mean Ratio	97.5	94.5
Weighted Mean Ratio	80.7	85.3	Weighted Mean Ratio	95.0	93.1
Geometric Mean Ratio	80.9	85.3	Geometric Mean Ratio	96.5	93.2
Harmonic Mean Ratio	79.2	82.3	Harmonic Mean Ratio	95.4	92.1
Standard Deviation	17.6	25.6	Standard Deviation	14.5	18.0
Coefficient of Variation (COV)	21.3	28.9	Coefficient of Variation (COV)	14.9	19.1
Price-Related Differential (PRD)	1.02	1.04	Price-Related Differential (PRD)	1.03	1.01
Lower PRD Confidence Interval	0.97	0.91	Lower PRD Confidence Interval	1.01	0.94
Upper PRD Confidence interval	1.09	1.14	Upper PRD Confidence interval	1.04	1.11
Coeff. of Price-Related Bias (PRB)	-0.01	0.08	Coeff. of Price-Related Bias (PRB)	-0.17	-0.01
Lower PRB Confidence Interval	-0.13	-0.30	Lower PRB Confidence Interval	-0.27	-0.28
Upper PRB Confidence Interval	0.11	0.46	Upper PRB Confidence Interval	-0.07	0.25
Average Sale Price	51,163	33,167	Average Sale Price	118,665	268,451
Average Appraised Value	41,275	28,305	Average Appraised Value	112,682	250,000

Detailed Sample Statistics for the Residential and Commercial Subclasses

035 : GRAY			036 : GREELEY		*S-5*
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	63	5	Original Number of Sales	8	5
Trimmed Outliers	1	0	Trimmed Outliers	1	0
Number of Ratios: Outliers Removed	62	5	Number of Ratios: Outliers Removed	7	5
Minimum Ratio	59.6	58.2	Minimum Ratio	58.5	85.5
Maximum Ratio	145.4	139.2	Maximum Ratio	369.3	145.6
Minimum Sale Price	12,000	27,500	Minimum Sale Price	8,000	7,500
Maximum Sale Price	275,000	521,512	Maximum Sale Price	150,000	1,185,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	94.9	107.1	Median Ratio	111.4	98.5
Lower Median Confidence Interval	88.9	58.2	Lower Median Confidence Interval	81.8	85.5
Upper Median Confidence Interval	98.8	139.2	Upper Median Confidence Interval	152.9	145.6
Broadened Median Ratio	94.8	95.8	Broadened Median Ratio	108.8	108.4
Coefficient of Dispersion (COD)	13.1	25.2	Coefficient of Dispersion (COD)	25.0	20.3
Lower COD Confidence Interval	10.9	10.1	Lower COD Confidence Interval	15.5	3.8
Upper COD Confidence Interval	16.0	51.3	Upper COD Confidence Interval	52.2	23.1
Value Weighted COD	11.6	37.5	Value Weighted COD	22.1	33.2
Coefficient of Concentration @10%	42.9	40.0	Coefficient of Concentration @10%	12.5	40.0
Coefficient of Concentration @15%	60.3	40.0	Coefficient of Concentration @15%	37.5	60.0
Coefficient of Concentration @20%	73.0	40.0	Coefficient of Concentration @20%	37.5	60.0
Coefficient of Concentration @50%	98.4	100.0	Coefficient of Concentration @50%	87.5	100.0
Coefficient of Concentration @100%	100.0	100.0	Coefficient of Concentration @100%	87.5	100.0
Coefficient of Interquartile Deviation	12.3	31.5	Coefficient of Interquartile Deviation	28.5	25.4
Median Percent Deviation	12.2	30.0	Median Percent Deviation	25.8	13.2
Lower Quartile (25th Percentile)	83.2	60.6	Lower Quartile (25th Percentile)	82.2	89.5
Upper Quartile	106.5	128.1	Upper Quartile	145.6	139.4
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptW	Normality Test	AcceptW	AcceptW
Relative Skewness	0.35	-0.08	Relative Skewness	0.16	0.40
Relative Kurtosis	3.01	1.42	Relative Kurtosis	2.01	1.39
Arithmetic Mean Ratio	94.6	96.9	Arithmetic Mean Ratio	103.3	111.3
Weighted Mean Ratio	93.6	72.2	Weighted Mean Ratio	96.5	130.5
Geometric Mean Ratio	93.4	91.5	Geometric Mean Ratio	98.9	108.8
Harmonic Mean Ratio	92.1	86.1	Harmonic Mean Ratio	94.5	106.6
Standard Deviation	15.6	35.1	Standard Deviation	31.9	26.5
Coefficient of Variation (COV)	16.4	36.3	Coefficient of Variation (COV)	30.9	23.8
Price-Related Differential (PRD)	1.01	1.34	Price-Related Differential (PRD)	1.07	0.85
Lower PRD Confidence Interval	0.99	1.21	Lower PRD Confidence Interval	1.03	0.77
Upper PRD Confidence interval	1.04	1.50	Upper PRD Confidence interval	1.14	1.12
Coeff. of Price-Related Bias (PRB)	-0.01	-0.16	Coeff. of Price-Related Bias (PRB)	-0.86	0.03
Lower PRB Confidence Interval	-0.05	-0.43	Lower PRB Confidence Interval	-1.41	-0.13
Upper PRB Confidence Interval	0.03	0.10	Upper PRB Confidence Interval	-0.32	0.19
Average Sale Price	113,843	180,802	Average Sale Price	80,857	257,300
Average Appraised Value	106,507	130,548	Average Appraised Value	78,029	335,826

Detailed Sample Statistics for the Residential and Commercial Subclasses

037 : GREENWOOD			038 : HAMILTON		S-5
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	49	5	Original Number of Sales	20	6
Trimmed Outliers	3	0	Trimmed Outliers	0	0
Number of Ratios: Outliers Removed	46	5	Number of Ratios: Outliers Removed	20	6
Minimum Ratio	34.8	86.4	Minimum Ratio	29.5	58.8
Maximum Ratio	480.0	111.3	Maximum Ratio	139.2	443.6
Minimum Sale Price	1,200	3,000	Minimum Sale Price	15,000	4,500
Maximum Sale Price	340,000	40,000	Maximum Sale Price	230,000	275,000
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	103.5	108.2	Median Ratio	89.6	107.8
Lower Median Confidence Interval	97.3	86.4	Lower Median Confidence Interval	79.4	71.3
Upper Median Confidence Interval	110.1	111.3	Upper Median Confidence Interval	101.9	323.3
Broadened Median Ratio	103.5	107.4	Broadened Median Ratio	90.1	119.7
Coefficient of Dispersion (COD)	20.6	5.6	Coefficient of Dispersion (COD)	20.9	80.8
Lower COD Confidence Interval	15.8	1.5	Lower COD Confidence Interval	14.9	37.5
Upper COD Confidence Interval	27.9	11.6	Upper COD Confidence Interval	32.5	218.3
Value Weighted COD	17.8	6.9	Value Weighted COD	16.3	26.1
Coefficient of Concentration @10%	38.8	80.0	Coefficient of Concentration @10%	35.0	33.3
Coefficient of Concentration @15%	44.9	80.0	Coefficient of Concentration @15%	50.0	33.3
Coefficient of Concentration @20%	55.1	80.0	Coefficient of Concentration @20%	65.0	33.3
Coefficient of Concentration @50%	83.7	100.0	Coefficient of Concentration @50%	90.0	66.7
Coefficient of Concentration @100%	93.9	100.0	Coefficient of Concentration @100%	100.0	83.3
Coefficient of Interquartile Deviation	19.1	7.0	Coefficient of Interquartile Deviation	18.5	86.1
Median Percent Deviation	18.3	2.9	Median Percent Deviation	15.0	33.8
Lower Quartile (25th Percentile)	85.3	95.4	Lower Quartile (25th Percentile)	76.1	77.6
Upper Quartile	124.9	110.5	Upper Quartile	109.4	263.1
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectW	Normality Test	RejectK	RejectW
Relative Skewness	-0.38	-1.28	Relative Skewness	-0.27	1.38
Relative Kurtosis	3.38	2.94	Relative Kurtosis	3.38	3.37
Arithmetic Mean Ratio	99.1	104.0	Arithmetic Mean Ratio	91.8	167.5
Weighted Mean Ratio	94.6	101.3	Weighted Mean Ratio	87.4	102.8
Geometric Mean Ratio	94.0	103.6	Geometric Mean Ratio	87.7	131.3
Harmonic Mean Ratio	87.5	103.1	Harmonic Mean Ratio	82.2	109.5
Standard Deviation	28.7	10.2	Standard Deviation	25.3	143.9
Coefficient of Variation (COV)	29.0	9.8	Coefficient of Variation (COV)	27.6	86.0
Price-Related Differential (PRD)	1.05	1.03	Price-Related Differential (PRD)	1.05	1.63
Lower PRD Confidence Interval	0.99	1.00	Lower PRD Confidence Interval	0.99	1.05
Upper PRD Confidence interval	1.13	1.10	Upper PRD Confidence interval	1.12	2.93
Coeff. of Price-Related Bias (PRB)	-0.15	-0.03	Coeff. of Price-Related Bias (PRB)	0.01	-0.61
Lower PRB Confidence Interval	-0.29	-0.14	Lower PRB Confidence Interval	-0.13	-1.52
Upper PRB Confidence Interval	-0.01	0.07	Upper PRB Confidence Interval	0.16	0.31
Average Sale Price	54,663	16,260	Average Sale Price	91,728	81,083
Average Appraised Value	51,711	16,464	Average Appraised Value	80,168	83,345

Detailed Sample Statistics for the Residential and Commercial Subclasses

039 : HARPER		*S-5*	040 : HARVEY		
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	50	10	Original Number of Sales	216	27
Trimmed Outliers	7	1	Trimmed Outliers	32	2
Number of Ratios: Outliers Removed	43	9	Number of Ratios: Outliers Removed	184	25
Minimum Ratio	28.8	59.8	Minimum Ratio	18.6	29.4
Maximum Ratio	311.5	280.1	Maximum Ratio	935.0	786.0
Minimum Sale Price	4,000	12,000	Minimum Sale Price	2,700	7,000
Maximum Sale Price	265,000	350,000	Maximum Sale Price	1,282,515	2,275,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	99.2	102.2	Median Ratio	98.5	82.9
Lower Median Confidence Interval	93.7	91.4	Lower Median Confidence Interval	96.8	73.9
Upper Median Confidence Interval	109.9	125.5	Upper Median Confidence Interval	100.2	107.9
Broadened Median Ratio	99.4	103.8	Broadened Median Ratio	98.5	87.2
Coefficient of Dispersion (COD)	18.8	14.7	Coefficient of Dispersion (COD)	10.9	29.1
Lower COD Confidence Interval	13.8	8.4	Lower COD Confidence Interval	9.6	22.4
Upper COD Confidence Interval	25.9	28.1	Upper COD Confidence Interval	12.5	43.2
Value Weighted COD	14.4	12.2	Value Weighted COD	11.2	45.4
Coefficient of Concentration @10%	38.0	40.0	Coefficient of Concentration @10%	49.5	22.2
Coefficient of Concentration @15%	54.0	40.0	Coefficient of Concentration @15%	62.5	29.6
Coefficient of Concentration @20%	62.0	70.0	Coefficient of Concentration @20%	69.9	33.3
Coefficient of Concentration @50%	78.0	90.0	Coefficient of Concentration @50%	87.0	74.1
Coefficient of Concentration @100%	90.0	90.0	Coefficient of Concentration @100%	95.4	92.6
Coefficient of Interquartile Deviation	19.1	14.6	Coefficient of Interquartile Deviation	11.5	28.3
Median Percent Deviation	12.9	15.4	Median Percent Deviation	10.3	25.5
Lower Quartile (25th Percentile)	89.4	93.6	Lower Quartile (25th Percentile)	90.3	69.2
Upper Quartile	127.4	123.5	Upper Quartile	113.0	116.0
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectW	RejectK	Normality Test	RejectK	AcceptK
Relative Skewness	0.90	-0.46	Relative Skewness	0.41	-0.14
Relative Kurtosis	4.18	2.90	Relative Kurtosis	3.69	2.29
Arithmetic Mean Ratio	103.0	101.6	Arithmetic Mean Ratio	99.3	85.7
Weighted Mean Ratio	92.9	107.5	Weighted Mean Ratio	95.7	97.0
Geometric Mean Ratio	99.7	99.3	Geometric Mean Ratio	98.3	79.9
Harmonic Mean Ratio	96.5	96.8	Harmonic Mean Ratio	97.2	73.1
Standard Deviation	27.0	21.4	Standard Deviation	14.5	29.6
Coefficient of Variation (COV)	26.2	21.0	Coefficient of Variation (COV)	14.6	34.6
Price-Related Differential (PRD)	1.11	0.94	Price-Related Differential (PRD)	1.04	0.88
Lower PRD Confidence Interval	1.06	0.83	Lower PRD Confidence Interval	1.01	0.74
Upper PRD Confidence interval	1.18	1.05	Upper PRD Confidence interval	1.09	1.21
Coeff. of Price-Related Bias (PRB)	-0.16	0.06	Coeff. of Price-Related Bias (PRB)	-0.23	-0.20
Lower PRB Confidence Interval	-0.27	-0.23	Lower PRB Confidence Interval	-0.32	-0.62
Upper PRB Confidence Interval	-0.05	0.34	Upper PRB Confidence Interval	-0.14	0.22
Average Sale Price	83,084	104,944	Average Sale Price	128,613	257,936
Average Appraised Value	77,157	112,832	Average Appraised Value	123,093	250,071

Detailed Sample Statistics for the Residential and Commercial Subclasses

041 : HASKELL		*S-3*
GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	23	4
Trimmed Outliers	0	0
Number of Ratios: Outliers Removed	23	4
Minimum Ratio	47.8	57.5
Maximum Ratio	119.9	130.1
Minimum Sale Price	37,000	25,000
Maximum Sale Price	239,000	95,000
DISTRIBUTION FREE STATISTICS		
Median Ratio	92.9	99.4
Lower Median Confidence Interval	81.9	59.2
Upper Median Confidence Interval	97.3	129.0
Broadened Median Ratio	93.5	97.5
Coefficient of Dispersion (COD)	15.5	22.5
Lower COD Confidence Interval	11.2	11.7
Upper COD Confidence Interval	23.3	38.7
Value Weighted COD	15.3	26.8
Coefficient of Concentration @10%	34.8	50.0
Coefficient of Concentration @15%	60.9	50.0
Coefficient of Concentration @20%	65.2	50.0
Coefficient of Concentration @50%	100.0	100.0
Coefficient of Concentration @100%	100.0	100.0
Coefficient of Interquartile Deviation	13.0	29.5
Median Percent Deviation	12.9	19.7
Lower Quartile (25th Percentile)	80.8	65.9
Upper Quartile	104.9	124.5
PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptW
Relative Skewness	-0.52	-0.28
Relative Kurtosis	2.67	1.83
Arithmetic Mean Ratio	90.7	96.6
Weighted Mean Ratio	92.7	92.9
Geometric Mean Ratio	88.6	92.5
Harmonic Mean Ratio	86.2	88.2
Standard Deviation	18.7	30.6
Coefficient of Variation (COV)	20.6	31.7
Price-Related Differential (PRD)	0.98	1.04
Lower PRD Confidence Interval	0.95	0.99
Upper PRD Confidence interval	1.01	1.22
Coeff. of Price-Related Bias (PRB)	0.11	0.00
Lower PRB Confidence Interval	0.01	0.00
Upper PRB Confidence Interval	0.22	0.00
Average Sale Price	126,596	69,375
Average Appraised Value	117,356	64,473

042 : HODGEMAN		*S-6*
GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	11	9
Trimmed Outliers	0	1
Number of Ratios: Outliers Removed	11	8
Minimum Ratio	39.6	49.3
Maximum Ratio	126.6	476.5
Minimum Sale Price	18,500	2,000
Maximum Sale Price	167,000	114,000
DISTRIBUTION FREE STATISTICS		
Median Ratio	98.7	69.9
Lower Median Confidence Interval	72.7	50.8
Upper Median Confidence Interval	106.3	121.2
Broadened Median Ratio	97.6	71.5
Coefficient of Dispersion (COD)	16.3	25.0
Lower COD Confidence Interval	8.4	14.5
Upper COD Confidence Interval	35.7	46.8
Value Weighted COD	17.9	24.2
Coefficient of Concentration @10%	54.5	22.2
Coefficient of Concentration @15%	63.6	33.3
Coefficient of Concentration @20%	63.6	44.4
Coefficient of Concentration @50%	90.9	77.8
Coefficient of Concentration @100%	100.0	88.9
Coefficient of Interquartile Deviation	17.0	36.3
Median Percent Deviation	7.6	25.1
Lower Quartile (25th Percentile)	72.7	53.6
Upper Quartile	106.3	104.3
PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectK
Relative Skewness	-0.91	1.05
Relative Kurtosis	3.38	3.20
Arithmetic Mean Ratio	92.3	72.4
Weighted Mean Ratio	90.9	59.3
Geometric Mean Ratio	88.8	69.4
Harmonic Mean Ratio	84.1	66.9
Standard Deviation	23.7	23.8
Coefficient of Variation (COV)	25.7	32.8
Price-Related Differential (PRD)	1.02	1.22
Lower PRD Confidence Interval	0.96	1.07
Upper PRD Confidence interval	1.12	1.59
Coeff. of Price-Related Bias (PRB)	-0.01	-0.71
Lower PRB Confidence Interval	-0.20	-2.05
Upper PRB Confidence Interval	0.18	0.63
Average Sale Price	65,791	28,000
Average Appraised Value	59,790	16,601

Detailed Sample Statistics for the Residential and Commercial Subclasses

043 : JACKSON		S-8	044 : JEFFERSON		S-7
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	93	12	Original Number of Sales	195	9
Trimmed Outliers	9	1	Trimmed Outliers	18	1
Number of Ratios: Outliers Removed	84	11	Number of Ratios: Outliers Removed	177	8
Minimum Ratio	48.7	55.6	Minimum Ratio	29.4	67.0
Maximum Ratio	748.5	155.5	Maximum Ratio	621.1	212.9
Minimum Sale Price	3,770	18,000	Minimum Sale Price	4,500	18,000
Maximum Sale Price	343,000	801,000	Maximum Sale Price	458,000	193,000
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	93.4	74.0	Median Ratio	93.3	99.7
Lower Median Confidence Interval	88.5	63.2	Lower Median Confidence Interval	90.6	77.3
Upper Median Confidence Interval	101.3	88.5	Upper Median Confidence Interval	95.7	126.1
Broadened Median Ratio	93.7	74.2	Broadened Median Ratio	93.3	97.9
Coefficient of Dispersion (COD)	17.8	14.6	Coefficient of Dispersion (COD)	14.1	14.8
Lower COD Confidence Interval	14.9	9.2	Lower COD Confidence Interval	12.4	8.6
Upper COD Confidence Interval	21.4	23.3	Upper COD Confidence Interval	16.1	25.3
Value Weighted COD	15.1	19.0	Value Weighted COD	12.0	15.7
Coefficient of Concentration @10%	35.5	50.0	Coefficient of Concentration @10%	45.1	44.4
Coefficient of Concentration @15%	49.5	50.0	Coefficient of Concentration @15%	59.0	44.4
Coefficient of Concentration @20%	61.3	58.3	Coefficient of Concentration @20%	67.7	55.6
Coefficient of Concentration @50%	87.1	91.7	Coefficient of Concentration @50%	90.3	88.9
Coefficient of Concentration @100%	94.6	91.7	Coefficient of Concentration @100%	96.9	88.9
Coefficient of Interquartile Deviation	14.9	21.0	Coefficient of Interquartile Deviation	12.4	17.4
Median Percent Deviation	15.5	14.5	Median Percent Deviation	11.5	17.5
Lower Quartile (25th Percentile)	82.6	61.4	Lower Quartile (25th Percentile)	83.2	79.8
Upper Quartile	110.4	92.6	Upper Quartile	106.3	114.6
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectK	Normality Test	RejectK	AcceptK
Relative Skewness	0.35	0.52	Relative Skewness	0.44	0.27
Relative Kurtosis	3.17	2.32	Relative Kurtosis	3.33	2.46
Arithmetic Mean Ratio	93.3	74.0	Arithmetic Mean Ratio	94.2	93.7
Weighted Mean Ratio	90.3	76.5	Weighted Mean Ratio	91.0	84.7
Geometric Mean Ratio	90.8	72.8	Geometric Mean Ratio	92.6	92.1
Harmonic Mean Ratio	88.3	71.7	Harmonic Mean Ratio	91.1	90.5
Standard Deviation	21.4	14.3	Standard Deviation	17.3	18.4
Coefficient of Variation (COV)	22.9	19.3	Coefficient of Variation (COV)	18.4	19.6
Price-Related Differential (PRD)	1.03	0.97	Price-Related Differential (PRD)	1.04	1.11
Lower PRD Confidence Interval	1.01	0.90	Lower PRD Confidence Interval	1.02	1.05
Upper PRD Confidence interval	1.06	1.11	Upper PRD Confidence interval	1.05	1.24
Coeff. of Price-Related Bias (PRB)	-0.27	0.14	Coeff. of Price-Related Bias (PRB)	-0.21	-0.10
Lower PRB Confidence Interval	-0.46	0.02	Lower PRB Confidence Interval	-0.28	-0.48
Upper PRB Confidence Interval	-0.08	0.26	Upper PRB Confidence Interval	-0.14	0.28
Average Sale Price	101,997	89,773	Average Sale Price	143,997	87,674
Average Appraised Value	92,074	68,668	Average Appraised Value	131,029	74,264

Detailed Sample Statistics for the Residential and Commercial Subclasses

045 : JEWELL		*S-3*	046 : JOHNSON		
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	20	6	Original Number of Sales	352	138
Trimmed Outliers	1	0	Trimmed Outliers	24	6
Number of Ratios: Outliers Removed	19	6	Number of Ratios: Outliers Removed	328	132
Minimum Ratio	52.0	50.5	Minimum Ratio	44.7	39.8
Maximum Ratio	650.0	179.4	Maximum Ratio	1013.3	374.9
Minimum Sale Price	1,000	1,000	Minimum Sale Price	30,500	57,500
Maximum Sale Price	120,000	14,000	Maximum Sale Price	1,100,000	20,000,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	124.1	121.3	Median Ratio	92.7	86.4
Lower Median Confidence Interval	88.0	76.3	Lower Median Confidence Interval	91.2	81.8
Upper Median Confidence Interval	138.7	155.0	Upper Median Confidence Interval	93.5	93.0
Broadened Median Ratio	117.1	119.6	Broadened Median Ratio	92.7	86.4
Coefficient of Dispersion (COD)	28.7	21.8	Coefficient of Dispersion (COD)	8.2	22.3
Lower COD Confidence Interval	18.3	7.7	Lower COD Confidence Interval	7.5	19.6
Upper COD Confidence Interval	44.2	63.6	Upper COD Confidence Interval	9.0	26.0
Value Weighted COD	28.9	18.8	Value Weighted COD	8.3	20.8
Coefficient of Concentration @10%	25.0	50.0	Coefficient of Concentration @10%	65.1	33.3
Coefficient of Concentration @15%	25.0	50.0	Coefficient of Concentration @15%	78.4	43.5
Coefficient of Concentration @20%	35.0	66.7	Coefficient of Concentration @20%	85.5	57.2
Coefficient of Concentration @50%	75.0	83.3	Coefficient of Concentration @50%	97.4	87.0
Coefficient of Concentration @100%	95.0	100.0	Coefficient of Concentration @100%	98.9	95.7
Coefficient of Interquartile Deviation	24.7	22.1	Coefficient of Interquartile Deviation	7.2	22.4
Median Percent Deviation	27.4	11.8	Median Percent Deviation	7.0	16.9
Lower Quartile (25th Percentile)	83.6	89.1	Lower Quartile (25th Percentile)	85.5	73.2
Upper Quartile	144.9	142.7	Upper Quartile	98.9	111.8
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptW	Normality Test	RejectK	RejectK
Relative Skewness	0.47	-0.19	Relative Skewness	-0.19	0.74
Relative Kurtosis	2.60	2.73	Relative Kurtosis	3.05	3.28
Arithmetic Mean Ratio	115.3	117.5	Arithmetic Mean Ratio	91.7	90.3
Weighted Mean Ratio	113.5	121.4	Weighted Mean Ratio	91.7	79.7
Geometric Mean Ratio	107.5	110.0	Geometric Mean Ratio	91.1	87.1
Harmonic Mean Ratio	99.7	101.2	Harmonic Mean Ratio	90.6	84.0
Standard Deviation	43.4	41.8	Standard Deviation	9.7	24.8
Coefficient of Variation (COV)	37.7	35.6	Coefficient of Variation (COV)	10.6	27.4
Price-Related Differential (PRD)	1.02	0.97	Price-Related Differential (PRD)	1.00	1.13
Lower PRD Confidence Interval	0.91	0.91	Lower PRD Confidence Interval	0.99	1.06
Upper PRD Confidence interval	1.22	1.03	Upper PRD Confidence interval	1.01	1.22
Coeff. of Price-Related Bias (PRB)	-0.34	0.09	Coeff. of Price-Related Bias (PRB)	-0.06	0.01
Lower PRB Confidence Interval	-0.68	-0.22	Lower PRB Confidence Interval	-0.18	-0.04
Upper PRB Confidence Interval	0.00	0.40	Upper PRB Confidence Interval	0.05	0.06
Average Sale Price	33,526	8,167	Average Sale Price	262,390	1,751,623
Average Appraised Value	38,054	9,917	Average Appraised Value	240,523	1,396,006

Detailed Sample Statistics for the Residential and Commercial Subclasses

047 : KEARNY		S-6	048 : KINGMAN		S-4
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	32	6	Original Number of Sales	60	5
Trimmed Outliers	1	0	Trimmed Outliers	5	0
Number of Ratios: Outliers Removed	31	6	Number of Ratios: Outliers Removed	55	5
Minimum Ratio	54.7	53.6	Minimum Ratio	14.2	98.0
Maximum Ratio	206.0	198.6	Maximum Ratio	335.2	174.0
Minimum Sale Price	21,000	5,000	Minimum Sale Price	8,400	24,000
Maximum Sale Price	310,000	197,690	Maximum Sale Price	699,900	379,500
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	89.9	81.8	Median Ratio	105.1	104.4
Lower Median Confidence Interval	76.6	57.7	Lower Median Confidence Interval	100.1	98.0
Upper Median Confidence Interval	96.1	151.5	Upper Median Confidence Interval	116.9	174.0
Broadened Median Ratio	88.3	82.2	Broadened Median Ratio	105.2	111.0
Coefficient of Dispersion (COD)	20.1	40.9	Coefficient of Dispersion (COD)	20.7	19.2
Lower COD Confidence Interval	14.8	15.9	Lower COD Confidence Interval	16.5	8.9
Upper COD Confidence Interval	26.8	86.1	Upper COD Confidence Interval	26.6	31.0
Value Weighted COD	21.1	43.3	Value Weighted COD	18.8	45.8
Coefficient of Concentration @10%	25.0	33.3	Coefficient of Concentration @10%	28.3	60.0
Coefficient of Concentration @15%	50.0	33.3	Coefficient of Concentration @15%	45.0	60.0
Coefficient of Concentration @20%	50.0	33.3	Coefficient of Concentration @20%	60.0	60.0
Coefficient of Concentration @50%	90.6	83.3	Coefficient of Concentration @50%	81.7	80.0
Coefficient of Concentration @100%	96.9	83.3	Coefficient of Concentration @100%	95.0	100.0
Coefficient of Interquartile Deviation	18.0	41.7	Coefficient of Interquartile Deviation	17.8	24.1
Median Percent Deviation	17.9	26.0	Median Percent Deviation	16.8	6.1
Lower Quartile (25th Percentile)	68.8	59.8	Lower Quartile (25th Percentile)	90.7	100.0
Upper Quartile	101.2	128.0	Upper Quartile	128.0	150.3
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectW	Normality Test	RejectK	RejectW
Relative Skewness	0.58	1.34	Relative Skewness	0.22	1.11
Relative Kurtosis	2.96	3.40	Relative Kurtosis	3.43	2.61
Arithmetic Mean Ratio	87.3	97.0	Arithmetic Mean Ratio	107.5	121.0
Weighted Mean Ratio	81.6	112.9	Weighted Mean Ratio	99.9	150.2
Geometric Mean Ratio	84.5	87.8	Geometric Mean Ratio	103.2	118.1
Harmonic Mean Ratio	81.9	81.0	Harmonic Mean Ratio	98.4	115.7
Standard Deviation	22.6	53.0	Standard Deviation	29.2	31.6
Coefficient of Variation (COV)	25.9	54.6	Coefficient of Variation (COV)	27.2	26.1
Price-Related Differential (PRD)	1.07	0.86	Price-Related Differential (PRD)	1.08	0.81
Lower PRD Confidence Interval	1.03	0.69	Lower PRD Confidence Interval	1.03	0.77
Upper PRD Confidence interval	1.14	1.03	Upper PRD Confidence interval	1.13	1.01
Coeff. of Price-Related Bias (PRB)	-0.18	0.20	Coeff. of Price-Related Bias (PRB)	-0.07	0.16
Lower PRB Confidence Interval	-0.35	-0.12	Lower PRB Confidence Interval	-0.18	0.02
Upper PRB Confidence Interval	-0.01	0.52	Upper PRB Confidence Interval	0.04	0.30
Average Sale Price	97,026	77,282	Average Sale Price	94,095	121,020
Average Appraised Value	79,153	87,253	Average Appraised Value	93,961	181,752

Detailed Sample Statistics for the Residential and Commercial Subclasses

049 : KIOWA		S-4	050 : LABETTE		
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	14	6	Original Number of Sales	177	13
Trimmed Outliers	0	0	Trimmed Outliers	23	1
Number of Ratios: Outliers Removed	14	6	Number of Ratios: Outliers Removed	154	12
Minimum Ratio	64.5	65.4	Minimum Ratio	46.7	10.5
Maximum Ratio	155.7	126.7	Maximum Ratio	1064.7	572.0
Minimum Sale Price	18,000	14,000	Minimum Sale Price	1,500	6,700
Maximum Sale Price	215,000	2,100,000	Maximum Sale Price	259,900	1,500,000
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	91.9	89.8	Median Ratio	103.8	95.8
Lower Median Confidence Interval	89.5	66.8	Lower Median Confidence Interval	99.4	72.6
Upper Median Confidence Interval	112.0	109.1	Upper Median Confidence Interval	109.7	173.3
Broadened Median Ratio	94.9	86.5	Broadened Median Ratio	104.3	111.2
Coefficient of Dispersion (COD)	17.7	16.1	Coefficient of Dispersion (COD)	23.5	51.5
Lower COD Confidence Interval	11.9	5.5	Lower COD Confidence Interval	20.3	34.0
Upper COD Confidence Interval	30.5	30.9	Upper COD Confidence Interval	27.8	98.3
Value Weighted COD	13.1	22.3	Value Weighted COD	16.0	29.4
Coefficient of Concentration @10%	42.9	50.0	Coefficient of Concentration @10%	29.4	15.4
Coefficient of Concentration @15%	57.1	50.0	Coefficient of Concentration @15%	42.9	15.4
Coefficient of Concentration @20%	64.3	50.0	Coefficient of Concentration @20%	51.4	15.4
Coefficient of Concentration @50%	92.9	100.0	Coefficient of Concentration @50%	78.0	46.2
Coefficient of Concentration @100%	100.0	100.0	Coefficient of Concentration @100%	86.4	92.3
Coefficient of Interquartile Deviation	14.7	18.2	Coefficient of Interquartile Deviation	24.2	56.2
Median Percent Deviation	13.1	12.9	Median Percent Deviation	19.4	55.9
Lower Quartile (25th Percentile)	89.3	67.6	Lower Quartile (25th Percentile)	89.3	67.8
Upper Quartile	116.4	100.3	Upper Quartile	139.7	175.5
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptW	Normality Test	RejectK	AcceptK
Relative Skewness	0.83	0.71	Relative Skewness	1.24	0.00
Relative Kurtosis	3.59	2.64	Relative Kurtosis	4.54	1.73
Arithmetic Mean Ratio	100.3	88.6	Arithmetic Mean Ratio	106.6	106.3
Weighted Mean Ratio	95.7	71.9	Weighted Mean Ratio	95.7	80.5
Geometric Mean Ratio	98.0	86.4	Geometric Mean Ratio	102.2	85.6
Harmonic Mean Ratio	95.8	84.4	Harmonic Mean Ratio	98.2	55.9
Standard Deviation	23.0	22.0	Standard Deviation	33.1	58.0
Coefficient of Variation (COV)	22.9	24.8	Coefficient of Variation (COV)	31.0	54.5
Price-Related Differential (PRD)	1.05	1.23	Price-Related Differential (PRD)	1.11	1.32
Lower PRD Confidence Interval	1.02	0.98	Lower PRD Confidence Interval	1.08	1.08
Upper PRD Confidence interval	1.10	1.50	Upper PRD Confidence interval	1.16	1.75
Coeff. of Price-Related Bias (PRB)	-0.07	-0.01	Coeff. of Price-Related Bias (PRB)	-0.34	0.26
Lower PRB Confidence Interval	-0.24	-0.15	Lower PRB Confidence Interval	-0.44	-0.16
Upper PRB Confidence Interval	0.10	0.13	Upper PRB Confidence Interval	-0.25	0.67
Average Sale Price	95,321	399,833	Average Sale Price	68,858	179,708
Average Appraised Value	91,221	287,510	Average Appraised Value	65,863	144,693

Detailed Sample Statistics for the Residential and Commercial Subclasses

051:LANE		S-6	052:LEAVENWORTH		
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	13	6	Original Number of Sales	218	15
Trimmed Outliers	0	0	Trimmed Outliers	32	0
Number of Ratios: Outliers Removed	13	6	Number of Ratios: Outliers Removed	186	15
Minimum Ratio	32.1	31.5	Minimum Ratio	29.4	50.6
Maximum Ratio	154.3	315.4	Maximum Ratio	521.9	193.6
Minimum Sale Price	6,000	3,500	Minimum Sale Price	5,000	35,000
Maximum Sale Price	85,000	185,000	Maximum Sale Price	800,000	1,325,000
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	85.3	97.2	Median Ratio	95.2	102.7
Lower Median Confidence Interval	64.6	56.1	Lower Median Confidence Interval	93.9	90.0
Upper Median Confidence Interval	120.8	220.6	Upper Median Confidence Interval	96.6	129.7
Broadened Median Ratio	82.6	99.2	Broadened Median Ratio	95.1	100.8
Coefficient of Dispersion (COD)	35.0	57.0	Coefficient of Dispersion (COD)	6.1	26.1
Lower COD Confidence Interval	22.3	17.1	Lower COD Confidence Interval	5.4	17.3
Upper COD Confidence Interval	57.7	185.7	Upper COD Confidence Interval	6.9	43.1
Value Weighted COD	27.9	38.4	Value Weighted COD	5.7	32.0
Coefficient of Concentration @10%	30.8	33.3	Coefficient of Concentration @10%	70.2	26.7
Coefficient of Concentration @15%	30.8	33.3	Coefficient of Concentration @15%	77.5	40.0
Coefficient of Concentration @20%	30.8	50.0	Coefficient of Concentration @20%	83.5	53.3
Coefficient of Concentration @50%	69.2	66.7	Coefficient of Concentration @50%	93.1	86.7
Coefficient of Concentration @100%	100.0	83.3	Coefficient of Concentration @100%	96.3	100.0
Coefficient of Interquartile Deviation	40.2	53.9	Coefficient of Interquartile Deviation	5.8	21.8
Median Percent Deviation	32.5	23.2	Median Percent Deviation	5.8	19.6
Lower Quartile (25th Percentile)	61.1	68.4	Lower Quartile (25th Percentile)	89.7	84.9
Upper Quartile	129.6	173.2	Upper Quartile	100.8	129.7
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectW	Normality Test	RejectK	RejectK
Relative Skewness	0.33	1.38	Relative Skewness	0.38	0.66
Relative Kurtosis	1.96	3.58	Relative Kurtosis	3.53	3.46
Arithmetic Mean Ratio	90.1	124.6	Arithmetic Mean Ratio	95.0	105.8
Weighted Mean Ratio	76.6	66.6	Weighted Mean Ratio	94.9	80.3
Geometric Mean Ratio	82.2	99.2	Geometric Mean Ratio	94.7	100.0
Harmonic Mean Ratio	74.3	79.1	Harmonic Mean Ratio	94.4	94.2
Standard Deviation	38.3	98.5	Standard Deviation	7.5	36.5
Coefficient of Variation (COV)	42.5	79.1	Coefficient of Variation (COV)	7.9	34.5
Price-Related Differential (PRD)	1.18	1.87	Price-Related Differential (PRD)	1.00	1.32
Lower PRD Confidence Interval	1.06	1.18	Lower PRD Confidence Interval	1.00	1.08
Upper PRD Confidence interval	1.40	4.52	Upper PRD Confidence interval	1.01	1.70
Coeff. of Price-Related Bias (PRB)	-0.19	-0.31	Coeff. of Price-Related Bias (PRB)	-0.21	-0.18
Lower PRB Confidence Interval	-0.44	-0.92	Lower PRB Confidence Interval	-0.27	-0.31
Upper PRB Confidence Interval	0.05	0.30	Upper PRB Confidence Interval	-0.14	-0.05
Average Sale Price	44,923	61,417	Average Sale Price	169,442	255,200
Average Appraised Value	34,425	40,878	Average Appraised Value	160,836	204,983

Detailed Sample Statistics for the Residential and Commercial Subclasses

053 : LINCOLN		S-10	054 : LINN		S-4
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	19	10	Original Number of Sales	115	6
Trimmed Outliers	3	2	Trimmed Outliers	12	0
Number of Ratios: Outliers Removed	16	8	Number of Ratios: Outliers Removed	103	6
Minimum Ratio	60.6	51.0	Minimum Ratio	16.5	56.7
Maximum Ratio	1736.8	342.0	Maximum Ratio	526.0	112.5
Minimum Sale Price	2,000	1,000	Minimum Sale Price	500	6,000
Maximum Sale Price	305,000	315,000	Maximum Sale Price	350,000	110,000
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	116.2	97.6	Median Ratio	88.8	82.3
Lower Median Confidence Interval	95.5	89.5	Lower Median Confidence Interval	85.1	65.2
Upper Median Confidence Interval	132.1	115.3	Upper Median Confidence Interval	93.9	106.2
Broadened Median Ratio	118.0	97.7	Broadened Median Ratio	89.0	83.8
Coefficient of Dispersion (COD)	23.7	7.9	Coefficient of Dispersion (COD)	19.0	18.6
Lower COD Confidence Interval	15.4	2.6	Lower COD Confidence Interval	16.0	11.4
Upper COD Confidence Interval	38.8	18.3	Upper COD Confidence Interval	22.8	33.0
Value Weighted COD	32.9	3.1	Value Weighted COD	16.3	14.9
Coefficient of Concentration @10%	21.1	60.0	Coefficient of Concentration @10%	31.3	33.3
Coefficient of Concentration @15%	36.8	60.0	Coefficient of Concentration @15%	49.6	50.0
Coefficient of Concentration @20%	47.4	70.0	Coefficient of Concentration @20%	56.5	50.0
Coefficient of Concentration @50%	78.9	90.0	Coefficient of Concentration @50%	83.5	100.0
Coefficient of Concentration @100%	84.2	90.0	Coefficient of Concentration @100%	94.8	100.0
Coefficient of Interquartile Deviation	22.4	9.7	Coefficient of Interquartile Deviation	15.6	20.5
Median Percent Deviation	20.0	4.6	Median Percent Deviation	15.2	16.0
Lower Quartile (25th Percentile)	92.9	90.0	Lower Quartile (25th Percentile)	75.8	69.4
Upper Quartile	145.0	109.0	Upper Quartile	103.5	103.1
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectW	Normality Test	RejectK	AcceptW
Relative Skewness	0.70	1.41	Relative Skewness	0.12	0.06
Relative Kurtosis	3.61	4.58	Relative Kurtosis	3.36	1.98
Arithmetic Mean Ratio	109.2	99.9	Arithmetic Mean Ratio	86.7	84.5
Weighted Mean Ratio	85.8	97.7	Weighted Mean Ratio	83.8	86.6
Geometric Mean Ratio	104.1	99.1	Geometric Mean Ratio	83.7	82.5
Harmonic Mean Ratio	99.2	98.4	Harmonic Mean Ratio	80.5	80.5
Standard Deviation	34.9	14.1	Standard Deviation	21.9	19.9
Coefficient of Variation (COV)	32.0	14.1	Coefficient of Variation (COV)	25.2	23.5
Price-Related Differential (PRD)	1.27	1.02	Price-Related Differential (PRD)	1.03	0.98
Lower PRD Confidence Interval	1.08	0.97	Lower PRD Confidence Interval	1.00	0.86
Upper PRD Confidence interval	1.48	1.10	Upper PRD Confidence interval	1.07	1.07
Coeff. of Price-Related Bias (PRB)	-0.02	-0.31	Coeff. of Price-Related Bias (PRB)	-0.10	0.09
Lower PRB Confidence Interval	-1.15	-0.53	Lower PRB Confidence Interval	-0.17	-0.08
Upper PRB Confidence Interval	1.11	-0.09	Upper PRB Confidence Interval	-0.04	0.26
Average Sale Price	56,465	103,750	Average Sale Price	85,615	52,309
Average Appraised Value	48,446	101,401	Average Appraised Value	71,781	45,285

Detailed Sample Statistics for the Residential and Commercial Subclasses

055 : LOGAN		S-5	056 : LYON		
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	53	7	Original Number of Sales	208	18
Trimmed Outliers	9	0	Trimmed Outliers	18	1
Number of Ratios: Outliers Removed	44	7	Number of Ratios: Outliers Removed	190	17
Minimum Ratio	38.3	48.8	Minimum Ratio	47.2	34.4
Maximum Ratio	203.2	166.9	Maximum Ratio	292.4	306.7
Minimum Sale Price	3,000	12,000	Minimum Sale Price	900	20,000
Maximum Sale Price	295,000	3,650,000	Maximum Sale Price	5,000,000	1,800,000
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	98.2	85.9	Median Ratio	94.6	116.2
Lower Median Confidence Interval	89.5	56.4	Lower Median Confidence Interval	92.2	91.9
Upper Median Confidence Interval	101.0	123.0	Upper Median Confidence Interval	98.8	132.0
Broadened Median Ratio	98.0	92.8	Broadened Median Ratio	94.6	113.1
Coefficient of Dispersion (COD)	11.5	39.5	Coefficient of Dispersion (COD)	15.0	25.1
Lower COD Confidence Interval	8.8	24.1	Lower COD Confidence Interval	13.4	15.6
Upper COD Confidence Interval	15.4	86.0	Upper COD Confidence Interval	17.0	41.5
Value Weighted COD	10.0	34.4	Value Weighted COD	20.6	30.8
Coefficient of Concentration @10%	50.9	14.3	Coefficient of Concentration @10%	40.9	22.2
Coefficient of Concentration @15%	60.4	14.3	Coefficient of Concentration @15%	56.7	38.9
Coefficient of Concentration @20%	66.0	28.6	Coefficient of Concentration @20%	66.8	44.4
Coefficient of Concentration @50%	88.7	85.7	Coefficient of Concentration @50%	89.9	77.8
Coefficient of Concentration @100%	96.2	100.0	Coefficient of Concentration @100%	96.6	94.4
Coefficient of Interquartile Deviation	10.4	38.8	Coefficient of Interquartile Deviation	13.5	21.7
Median Percent Deviation	9.8	42.7	Median Percent Deviation	12.3	21.0
Lower Quartile (25th Percentile)	85.0	56.4	Lower Quartile (25th Percentile)	83.8	87.5
Upper Quartile	105.5	123.0	Upper Quartile	109.3	138.0
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	AcceptK	AcceptW	Normality Test	RejectK	RejectK
Relative Skewness	0.09	0.46	Relative Skewness	0.25	-0.57
Relative Kurtosis	3.55	1.95	Relative Kurtosis	3.48	2.41
Arithmetic Mean Ratio	94.5	96.2	Arithmetic Mean Ratio	94.0	104.7
Weighted Mean Ratio	92.7	58.0	Weighted Mean Ratio	81.8	116.4
Geometric Mean Ratio	93.3	88.2	Geometric Mean Ratio	92.2	96.4
Harmonic Mean Ratio	92.1	81.0	Harmonic Mean Ratio	90.3	85.6
Standard Deviation	14.8	42.9	Standard Deviation	18.3	37.3
Coefficient of Variation (COV)	15.7	44.6	Coefficient of Variation (COV)	19.5	35.6
Price-Related Differential (PRD)	1.02	1.66	Price-Related Differential (PRD)	1.15	0.90
Lower PRD Confidence Interval	1.00	1.19	Lower PRD Confidence Interval	1.03	0.77
Upper PRD Confidence interval	1.05	2.46	Upper PRD Confidence interval	1.36	1.18
Coeff. of Price-Related Bias (PRB)	-0.08	-0.10	Coeff. of Price-Related Bias (PRB)	-0.10	-0.05
Lower PRB Confidence Interval	-0.15	-0.29	Lower PRB Confidence Interval	-0.13	-0.22
Upper PRB Confidence Interval	-0.02	0.09	Upper PRB Confidence Interval	-0.06	0.12
Average Sale Price	96,040	549,000	Average Sale Price	128,984	268,088
Average Appraised Value	88,998	318,327	Average Appraised Value	105,511	312,153

Detailed Sample Statistics for the Residential and Commercial Subclasses

057 : MARION			058 : MARSHALL		
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	130	7	Original Number of Sales	108	10
Trimmed Outliers	19	0	Trimmed Outliers	20	0
Number of Ratios: Outliers Removed	111	7	Number of Ratios: Outliers Removed	88	10
Minimum Ratio	50.0	57.7	Minimum Ratio	6.1	44.6
Maximum Ratio	986.0	120.1	Maximum Ratio	372.6	138.9
Minimum Sale Price	800	27,500	Minimum Sale Price	3,000	5,000
Maximum Sale Price	290,000	900,000	Maximum Sale Price	800,000	180,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	98.4	94.5	Median Ratio	97.6	78.7
Lower Median Confidence Interval	95.8	61.6	Lower Median Confidence Interval	93.1	59.3
Upper Median Confidence Interval	103.7	102.2	Upper Median Confidence Interval	100.2	102.3
Broadened Median Ratio	98.4	91.0	Broadened Median Ratio	97.7	78.5
Coefficient of Dispersion (COD)	13.9	19.3	Coefficient of Dispersion (COD)	12.4	28.5
Lower COD Confidence Interval	11.8	10.0	Lower COD Confidence Interval	10.2	17.8
Upper COD Confidence Interval	16.6	37.5	Upper COD Confidence Interval	15.1	48.3
Value Weighted COD	11.5	34.4	Value Weighted COD	10.9	25.1
Coefficient of Concentration @10%	42.3	42.9	Coefficient of Concentration @10%	47.2	20.0
Coefficient of Concentration @15%	57.7	42.9	Coefficient of Concentration @15%	57.4	40.0
Coefficient of Concentration @20%	65.4	57.1	Coefficient of Concentration @20%	63.0	40.0
Coefficient of Concentration @50%	84.6	100.0	Coefficient of Concentration @50%	85.2	80.0
Coefficient of Concentration @100%	90.0	100.0	Coefficient of Concentration @100%	96.3	100.0
Coefficient of Interquartile Deviation	14.7	21.5	Coefficient of Interquartile Deviation	10.9	28.7
Median Percent Deviation	12.3	18.4	Median Percent Deviation	11.0	24.1
Lower Quartile (25th Percentile)	88.3	61.6	Lower Quartile (25th Percentile)	85.5	57.3
Upper Quartile	117.2	102.2	Upper Quartile	106.9	102.5
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptW	Normality Test	RejectW	RejectK
Relative Skewness	0.27	-0.10	Relative Skewness	-0.03	0.60
Relative Kurtosis	4.21	1.70	Relative Kurtosis	3.52	2.46
Arithmetic Mean Ratio	97.1	87.8	Arithmetic Mean Ratio	96.7	82.3
Weighted Mean Ratio	93.3	64.3	Weighted Mean Ratio	94.8	70.6
Geometric Mean Ratio	95.4	85.1	Geometric Mean Ratio	95.2	77.7
Harmonic Mean Ratio	93.5	82.3	Harmonic Mean Ratio	93.7	73.5
Standard Deviation	18.1	23.1	Standard Deviation	16.4	29.5
Coefficient of Variation (COV)	18.6	26.3	Coefficient of Variation (COV)	17.0	35.9
Price-Related Differential (PRD)	1.04	1.37	Price-Related Differential (PRD)	1.02	1.17
Lower PRD Confidence Interval	1.02	1.26	Lower PRD Confidence Interval	1.00	1.01
Upper PRD Confidence interval	1.07	1.48	Upper PRD Confidence interval	1.05	1.37
Coeff. of Price-Related Bias (PRB)	-0.42	-0.08	Coeff. of Price-Related Bias (PRB)	-0.11	-0.01
Lower PRB Confidence Interval	-0.55	-0.18	Lower PRB Confidence Interval	-0.17	-0.21
Upper PRB Confidence Interval	-0.29	0.02	Upper PRB Confidence Interval	-0.04	0.20
Average Sale Price	89,504	287,929	Average Sale Price	75,264	50,916
Average Appraised Value	83,499	185,163	Average Appraised Value	71,375	35,953

Detailed Sample Statistics for the Residential and Commercial Subclasses

059 : MCPHERSON			060 : MEADE		*S-7*
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	191	15	Original Number of Sales	24	5
Trimmed Outliers	15	0	Trimmed Outliers	0	0
Number of Ratios: Outliers Removed	176	15	Number of Ratios: Outliers Removed	24	5
Minimum Ratio	49.9	37.3	Minimum Ratio	49.8	53.6
Maximum Ratio	260.4	128.4	Maximum Ratio	173.1	95.3
Minimum Sale Price	16,500	30,000	Minimum Sale Price	5,000	11,000
Maximum Sale Price	364,500	238,000	Maximum Sale Price	160,000	675,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	97.6	82.8	Median Ratio	87.6	65.2
Lower Median Confidence Interval	96.2	57.0	Lower Median Confidence Interval	77.1	53.6
Upper Median Confidence Interval	99.0	113.4	Upper Median Confidence Interval	108.5	95.3
Broadened Median Ratio	97.6	84.4	Broadened Median Ratio	87.4	63.6
Coefficient of Dispersion (COD)	8.7	28.9	Coefficient of Dispersion (COD)	29.4	14.3
Lower COD Confidence Interval	7.7	20.3	Lower COD Confidence Interval	21.1	3.6
Upper COD Confidence Interval	9.9	53.1	Upper COD Confidence Interval	41.3	31.2
Value Weighted COD	8.2	28.0	Value Weighted COD	18.3	40.8
Coefficient of Concentration @10%	58.1	13.3	Coefficient of Concentration @10%	29.2	60.0
Coefficient of Concentration @15%	70.2	33.3	Coefficient of Concentration @15%	37.5	60.0
Coefficient of Concentration @20%	82.7	40.0	Coefficient of Concentration @20%	45.8	80.0
Coefficient of Concentration @50%	95.3	80.0	Coefficient of Concentration @50%	83.3	100.0
Coefficient of Concentration @100%	99.0	100.0	Coefficient of Concentration @100%	100.0	100.0
Coefficient of Interquartile Deviation	7.3	34.1	Coefficient of Interquartile Deviation	23.9	17.9
Median Percent Deviation	7.4	31.2	Median Percent Deviation	22.4	7.4
Lower Quartile (25th Percentile)	90.1	57.0	Lower Quartile (25th Percentile)	73.7	57.0
Upper Quartile	104.4	113.4	Upper Quartile	115.5	80.3
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptK	Normality Test	RejectW	RejectA
Relative Skewness	0.19	-0.16	Relative Skewness	0.93	1.16
Relative Kurtosis	2.92	1.88	Relative Kurtosis	2.90	2.87
Arithmetic Mean Ratio	96.6	83.3	Arithmetic Mean Ratio	97.8	68.0
Weighted Mean Ratio	96.2	79.1	Weighted Mean Ratio	81.7	89.8
Geometric Mean Ratio	96.0	77.9	Geometric Mean Ratio	92.6	66.6
Harmonic Mean Ratio	95.4	72.1	Harmonic Mean Ratio	88.0	65.5
Standard Deviation	11.0	29.1	Standard Deviation	34.6	16.0
Coefficient of Variation (COV)	11.4	34.9	Coefficient of Variation (COV)	35.4	23.6
Price-Related Differential (PRD)	1.00	1.05	Price-Related Differential (PRD)	1.20	0.76
Lower PRD Confidence Interval	1.00	0.98	Lower PRD Confidence Interval	1.10	0.74
Upper PRD Confidence interval	1.01	1.15	Upper PRD Confidence interval	1.34	1.05
Coeff. of Price-Related Bias (PRB)	-0.10	0.01	Coeff. of Price-Related Bias (PRB)	-0.23	0.08
Lower PRB Confidence Interval	-0.14	-0.25	Lower PRB Confidence Interval	-0.32	-0.02
Upper PRB Confidence Interval	-0.05	0.27	Upper PRB Confidence Interval	-0.14	0.19
Average Sale Price	146,501	117,017	Average Sale Price	80,760	158,800
Average Appraised Value	140,872	92,517	Average Appraised Value	65,948	142,676

Detailed Sample Statistics for the Residential and Commercial Subclasses

061 : MIAMI			062 : MITCHELL		*S-5*
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	488	9	Original Number of Sales	59	8
Trimmed Outliers	65	0	Trimmed Outliers	3	0
Number of Ratios: Outliers Removed	423	9	Number of Ratios: Outliers Removed	56	8
Minimum Ratio	56.2	65.4	Minimum Ratio	31.0	55.0
Maximum Ratio	4410.0	145.0	Maximum Ratio	208.0	138.5
Minimum Sale Price	1,000	32,000	Minimum Sale Price	5,000	5,400
Maximum Sale Price	890,000	930,000	Maximum Sale Price	370,000	150,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	94.2	96.7	Median Ratio	93.7	75.5
Lower Median Confidence Interval	93.1	80.0	Lower Median Confidence Interval	85.6	71.6
Upper Median Confidence Interval	95.7	123.1	Upper Median Confidence Interval	100.0	115.5
Broadened Median Ratio	94.2	95.2	Broadened Median Ratio	93.5	79.5
Coefficient of Dispersion (COD)	9.2	18.6	Coefficient of Dispersion (COD)	19.3	26.4
Lower COD Confidence Interval	8.5	11.3	Lower COD Confidence Interval	15.8	17.3
Upper COD Confidence Interval	10.0	31.4	Upper COD Confidence Interval	24.3	48.3
Value Weighted COD	8.5	19.7	Value Weighted COD	15.8	24.1
Coefficient of Concentration @10%	55.9	44.4	Coefficient of Concentration @10%	30.5	50.0
Coefficient of Concentration @15%	70.7	44.4	Coefficient of Concentration @15%	40.7	50.0
Coefficient of Concentration @20%	78.1	55.6	Coefficient of Concentration @20%	52.5	50.0
Coefficient of Concentration @50%	90.4	100.0	Coefficient of Concentration @50%	93.2	75.0
Coefficient of Concentration @100%	94.7	100.0	Coefficient of Concentration @100%	98.3	100.0
Coefficient of Interquartile Deviation	8.5	19.7	Coefficient of Interquartile Deviation	18.6	27.0
Median Percent Deviation	8.4	17.2	Median Percent Deviation	17.6	16.2
Lower Quartile (25th Percentile)	86.4	84.1	Lower Quartile (25th Percentile)	77.7	71.7
Upper Quartile	102.4	122.2	Upper Quartile	112.5	112.4
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectK	Normality Test	RejectK	RejectK
Relative Skewness	0.18	0.42	Relative Skewness	-0.24	0.69
Relative Kurtosis	3.64	2.31	Relative Kurtosis	2.78	2.24
Arithmetic Mean Ratio	92.4	101.0	Arithmetic Mean Ratio	90.9	88.4
Weighted Mean Ratio	92.0	86.4	Weighted Mean Ratio	86.4	81.7
Geometric Mean Ratio	91.7	98.4	Geometric Mean Ratio	87.9	84.8
Harmonic Mean Ratio	91.0	95.8	Harmonic Mean Ratio	84.3	81.6
Standard Deviation	11.1	24.6	Standard Deviation	22.2	27.9
Coefficient of Variation (COV)	12.0	24.3	Coefficient of Variation (COV)	24.4	31.6
Price-Related Differential (PRD)	1.00	1.17	Price-Related Differential (PRD)	1.05	1.08
Lower PRD Confidence Interval	1.00	1.05	Lower PRD Confidence Interval	1.01	0.94
Upper PRD Confidence interval	1.01	1.43	Upper PRD Confidence interval	1.11	1.41
Coeff. of Price-Related Bias (PRB)	-0.97	-0.10	Coeff. of Price-Related Bias (PRB)	-0.05	-0.12
Lower PRB Confidence Interval	-1.18	-0.22	Lower PRB Confidence Interval	-0.11	-0.34
Upper PRB Confidence Interval	-0.77	0.02	Upper PRB Confidence Interval	0.01	0.10
Average Sale Price	206,533	287,939	Average Sale Price	104,398	73,175
Average Appraised Value	190,016	248,864	Average Appraised Value	90,228	59,770

Detailed Sample Statistics for the Residential and Commercial Subclasses

063 : MONTGOMERY			064 : MORRIS		S-5
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	198	22	Original Number of Sales	52	8
Trimmed Outliers	24	1	Trimmed Outliers	5	0
Number of Ratios: Outliers Removed	174	21	Number of Ratios: Outliers Removed	47	8
Minimum Ratio	0.8	53.7	Minimum Ratio	37.3	34.5
Maximum Ratio	8080.0	1309.2	Maximum Ratio	508.5	112.8
Minimum Sale Price	500	9,000	Minimum Sale Price	1,500	15,000
Maximum Sale Price	305,000	2,000,000	Maximum Sale Price	390,000	200,000
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	113.9	108.8	Median Ratio	100.0	71.1
Lower Median Confidence Interval	105.3	101.0	Lower Median Confidence Interval	90.4	60.0
Upper Median Confidence Interval	120.5	134.4	Upper Median Confidence Interval	105.6	98.7
Broadened Median Ratio	113.8	112.2	Broadened Median Ratio	100.1	73.9
Coefficient of Dispersion (COD)	24.9	24.3	Coefficient of Dispersion (COD)	23.9	25.3
Lower COD Confidence Interval	22.0	18.5	Lower COD Confidence Interval	17.6	15.8
Upper COD Confidence Interval	28.7	36.5	Upper COD Confidence Interval	31.3	58.7
Value Weighted COD	19.3	13.7	Value Weighted COD	19.5	26.6
Coefficient of Concentration @10%	24.2	31.8	Coefficient of Concentration @10%	34.6	37.5
Coefficient of Concentration @15%	38.9	45.5	Coefficient of Concentration @15%	40.4	37.5
Coefficient of Concentration @20%	48.5	45.5	Coefficient of Concentration @20%	50.0	50.0
Coefficient of Concentration @50%	80.3	81.8	Coefficient of Concentration @50%	76.9	75.0
Coefficient of Concentration @100%	87.4	95.5	Coefficient of Concentration @100%	90.4	100.0
Coefficient of Interquartile Deviation	24.8	22.3	Coefficient of Interquartile Deviation	24.9	24.6
Median Percent Deviation	21.2	22.9	Median Percent Deviation	20.7	21.9
Lower Quartile (25th Percentile)	93.9	98.8	Lower Quartile (25th Percentile)	80.9	61.8
Upper Quartile	150.5	147.2	Upper Quartile	130.7	96.8
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectK	Normality Test	RejectW	AcceptK
Relative Skewness	1.01	0.24	Relative Skewness	0.90	-0.10
Relative Kurtosis	4.30	2.60	Relative Kurtosis	3.70	2.35
Arithmetic Mean Ratio	115.3	115.6	Arithmetic Mean Ratio	100.8	75.8
Weighted Mean Ratio	106.3	107.4	Weighted Mean Ratio	94.0	74.0
Geometric Mean Ratio	110.1	110.6	Geometric Mean Ratio	95.7	71.9
Harmonic Mean Ratio	105.2	105.4	Harmonic Mean Ratio	90.6	67.4
Standard Deviation	36.1	33.9	Standard Deviation	33.4	24.5
Coefficient of Variation (COV)	31.3	29.3	Coefficient of Variation (COV)	33.1	32.3
Price-Related Differential (PRD)	1.09	1.08	Price-Related Differential (PRD)	1.07	1.03
Lower PRD Confidence Interval	1.05	0.98	Lower PRD Confidence Interval	1.02	0.92
Upper PRD Confidence interval	1.12	1.23	Upper PRD Confidence interval	1.14	1.28
Coeff. of Price-Related Bias (PRB)	-1.07	0.03	Coeff. of Price-Related Bias (PRB)	-0.17	-0.08
Lower PRB Confidence Interval	-1.68	-0.68	Lower PRB Confidence Interval	-0.34	-0.42
Upper PRB Confidence Interval	-0.46	0.75	Upper PRB Confidence Interval	0.00	0.26
Average Sale Price	69,019	156,385	Average Sale Price	91,551	88,188
Average Appraised Value	73,335	167,902	Average Appraised Value	86,079	65,220

Detailed Sample Statistics for the Residential and Commercial Subclasses

065 : MORTON		S-5	066 : NEMAHA		
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	19	6	Original Number of Sales	97	10
Trimmed Outliers	1	0	Trimmed Outliers	9	0
Number of Ratios: Outliers Removed	18	6	Number of Ratios: Outliers Removed	88	10
Minimum Ratio	38.9	47.8	Minimum Ratio	44.4	72.3
Maximum Ratio	123.2	144.9	Maximum Ratio	338.4	195.8
Minimum Sale Price	9,000	30,000	Minimum Sale Price	2,500	15,000
Maximum Sale Price	140,000	340,500	Maximum Sale Price	372,000	450,000
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	99.7	88.3	Median Ratio	90.7	112.0
Lower Median Confidence Interval	94.4	56.8	Lower Median Confidence Interval	84.8	82.3
Upper Median Confidence Interval	105.9	134.3	Upper Median Confidence Interval	95.5	146.7
Broadened Median Ratio	100.3	90.4	Broadened Median Ratio	90.8	114.1
Coefficient of Dispersion (COD)	11.1	33.0	Coefficient of Dispersion (COD)	16.9	27.7
Lower COD Confidence Interval	7.8	20.5	Lower COD Confidence Interval	14.3	18.8
Upper COD Confidence Interval	16.6	60.4	Upper COD Confidence Interval	20.4	47.9
Value Weighted COD	11.4	26.5	Value Weighted COD	15.4	21.4
Coefficient of Concentration @10%	52.6	0.0	Coefficient of Concentration @10%	34.0	30.0
Coefficient of Concentration @15%	57.9	33.3	Coefficient of Concentration @15%	52.6	30.0
Coefficient of Concentration @20%	78.9	33.3	Coefficient of Concentration @20%	62.9	40.0
Coefficient of Concentration @50%	94.7	83.3	Coefficient of Concentration @50%	89.7	90.0
Coefficient of Concentration @100%	100.0	100.0	Coefficient of Concentration @100%	92.8	100.0
Coefficient of Interquartile Deviation	11.4	38.3	Coefficient of Interquartile Deviation	14.1	30.6
Median Percent Deviation	9.6	32.8	Median Percent Deviation	13.7	28.7
Lower Quartile (25th Percentile)	86.6	61.3	Lower Quartile (25th Percentile)	77.1	80.7
Upper Quartile	109.3	129.0	Upper Quartile	102.7	149.2
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptW	Normality Test	RejectK	RejectK
Relative Skewness	-0.35	0.23	Relative Skewness	0.15	0.55
Relative Kurtosis	2.42	1.74	Relative Kurtosis	3.14	2.39
Arithmetic Mean Ratio	100.1	93.1	Arithmetic Mean Ratio	87.8	119.0
Weighted Mean Ratio	98.6	78.3	Weighted Mean Ratio	84.9	124.5
Geometric Mean Ratio	99.0	87.0	Geometric Mean Ratio	85.6	113.3
Harmonic Mean Ratio	97.9	81.0	Harmonic Mean Ratio	83.3	108.0
Standard Deviation	14.6	36.5	Standard Deviation	19.2	39.6
Coefficient of Variation (COV)	14.6	39.2	Coefficient of Variation (COV)	21.9	33.3
Price-Related Differential (PRD)	1.02	1.19	Price-Related Differential (PRD)	1.03	0.96
Lower PRD Confidence Interval	0.98	1.00	Lower PRD Confidence Interval	1.01	0.83
Upper PRD Confidence interval	1.07	1.43	Upper PRD Confidence interval	1.07	1.10
Coeff. of Price-Related Bias (PRB)	0.07	-0.06	Coeff. of Price-Related Bias (PRB)	-0.22	0.04
Lower PRB Confidence Interval	-0.01	-0.50	Lower PRB Confidence Interval	-0.30	-0.15
Upper PRB Confidence Interval	0.15	0.38	Upper PRB Confidence Interval	-0.13	0.23
Average Sale Price	60,038	100,417	Average Sale Price	104,886	93,050
Average Appraised Value	59,170	78,645	Average Appraised Value	89,040	115,834

Detailed Sample Statistics for the Residential and Commercial Subclasses

067 : NEOSHO			068 : NESS		S-7
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	131	12	Original Number of Sales	31	7
Trimmed Outliers	12	1	Trimmed Outliers	4	0
Number of Ratios: Outliers Removed	119	11	Number of Ratios: Outliers Removed	27	7
Minimum Ratio	52.4	55.7	Minimum Ratio	49.9	56.4
Maximum Ratio	5980.0	2183.1	Maximum Ratio	162.5	99.6
Minimum Sale Price	50	3,500	Minimum Sale Price	15,000	4,500
Maximum Sale Price	285,000	1,535,000	Maximum Sale Price	215,000	535,500
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	101.6	104.2	Median Ratio	97.9	82.3
Lower Median Confidence Interval	97.2	92.0	Lower Median Confidence Interval	96.1	77.4
Upper Median Confidence Interval	104.7	124.1	Upper Median Confidence Interval	104.6	99.5
Broadened Median Ratio	101.6	103.9	Broadened Median Ratio	98.0	86.8
Coefficient of Dispersion (COD)	17.5	19.1	Coefficient of Dispersion (COD)	11.3	14.5
Lower COD Confidence Interval	15.1	12.5	Lower COD Confidence Interval	8.0	8.8
Upper COD Confidence Interval	20.6	40.0	Upper COD Confidence Interval	16.3	32.7
Value Weighted COD	15.6	23.3	Value Weighted COD	14.0	17.4
Coefficient of Concentration @10%	38.2	41.7	Coefficient of Concentration @10%	45.2	42.9
Coefficient of Concentration @15%	51.1	50.0	Coefficient of Concentration @15%	61.3	42.9
Coefficient of Concentration @20%	61.8	58.3	Coefficient of Concentration @20%	71.0	57.1
Coefficient of Concentration @50%	87.8	91.7	Coefficient of Concentration @50%	90.3	100.0
Coefficient of Concentration @100%	94.7	91.7	Coefficient of Concentration @100%	100.0	100.0
Coefficient of Interquartile Deviation	15.7	16.4	Coefficient of Interquartile Deviation	11.2	13.4
Median Percent Deviation	14.8	16.4	Median Percent Deviation	11.5	19.2
Lower Quartile (25th Percentile)	88.7	90.5	Lower Quartile (25th Percentile)	88.7	77.4
Upper Quartile	120.6	124.6	Upper Quartile	110.6	99.5
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptK	Normality Test	RejectK	AcceptW
Relative Skewness	0.46	-0.34	Relative Skewness	-0.56	-0.66
Relative Kurtosis	3.25	2.40	Relative Kurtosis	3.10	2.41
Arithmetic Mean Ratio	101.5	100.7	Arithmetic Mean Ratio	96.6	84.8
Weighted Mean Ratio	95.8	81.7	Weighted Mean Ratio	91.6	95.7
Geometric Mean Ratio	99.0	97.5	Geometric Mean Ratio	95.4	83.4
Harmonic Mean Ratio	96.4	93.9	Harmonic Mean Ratio	94.0	81.8
Standard Deviation	23.0	25.2	Standard Deviation	15.2	15.8
Coefficient of Variation (COV)	22.6	25.0	Coefficient of Variation (COV)	15.7	18.6
Price-Related Differential (PRD)	1.06	1.23	Price-Related Differential (PRD)	1.05	0.89
Lower PRD Confidence Interval	1.03	1.00	Lower PRD Confidence Interval	1.01	0.76
Upper PRD Confidence interval	1.10	1.49	Upper PRD Confidence interval	1.11	0.98
Coeff. of Price-Related Bias (PRB)	-1.99	-0.57	Coeff. of Price-Related Bias (PRB)	-0.10	0.05
Lower PRB Confidence Interval	-2.68	-2.54	Lower PRB Confidence Interval	-0.19	-0.01
Upper PRB Confidence Interval	-1.29	1.40	Upper PRB Confidence Interval	-0.01	0.12
Average Sale Price	76,749	275,164	Average Sale Price	78,589	107,286
Average Appraised Value	73,530	224,755	Average Appraised Value	72,007	102,641

Detailed Sample Statistics for the Residential and Commercial Subclasses

069 : NORTON		*S-9*	070 : OSAGE		
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	62	10	Original Number of Sales	177	8
Trimmed Outliers	8	1	Trimmed Outliers	16	0
Number of Ratios: Outliers Removed	54	9	Number of Ratios: Outliers Removed	161	8
Minimum Ratio	21.6	28.3	Minimum Ratio	46.9	55.4
Maximum Ratio	600.7	273.8	Maximum Ratio	648.5	131.4
Minimum Sale Price	1,500	15,000	Minimum Sale Price	2,000	3,000
Maximum Sale Price	333,000	200,000	Maximum Sale Price	280,000	245,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	85.5	78.1	Median Ratio	97.9	72.5
Lower Median Confidence Interval	79.9	52.4	Lower Median Confidence Interval	93.8	57.2
Upper Median Confidence Interval	92.0	108.4	Upper Median Confidence Interval	104.5	117.4
Broadened Median Ratio	85.9	78.6	Broadened Median Ratio	98.1	76.8
Coefficient of Dispersion (COD)	15.2	30.3	Coefficient of Dispersion (COD)	20.1	34.7
Lower COD Confidence Interval	12.3	15.7	Lower COD Confidence Interval	17.5	12.3
Upper COD Confidence Interval	19.3	92.2	Upper COD Confidence Interval	23.1	40.7
Value Weighted COD	12.9	17.2	Value Weighted COD	17.1	37.8
Coefficient of Concentration @10%	35.5	40.0	Coefficient of Concentration @10%	32.8	0.0
Coefficient of Concentration @15%	53.2	40.0	Coefficient of Concentration @15%	50.3	37.5
Coefficient of Concentration @20%	69.4	40.0	Coefficient of Concentration @20%	56.5	37.5
Coefficient of Concentration @50%	85.5	60.0	Coefficient of Concentration @50%	83.6	75.0
Coefficient of Concentration @100%	93.5	90.0	Coefficient of Concentration @100%	91.5	100.0
Coefficient of Interquartile Deviation	14.8	40.4	Coefficient of Interquartile Deviation	20.1	39.2
Median Percent Deviation	14.6	33.1	Median Percent Deviation	15.0	22.4
Lower Quartile (25th Percentile)	72.8	50.0	Lower Quartile (25th Percentile)	85.7	58.4
Upper Quartile	98.1	113.0	Upper Quartile	125.1	115.2
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptK	Normality Test	RejectK	RejectK
Relative Skewness	0.57	0.02	Relative Skewness	0.95	0.46
Relative Kurtosis	3.56	2.20	Relative Kurtosis	3.69	1.56
Arithmetic Mean Ratio	86.1	73.9	Arithmetic Mean Ratio	101.8	84.6
Weighted Mean Ratio	82.3	78.8	Weighted Mean Ratio	96.9	82.1
Geometric Mean Ratio	84.6	66.4	Geometric Mean Ratio	98.8	80.2
Harmonic Mean Ratio	83.0	58.2	Harmonic Mean Ratio	96.0	76.2
Standard Deviation	16.8	32.5	Standard Deviation	25.9	30.3
Coefficient of Variation (COV)	19.5	44.0	Coefficient of Variation (COV)	25.4	35.8
Price-Related Differential (PRD)	1.05	0.94	Price-Related Differential (PRD)	1.05	1.03
Lower PRD Confidence Interval	1.01	0.81	Lower PRD Confidence Interval	1.03	0.83
Upper PRD Confidence interval	1.09	1.07	Upper PRD Confidence interval	1.08	1.27
Coeff. of Price-Related Bias (PRB)	-0.22	0.37	Coeff. of Price-Related Bias (PRB)	-0.35	0.06
Lower PRB Confidence Interval	-0.36	-0.12	Lower PRB Confidence Interval	-0.44	-0.12
Upper PRB Confidence Interval	-0.07	0.85	Upper PRB Confidence Interval	-0.26	0.25
Average Sale Price	88,492	63,583	Average Sale Price	95,910	72,625
Average Appraised Value	72,850	50,081	Average Appraised Value	92,909	59,636

Detailed Sample Statistics for the Residential and Commercial Subclasses

071 : OSBORNE		S-5	072 : OTTAWA		
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	29	6	Original Number of Sales	50	5
Trimmed Outliers	4	0	Trimmed Outliers	2	0
Number of Ratios: Outliers Removed	25	6	Number of Ratios: Outliers Removed	48	5
Minimum Ratio	32.2	44.4	Minimum Ratio	49.8	99.4
Maximum Ratio	538.0	147.5	Maximum Ratio	1598.0	153.7
Minimum Sale Price	500	2,500	Minimum Sale Price	1,000	15,000
Maximum Sale Price	82,500	140,000	Maximum Sale Price	440,000	75,000
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	113.2	99.0	Median Ratio	94.7	113.7
Lower Median Confidence Interval	94.4	55.3	Lower Median Confidence Interval	81.7	99.4
Upper Median Confidence Interval	121.9	133.4	Upper Median Confidence Interval	100.0	153.7
Broadened Median Ratio	110.5	96.9	Broadened Median Ratio	95.4	112.4
Coefficient of Dispersion (COD)	25.8	27.5	Coefficient of Dispersion (COD)	17.4	10.8
Lower COD Confidence Interval	18.5	12.7	Lower COD Confidence Interval	13.5	2.6
Upper COD Confidence Interval	38.5	60.2	Upper COD Confidence Interval	22.8	20.1
Value Weighted COD	20.9	22.5	Value Weighted COD	17.0	9.0
Coefficient of Concentration @10%	27.6	33.3	Coefficient of Concentration @10%	34.0	60.0
Coefficient of Concentration @15%	31.0	33.3	Coefficient of Concentration @15%	44.0	80.0
Coefficient of Concentration @20%	44.8	33.3	Coefficient of Concentration @20%	70.0	80.0
Coefficient of Concentration @50%	72.4	83.3	Coefficient of Concentration @50%	96.0	100.0
Coefficient of Concentration @100%	89.7	100.0	Coefficient of Concentration @100%	96.0	100.0
Coefficient of Interquartile Deviation	21.7	33.1	Coefficient of Interquartile Deviation	14.3	13.5
Median Percent Deviation	20.7	26.8	Median Percent Deviation	16.0	4.8
Lower Quartile (25th Percentile)	90.3	60.8	Lower Quartile (25th Percentile)	77.1	103.8
Upper Quartile	139.5	126.4	Upper Quartile	104.2	134.5
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	AcceptK	AcceptW	Normality Test	RejectW	RejectA
Relative Skewness	-0.09	-0.05	Relative Skewness	-0.27	1.16
Relative Kurtosis	2.90	1.98	Relative Kurtosis	2.18	2.87
Arithmetic Mean Ratio	102.0	95.9	Arithmetic Mean Ratio	89.0	118.1
Weighted Mean Ratio	101.9	109.8	Weighted Mean Ratio	87.3	110.2
Geometric Mean Ratio	95.2	89.3	Geometric Mean Ratio	86.7	116.7
Harmonic Mean Ratio	86.8	82.2	Harmonic Mean Ratio	84.2	115.6
Standard Deviation	34.9	36.8	Standard Deviation	19.6	20.8
Coefficient of Variation (COV)	34.2	38.4	Coefficient of Variation (COV)	22.0	17.7
Price-Related Differential (PRD)	1.00	0.87	Price-Related Differential (PRD)	1.02	1.07
Lower PRD Confidence Interval	0.94	0.66	Lower PRD Confidence Interval	0.99	1.02
Upper PRD Confidence interval	1.09	1.04	Upper PRD Confidence interval	1.05	1.18
Coeff. of Price-Related Bias (PRB)	-0.35	0.12	Coeff. of Price-Related Bias (PRB)	-1.31	-0.21
Lower PRB Confidence Interval	-0.55	-0.07	Lower PRB Confidence Interval	-1.91	-0.43
Upper PRB Confidence Interval	-0.15	0.31	Upper PRB Confidence Interval	-0.72	0.00
Average Sale Price	35,837	39,024	Average Sale Price	136,133	38,300
Average Appraised Value	36,526	42,853	Average Appraised Value	118,848	42,198

Detailed Sample Statistics for the Residential and Commercial Subclasses

073 : PAWNEE			074 : PHILLIPS		*S-6*
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	61	7	Original Number of Sales	60	10
Trimmed Outliers	5	0	Trimmed Outliers	3	0
Number of Ratios: Outliers Removed	56	7	Number of Ratios: Outliers Removed	57	10
Minimum Ratio	74.0	63.4	Minimum Ratio	23.3	22.3
Maximum Ratio	348.3	197.9	Maximum Ratio	399.3	125.5
Minimum Sale Price	1,500	3,500	Minimum Sale Price	900	5,000
Maximum Sale Price	264,325	65,500	Maximum Sale Price	165,000	118,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	104.6	101.0	Median Ratio	81.6	68.8
Lower Median Confidence Interval	98.3	86.4	Lower Median Confidence Interval	73.5	46.2
Upper Median Confidence Interval	112.3	176.0	Upper Median Confidence Interval	91.4	95.9
Broadened Median Ratio	104.8	97.6	Broadened Median Ratio	81.5	69.8
Coefficient of Dispersion (COD)	15.3	34.3	Coefficient of Dispersion (COD)	23.5	39.8
Lower COD Confidence Interval	12.5	16.6	Lower COD Confidence Interval	19.4	23.4
Upper COD Confidence Interval	19.4	62.7	Upper COD Confidence Interval	30.0	70.3
Value Weighted COD	13.1	28.2	Value Weighted COD	18.4	38.9
Coefficient of Concentration @10%	37.7	28.6	Coefficient of Concentration @10%	23.3	0.0
Coefficient of Concentration @15%	52.5	57.1	Coefficient of Concentration @15%	36.7	0.0
Coefficient of Concentration @20%	70.5	57.1	Coefficient of Concentration @20%	53.3	0.0
Coefficient of Concentration @50%	86.9	71.4	Coefficient of Concentration @50%	86.7	80.0
Coefficient of Concentration @100%	95.1	100.0	Coefficient of Concentration @100%	96.7	100.0
Coefficient of Interquartile Deviation	14.0	44.4	Coefficient of Interquartile Deviation	18.9	35.6
Median Percent Deviation	13.4	14.5	Median Percent Deviation	18.4	34.1
Lower Quartile (25th Percentile)	93.4	86.4	Lower Quartile (25th Percentile)	67.5	45.9
Upper Quartile	122.8	176.0	Upper Quartile	98.4	94.9
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectW	RejectA	Normality Test	RejectK	AcceptK
Relative Skewness	0.96	0.76	Relative Skewness	0.18	0.14
Relative Kurtosis	3.89	2.01	Relative Kurtosis	3.13	1.97
Arithmetic Mean Ratio	105.7	116.6	Arithmetic Mean Ratio	81.9	71.3
Weighted Mean Ratio	102.8	114.8	Weighted Mean Ratio	79.5	63.0
Geometric Mean Ratio	103.9	108.4	Geometric Mean Ratio	78.1	64.0
Harmonic Mean Ratio	102.2	101.4	Harmonic Mean Ratio	73.6	56.1
Standard Deviation	20.5	50.3	Standard Deviation	23.8	32.0
Coefficient of Variation (COV)	19.4	43.1	Coefficient of Variation (COV)	29.0	44.8
Price-Related Differential (PRD)	1.03	1.02	Price-Related Differential (PRD)	1.03	1.13
Lower PRD Confidence Interval	1.00	0.88	Lower PRD Confidence Interval	0.99	0.99
Upper PRD Confidence interval	1.06	1.15	Upper PRD Confidence interval	1.08	1.36
Coeff. of Price-Related Bias (PRB)	-0.11	0.14	Coeff. of Price-Related Bias (PRB)	-0.15	-0.02
Lower PRB Confidence Interval	-0.21	-0.20	Lower PRB Confidence Interval	-0.28	-0.26
Upper PRB Confidence Interval	-0.01	0.47	Upper PRB Confidence Interval	-0.02	0.22
Average Sale Price	85,542	33,714	Average Sale Price	68,146	48,847
Average Appraised Value	87,922	38,699	Average Appraised Value	54,183	30,787

Detailed Sample Statistics for the Residential and Commercial Subclasses

075 : POTTAWATOMIE			076 : PRATT		
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	314	14	Original Number of Sales	83	6
Trimmed Outliers	33	0	Trimmed Outliers	11	1
Number of Ratios: Outliers Removed	281	14	Number of Ratios: Outliers Removed	72	5
Minimum Ratio	6.2	67.1	Minimum Ratio	21.2	68.5
Maximum Ratio	209.2	122.7	Maximum Ratio	518.8	137.4
Minimum Sale Price	10,000	2,000	Minimum Sale Price	1,000	21,500
Maximum Sale Price	595,000	15,966,975	Maximum Sale Price	489,000	300,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	96.5	89.2	Median Ratio	98.6	77.0
Lower Median Confidence Interval	95.4	78.2	Lower Median Confidence Interval	95.5	70.5
Upper Median Confidence Interval	97.6	107.8	Upper Median Confidence Interval	103.4	110.2
Broadened Median Ratio	96.5	90.9	Broadened Median Ratio	98.4	77.3
Coefficient of Dispersion (COD)	7.9	16.9	Coefficient of Dispersion (COD)	13.2	5.3
Lower COD Confidence Interval	7.2	13.2	Lower COD Confidence Interval	10.8	2.9
Upper COD Confidence Interval	8.7	24.0	Upper COD Confidence Interval	16.6	8.5
Value Weighted COD	7.8	13.7	Value Weighted COD	10.9	5.2
Coefficient of Concentration @10%	62.7	28.6	Coefficient of Concentration @10%	45.8	66.7
Coefficient of Concentration @15%	77.1	50.0	Coefficient of Concentration @15%	56.6	83.3
Coefficient of Concentration @20%	81.8	64.3	Coefficient of Concentration @20%	67.5	83.3
Coefficient of Concentration @50%	96.5	100.0	Coefficient of Concentration @50%	86.7	83.3
Coefficient of Concentration @100%	99.4	100.0	Coefficient of Concentration @100%	96.4	100.0
Coefficient of Interquartile Deviation	7.0	18.3	Coefficient of Interquartile Deviation	12.9	16.3
Median Percent Deviation	7.0	14.9	Median Percent Deviation	12.9	6.8
Lower Quartile (25th Percentile)	89.6	77.6	Lower Quartile (25th Percentile)	85.9	71.6
Upper Quartile	103.2	110.3	Upper Quartile	111.5	96.6
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptK	Normality Test	RejectW	AcceptW
Relative Skewness	-0.19	0.28	Relative Skewness	0.20	0.06
Relative Kurtosis	3.33	1.78	Relative Kurtosis	3.97	1.92
Arithmetic Mean Ratio	96.8	93.4	Arithmetic Mean Ratio	97.7	75.6
Weighted Mean Ratio	96.5	78.6	Weighted Mean Ratio	96.1	73.8
Geometric Mean Ratio	96.3	91.8	Geometric Mean Ratio	96.1	75.5
Harmonic Mean Ratio	95.7	90.2	Harmonic Mean Ratio	94.4	75.3
Standard Deviation	10.0	18.0	Standard Deviation	17.5	5.5
Coefficient of Variation (COV)	10.4	19.3	Coefficient of Variation (COV)	18.0	7.3
Price-Related Differential (PRD)	1.00	1.19	Price-Related Differential (PRD)	1.02	1.02
Lower PRD Confidence Interval	1.00	1.03	Lower PRD Confidence Interval	1.00	0.99
Upper PRD Confidence interval	1.01	1.34	Upper PRD Confidence interval	1.04	1.07
Coeff. of Price-Related Bias (PRB)	0.02	-0.01	Coeff. of Price-Related Bias (PRB)	-0.18	-0.07
Lower PRB Confidence Interval	-0.01	-0.05	Lower PRB Confidence Interval	-0.27	-0.38
Upper PRB Confidence Interval	0.04	0.03	Upper PRB Confidence Interval	-0.09	0.24
Average Sale Price	197,416	1,548,927	Average Sale Price	96,233	152,500
Average Appraised Value	190,463	1,217,167	Average Appraised Value	92,449	112,558

Detailed Sample Statistics for the Residential and Commercial Subclasses

077 : RAWLINS		S-7	078 : RENO		
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	23	7	Original Number of Sales	216	24
Trimmed Outliers	3	0	Trimmed Outliers	27	1
Number of Ratios: Outliers Removed	20	7	Number of Ratios: Outliers Removed	189	23
Minimum Ratio	43.7	45.9	Minimum Ratio	20.2	31.2
Maximum Ratio	148.5	119.4	Maximum Ratio	574.6	309.0
Minimum Sale Price	13,000	6,500	Minimum Sale Price	1,000	2,000
Maximum Sale Price	225,000	65,000	Maximum Sale Price	415,000	2,200,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	82.9	80.5	Median Ratio	97.6	103.2
Lower Median Confidence Interval	79.8	56.9	Lower Median Confidence Interval	95.1	83.8
Upper Median Confidence Interval	88.5	117.3	Upper Median Confidence Interval	100.5	122.6
Broadened Median Ratio	82.6	83.4	Broadened Median Ratio	97.7	103.0
Coefficient of Dispersion (COD)	10.2	27.8	Coefficient of Dispersion (COD)	11.6	32.6
Lower COD Confidence Interval	6.9	17.9	Lower COD Confidence Interval	10.2	22.1
Upper COD Confidence Interval	14.7	55.8	Upper COD Confidence Interval	13.2	51.1
Value Weighted COD	9.2	32.1	Value Weighted COD	10.6	33.8
Coefficient of Concentration @10%	52.2	28.6	Coefficient of Concentration @10%	47.7	33.3
Coefficient of Concentration @15%	60.9	28.6	Coefficient of Concentration @15%	64.8	33.3
Coefficient of Concentration @20%	60.9	42.9	Coefficient of Concentration @20%	70.4	41.7
Coefficient of Concentration @50%	95.7	100.0	Coefficient of Concentration @50%	90.7	75.0
Coefficient of Concentration @100%	100.0	100.0	Coefficient of Concentration @100%	96.8	95.8
Coefficient of Interquartile Deviation	8.5	37.6	Coefficient of Interquartile Deviation	10.3	30.8
Median Percent Deviation	8.0	29.3	Median Percent Deviation	10.2	28.4
Lower Quartile (25th Percentile)	77.4	56.9	Lower Quartile (25th Percentile)	87.8	65.8
Upper Quartile	91.5	117.3	Upper Quartile	107.9	129.3
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptW	Normality Test	RejectK	RejectK
Relative Skewness	0.30	0.03	Relative Skewness	0.16	0.71
Relative Kurtosis	2.63	1.65	Relative Kurtosis	3.53	3.15
Arithmetic Mean Ratio	85.3	84.2	Arithmetic Mean Ratio	96.6	103.4
Weighted Mean Ratio	87.2	90.8	Weighted Mean Ratio	94.9	82.1
Geometric Mean Ratio	84.6	79.9	Geometric Mean Ratio	95.4	93.9
Harmonic Mean Ratio	83.8	75.5	Harmonic Mean Ratio	94.2	84.2
Standard Deviation	11.6	28.4	Standard Deviation	14.9	45.6
Coefficient of Variation (COV)	13.5	33.7	Coefficient of Variation (COV)	15.4	44.0
Price-Related Differential (PRD)	0.98	0.93	Price-Related Differential (PRD)	1.02	1.26
Lower PRD Confidence Interval	0.94	0.81	Lower PRD Confidence Interval	1.00	1.01
Upper PRD Confidence interval	1.01	1.06	Upper PRD Confidence interval	1.03	1.76
Coeff. of Price-Related Bias (PRB)	0.02	0.14	Coeff. of Price-Related Bias (PRB)	-0.17	-0.15
Lower PRB Confidence Interval	-0.06	-0.16	Lower PRB Confidence Interval	-0.24	-0.26
Upper PRB Confidence Interval	0.10	0.43	Upper PRB Confidence Interval	-0.11	-0.03
Average Sale Price	91,703	28,714	Average Sale Price	106,616	327,309
Average Appraised Value	79,985	26,083	Average Appraised Value	101,185	268,769

Detailed Sample Statistics for the Residential and Commercial Subclasses

079 : REPUBLIC			080 : RICE		
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	60	10	Original Number of Sales	100	8
Trimmed Outliers	5	0	Trimmed Outliers	9	0
Number of Ratios: Outliers Removed	55	10	Number of Ratios: Outliers Removed	91	8
Minimum Ratio	30.5	56.1	Minimum Ratio	28.2	56.6
Maximum Ratio	294.8	116.3	Maximum Ratio	232.3	126.1
Minimum Sale Price	2,000	15,000	Minimum Sale Price	3,000	15,000
Maximum Sale Price	270,000	150,000	Maximum Sale Price	269,000	70,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	97.0	87.1	Median Ratio	92.5	94.8
Lower Median Confidence Interval	89.2	67.6	Lower Median Confidence Interval	88.2	82.0
Upper Median Confidence Interval	104.7	100.0	Upper Median Confidence Interval	96.2	107.5
Broadened Median Ratio	97.7	86.2	Broadened Median Ratio	92.3	94.5
Coefficient of Dispersion (COD)	21.8	18.0	Coefficient of Dispersion (COD)	17.8	14.2
Lower COD Confidence Interval	17.4	11.5	Lower COD Confidence Interval	14.7	7.0
Upper COD Confidence Interval	28.0	28.4	Upper COD Confidence Interval	21.7	31.8
Value Weighted COD	16.3	19.7	Value Weighted COD	17.7	12.2
Coefficient of Concentration @10%	31.7	30.0	Coefficient of Concentration @10%	38.0	50.0
Coefficient of Concentration @15%	43.3	50.0	Coefficient of Concentration @15%	51.0	75.0
Coefficient of Concentration @20%	51.7	60.0	Coefficient of Concentration @20%	59.0	75.0
Coefficient of Concentration @50%	83.3	100.0	Coefficient of Concentration @50%	88.0	100.0
Coefficient of Concentration @100%	95.0	100.0	Coefficient of Concentration @100%	97.0	100.0
Coefficient of Interquartile Deviation	18.1	19.4	Coefficient of Interquartile Deviation	15.9	11.1
Median Percent Deviation	18.1	16.5	Median Percent Deviation	13.9	9.2
Lower Quartile (25th Percentile)	76.8	66.9	Lower Quartile (25th Percentile)	75.0	84.0
Upper Quartile	112.0	100.7	Upper Quartile	104.4	105.1
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptK	Normality Test	RejectW	AcceptK
Relative Skewness	0.33	0.02	Relative Skewness	-0.53	-0.31
Relative Kurtosis	3.28	1.92	Relative Kurtosis	3.03	3.12
Arithmetic Mean Ratio	95.4	85.1	Arithmetic Mean Ratio	87.5	93.7
Weighted Mean Ratio	90.3	92.6	Weighted Mean Ratio	85.4	90.0
Geometric Mean Ratio	91.3	83.0	Geometric Mean Ratio	84.5	91.6
Harmonic Mean Ratio	86.6	81.0	Harmonic Mean Ratio	80.8	89.3
Standard Deviation	27.4	19.2	Standard Deviation	21.1	20.0
Coefficient of Variation (COV)	28.7	22.5	Coefficient of Variation (COV)	24.1	21.3
Price-Related Differential (PRD)	1.06	0.92	Price-Related Differential (PRD)	1.02	1.04
Lower PRD Confidence Interval	1.00	0.85	Lower PRD Confidence Interval	1.00	1.00
Upper PRD Confidence interval	1.13	1.03	Upper PRD Confidence interval	1.06	1.11
Coeff. of Price-Related Bias (PRB)	-0.14	0.09	Coeff. of Price-Related Bias (PRB)	-0.12	-0.08
Lower PRB Confidence Interval	-0.22	-0.06	Lower PRB Confidence Interval	-0.19	-0.33
Upper PRB Confidence Interval	-0.07	0.24	Upper PRB Confidence Interval	-0.05	0.17
Average Sale Price	61,049	50,100	Average Sale Price	69,607	36,250
Average Appraised Value	55,121	46,389	Average Appraised Value	59,441	32,613

Detailed Sample Statistics for the Residential and Commercial Subclasses

081 : RILEY			082 : ROOKS		
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	249	19	Original Number of Sales	46	5
Trimmed Outliers	22	1	Trimmed Outliers	0	0
Number of Ratios: Outliers Removed	227	18	Number of Ratios: Outliers Removed	46	5
Minimum Ratio	27.5	50.4	Minimum Ratio	40.7	50.9
Maximum Ratio	320.4	347.6	Maximum Ratio	182.0	109.7
Minimum Sale Price	12,500	19,000	Minimum Sale Price	5,000	10,000
Maximum Sale Price	1,875,000	2,520,000	Maximum Sale Price	235,000	208,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	98.7	89.4	Median Ratio	91.0	56.9
Lower Median Confidence Interval	97.2	81.7	Lower Median Confidence Interval	79.7	50.9
Upper Median Confidence Interval	99.9	100.0	Upper Median Confidence Interval	99.0	109.7
Broadened Median Ratio	98.7	88.2	Broadened Median Ratio	90.7	59.1
Coefficient of Dispersion (COD)	7.2	20.5	Coefficient of Dispersion (COD)	27.2	26.3
Lower COD Confidence Interval	6.5	13.4	Lower COD Confidence Interval	21.1	9.0
Upper COD Confidence Interval	8.0	32.7	Upper COD Confidence Interval	34.8	46.3
Value Weighted COD	7.7	21.4	Value Weighted COD	22.3	15.1
Coefficient of Concentration @10%	67.9	42.1	Coefficient of Concentration @10%	28.3	40.0
Coefficient of Concentration @15%	79.5	47.4	Coefficient of Concentration @15%	37.0	60.0
Coefficient of Concentration @20%	87.6	52.6	Coefficient of Concentration @20%	43.5	80.0
Coefficient of Concentration @50%	96.4	89.5	Coefficient of Concentration @50%	87.0	80.0
Coefficient of Concentration @100%	98.4	94.7	Coefficient of Concentration @100%	100.0	100.0
Coefficient of Interquartile Deviation	6.2	22.3	Coefficient of Interquartile Deviation	27.5	32.9
Median Percent Deviation	6.2	17.6	Median Percent Deviation	22.1	10.7
Lower Quartile (25th Percentile)	92.6	73.6	Lower Quartile (25th Percentile)	71.5	51.5
Upper Quartile	104.7	113.4	Upper Quartile	121.6	89.0
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	AcceptK	RejectK	Normality Test	RejectW	RejectW
Relative Skewness	-0.01	0.96	Relative Skewness	0.74	1.24
Relative Kurtosis	3.07	4.13	Relative Kurtosis	2.98	2.85
Arithmetic Mean Ratio	98.2	90.9	Arithmetic Mean Ratio	97.5	67.6
Weighted Mean Ratio	97.4	94.0	Weighted Mean Ratio	86.0	61.6
Geometric Mean Ratio	97.7	87.7	Geometric Mean Ratio	92.4	64.7
Harmonic Mean Ratio	97.3	84.7	Harmonic Mean Ratio	87.6	62.4
Standard Deviation	9.2	25.7	Standard Deviation	32.6	24.5
Coefficient of Variation (COV)	9.3	28.2	Coefficient of Variation (COV)	33.5	36.3
Price-Related Differential (PRD)	1.01	0.97	Price-Related Differential (PRD)	1.13	1.10
Lower PRD Confidence Interval	1.00	0.86	Lower PRD Confidence Interval	1.05	0.93
Upper PRD Confidence interval	1.02	1.14	Upper PRD Confidence interval	1.25	1.41
Coeff. of Price-Related Bias (PRB)	-0.13	-0.04	Coeff. of Price-Related Bias (PRB)	-0.06	-0.18
Lower PRB Confidence Interval	-0.17	-0.23	Lower PRB Confidence Interval	-0.13	-0.59
Upper PRB Confidence Interval	-0.09	0.15	Upper PRB Confidence Interval	0.01	0.24
Average Sale Price	210,767	549,306	Average Sale Price	55,739	87,200
Average Appraised Value	205,318	516,107	Average Appraised Value	47,949	53,674

Detailed Sample Statistics for the Residential and Commercial Subclasses

083 : RUSH		*S-12*	084 : RUSSELL		*S-9*
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	36	13	Original Number of Sales	89	15
Trimmed Outliers	2	0	Trimmed Outliers	11	1
Number of Ratios: Outliers Removed	34	13	Number of Ratios: Outliers Removed	78	14
Minimum Ratio	29.2	45.1	Minimum Ratio	31.3	46.9
Maximum Ratio	439.0	155.5	Maximum Ratio	414.0	228.8
Minimum Sale Price	2,250	500	Minimum Sale Price	3,450	2,500
Maximum Sale Price	209,000	346,000	Maximum Sale Price	197,000	157,500
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	105.5	93.3	Median Ratio	95.9	86.3
Lower Median Confidence Interval	99.9	63.1	Lower Median Confidence Interval	90.5	62.2
Upper Median Confidence Interval	120.8	114.6	Upper Median Confidence Interval	99.2	114.0
Broadened Median Ratio	105.0	91.2	Broadened Median Ratio	96.0	87.6
Coefficient of Dispersion (COD)	25.6	30.3	Coefficient of Dispersion (COD)	11.9	28.5
Lower COD Confidence Interval	18.5	19.6	Lower COD Confidence Interval	9.9	18.8
Upper COD Confidence Interval	35.8	55.1	Upper COD Confidence Interval	14.5	46.7
Value Weighted COD	16.2	31.9	Value Weighted COD	11.1	23.2
Coefficient of Concentration @10%	38.9	23.1	Coefficient of Concentration @10%	47.2	20.0
Coefficient of Concentration @15%	44.4	23.1	Coefficient of Concentration @15%	61.8	20.0
Coefficient of Concentration @20%	50.0	30.8	Coefficient of Concentration @20%	69.7	26.7
Coefficient of Concentration @50%	77.8	76.9	Coefficient of Concentration @50%	93.3	93.3
Coefficient of Concentration @100%	94.4	100.0	Coefficient of Concentration @100%	97.8	93.3
Coefficient of Interquartile Deviation	21.3	28.9	Coefficient of Interquartile Deviation	10.3	37.2
Median Percent Deviation	18.4	30.7	Median Percent Deviation	11.0	32.0
Lower Quartile (25th Percentile)	95.7	61.2	Lower Quartile (25th Percentile)	84.0	49.8
Upper Quartile	140.6	115.1	Upper Quartile	103.8	114.0
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectK	Normality Test	RejectK	AcceptK
Relative Skewness	0.24	0.35	Relative Skewness	-0.24	0.00
Relative Kurtosis	3.58	2.07	Relative Kurtosis	2.89	1.50
Arithmetic Mean Ratio	109.5	93.2	Arithmetic Mean Ratio	92.6	83.0
Weighted Mean Ratio	99.3	71.5	Weighted Mean Ratio	92.4	78.7
Geometric Mean Ratio	102.0	86.9	Geometric Mean Ratio	91.5	78.2
Harmonic Mean Ratio	92.2	80.8	Harmonic Mean Ratio	90.2	73.5
Standard Deviation	38.0	35.6	Standard Deviation	14.4	28.2
Coefficient of Variation (COV)	34.7	38.1	Coefficient of Variation (COV)	15.5	34.1
Price-Related Differential (PRD)	1.10	1.30	Price-Related Differential (PRD)	1.00	1.05
Lower PRD Confidence Interval	1.02	1.08	Lower PRD Confidence Interval	0.98	0.93
Upper PRD Confidence interval	1.22	1.63	Upper PRD Confidence interval	1.02	1.23
Coeff. of Price-Related Bias (PRB)	-0.10	-0.06	Coeff. of Price-Related Bias (PRB)	-0.06	-0.06
Lower PRB Confidence Interval	-0.24	-0.16	Lower PRB Confidence Interval	-0.13	-0.21
Upper PRB Confidence Interval	0.04	0.04	Upper PRB Confidence Interval	0.02	0.10
Average Sale Price	53,172	52,903	Average Sale Price	90,121	57,786
Average Appraised Value	52,787	37,849	Average Appraised Value	83,257	45,480

Detailed Sample Statistics for the Residential and Commercial Subclasses

085 : SALINE			086 : SCOTT		
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	247	29	Original Number of Sales	66	7
Trimmed Outliers	21	0	Trimmed Outliers	3	0
Number of Ratios: Outliers Removed	226	29	Number of Ratios: Outliers Removed	63	7
Minimum Ratio	51.5	28.5	Minimum Ratio	46.8	47.5
Maximum Ratio	316.0	156.5	Maximum Ratio	164.0	144.2
Minimum Sale Price	10,000	35,000	Minimum Sale Price	10,000	30,000
Maximum Sale Price	900,000	3,950,000	Maximum Sale Price	340,000	300,000
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	98.8	98.7	Median Ratio	85.5	68.9
Lower Median Confidence Interval	96.5	79.3	Lower Median Confidence Interval	79.8	57.1
Upper Median Confidence Interval	100.3	108.0	Upper Median Confidence Interval	88.4	138.5
Broadened Median Ratio	98.7	96.3	Broadened Median Ratio	85.4	78.4
Coefficient of Dispersion (COD)	13.7	25.2	Coefficient of Dispersion (COD)	14.0	43.6
Lower COD Confidence Interval	12.2	18.6	Lower COD Confidence Interval	11.5	11.9
Upper COD Confidence Interval	15.5	34.5	Upper COD Confidence Interval	17.5	56.2
Value Weighted COD	11.3	32.1	Value Weighted COD	12.4	61.1
Coefficient of Concentration @10%	47.0	27.6	Coefficient of Concentration @10%	40.9	28.6
Coefficient of Concentration @15%	58.7	34.5	Coefficient of Concentration @15%	62.1	28.6
Coefficient of Concentration @20%	68.4	41.4	Coefficient of Concentration @20%	72.7	42.9
Coefficient of Concentration @50%	90.3	89.7	Coefficient of Concentration @50%	95.5	71.4
Coefficient of Concentration @100%	96.0	100.0	Coefficient of Concentration @100%	100.0	71.4
Coefficient of Interquartile Deviation	13.2	23.8	Coefficient of Interquartile Deviation	11.7	59.1
Median Percent Deviation	10.8	23.4	Median Percent Deviation	11.5	31.1
Lower Quartile (25th Percentile)	89.6	74.0	Lower Quartile (25th Percentile)	74.8	57.1
Upper Quartile	115.8	121.0	Upper Quartile	94.9	138.5
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptK	Normality Test	RejectK	AcceptW
Relative Skewness	0.61	0.01	Relative Skewness	-0.24	0.51
Relative Kurtosis	3.78	2.51	Relative Kurtosis	2.82	1.62
Arithmetic Mean Ratio	99.4	96.4	Arithmetic Mean Ratio	82.6	88.9
Weighted Mean Ratio	96.3	82.5	Weighted Mean Ratio	83.1	97.0
Geometric Mean Ratio	97.8	90.9	Geometric Mean Ratio	81.1	82.0
Harmonic Mean Ratio	96.2	84.3	Harmonic Mean Ratio	79.6	75.9
Standard Deviation	18.1	31.0	Standard Deviation	15.1	39.2
Coefficient of Variation (COV)	18.2	32.2	Coefficient of Variation (COV)	18.3	44.1
Price-Related Differential (PRD)	1.03	1.17	Price-Related Differential (PRD)	0.99	0.92
Lower PRD Confidence Interval	1.02	0.94	Lower PRD Confidence Interval	0.97	0.75
Upper PRD Confidence interval	1.05	1.45	Upper PRD Confidence interval	1.02	1.31
Coeff. of Price-Related Bias (PRB)	-0.20	-0.02	Coeff. of Price-Related Bias (PRB)	0.00	0.15
Lower PRB Confidence Interval	-0.25	-0.10	Lower PRB Confidence Interval	-0.06	-0.30
Upper PRB Confidence Interval	-0.15	0.05	Upper PRB Confidence Interval	0.06	0.60
Average Sale Price	132,835	503,494	Average Sale Price	94,613	102,714
Average Appraised Value	127,898	415,387	Average Appraised Value	78,666	99,597

Detailed Sample Statistics for the Residential and Commercial Subclasses

087 : SEDGWICK			088 : SEWARD		
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	347	137	Original Number of Sales	160	10
Trimmed Outliers	46	7	Trimmed Outliers	20	1
Number of Ratios: Outliers Removed	301	130	Number of Ratios: Outliers Removed	140	9
Minimum Ratio	18.2	27.9	Minimum Ratio	22.5	19.0
Maximum Ratio	795.4	675.5	Maximum Ratio	892.3	132.6
Minimum Sale Price	6,000	15,000	Minimum Sale Price	2,000	59,000
Maximum Sale Price	680,000	5,600,000	Maximum Sale Price	365,000	800,000
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	91.3	89.8	Median Ratio	98.1	87.3
Lower Median Confidence Interval	90.2	86.6	Lower Median Confidence Interval	96.1	77.2
Upper Median Confidence Interval	93.2	93.9	Upper Median Confidence Interval	100.6	112.7
Broadened Median Ratio	91.5	89.9	Broadened Median Ratio	98.1	87.2
Coefficient of Dispersion (COD)	9.7	22.5	Coefficient of Dispersion (COD)	9.4	16.8
Lower COD Confidence Interval	8.8	19.5	Lower COD Confidence Interval	8.2	8.2
Upper COD Confidence Interval	10.7	26.1	Upper COD Confidence Interval	10.9	26.0
Value Weighted COD	8.8	24.4	Value Weighted COD	8.8	21.8
Coefficient of Concentration @10%	55.9	30.7	Coefficient of Concentration @10%	54.4	40.0
Coefficient of Concentration @15%	66.9	40.1	Coefficient of Concentration @15%	70.0	70.0
Coefficient of Concentration @20%	76.1	48.2	Coefficient of Concentration @20%	76.3	70.0
Coefficient of Concentration @50%	89.3	84.7	Coefficient of Concentration @50%	93.8	80.0
Coefficient of Concentration @100%	95.7	96.4	Coefficient of Concentration @100%	98.8	100.0
Coefficient of Interquartile Deviation	9.5	21.0	Coefficient of Interquartile Deviation	8.6	15.6
Median Percent Deviation	8.4	20.6	Median Percent Deviation	8.7	10.5
Lower Quartile (25th Percentile)	85.0	70.6	Lower Quartile (25th Percentile)	90.2	77.9
Upper Quartile	102.4	108.4	Upper Quartile	107.0	105.2
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectK	Normality Test	RejectK	RejectW
Relative Skewness	0.46	0.22	Relative Skewness	0.09	0.91
Relative Kurtosis	3.45	2.80	Relative Kurtosis	3.35	2.32
Arithmetic Mean Ratio	91.8	88.9	Arithmetic Mean Ratio	97.7	95.9
Weighted Mean Ratio	89.9	83.1	Weighted Mean Ratio	97.9	94.3
Geometric Mean Ratio	91.0	85.0	Geometric Mean Ratio	96.9	93.9
Harmonic Mean Ratio	90.3	80.6	Harmonic Mean Ratio	96.1	92.2
Standard Deviation	11.6	25.8	Standard Deviation	12.2	21.5
Coefficient of Variation (COV)	12.7	29.0	Coefficient of Variation (COV)	12.4	22.5
Price-Related Differential (PRD)	1.02	1.07	Price-Related Differential (PRD)	1.00	1.02
Lower PRD Confidence Interval	1.01	1.00	Lower PRD Confidence Interval	0.99	0.91
Upper PRD Confidence interval	1.03	1.15	Upper PRD Confidence interval	1.01	1.10
Coeff. of Price-Related Bias (PRB)	-0.25	-0.04	Coeff. of Price-Related Bias (PRB)	-0.10	0.11
Lower PRB Confidence Interval	-0.32	-0.11	Lower PRB Confidence Interval	-0.22	-0.13
Upper PRB Confidence Interval	-0.19	0.04	Upper PRB Confidence Interval	0.01	0.36
Average Sale Price	158,399	590,549	Average Sale Price	129,779	235,361
Average Appraised Value	142,451	490,895	Average Appraised Value	127,033	221,987

Detailed Sample Statistics for the Residential and Commercial Subclasses

089 : SHAWNEE			090 : SHERIDAN		*S-7*
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	321	64	Original Number of Sales	22	6
Trimmed Outliers	49	5	Trimmed Outliers	1	0
Number of Ratios: Outliers Removed	272	59	Number of Ratios: Outliers Removed	21	6
Minimum Ratio	6.7	43.4	Minimum Ratio	66.3	44.9
Maximum Ratio	933.0	674.4	Maximum Ratio	150.6	98.1
Minimum Sale Price	2,000	1,000	Minimum Sale Price	6,500	15,000
Maximum Sale Price	560,000	3,715,000	Maximum Sale Price	325,000	871,815
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	96.7	101.8	Median Ratio	91.6	80.1
Lower Median Confidence Interval	95.1	97.0	Lower Median Confidence Interval	81.1	50.2
Upper Median Confidence Interval	98.7	106.3	Upper Median Confidence Interval	98.1	97.4
Broadened Median Ratio	96.7	101.8	Broadened Median Ratio	90.0	78.7
Coefficient of Dispersion (COD)	9.1	18.6	Coefficient of Dispersion (COD)	11.9	20.0
Lower COD Confidence Interval	8.2	14.9	Lower COD Confidence Interval	8.7	7.7
Upper COD Confidence Interval	10.1	23.7	Upper COD Confidence Interval	16.0	37.8
Value Weighted COD	8.0	17.6	Value Weighted COD	13.8	21.8
Coefficient of Concentration @10%	55.1	39.1	Coefficient of Concentration @10%	36.4	33.3
Coefficient of Concentration @15%	68.8	50.0	Coefficient of Concentration @15%	63.6	33.3
Coefficient of Concentration @20%	75.1	56.3	Coefficient of Concentration @20%	81.8	33.3
Coefficient of Concentration @50%	88.8	89.1	Coefficient of Concentration @50%	95.5	100.0
Coefficient of Concentration @100%	96.3	95.3	Coefficient of Concentration @100%	100.0	100.0
Coefficient of Interquartile Deviation	9.2	15.8	Coefficient of Interquartile Deviation	12.5	27.6
Median Percent Deviation	8.9	14.3	Median Percent Deviation	12.1	21.6
Lower Quartile (25th Percentile)	89.1	88.6	Lower Quartile (25th Percentile)	78.9	52.8
Upper Quartile	106.9	120.8	Upper Quartile	101.9	97.0
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptK	Normality Test	RejectK	AcceptW
Relative Skewness	0.32	-0.04	Relative Skewness	0.24	-0.39
Relative Kurtosis	3.54	3.00	Relative Kurtosis	2.30	1.67
Arithmetic Mean Ratio	95.7	99.3	Arithmetic Mean Ratio	89.3	75.9
Weighted Mean Ratio	94.6	93.0	Weighted Mean Ratio	91.3	87.8
Geometric Mean Ratio	95.0	96.0	Geometric Mean Ratio	88.4	73.0
Harmonic Mean Ratio	94.4	92.3	Harmonic Mean Ratio	87.5	69.9
Standard Deviation	11.3	24.8	Standard Deviation	13.3	21.6
Coefficient of Variation (COV)	11.8	25.0	Coefficient of Variation (COV)	14.9	28.5
Price-Related Differential (PRD)	1.01	1.07	Price-Related Differential (PRD)	0.98	0.86
Lower PRD Confidence Interval	1.00	1.01	Lower PRD Confidence Interval	0.93	0.71
Upper PRD Confidence interval	1.02	1.14	Upper PRD Confidence interval	1.03	1.11
Coeff. of Price-Related Bias (PRB)	-0.25	-0.04	Coeff. of Price-Related Bias (PRB)	-0.05	0.04
Lower PRB Confidence Interval	-0.31	-0.15	Lower PRB Confidence Interval	-0.12	-0.12
Upper PRB Confidence Interval	-0.18	0.07	Upper PRB Confidence Interval	0.03	0.20
Average Sale Price	145,610	448,770	Average Sale Price	104,444	202,553
Average Appraised Value	137,745	417,135	Average Appraised Value	95,327	177,765

Detailed Sample Statistics for the Residential and Commercial Subclasses

091 : SHERMAN		S-5	092 : SMITH		S-5
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	72	8	Original Number of Sales	33	7
Trimmed Outliers	7	0	Trimmed Outliers	0	0
Number of Ratios: Outliers Removed	65	8	Number of Ratios: Outliers Removed	33	7
Minimum Ratio	29.5	39.8	Minimum Ratio	25.2	33.0
Maximum Ratio	666.0	150.8	Maximum Ratio	170.5	237.4
Minimum Sale Price	5,000	25,000	Minimum Sale Price	4,200	3,500
Maximum Sale Price	195,000	1,450,000	Maximum Sale Price	225,000	179,000
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	94.6	97.8	Median Ratio	83.8	157.1
Lower Median Confidence Interval	87.0	82.0	Lower Median Confidence Interval	77.6	49.5
Upper Median Confidence Interval	100.5	125.0	Upper Median Confidence Interval	110.6	187.2
Broadened Median Ratio	94.2	96.2	Broadened Median Ratio	88.1	134.5
Coefficient of Dispersion (COD)	19.3	21.4	Coefficient of Dispersion (COD)	36.7	40.4
Lower COD Confidence Interval	15.8	9.8	Lower COD Confidence Interval	30.0	17.8
Upper COD Confidence Interval	24.5	51.7	Upper COD Confidence Interval	51.2	149.0
Value Weighted COD	15.7	21.5	Value Weighted COD	23.4	54.4
Coefficient of Concentration @10%	38.9	37.5	Coefficient of Concentration @10%	21.2	14.3
Coefficient of Concentration @15%	45.8	50.0	Coefficient of Concentration @15%	33.3	28.6
Coefficient of Concentration @20%	61.1	62.5	Coefficient of Concentration @20%	45.5	42.9
Coefficient of Concentration @50%	84.7	75.0	Coefficient of Concentration @50%	69.7	42.9
Coefficient of Concentration @100%	94.4	100.0	Coefficient of Concentration @100%	93.9	100.0
Coefficient of Interquartile Deviation	17.6	18.0	Coefficient of Interquartile Deviation	29.2	43.8
Median Percent Deviation	17.9	13.6	Median Percent Deviation	31.9	51.1
Lower Quartile (25th Percentile)	77.0	83.3	Lower Quartile (25th Percentile)	72.3	49.5
Upper Quartile	110.3	118.6	Upper Quartile	121.3	187.2
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	AcceptK	AcceptK	Normality Test	RejectK	Rej-Mo4
Relative Skewness	-0.03	-0.11	Relative Skewness	0.25	-0.04
Relative Kurtosis	3.46	2.99	Relative Kurtosis	2.38	1.50
Arithmetic Mean Ratio	90.8	97.4	Arithmetic Mean Ratio	95.5	130.1
Weighted Mean Ratio	89.2	78.9	Weighted Mean Ratio	84.8	77.5
Geometric Mean Ratio	87.6	91.9	Geometric Mean Ratio	86.9	105.2
Harmonic Mean Ratio	83.7	85.1	Harmonic Mean Ratio	77.0	81.3
Standard Deviation	23.0	32.2	Standard Deviation	38.8	78.3
Coefficient of Variation (COV)	25.4	33.1	Coefficient of Variation (COV)	40.7	60.2
Price-Related Differential (PRD)	1.02	1.24	Price-Related Differential (PRD)	1.13	1.68
Lower PRD Confidence Interval	0.98	1.06	Lower PRD Confidence Interval	1.04	1.09
Upper PRD Confidence interval	1.06	1.80	Upper PRD Confidence interval	1.25	3.27
Coeff. of Price-Related Bias (PRB)	-0.20	-0.09	Coeff. of Price-Related Bias (PRB)	-0.05	-0.16
Lower PRB Confidence Interval	-0.39	-0.22	Lower PRB Confidence Interval	-0.16	-0.42
Upper PRB Confidence Interval	-0.01	0.03	Upper PRB Confidence Interval	0.07	0.10
Average Sale Price	81,913	331,300	Average Sale Price	67,506	51,500
Average Appraised Value	73,066	261,371	Average Appraised Value	57,223	39,916

Detailed Sample Statistics for the Residential and Commercial Subclasses

093 : STAFFORD		*S-3*	094 : STANTON		*S-5*
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	38	6	Original Number of Sales	9	5
Trimmed Outliers	7	0	Trimmed Outliers	1	0
Number of Ratios: Outliers Removed	31	6	Number of Ratios: Outliers Removed	8	5
Minimum Ratio	50.7	65.5	Minimum Ratio	59.9	39.7
Maximum Ratio	352.6	200.0	Maximum Ratio	270.8	128.8
Minimum Sale Price	2,000	10,000	Minimum Sale Price	24,000	2,500
Maximum Sale Price	360,000	58,000	Maximum Sale Price	125,000	223,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	101.5	85.4	Median Ratio	101.9	80.0
Lower Median Confidence Interval	96.7	67.2	Lower Median Confidence Interval	75.3	39.7
Upper Median Confidence Interval	108.7	147.3	Upper Median Confidence Interval	138.6	128.8
Broadened Median Ratio	101.6	84.2	Broadened Median Ratio	110.3	67.7
Coefficient of Dispersion (COD)	9.9	34.5	Coefficient of Dispersion (COD)	24.2	31.5
Lower COD Confidence Interval	7.4	9.1	Lower COD Confidence Interval	15.1	1.7
Upper COD Confidence Interval	14.2	65.6	Upper COD Confidence Interval	38.6	60.1
Value Weighted COD	12.3	24.6	Value Weighted COD	22.9	37.1
Coefficient of Concentration @10%	50.0	33.3	Coefficient of Concentration @10%	22.2	40.0
Coefficient of Concentration @15%	60.5	50.0	Coefficient of Concentration @15%	22.2	40.0
Coefficient of Concentration @20%	73.7	66.7	Coefficient of Concentration @20%	22.2	40.0
Coefficient of Concentration @50%	84.2	83.3	Coefficient of Concentration @50%	88.9	60.0
Coefficient of Concentration @100%	94.7	83.3	Coefficient of Concentration @100%	88.9	100.0
Coefficient of Interquartile Deviation	9.8	30.9	Coefficient of Interquartile Deviation	29.0	39.4
Median Percent Deviation	9.5	14.9	Median Percent Deviation	28.7	46.2
Lower Quartile (25th Percentile)	92.2	68.1	Lower Quartile (25th Percentile)	77.7	41.4
Upper Quartile	112.1	120.9	Upper Quartile	136.9	104.4
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectW	Normality Test	Rej-Mo4	AcceptW
Relative Skewness	-0.67	1.56	Relative Skewness	-0.02	0.54
Relative Kurtosis	3.88	3.79	Relative Kurtosis	1.55	2.06
Arithmetic Mean Ratio	99.6	100.0	Arithmetic Mean Ratio	102.5	74.3
Weighted Mean Ratio	92.5	88.4	Weighted Mean Ratio	96.3	51.3
Geometric Mean Ratio	98.6	92.3	Geometric Mean Ratio	98.5	67.6
Harmonic Mean Ratio	97.5	87.0	Harmonic Mean Ratio	94.4	61.6
Standard Deviation	13.7	50.5	Standard Deviation	29.9	36.1
Coefficient of Variation (COV)	13.7	50.5	Coefficient of Variation (COV)	29.2	48.5
Price-Related Differential (PRD)	1.08	1.13	Price-Related Differential (PRD)	1.06	1.45
Lower PRD Confidence Interval	1.03	0.98	Lower PRD Confidence Interval	1.02	1.10
Upper PRD Confidence interval	1.13	1.38	Upper PRD Confidence interval	1.16	2.29
Coeff. of Price-Related Bias (PRB)	-0.09	-0.04	Coeff. of Price-Related Bias (PRB)	-0.57	-0.12
Lower PRB Confidence Interval	-0.20	-0.87	Lower PRB Confidence Interval	-1.44	-0.35
Upper PRB Confidence Interval	0.03	0.79	Upper PRB Confidence Interval	0.31	0.12
Average Sale Price	76,943	28,333	Average Sale Price	77,813	76,300
Average Appraised Value	71,188	25,037	Average Appraised Value	74,971	39,154

Detailed Sample Statistics for the Residential and Commercial Subclasses

095 : STEVENS		S-7	096 : SUMNER		
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	35	10	Original Number of Sales	245	10
Trimmed Outliers	2	1	Trimmed Outliers	36	0
Number of Ratios: Outliers Removed	33	9	Number of Ratios: Outliers Removed	209	10
Minimum Ratio	55.4	48.3	Minimum Ratio	13.1	69.9
Maximum Ratio	246.5	323.0	Maximum Ratio	984.0	126.0
Minimum Sale Price	2,000	29,864	Minimum Sale Price	500	7,000
Maximum Sale Price	280,000	775,000	Maximum Sale Price	512,900	620,000
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	99.7	95.0	Median Ratio	100.6	94.2
Lower Median Confidence Interval	90.6	68.3	Lower Median Confidence Interval	97.4	88.2
Upper Median Confidence Interval	115.0	118.1	Upper Median Confidence Interval	103.7	117.5
Broadened Median Ratio	100.8	93.2	Broadened Median Ratio	100.5	95.9
Coefficient of Dispersion (COD)	17.2	24.1	Coefficient of Dispersion (COD)	17.2	15.6
Lower COD Confidence Interval	13.4	16.1	Lower COD Confidence Interval	15.2	11.5
Upper COD Confidence Interval	23.6	42.7	Upper COD Confidence Interval	19.5	24.4
Value Weighted COD	13.2	21.6	Value Weighted COD	14.5	11.1
Coefficient of Concentration @10%	31.4	20.0	Coefficient of Concentration @10%	34.7	50.0
Coefficient of Concentration @15%	48.6	30.0	Coefficient of Concentration @15%	49.8	50.0
Coefficient of Concentration @20%	68.6	30.0	Coefficient of Concentration @20%	55.9	60.0
Coefficient of Concentration @50%	91.4	90.0	Coefficient of Concentration @50%	82.0	100.0
Coefficient of Concentration @100%	97.1	90.0	Coefficient of Concentration @100%	90.2	100.0
Coefficient of Interquartile Deviation	17.9	27.5	Coefficient of Interquartile Deviation	18.7	15.1
Median Percent Deviation	15.3	26.2	Median Percent Deviation	15.2	11.8
Lower Quartile (25th Percentile)	86.5	67.7	Lower Quartile (25th Percentile)	87.8	88.0
Upper Quartile	122.2	120.0	Upper Quartile	125.4	116.5
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptK	Normality Test	RejectK	AcceptK
Relative Skewness	0.66	-0.02	Relative Skewness	0.59	0.12
Relative Kurtosis	3.61	1.79	Relative Kurtosis	3.79	2.00
Arithmetic Mean Ratio	103.2	88.5	Arithmetic Mean Ratio	98.9	99.8
Weighted Mean Ratio	97.0	78.8	Weighted Mean Ratio	96.3	93.3
Geometric Mean Ratio	100.9	84.8	Geometric Mean Ratio	96.4	98.2
Harmonic Mean Ratio	98.7	81.1	Harmonic Mean Ratio	93.8	96.7
Standard Deviation	22.4	26.1	Standard Deviation	22.5	18.3
Coefficient of Variation (COV)	21.7	29.5	Coefficient of Variation (COV)	22.8	18.3
Price-Related Differential (PRD)	1.06	1.12	Price-Related Differential (PRD)	1.03	1.07
Lower PRD Confidence Interval	1.02	1.02	Lower PRD Confidence Interval	1.00	0.99
Upper PRD Confidence interval	1.12	1.28	Upper PRD Confidence interval	1.05	1.18
Coeff. of Price-Related Bias (PRB)	-0.11	-0.05	Coeff. of Price-Related Bias (PRB)	-0.32	-0.01
Lower PRB Confidence Interval	-0.21	-0.54	Lower PRB Confidence Interval	-0.42	-0.10
Upper PRB Confidence Interval	-0.02	0.45	Upper PRB Confidence Interval	-0.22	0.07
Average Sale Price	103,674	175,221	Average Sale Price	95,606	105,511
Average Appraised Value	100,558	138,031	Average Appraised Value	92,105	98,484

Detailed Sample Statistics for the Residential and Commercial Subclasses

097 : THOMAS		*S-6*	098 : TREGO		*S-9*
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	109	8	Original Number of Sales	36	9
Trimmed Outliers	9	0	Trimmed Outliers	5	1
Number of Ratios: Outliers Removed	100	8	Number of Ratios: Outliers Removed	31	8
Minimum Ratio	48.9	47.5	Minimum Ratio	22.1	51.6
Maximum Ratio	204.6	151.9	Maximum Ratio	365.3	502.0
Minimum Sale Price	4,800	52,500	Minimum Sale Price	3,000	500
Maximum Sale Price	480,000	340,000	Maximum Sale Price	233,000	1,300,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	95.0	96.3	Median Ratio	94.5	97.9
Lower Median Confidence Interval	92.3	53.5	Lower Median Confidence Interval	85.4	62.3
Upper Median Confidence Interval	99.5	118.9	Upper Median Confidence Interval	101.2	188.9
Broadened Median Ratio	95.0	97.5	Broadened Median Ratio	93.8	96.1
Coefficient of Dispersion (COD)	12.0	28.7	Coefficient of Dispersion (COD)	19.4	31.1
Lower COD Confidence Interval	10.1	17.1	Lower COD Confidence Interval	14.0	15.8
Upper COD Confidence Interval	14.3	59.9	Upper COD Confidence Interval	28.3	65.3
Value Weighted COD	11.5	36.4	Value Weighted COD	21.4	26.5
Coefficient of Concentration @10%	47.7	0.0	Coefficient of Concentration @10%	41.7	22.2
Coefficient of Concentration @15%	65.1	37.5	Coefficient of Concentration @15%	52.8	44.4
Coefficient of Concentration @20%	78.0	50.0	Coefficient of Concentration @20%	55.6	55.6
Coefficient of Concentration @50%	95.4	75.0	Coefficient of Concentration @50%	80.6	77.8
Coefficient of Concentration @100%	98.2	100.0	Coefficient of Concentration @100%	94.4	88.9
Coefficient of Interquartile Deviation	10.4	29.3	Coefficient of Interquartile Deviation	17.0	40.9
Median Percent Deviation	10.5	21.3	Median Percent Deviation	13.5	19.5
Lower Quartile (25th Percentile)	82.8	61.4	Lower Quartile (25th Percentile)	72.4	72.9
Upper Quartile	102.6	117.8	Upper Quartile	104.6	153.0
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptK	Normality Test	RejectK	RejectK
Relative Skewness	-0.48	0.05	Relative Skewness	-0.33	1.16
Relative Kurtosis	3.09	2.10	Relative Kurtosis	2.81	3.72
Arithmetic Mean Ratio	91.9	95.5	Arithmetic Mean Ratio	87.4	99.0
Weighted Mean Ratio	90.9	90.2	Weighted Mean Ratio	81.0	97.4
Geometric Mean Ratio	90.7	89.4	Geometric Mean Ratio	83.8	92.2
Harmonic Mean Ratio	89.3	83.1	Harmonic Mean Ratio	79.6	86.3
Standard Deviation	14.5	34.9	Standard Deviation	23.7	42.2
Coefficient of Variation (COV)	15.7	36.5	Coefficient of Variation (COV)	27.1	42.7
Price-Related Differential (PRD)	1.01	1.06	Price-Related Differential (PRD)	1.08	1.02
Lower PRD Confidence Interval	0.99	0.92	Lower PRD Confidence Interval	1.02	0.69
Upper PRD Confidence interval	1.04	1.23	Upper PRD Confidence interval	1.17	1.28
Coeff. of Price-Related Bias (PRB)	-0.09	0.06	Coeff. of Price-Related Bias (PRB)	-0.29	-0.26
Lower PRB Confidence Interval	-0.13	-0.35	Lower PRB Confidence Interval	-0.46	-0.63
Upper PRB Confidence Interval	-0.05	0.48	Upper PRB Confidence Interval	-0.12	0.12
Average Sale Price	137,876	139,688	Average Sale Price	79,758	229,913
Average Appraised Value	125,333	126,065	Average Appraised Value	64,594	224,021

Detailed Sample Statistics for the Residential and Commercial Subclasses

099 : WABAUNSEE		S-5	100 : WALLACE		S-1
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	66	7	Original Number of Sales	10	2
Trimmed Outliers	7	0	Trimmed Outliers	1	0
Number of Ratios: Outliers Removed	59	7	Number of Ratios: Outliers Removed	9	2
Minimum Ratio	19.7	64.7	Minimum Ratio	57.3	
Maximum Ratio	274.4	166.7	Maximum Ratio	171.3	
Minimum Sale Price	5,000	15,000	Minimum Sale Price	8,000	2,000
Maximum Sale Price	549,000	135,000	Maximum Sale Price	180,000	70,000
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	96.9	107.8	Median Ratio	93.1	72.3
Lower Median Confidence Interval	93.8	70.4	Lower Median Confidence Interval	84.0	
Upper Median Confidence Interval	98.9	144.4	Upper Median Confidence Interval	107.0	
Broadened Median Ratio	96.8	107.8	Broadened Median Ratio	92.9	
Coefficient of Dispersion (COD)	10.8	29.0	Coefficient of Dispersion (COD)	12.5	27.4
Lower COD Confidence Interval	8.6	18.1	Lower COD Confidence Interval	7.2	
Upper COD Confidence Interval	13.6	57.6	Upper COD Confidence Interval	26.6	
Value Weighted COD	9.7	28.6	Value Weighted COD	7.6	
Coefficient of Concentration @10%	51.5	14.3	Coefficient of Concentration @10%	50.0	
Coefficient of Concentration @15%	59.1	14.3	Coefficient of Concentration @15%	70.0	
Coefficient of Concentration @20%	74.2	42.9	Coefficient of Concentration @20%	70.0	
Coefficient of Concentration @50%	89.4	85.7	Coefficient of Concentration @50%	90.0	
Coefficient of Concentration @100%	97.0	100.0	Coefficient of Concentration @100%	100.0	
Coefficient of Interquartile Deviation	9.8	34.4	Coefficient of Interquartile Deviation	12.2	
Median Percent Deviation	9.2	34.1	Median Percent Deviation	10.0	
Lower Quartile (25th Percentile)	86.8	70.4	Lower Quartile (25th Percentile)	83.9	
Upper Quartile	105.7	144.4	Upper Quartile	106.6	
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectK	AcceptW	Normality Test	RejectK	
Relative Skewness	-0.10	0.20	Relative Skewness	-0.54	
Relative Kurtosis	2.92	1.65	Relative Kurtosis	3.31	
Arithmetic Mean Ratio	94.9	109.9	Arithmetic Mean Ratio	90.4	
Weighted Mean Ratio	92.4	95.1	Weighted Mean Ratio	93.0	
Geometric Mean Ratio	93.9	104.0	Geometric Mean Ratio	89.0	
Harmonic Mean Ratio	92.8	98.3	Harmonic Mean Ratio	87.3	
Standard Deviation	13.9	38.6	Standard Deviation	16.3	
Coefficient of Variation (COV)	14.6	35.1	Coefficient of Variation (COV)	18.1	
Price-Related Differential (PRD)	1.03	1.16	Price-Related Differential (PRD)	0.97	0.79
Lower PRD Confidence Interval	1.01	1.01	Lower PRD Confidence Interval	0.91	
Upper PRD Confidence interval	1.05	1.39	Upper PRD Confidence interval	1.03	
Coeff. of Price-Related Bias (PRB)	-0.07	-0.14	Coeff. of Price-Related Bias (PRB)	-0.06	
Lower PRB Confidence Interval	-0.13	-0.57	Lower PRB Confidence Interval	-0.27	
Upper PRB Confidence Interval	-0.01	0.30	Upper PRB Confidence Interval	0.14	
Average Sale Price	131,486	46,500	Average Sale Price	65,000	36,000
Average Appraised Value	121,542	44,239	Average Appraised Value	60,427	32,785

Detailed Sample Statistics for the Residential and Commercial Subclasses

101 : WASHINGTON		S-5	102 : WICHITA		S-6
GENERAL STATISTICS	Residential	Comm./Ind	GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	43	8	Original Number of Sales	25	7
Trimmed Outliers	2	0	Trimmed Outliers	3	0
Number of Ratios: Outliers Removed	41	8	Number of Ratios: Outliers Removed	22	7
Minimum Ratio	35.8	32.7	Minimum Ratio	29.6	78.5
Maximum Ratio	525.3	185.6	Maximum Ratio	220.9	160.6
Minimum Sale Price	1,500	21,000	Minimum Sale Price	4,000	2,750
Maximum Sale Price	225,500	240,000	Maximum Sale Price	209,000	87,000
DISTRIBUTION FREE STATISTICS			DISTRIBUTION FREE STATISTICS		
Median Ratio	108.2	85.7	Median Ratio	95.0	102.5
Lower Median Confidence Interval	104.1	51.8	Lower Median Confidence Interval	80.3	90.5
Upper Median Confidence Interval	139.9	139.7	Upper Median Confidence Interval	102.1	137.9
Broadened Median Ratio	109.9	83.7	Broadened Median Ratio	93.2	99.4
Coefficient of Dispersion (COD)	44.0	38.9	Coefficient of Dispersion (COD)	14.9	19.7
Lower COD Confidence Interval	32.7	19.2	Lower COD Confidence Interval	11.5	9.8
Upper COD Confidence Interval	60.6	81.1	Upper COD Confidence Interval	20.9	34.6
Value Weighted COD	24.6	33.0	Value Weighted COD	13.8	22.6
Coefficient of Concentration @10%	34.9	37.5	Coefficient of Concentration @10%	44.0	28.6
Coefficient of Concentration @15%	41.9	37.5	Coefficient of Concentration @15%	48.0	57.1
Coefficient of Concentration @20%	44.2	37.5	Coefficient of Concentration @20%	60.0	57.1
Coefficient of Concentration @50%	67.4	62.5	Coefficient of Concentration @50%	88.0	85.7
Coefficient of Concentration @100%	83.7	87.5	Coefficient of Concentration @100%	92.0	100.0
Coefficient of Interquartile Deviation	50.0	42.1	Coefficient of Interquartile Deviation	13.8	23.1
Median Percent Deviation	29.3	30.4	Median Percent Deviation	15.5	11.7
Lower Quartile (25th Percentile)	96.9	55.7	Lower Quartile (25th Percentile)	78.6	90.5
Upper Quartile	205.1	127.8	Upper Quartile	104.7	137.9
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectW	RejectK	Normality Test	RejectK	AcceptW
Relative Skewness	1.17	0.79	Relative Skewness	0.25	0.83
Relative Kurtosis	3.87	2.70	Relative Kurtosis	2.36	2.31
Arithmetic Mean Ratio	134.4	92.6	Arithmetic Mean Ratio	92.6	109.4
Weighted Mean Ratio	99.4	72.5	Weighted Mean Ratio	89.9	109.1
Geometric Mean Ratio	119.8	81.8	Geometric Mean Ratio	91.2	106.4
Harmonic Mean Ratio	106.9	71.8	Harmonic Mean Ratio	89.8	103.7
Standard Deviation	68.2	49.1	Standard Deviation	16.7	29.2
Coefficient of Variation (COV)	50.7	53.0	Coefficient of Variation (COV)	18.0	26.7
Price-Related Differential (PRD)	1.35	1.28	Price-Related Differential (PRD)	1.03	1.00
Lower PRD Confidence Interval	1.21	1.04	Lower PRD Confidence Interval	0.99	0.87
Upper PRD Confidence interval	1.57	1.69	Upper PRD Confidence interval	1.09	1.12
Coeff. of Price-Related Bias (PRB)	-0.47	-0.06	Coeff. of Price-Related Bias (PRB)	0.02	0.02
Lower PRB Confidence Interval	-0.62	-0.55	Lower PRB Confidence Interval	-0.10	-0.16
Upper PRB Confidence Interval	-0.32	0.43	Upper PRB Confidence Interval	0.15	0.21
Average Sale Price	54,438	71,250	Average Sale Price	85,000	37,821
Average Appraised Value	54,101	51,675	Average Appraised Value	76,406	41,271

Detailed Sample Statistics for the Residential and Commercial Subclasses

103 : WILSON			104 : WOODSON		S-12
GENERAL STATISTICS	Residential	Comm./Ind	*GENERAL STATISTICS*	Residential	Comm./Ind
Original Number of Sales	65	8	Original Number of Sales	21	11
Trimmed Outliers	11	0	Trimmed Outliers	2	2
Number of Ratios: Outliers Removed	54	8	Number of Ratios: Outliers Removed	19	9
Minimum Ratio	52.5	56.3	Minimum Ratio	73.1	50.3
Maximum Ratio	4882.0	172.4	Maximum Ratio	1443.0	413.0
Minimum Sale Price	500	7,200	Minimum Sale Price	1,000	1,000
Maximum Sale Price	222,400	49,000	Maximum Sale Price	130,000	225,000
DISTRIBUTION FREE STATISTICS			*DISTRIBUTION FREE STATISTICS*		
Median Ratio	100.5	102.2	Median Ratio	95.9	109.1
Lower Median Confidence Interval	91.0	80.7	Lower Median Confidence Interval	83.9	81.3
Upper Median Confidence Interval	113.6	145.9	Upper Median Confidence Interval	119.5	130.1
Broadened Median Ratio	100.5	104.2	Broadened Median Ratio	100.5	109.9
Coefficient of Dispersion (COD)	22.2	29.2	Coefficient of Dispersion (COD)	23.4	18.2
Lower COD Confidence Interval	17.8	19.6	Lower COD Confidence Interval	17.6	10.1
Upper COD Confidence Interval	28.8	54.0	Upper COD Confidence Interval	36.0	34.4
Value Weighted COD	17.2	27.2	Value Weighted COD	14.5	32.8
Coefficient of Concentration @10%	24.6	0.0	Coefficient of Concentration @10%	19.0	36.4
Coefficient of Concentration @15%	38.5	37.5	Coefficient of Concentration @15%	33.3	36.4
Coefficient of Concentration @20%	46.2	37.5	Coefficient of Concentration @20%	52.4	45.5
Coefficient of Concentration @50%	78.5	87.5	Coefficient of Concentration @50%	76.2	72.7
Coefficient of Concentration @100%	83.1	100.0	Coefficient of Concentration @100%	90.5	81.8
Coefficient of Interquartile Deviation	28.2	28.4	Coefficient of Interquartile Deviation	28.3	22.4
Median Percent Deviation	22.0	22.3	Median Percent Deviation	19.9	21.9
Lower Quartile (25th Percentile)	84.3	83.0	Lower Quartile (25th Percentile)	81.2	81.3
Upper Quartile	141.0	141.0	Upper Quartile	135.6	130.1
PARAMETRIC STATISTICS			PARAMETRIC STATISTICS		
Normality Test	RejectW	AcceptK	Normality Test	RejectW	RejectK
Relative Skewness	1.08	0.32	Relative Skewness	0.96	-0.55
Relative Kurtosis	4.47	2.14	Relative Kurtosis	2.88	2.44
Arithmetic Mean Ratio	99.9	109.5	Arithmetic Mean Ratio	103.7	97.2
Weighted Mean Ratio	93.6	107.0	Weighted Mean Ratio	93.1	74.8
Geometric Mean Ratio	96.3	103.7	Geometric Mean Ratio	100.4	94.0
Harmonic Mean Ratio	93.0	98.0	Harmonic Mean Ratio	97.5	90.2
Standard Deviation	28.4	37.7	Standard Deviation	28.6	24.7
Coefficient of Variation (COV)	28.4	34.4	Coefficient of Variation (COV)	27.6	25.4
Price-Related Differential (PRD)	1.07	1.02	Price-Related Differential (PRD)	1.11	1.30
Lower PRD Confidence Interval	1.02	0.96	Lower PRD Confidence Interval	1.03	1.04
Upper PRD Confidence interval	1.13	1.10	Upper PRD Confidence interval	1.25	1.69
Coeff. of Price-Related Bias (PRB)	-1.93	0.11	Coeff. of Price-Related Bias (PRB)	-0.34	-0.20
Lower PRB Confidence Interval	-3.05	-0.29	Lower PRB Confidence Interval	-1.15	-0.51
Upper PRB Confidence Interval	-0.82	0.50	Upper PRB Confidence Interval	0.47	0.11
Average Sale Price	68,744	26,088	Average Sale Price	40,000	55,222
Average Appraised Value	64,372	27,916	Average Appraised Value	37,252	41,283

Detailed Sample Statistics for the Residential and Commercial Subclasses

105 : WYANDOTTE		
GENERAL STATISTICS	Residential	Comm./Ind
Original Number of Sales	320	64
Trimmed Outliers	36	3
Number of Ratios: Outliers Removed	284	61
Minimum Ratio	30.3	36.3
Maximum Ratio	492.5	447.0
Minimum Sale Price	5,000	5,000
Maximum Sale Price	442,000	6,500,000
DISTRIBUTION FREE STATISTICS		
Median Ratio	94.4	84.9
Lower Median Confidence Interval	91.7	77.0
Upper Median Confidence Interval	96.8	92.7
Broadened Median Ratio	94.4	85.1
Coefficient of Dispersion (COD)	17.1	24.9
Lower COD Confidence Interval	15.4	20.9
Upper COD Confidence Interval	19.0	31.3
Value Weighted COD	13.4	17.7
Coefficient of Concentration @10%	37.5	28.1
Coefficient of Concentration @15%	50.6	39.1
Coefficient of Concentration @20%	59.7	43.8
Coefficient of Concentration @50%	85.9	84.4
Coefficient of Concentration @100%	91.6	95.3
Coefficient of Interquartile Deviation	16.5	24.0
Median Percent Deviation	14.5	23.7
Lower Quartile (25th Percentile)	81.3	65.0
Upper Quartile	112.5	105.6
PARAMETRIC STATISTICS		
Normality Test	RejectK	RejectK
Relative Skewness	0.53	0.38
Relative Kurtosis	3.46	2.83
Arithmetic Mean Ratio	92.9	85.5
Weighted Mean Ratio	89.9	79.3
Geometric Mean Ratio	90.6	81.5
Harmonic Mean Ratio	88.3	77.4
Standard Deviation	20.9	26.1
Coefficient of Variation (COV)	22.5	30.5
Price-Related Differential (PRD)	1.03	1.08
Lower PRD Confidence Interval	1.02	1.01
Upper PRD Confidence interval	1.05	1.16
Coeff. of Price-Related Bias (PRB)	-0.23	-0.12
Lower PRB Confidence Interval	-0.29	-0.20
Upper PRB Confidence Interval	-0.18	-0.04
Average Sale Price	116,780	518,285
Average Appraised Value	104,998	411,182

Section II

Kansas Real Estate

Sales Validation Questionnaire

ONLY FOR USE IN COUNTIES APPROVED TO ACCEPT ONE-PART FORMS *(See website information below)*

KANSAS REAL ESTATE SALES VALIDATION QUESTIONNAIRE

FOR COUNTY USE ONLY: DEED BOOK _____ PAGE _____	COV # _ _ _ _ _ _	CO. NO.	MAP	SEC	SHEET	QTR.	BLOCK	PARCEL	OWN
RECORDING DATE ____ / ____ / ____	TYPE OF INSTRUMENT _____ SPLIT ☐ CR _____ RA _____ DE _____ MULTI ☐		MO	YR	TY		AMOUNT	S	V

SELLER (Grantor) NAME _____	BUYER (Grantee) NAME _____
MAILING _____	MAILING _____
CITY/ST/ZIP _____	CITY/ST/ZIP _____
PHONE NO. (____) _____ email (optional) _____	PHONE NO. (____) _____ email (optional) _____

IF AN AGENT SIGNS THIS FORM, BOTH BUYER AND SELLER TELEPHONE NUMBERS MUST BE ENTERED.

BRIEF LEGAL DESCRIPTION _____ _____ _____ _____	Property / Situs Address: _____ Name and Mailing Address for Tax Statements _____ _____ _____

1. Check any special factors that apply:

   ☐ Sale between immediate family members:
   Specify the relationship _____

   ☐ Sale involved corporate affiliates or related entities
   ☐ Auction sale (absolute auction ☐ Yes ☐ No)
   ☐ Short sale (amount of lien(s) exceeds sale proceeds)
   ☐ Transfer in lieu of foreclosure or repossession
   ☐ Sale involved a build-to-suit or leaseback arrangement
   ☐ Sale by judicial order (by a guardian, executor,
   conservator, administrator, or trustee of an estate)
   ☐ Sale involved a government agency or public utility
   ☐ Buyer (new owner) is a religious, charitable, or benevolent
   organization, school or educational association
   ☐ Buyer (new owner) is a financial institution, insurance
   company, pension fund, or mortgage corporation
   ☐ Sale of only a partial interest in the real estate
   ☐ Sale involved a trade or exchange of properties
   ☐ **None of the above**

2. Check use of property at the time of sale:
   ☐ Single family residence   ☐ Agricultural land
   ☐ Farm/Ranch with residence   Mineral rights included?
   ☐ Condominium unit   ☐ Yes ☐ No
   ☐ Vacant land   ☐ Apartment building
   ☐ Other: (Specify)   ☐ Commercial/Industrial bldg.
   _____

3. Was the property rented or leased at the time of sale?
   ☐ Yes (number of years remaining on lease _____)
   ☐ Tenant is buyer   ☐ No

4. Did the sale price include an operating business?
   ☐ Yes (estimated value $ _____) ☐ No

5. Was any personal property included in the sale price (such
   as furniture, equipment, inventory, machinery, crops, etc.)?
   ☐ Yes ☐ No If yes, please describe _____
   _____

   Estimated value of all personal property items included in the
   sale price $ _____

   If **Mobile Home:** Year _____ Model _____

6. Were any changes made to the property since January 1st?
   ☐ Yes   ☐ No
   ☐ Demolition ☐ New construction ☐ Remodeling ☐ Additions
   Date completed _____ Amount $ _____

7. Were any **delinquent** property taxes paid by the buyer? Amt.$ _____
   ☐ Yes **AND** the amount was included in the total sale price
   ☐ Yes but the amount was **not** included in the total sale price
   ☐ No delinquent property taxes were included in the sale

8. Method of financing (check all that apply):
   ☐ New loan(s) from a financial institution   ☐ IRS 1031Exchange
   ☐ Seller financing   ☐ Assumption of an existing loan(s)
   ☐ All cash   ☐ Trade of property   ☐ Not applicable

9. Was the property offered to other potential buyers?
   ☐ Yes: Advertised (listed, Internet, yard sign, word-of-mouth, etc.)
   ☐ No: Private purchase (not offered on the open market)

10. Does the buyer hold title to any adjoining property?
    ☐ Yes   ☐ No

11. Are there any additional facts that would cause this sale to be a
    distressed, forced, or non-arm's length exchange?
    ☐ Yes   ☐ No If yes, please describe _____
    _____

    K.S.A. 79-1437g. Same; penalty for violations. Any person who
    shall falsify the value of real estate transferred shall be deemed
    guilty of a misdemeanor and upon conviction thereof shall be
    fined not more than $500.

12. **TOTAL SALE PRICE $** _____

    DEED DATE ____ / ____ / ____

13. I have read the instructions for completing this form and certify
    that the above information is true and accurate.

    Print name _____

    Signature _____

    ☐ Grantor (Seller)   ☐ Grantee (Buyer)
    ☐ Agent Daytime phone number (_____) _____

PV-RE-22-OP
(Rev. 08/12)

KANSAS REAL ESTATE SALES VALIDATION ONE-PART QUESTIONNAIRE WEBSITE ADDRESS:
http://www.ksrevenue.org/pvdratiostats.html

INSTRUCTIONS FOR COMPLETING THE SALES VALIDATION QUESTIONNAIRE
One Part Form

ITEM 1   Please check all boxes which pertain to the sale.

ITEM 2   Check the box which describes the current or most recent use of the property at the time of sale. Check all boxes which are applicable if the property has multiple uses.

ITEM 3   Check yes if the buyer assumed any long term lease(s) (more than 3 years remaining) at the time of sale. Enter the years remaining if known. Check the box if a tenant (renter or lessee) purchased the property.

ITEM 4   Check yes if the purchase price included an operating business that may include intangible personal property such as a franchise, trade license, patent, trademark, stocks, bonds, and/or goodwill. Estimate the value of the intangibles if this was part of the purchase agreement and included in the total sale price.

ITEM 5   Check yes if any tangible items of property were included in the sale price. If possible, provide a brief description and your estimate of all personal property included in the total sale price.

ITEM 6   Check yes if the property characteristics changed after January 1st of the sale year. Indicate what type of major change(s) (such as demolition, new construction, remodeling, rehabilitation) took place by marking the appropriate box. Indicate the approximate date the changes took place and the approximate cost.

ITEM 7   Check yes if any delinquent property taxes were paid by the buyer and included as part of the sale price. Do not include the estimated real estate taxes prorated for the year the property sold included as part of the typical escrow closing cost.

ITEM 8   Check the predominate method of financing used to acquire the property. Check "Not Applicable" if money did not exchange hands.

ITEM 9   Check yes if the property was advertised on the open market, listed with a real estate agent or broker, displayed a for sale sign, advertised in a newspaper or other publication, listed on the internet, and/or offered by word of mouth. A private sale is an exchange that was not made available to the general public or the property was not exposed on the open market.

ITEM 10   Check yes if the buyer owns or controls the property adjoining or adjacent to the property being purchased.

ITEM 11   Provide a brief explanation if either the buyer or seller did not act prudently, was not fully informed about the property, did not have knowledge of the local market, was poorly advised, did not use good judgment in the negotiations, was acting under duress, or was compelled to sell or buy the property out of necessity.

ITEM 12   Provide the total sale price and date of sale. The date should be the date that either the deed or the contract for deed was signed, not the date the deed was recorded.

ITEM 13   Please sign the questionnaire and list a daytime phone number. The county appraiser may need to make a follow up phone call to clarify unusual terms or conditions.

When a real estate sales validation questionnaire is not required due to one or more of the exemptions provided in 1-16 below, the exemption must be clearly stated on the document being filed. The Register of Deeds cannot add this information to the deed at filing.

TRANSFERS OF TITLE THAT DO NOT REQUIRE A SALES VALIDATION QUESTIONNAIRE:

(1)   Recorded prior to the effective date of this act, i.e., July 1, 1991;
(2)   made solely for the purpose of securing or releasing security for a debt or other obligation;
(3)   made for the purpose of confirming, correcting, modifying or supplementing a deed previously recorded, and without additional consideration;
(4)   by way of gift, donation or contribution stated in the deed or other instruments;
(5)   to cemetery lots;
(6)   by leases and transfers of severed mineral interests;
(7)   to or from a trust, and without consideration;
(8)   resulting from a divorce settlement where one party transfers interest in property to the other;
(9)   made solely for the purpose of creating a joint tenancy or tenancy in common;
(10)   by way of a sheriff's deed;
(11)   by way of a deed which has been in escrow for longer than five years;
(12)   by way of a quit claim deed filed for the purpose of clearing title encumbrances;
(13)   when title is transferred to convey right-of-way or pursuant to eminent domain;
(14)   made by a guardian, executor, administrator, conservator or trustee of an estate pursuant to judicial order;
(15)   when title is transferred due to repossession; or
(16)   made for the purpose of releasing an equitable lien on a previously recorded affidavit of equitable interest, and without additional consideration.

(b)   When a real estate sales validation questionnaire is not required due to one or more of the exemptions provided in 1-16 above, the exemption shall be clearly stated on the document being filed.

If you have any questions or need assistance completing this form, please call the county appraiser's office.

Section III

Ratio Study Validation

&

Statistical Procedures

$$A = \pi r^2$$
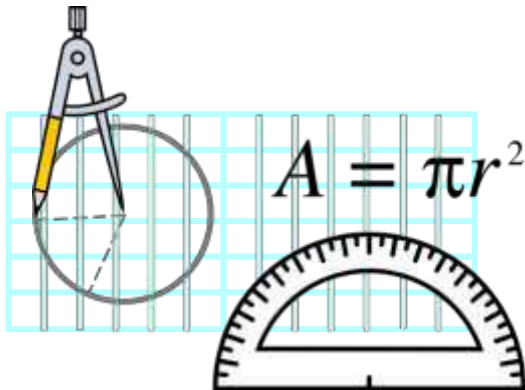
Sales Ratio Study

The sales ratio study is an important performance evaluation tool in the mass appraisal process. It can be used to measure the county's overall appraisal accuracy by indicating the general level of appraisal and the degree of uniformity. The study can also be used to monitor the need for a general reappraisal or identify neighborhoods that may require a review. Information from the study can also be used to develop market trends affecting various types of properties. By identifying problem areas or selected groups of properties in need of attention, resources can be efficiently allocated.

The ratio study makes a comparison of recently sold properties to the county appraiser's estimate of market value. Recent sales of property can often serve as representatives of true market value if the buyer and seller are well informed, the market is open and competitive and neither party is acting with undue compulsion. The appraiser will also consider other factors that may influence the price paid for a property. In some cases, an adjustment to the sale price must be made before it can be used as a good indicator of market value.

The principal information source used to confirm the sale price and determine validity of a real estate transfer is the Kansas Real Estate Sales Validation Questionnaire. Kansas statutes requires that a questionnaire be completed and filed with the register of deeds before a deed, affidavit of equitable interest or other recording instrument is accepted for recording (with some exceptions per K.S.A. 79-1437e).

Information provided by the Kansas Real Estate Sales Validation Questionnaire is not always sufficient to make a validation decision and a follow-up verification may be required. The buyer, seller or agent may have to be interviewed in order to make a final decision on the validity or obtain additional information for needed adjustments. The determination to classify a sale as valid or invalid is based upon industry standards promulgated by the International Association of Assessing Officers (IAAO). Various factors will be considered during the screening process before invalidating a sale. Any sale that is affected by the following conditions will be considered invalid for ratio study purposes:

- Property not exposed for sale on the open market

- Physical characteristics or highest and best use of the property changed after January 1, 2016, and before the sale occurred
- Sale involved a governmental agency liquidating repossessed property
- Transfer was determined to be a satisfaction of a contract for deed signed prior to the study year
- Transaction was a forced sale
- Sale included an excessive amount of tangible or intangible personal property
- Sale date not within the current study timeframe
- Split parcel
- Uninformed buyer and/or seller

The study concept is a simple one. The degree to which an appraisal made for tax purposes reflects market value can be indicated by the sale price of that property. If a sufficient number of recent sales are available, statistical measures can often provide reliable estimates of performance. Because property in Kansas is grouped into several subclasses, such as residential and commercial/industrial, a ratio study is conducted on each group to provide more detailed information.

The ratio for each property is calculated by dividing the appraised value by the sale price. The resulting ratios indicate how closely the appraiser achieved the goal of fair market value with a ratio of 100 percent being the most desirable. For the Kansas Real Estate Ratio Study, ratios are expressed as a percentage.

For example, consider the following five residential properties that have recently sold.

Sale	Appraised Value	Sale Price	Ratio	Ratio as a Percentage
1	$25,000	$20,000	1.25	125.0
2	$45,000	$50,000	0.90	90.0
3	$12,000	$15,000	0.80	80.0
4	$30,000	$30,000	1.00	100.0
5	$19,200	$16,000	1.20	120.0

Distribution-Free Statistics

Distribution-free statistics do not require assumptions about the shape of the population distribution from which the ratio study sample was drawn. Distribution-free statistics are nonparametric estimates that include the median and median absolution deviation.

Median Ratio

The median ratio is one of the most common statistical measures used in mass appraisal performance. It is considered a robust measure of the overall level of assessment (central tendency) because of its insensitivity to low or high ratios in the sample.

The ratios must first be sorted in ascending or descending order *(arrayed).* If the number of sample ratios is odd, the median is the value halfway through the arrayed data set with an equal number of ratios above and below the median.

Sale	Ratio	
1	*80.0*	
2	*90.0*	
3	***100.0***	***Median Ratio***
4	*120.0*	
5	*125.0*	

If the number of sample ratios is even, the median value is determined by adding the two middle values that fall in the center of the array and dividing by 2.

Sale	Ratio	
1	*80.0*	
2	*90.0*	
3	*100.0*	
4	*120.0*	***Median Ratio*** ⟵
5	*125.0*	
6	*130.0*	

The ratios 100.0 and 120.0 *(sample no. 3 & 4)* are in the middle of the array and should be added together and divided by 2.

$$\frac{100.0 + 120.0}{2} = \textbf{110.0} \textit{ Median Ratio}$$

Broadened Median Ratio *(BMED)*

The broadened median is a useful measure because it preserves the resistance of the median to outliers while achieving insensitivity to rounding and grouping of the middle observations. It is computed by averaging the median and up to six of the ratios around the median. The exact number depends on the sample size. Data sets with an odd number of ratios for sample sizes between five and eleven use the average of the three central ratios. For sample sizes greater than eleven the five central ratios are averaged. For data sets with an even number of ratios in sample sizes less than fourteen, the broadened median uses the four central ratios with weights 1/6, 1/3, 1/3 and 1/6. For data sets larger than fourteen, the broadened median uses the six central ratios with an assigned weight of 1/5 to each of the middle four ratios and 1/10 to the ratios at each end.

Broadened Median Ratio Computation

Example of odd numbered data set: 80.0   90.0   100.0   120.0   135.0

1. *Sum of the three central values (90.0 + 100.0 + 120.0 = 310.0)*
2. *Divide by 3 (310.0 / 3) =* **103.3** *Broadened Median Ratio*

Example of even number data set: 75.0   80.0   90.0   100.0   120.0   135.0

$$(80.0 * 1/6) + (90.0 * 1/3) + (100.0 * 1/3) + (120.0 * 1/3)$$
13.3 + 30.0 + 33.3 + 20.0 = **96.7** *Broadened Median Ratio*
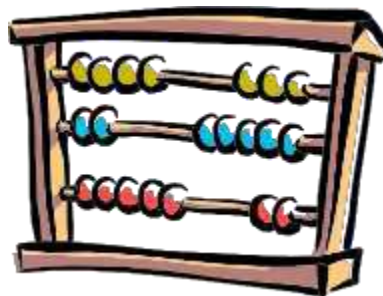
Coefficient of Dispersion *(COD)*

The coefficient of dispersion *(COD)* is the most common measure of uniformity in the mass appraisal industry. It measures the average amount of dispersion from the median and expresses it as a percentage of the median ratio. The statistic indicates how close the ratios are clustered around the median ratio.

COD Computation
1. *Subtract the median ratio from each ratio to find the absolute deviation (ignore plus or minus signs)*
2. *Sum the absolute deviations and divide by the sample size to find the average absolute deviation*
3. *Divide the average absolute deviation by the median ratio and multiply by 100 to obtain the percentage measure known as the COD*

Sale	Ratio	Median Ratio	Absolute Deviation From Median
1	80.0	100.0	20.0
2	90.0	100.0	10.0
3	100.0	100.0	00.0
4	120.0	100.0	20.0
5	125.0	100.0	25.0
		Sum of Deviations	75.0

$$\frac{20.0+10.0+00.0+20.0+25.0}{5} = \frac{75.0}{5} = 15.0 \ \underline{Average\ Absolute\ Deviation\ from\ Median}$$

$$\frac{15.0}{100.0} = 0.15*100 = \textbf{15.0} \ \underline{\textit{Coefficient of Dispersion (COD)}}$$

The lower the coefficient of deviation, the more uniform the assessments. A high COD suggest a lack of uniformity. The ideal value is *0*; however, this cannot be considered a realistic goal in an imperfect real estate market. Confidence intervals are used to evaluate this performance measure.

Example of Two Coefficients of Dispersion

County A   *County B*

50%
40%
30%
20%
10%

MEDIAN RATIO

40 Coefficient of Dispersion   *20 Coefficient of Dispersion*

Each dot represents one individual assessment/sales ratio..

- *In Diagram "A" the individual assessment/sales ratios are spread out, or dispersed considerably in relationship to the median ratio for the group of properties sold.*

- *In Diagram "B" the individual assessment/sales ratios are grouped closely in relation to the median ratio for the group of properties sold.*

The two counties in the illustration above both have a median ratio of 100 percent. However, one of the counties has a COD of 20 while the other county has a COD of 40. This difference suggests that appraisals in the county with a COD of 20 came twice as close to the median level of appraisal as the county with a COD of 40.

Weighted Coefficient of Dispersion

To calculate a value weighted COD, the contribution of each sale is factored into the deviation of each ratio about the median. If the weighted COD is greater than the COD, relatively high-value properties have been appraised with greater variability than low-value properties. If the weighted COD is less than the COD, high-value properties have been appraised with less variability than low-value properties.

Weighted COD Computation

1. *Calculate the mean sale price*
2. *Divide each sale price by the mean sale price to find the weight*
3. *Subtract each ratio from the median and take the absolute value (ignore plus or minus signs)*
4. *Multiply each weight times the absolute deviation from the median*
5. *Sum the weighted absolute deviations from the median*
6. *Divide by the number of ratios (61.9 / 5 = 12.4)*
7. *Divide by the median and multiply by 100 12.4/100.0 * 100.0 = 12.4*

Sale	Appraised Value	Sale Price	Mean Sale Price	Weight	Ratio	Median Ratio	Absolute Deviation From Median	Weight x Absolute Deviation From Median
1	$25,000	$20,000	$26,200	0.7634	125.0	100.0	25.0	19.1
2	$45,000	$50,000	$26,200	1.9084	90.0	100.0	10.0	19.1
3	$12,000	$15,000	$26,200	0.5725	80.0	100.0	20.0	11.5
4	$30,000	$30,000	$26,200	1.1450	100.0	100.0	00.0	00.0
5	$19,200	$16,000	$26,200	0.6107	120.0	100.0	20.0	12.2
Total	$131,200	$131,000						61.9

$$\text{Mean sale price} = \frac{\$131,000}{5} = \$26,200$$

$$\left(\frac{61.9}{5}\right) \Big/ 100.0 * 100 = \mathbf{12.4} \quad \textit{\textbf{Weighted Coefficient of Dispersion}}$$

Coefficient of Concentration *(COC)*

The coefficient of concentration *(COC)* is another measure of appraisal uniformity. It is found by determining the portion of ratios falling within a specified percentage of the median. The higher the coefficient of concentration is the better the measure of uniformity. Coefficients are calculated for 10 percent, 15 percent, 20 percent, 50 percent and 100 percent.

COC @ 15%

Sale	Ratio	
1	70.0	
2	75.0	
3	81.0	
4	82.0	
5	85.0	
6	90.0	
7	90.0	
8	**95.0**	**Median Ratio**
9	100.0	
10	105.0	
11	107.0	
12	108.0	
13	120.0	
14	130.0	
15	135.0	

95.0 – 14.3 = 80.7

95.0 + 14.3 = 109.3

If the range selected is 15%, to select the proportion that falls within the range:
*95.0 * 15.0% = 14.3*
95.0 - 14.3% = 80.7
95.0 + 14.3% = 109.3
10 ratios in the sample fall within the range of 80.7 to 109.3

*10 / 15 = 0.667 * 100 =* **66.7** *Coefficient of Concentration*

Coefficient of Interquartile Deviation

This measure was the original coefficient of dispersion recommended for use in ratio studies by the National Association of Tax Administrators. It is the interquartile range of ratios divided by 2, divided by the median ratio and multiplied by 100. The statistic is less sensitive to outliers than the COD currently defined by the IAAO.

Sale	Ratio
1	60.0
2	80.8
3	88.1
4	**96.0**
5	115.2
6	120.4
7	145.7

Median Ratio 96.0

1st Quartile = (Sale 2) 80.8
3rd Quartile = (Sale 6) 120.4

Interquartile range 120.4 - 80.8 = 39.6

*39.6 / 2 / 96.0 * 100 = 20.625 round to* **20.6 _Coefficient Interquartile Deviation_**

Median Percent Deviation

The median percent deviation is the *median* of the absolute deviations about the median, divided by the median ratio. It is an alternative to the COD and is highly resistant to the influence of outlier ratios.

Median Percent Deviation Computation

1. Subtract the median ratio from each ratio and find the absolute value of the deviation
2. Array the absolute deviations and find the median value deviation in the array
3. Divide the median absolute deviation by the median ratio and multiply by 100

Sale	Ratio	Median Ratio	Absolute Deviation From Median
1	80.0	100.0	20.0
2	90.0	100.0	10.0
3	100.0	100.0	00.0
4	120.0	100.0	20.0
5	125.0	100.0	25.0

Arrayed Deviations: 0 10.0 20.0 20.0 25.0 - Median Absolute Deviation (MAD) = 20.0

MAD = 20.0, Median = 100.0

$$\frac{20.0}{100.0} = 0.200 * 100 = \textbf{.200} \ \underline{\textit{\textbf{Median Percent Deviation}}}$$

Percentiles and Quartiles

Percentiles are dividing points for specific percentages of the data. The dividing points are the 25th percentile *(1st quartile)*, the 50th percentile *(median or 2nd quartile)* and the 75th *(3rd quartile)* percentile. The interquartile range is the difference between the 25th and the 75th percentiles.

25th Percentile (1st Quartile)

The 25th percentile is the first percentile and exceeds one-quarter of the ratios. The formula for finding the lower 25th percentile is $k = 0.25 * n + 0.25$. The rank of the 25th percentile in an array of 99 ratios is $0.25 * 99 + 0.25 = 25$.

75th Percentile (3rd Quartile)

The 75th percentile is the third percentile and exceeds three quarters of the ratios. The formula for finding the rank of the 75th percentile is $k = 0.75 * n + 0.75$. Usually, the rank of the percentile will not be a whole number, which means one must interpolate between ratios in the sorted array. In a sample that has 100 ratios, the 75th percentile is $0.75 * 100 + 0.75 = 75.75$. If the 75th and 76th highest ratios are 0.98 and 1.00 respectively, the 75th percentile is $0.98 + ((0.75) * (1.00 - 0.98)) = 0.995$.

Normality Test

A normality test of the sample data can be used to determine if the spread of ratios in the population conforms to a standard normal distribution or bell-shaped curve *(Gaussian shape)*. Although ratio data seldom conforms to a normal distribution, an effort has been made to examine and test the sample data. Parametric statistics generally depend upon an underlying assumption of normality. Numerous statistical tests can be employed to detect departures from a normal distribution. The ratio study program employs newer and more powerful procedures based on the empirical distribution function or standardized moments of skewness and kurtosis. These also include the D'Agostino-Pearson K^2, Shapiro-Wilk W (or Shapiro-Francia W') and Anderson-Darling A^2 tests. Several tests are used to evaluate each ratio study sample. The primary normality test selected for an individual ratio sample can be identified by a letter code below.

> M: 3rd and 4th standardized moment's critical values
> 3: 3rd standardized moment critical value
> 4: 4th standardized moment critical value
> A: Anderson-Darling A^2
> K: D'Agostino-Pearson K^2
> W: Shapiro-Wilk W (*Shapiro-Francia W' for n > 50 to 99*)

Null hypothesis (H_0) used for these tests: The study sample was drawn from a population with a normal distribution of ratios.

No statistical procedure is expected to perform perfectly under all circumstances. There is a small probability that an individual sample drawn from a population with a standard normal distribution of ratios may not pass a mathematical test. Thus, the null hypothesis will sometimes be rejected, when in fact it should not be (this is a type *I* error). The testing methods used by PVD are designed to limit the probability of rejection to less than 10%.

Skewness

Skewness is a descriptive measure of symmetry about the ratio distribution. Most ratio study frequency distributions tend to have longer tails that stretch to the right of the mean. This indication of positive skewness can often be attributed to high ratio outliers. Several approaches are available to calculate measures of skewness. The degree of skewness in this analysis is measured by the moment coefficient of skewness (based on the third moment about the mean). It is also called a measure of relative skewness. The normal distribution has no skewness and the value of this measure should be close to zero. Highly skewed sample distributions will have a measure greater than +3 or lower than –3.

Kurtosis

Kurtosis is a measure that is used to describe the concentration of ratio data in a frequency distribution. A flat distribution with short tails is sometimes referred to as platykurtic. A peaked distribution with thinner tails is referred to as leptokurtic, or centralized. The degree of kurtosis in this analysis is measured by the moment coefficient of kurtosis (based on the fourth moment about the mean). It is also called a measure of relative kurtosis. A normal distribution is bell shaped and referred to as mesokurtic, or neutral. It will have a value close to 3. Ratio study samples tend to have high peaks. Values above 6 tend to be associated with samples drawn from populations that would not be considered normal.

Parametric Statistics

Parametric statistics make certain assumptions about the distribution of the population ratios or samples drawn from these populations. When these assumptions are met, parametric statistics make more efficient use of the data than distribution-free statistics.

Arithmetic Mean Ratio

The arithmetic mean ratio is the average of the sample ratios.

Arithmetic Mean Ratio Computation
1. *Sum the sample ratios*
2. *Divide by the sample number*

In a normal distribution, the mean will equal the median. If the distribution is skewed to the right, the mean will be greater than the median, which is typical of ratio study data. If the distribution is skewed to the left, the mean will be less than the median.

Sale	Ratio
1	80.0
2	90.0
3	100.0
4	120.0
5	125.0

Note: The median sales ratio for this example is 100.0.

$$\frac{80.0+90.0+100.0+120.0+125.0}{5} = \mathbf{103.0} \quad \textit{Arithmetic Mean Ratio}$$

Weighted Mean Ratio

The value weighted mean ratio is the average of a sample of ratios where proportional weights have been assigned to the sales prices. The weighted mean ratio gives weight to each dollar of value in the sample whereas the median and mean give equal weight to each ratio. The weighted mean ratio is often referred to as the aggregate ratio and is used in computing the price-related differential *(PRD)*.

Weighted Mean Ratio Computation
1. *Sum the appraised values*
2. *Sum the sales prices*
3. *Divide the sum of the total appraised value by the sum of the total sale price*
4. *Multiply by 100*

Sale	Appraised Value	Sale Price
1	$55,000	$50,000
2	$125,000	$128,800
3	$75,000	$75,000
4	$40,000	$32,000
5	$15,000	$59,900
Total	$310,000	$345,700

$$\frac{310,000}{345,700}=0.8967*100=\mathbf{89.7} \quad \textit{Weighted Mean Ratio}$$

Geometric Mean Ratio

The geometric mean offers a measure of appraisal level that, like the median, is not as susceptible to the influence of outliers as the mean and weighted mean. Large differences between the geometric mean and the arithmetic mean indicate the presence of significant outlier ratios.

Geometric Mean Ratio Computation
1. *Multiply the ratios in the sample together and finding the nth root of the result, where n equals the number of ratios in the sample*
2. *Find the nth root of the product, where n equals the number of ratios in the sample*

Sale	Ratio
1	*80.0*
2	*90.0*
3	*100.0*
4	*120.0*
5	*125.0*

$$\left(80.0*90.0*100.0*120.0*125.0\right)^{1/5} = \textbf{101.6} \textit{ Geometric Mean Ratio}$$

Harmonic Mean Ratio

The harmonic mean is used to calculate average rates. The rate usually indicates the relationship between two different types of measuring units that can be expressed reciprocally. The harmonic mean is less affected by extreme ratios than the geometric mean and the arithmetic mean.

Harmonic Mean Ratio Computation
1. *Find the reciprocal of each ratio value (1divided by the ratio)*
2. *Sum the reciprocals*
3. *Divide the number of ratios in the sample by the sum of the reciprocals*

Sale	Appraised Value	Sale Price	Ratio	Reciprocal Values
1	*$25,000*	*$20,000*	*125.0*	*0.0080*
2	*$45,000*	*$50,000*	*90.0*	*0.0111*
3	*$12,000*	*$15,000*	*80.0*	*0.0125*
4	*$30,000*	*$30,000*	*100.0*	*0.0100*
5	*$19,200*	*$16,000*	*120.0*	*0.0083*
Total				*0.0499*

$$\frac{5}{0.0499} = \textbf{100.2} \textit{ Harmonic Mean Ratio}$$

Standard Deviation

The standard deviation is the most common measure of dispersion and may be a useful measure of appraisal uniformity if the underlying distribution of ratios in the population conforms to a normal distribution.

The formula for the standard deviation is $\quad s = \sqrt{\dfrac{\sum \left(A_i/S_i - \overline{A/S}\right)^2}{n-1}}$

s $\quad$ = standard deviation

$\sum$ $\quad$ = algebraic symbol for sum

A_i $\quad$ = each Appraised Value

S_i $\quad$ = each Sale Price

$\overline{A/S}$ $\quad$ = Sample Mean Ratio

^{2} $\quad$ = square or take to the 2nd Power

$\sqrt{}$ $\quad$ = the square root symbol

Standard Deviation Computation

1. *Subtract the mean from each ratio*
2. *Square the difference*
3. *Sum the squared differences*
4. *Divide by the number of ratios less one to obtain the* **variance**
5. *Take the square root of the variance to arrive at the standard deviation*

Sale	Appraised Value	Sale Price	Ratio	Ratio Minus Mean	Square the Difference
1	$25,000	$20,000	125.0	22.0	484.0
2	$45,000	$50,000	90.0	-13.0	169.0
3	$12,000	$15,000	80.0	-23.0	529.0
4	$30,000	$30,000	100.0	-3.0	9.0
5	$19,200	$16,000	120.0	17.0	289.0
Total					1480.0
Mean	103.0				

$$\sqrt{\frac{1480.0}{5-1}} = \sqrt{\frac{1480.0}{4}} = \sqrt{370.0} \quad \underline{\textit{Variance}}$$

$$\sqrt{370.0} = \mathbf{19.2} \ \underline{\textbf{\textit{Standard Deviation}}}$$

Coefficient of Variation *(COV)*

The coefficient of variation *(COV)* is a relative measure of appraisal uniformity that is based on the standard deviation.

Coefficient of Variation (COV) Computation
1.   *Compute the standard deviation*
2.   *Divide the standard deviation by the arithmetic mean ratio*

Using the standard deviation of 19.2 and the arithmetic mean ratio of 103.0, the calculation would be as follows.

$$\frac{19.2}{103.0} * 100 = \textbf{18.6} \quad \textit{Coefficient of Variation (COV)}$$

Price-Related Differential *(PRD)*

The price-related differential *(PRD)* is a statistic for measuring assessment regressivity or progressivity. Appraisals are considered regressive if high-value properties are under appraised relative to low-value properties and progressive if high-value properties are relatively over appraised.

A PRD of 1.00 is the most desirable state and indicates that no assessment bias exists between the low and high value properties. A PRD greater than 1.00 suggests that high-value property may be under appraised relative to lower valued property. If the PRD is less than 1.00, high-value property may be over appraised relative to low-valued property.

Price-Related Differential (PRD) Computation

1. *Divide the arithmetic mean ratio by the weighted mean ratio*

Sale	Appraised Value	Sale Price	Ratio
1	$25,000	$20,000	125.0
2	$45,000	$50,000	90.0
3	$12,000	$15,000	80.0
4	$30,000	$30,000	100.0
5	$19,200	$16,000	120.0
Total	$131,200	$131,000	515.0

$$\frac{515.0}{5} = 103.0 \quad Arithmetic\,Mean$$

$$\frac{131,200}{131,000} * 100 = 100.2 \; Weighted\,Mean\,Ratio$$

$$\frac{103.0}{100.2} = \textbf{1.03} \quad \underline{\textit{Price-Related Differential (PRD)}}$$

The arithmetic mean ratio is 103.0 and the weighted mean ratio is 100.2 *(1.002 * 100).* The PRD is found by dividing the mean ratio by the weighted mean ratio.

The example above may indicate some assessment regressivity. The International Association of Assessing Officers *Standard on Ratio Studies* recommends the price-related differential *(PRD)* should range between 0.98 and 1.03. Confidence intervals are used to evaluate this performance measure.

Price-Related Bias *(PRB)*

Price-related bias *(PRB)* is a coefficient that provides an index of appraisal/sale ratio change to market value change (vertical equity) obtained by regressing the ratio deviations from the median ratio (percentage changes) on a proxy of market value. The market value proxy is obtained by giving equal weight to appraised values and sales prices. The regression summary output coefficient, β_1 (X Variable 1 if developed in Microsoft Excel), or slope of the regression line represents the corresponding percentage change in ratios.

Price-Related Bias (PRB) Computation

1. *Calculate the ratio for each sale and find the median ratio of the sample.*
2. *Compute the proxy of market value. This term is composed of 50 percent of sale price + 50 percent of appraised value. To ensure that appraised values and sales prices receive equal weight, appraised values are divided by the median ratio (trended) before summing:*
   $$Proxy\_MV = 0.50 \cdot \times (AV/Median\,ratio) + 0.50 \times SP$$
   Where:
   AV = Appraised Value
   SP = Sale Price
3. *Take the natural logarithm of the value proxy and divide by the natural log of 2 (.693):*
   $$Ln\_ProxyMV = LN(Proxy\_MV)/LN(2)$$
   Taking logarithms converts the market value proxy to a percentage basis, which substantially minimizes the impact of atypically high values (outliers) in the analysis. Dividing by the natural log of 2 allows each increment of 1 to be interpreted as a change of 100%. (For example: LN(100,000)/LN(2) = 16.613 and LN(200,000)/LN(2) = 17.613).
4. *Compute percentage differences of each sale ratio in the sample when compared to the sample median ratio:*
   $$Pct\_Diff = (Sale\,ratio - Median\,ratio)/Median\,ratio$$
   Where:
   PCT_Diff = Percentage Difference
   Sale ratio = Appraised value / sale price
5. *Set up a simple linear regression where the independent variable is the log of the market value proxy (3) and the dependent variable is the associated sale ratio percentage difference (4): Pct_Diff = $\beta_0 + \beta_1 \times$ Ln_ProxyMV*
6. *Evaluate the p-Value for significance. It must be <= .05 to be significant*

7. *Examine the upper and lower 95% confidence intervals:*

   The PRB coefficient (slope) should fall between –0.05 and 0.05. If the 95 percent confidence interval does not overlap this range, one can reasonably conclude that appraisal levels change by more than 5 percent when market values are halved or doubled. PRBs for which 95 percent confidence intervals fall outside the range of –0.10 to 0.10 indicate unacceptable vertical inequities.

In the following example ratios decline by 34.0 percent when market values double (and increase by 34.0 percent when market values are halved). The 95 percent confidence interval is −0.381 to −0.300.

AV	SP	Ratio	AV/Med	MV proxy	X Ind Var LN(MV Proxy)	Y Dep Var Pct Diff
67,500	125,000	0.54	78,488	101,744	16.635	-0.372
51,000	85,000	0.60	59,302	72,151	16.139	-0.302
55,800	90,000	0.62	64,884	77,442	16.241	-0.279
50,400	70,000	0.72	58,605	64,302	15.973	-0.163
40,500	54,000	0.75	47,093	50,547	15.625	-0.128
48,360	62,000	0.78	56,233	59,116	15.851	-0.093
53,300	65,000	0.82	61,977	63,488	15.954	-0.047
44,720	52,000	0.86	52,000	52,000	15.666	0.000
36,400	40,000	0.91	42,326	41,163	15.329	0.058
37,830	39,000	0.97	43,988	41,494	15.341	0.128
30,000	30,000	1.00	34,884	32,442	14.986	0.163
33,600	32,000	1.05	39,070	35,535	15.117	0.221
33,000	30,000	1.10	38,372	34,186	15.061	0.279
9,000	6,000	1.50	10,465	8,233	13.007	0.744
8,500	5,000	1.70	9,884	7,442	12.861	0.977
	Median	**0.86**				

SUMMARY OUTPUT

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	5.292	0.2881	18.370	1.108E-10	4.670	5.915
X Variable 1	-0.340	0.0188	-18.137	1.300E-10	-0.381	-0.300

Note: **No** outlier trimming was employed for this new performance measure. In order to fully assess the usefulness of the statistic, extreme, influential, and leverage ratios must be identified through routine regression diagnostic test and reasonable cutoff procedures applied. Confidence intervals are used to evaluate this performance measure. No formal IAAO performance standard has been established at this time. However, the general area of compliance for the PRB is expected to fall between -.050 and +0.050.

Average Sale Price

	Average Sale Price Computation
1.	Sum the sale prices
2.	Divide by the number of sale prices in the sample

Sale	Sale Price
1	$20,000
2	$50,000
3	$15,000
4	$30,000
5	$16,000
Total	$131,000

$$\frac{\$131,000}{5} = \textbf{\$26,200} \quad \textit{Average Sale Price}$$

Average Market *(Appraised)* Value Estimate

	Average Market Value Computation
5.	Sum the appraised values
6.	Divide by the number of observations in the sample

Sale	Appraised Value
1	$25,000
2	$45,000
3	$12,000
4	$30,000
5	$19,200
Total	$131,200

$$\frac{\$131,200}{5} = \textbf{\$26,240} \quad \textit{Average Market Value}$$

Trimming Outlier Ratios

Outliers are extreme ratios that are considered highly unusual when compared to the sample as a whole. These aberrant ratios can distort some statistical measures. The potential for damage is greater when the sample sizes are small. One anomalous ratio can exert a controlling influence over a ratio study outcome and produce misleading information. Although extra steps have been taken in the sale verification and screening process to identify suspect sales; some suspect ratios may slip through. Uniform trimming procedures have been used to remove the influence of outlier ratios prior to calculating the following statistics and performance measures.

Trimmed Statistical Measures		
Coefficient of Dispersion *(COD)*	Weighted Mean	PRD Confidence Intervals
COD Confidence Intervals	Geometric Mean	Average Sale Price
Weighted COD	Standard Deviation	Average Market Value
Harmonic Mean	Coefficient of Variation	Normality testing
Arithmetic Mean	Price-Related Differential *(PRD)*	

Trimming Procedures for Removing Outlier Ratios
1. *The interquartile range of the sample is calculated by locating the first and third quartile points. The first quartile point is identified by the formula (n * .25) + .25 (n is the sample size). The third quartile is identified by the formula (n * .75) + .75.*
2. *The interquartile range (third quartile – first quartile) is multiplied by a factor of 1.5 to establish a base width for general outlier trimming. A factor of 3 is used to remove extreme outliers only.*
3. *The base width is added to the third quartile and subtracted from the first quartile to set the outlier trim points.*

An additional screen has been built into the trimming algorithm to restrict the maximum percentage of trimmed ratios to 20 percent.

Note: Most personal computer spreadsheets contain functions to locate the first (Q1) and third (Q3) quartile, but they do not all use the same formula to calculate quartiles. PVD uses the same formula as Minitab, SPSS and NCSS. Excel uses (n x .25) + .75 for Q1 and (n x .75) + .25 for Q3. The difference in formulas CAN cause trim points to be different.

Determining Minimum Sample Size from Tolerance Limits

In order for ratio study inferences to be reliable, it is necessary to know if the sample size is sufficient. For this Kansas ratio study, nonparametric tolerance limits have been employed to develop minimum sample size guidelines. A tolerance limit provides an interval wherein prescribed proportions of ratio populations are expected to lie, with a given level of statistical probability. For ratio study samples in the Residential or Commercial/Industrial subclass, a threshold has been selected to coincide with an 85 percent probability that at least 50 percent of the population ratios will be represented by the distribution of ratios found in the sample.

The table below provides information that can be used to evaluate sample size adequacy. For the Residential and Commercial/Industrial subclasses, a minimum of five ratios are required to achieve the minimum sample size threshold and provide a sufficient number of observations to develop confidence interval estimates. In most counties the Residential subclass sample will exceed 13 sales and achieve an 85 percent probability that 75 percent of the population ratios will be represented by the sample. Small counties will require supplemental sales (over the past 4 years) if less than five recent sales are available to develop a ratio sample for the Commercial/Industrial subclass. Large counties that qualify for representative residential sampling are held to higher standards. The sample size goal is expected to meet a 90 percent probability that 98 percent of the population ratios will be represented by the sample distribution. To meet this threshold, a county must have more than 194 valid residential sales during the study year.

Sample Sizes for Nonparametric Tolerance Limits								
Proportion of Ratios	*50%*	*70%*	*75%*	*80%*	*85%*	*90%*	*95%*	*98%*
85% Probability	6	10	13	16	22	33	67	168
90% Probability	7	12	15	18	25	38	77	194
95% Probability	8	14	18	22	30	46	93	236

References:
Conover, W.J., 1980. *Practical nonparametric statistics.* New York: John Wiley & Sons Wilks, S.S., 1962. *Mathematical statistics.* New York: John Wiley & Sons

Bootstrap Confidence Intervals for
the Compliance Ratio Study

Traditional statistical methods have not been very successful in assessing the accuracy of inferences when the underlying data deviates from a Gaussian *(normal or bell-shaped)* distribution. Ratio study data typically falls into this category. Statistical procedures developed over the last twenty years have improved the accuracy of reliability measures, such as confidence intervals, in many scientific and industrial applications. The *bootstrap* is one such method that employs computer simulation and re-sampling techniques to provide a more powerful way to comprehend the uncertainty associated with ratio study performance measures. This process can provide estimates for statistical measures that do not easily lend themselves to formulas by reducing the dependency on mathematical and model assumptions.

The name bootstrap is derived from the old saying, *"pulling yourself up by your bootstraps (Efron, 1999),"* that reflects the fact that one available sample gives rise to many others.

Bootstrapping produces a confidence interval in a different but natural way. Bootstrap samples are generated using a Monte Carlo simulation routine to prepare numerous re-samples of the same size as the original sample. After these samples are generated, the statistics of interest are computed *(Coefficient of Dispersion, Median Ratio and Price-Related Differential)*. A bootstrap confidence interval for each statistic can be obtained from the distribution of the sample.

****

References:

Efron, Bradley and Robert J. Tibshirani. 1993. *An introduction to the bootstrap*. New York: Chapman & Hall.

Diaconis, Persi and Bradley Efron. 1983. Computer-intensive methods in statistics. *Scientific American.* 148:116-130.

Gunter, Bert. 1991. Bootstrapping: How to make something from almost nothing and get statistically valid answers. *Quality Progress.* 24(12)97-103.

Hall, Peter. 1992. *Bootstrap and the edgeworth expansion.* New York: Springer-Verlag.

Residential Sampling Counties

A sample of sales ratios from a county may not accurately represent the population from which they have been drawn. Ratio study performance measures can be distorted or skewed by a disproportionate influence of new construction, highly active neighborhoods or unique properties. Depressed areas, older neighborhoods and properties with low turnover rates are often underrepresented in a sample of sales. A large sample does not mitigate these problems. Research conducted by PVD has shown that in the largest counties, a smaller representative sample can improve statistical accuracy and permit considerable savings of staff time and resources in conducting the validation process.

Legislative changes in 1994 granted the Director of Property Valuation discretion to select a *random sample* from the pool of valid sales in the residential subclass of property. This option can be used in counties with more than 15,000 parcels.

The Ratio Study Technical Advisory Committee has determined that an eligible county should have a sufficient number of transfers to construct a representative sample with at least 200 valid residential sales for the study year. The 13 counties listed below meet the aforementioned criteria for the 2013 study.

Residential Sampling Counties					
County	*Sample Siz*	*County*	*Sample Siz*	*County*	*Sample Size*
Butler	250	McPherson	200	Wyandotte	300
Douglas	200	Reno	200		
Ford	200	Riley	250		
Harvey	200	Saline	250		
Johnson	350	Sedgwick	350		
Leavenworth	200	Shawnee	300		

To perform residential sampling the following procedures have been implemented:

- Changes in population property characteristics are analyzed each year before sampling goals are established for a county.
- A computer assisted sampling program is employed to track the sampling process and ensure that sales will be selected on a random basis.
- A process has been employed to develop a more representative sample based on salient property characteristics of the population, such as, year built, size and construction quality.
- Sales validation and appeal procedures are uniform between residential sampling counties and non-sampling counties.
- Residential sampling plans and results are submitted each year to the Ratio Study Technical Advisory Committee for review and evaluation.

Supplemental Sales

If less than six valid sales occurred in a county with the commercial/industrial subclass of property during the study cycle, a review of sales from the previous four-year timeframe was made *(January 1, 2010 through December 31, 2013)* pursuant to K.S.A. 79-1488. Fifty-seven Kansas counties required supplemental sales for the commercial/industrial subclass for the year 2016. Approximately 330 supplemental commercial sales have been included in the statistical analysis for the year 2016 ratio studies.

The appraised value for supplemental sales reflects the appraised value for the year in which the property sold.

Section IV

Kansas Statutes Pertaining to the

"2016 Appraisal Sales Ratio Study"

Law

Ratio Studies
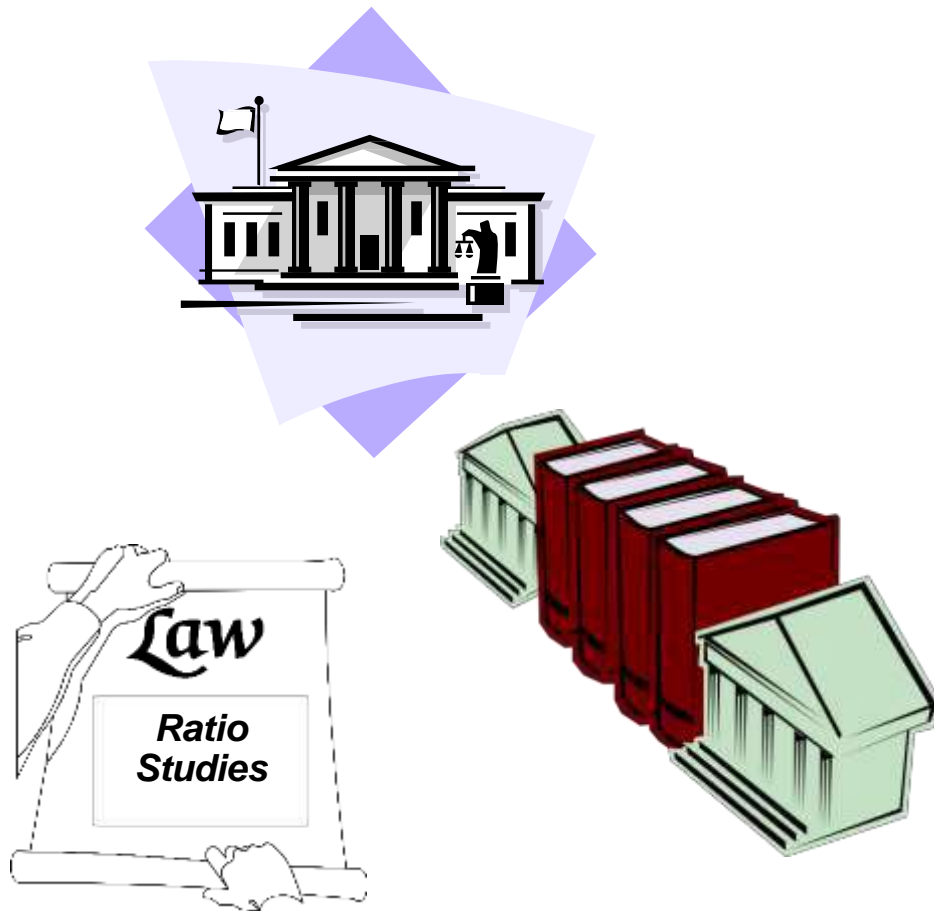
Kansas Statutes

79-503a. **Fair market value defined; allowable variance; factors to be considered in determining fair market value; generally accepted appraisal procedures to be utilized.**

"Fair market value" means the amount in terms of money that a well informed buyer is justified in paying and a well informed seller is justified in accepting for property in an open and competitive market, assuming that the parties are acting without undue compulsion. In the determination of fair market value of any real property which is subject to any special assessment, such value shall not be determined by adding the present value of the special assessment to the sales price. For the purposes of this definition it will be assumed that consummation of a sale occurs as of January 1.

Sales in and of themselves shall not be the sole criteria of fair market value but shall be used in connection with cost, income and factors including but not by way of exclusion:

(a) The proper classification of land and improvements;
(b) the size thereof;
(c) the effect of location on value;
(d) depreciation, including physical deterioration or functional, economic or social obsolescence;
(e) cost of reproduction of improvements;
(f) productivity; taking into account all restrictions imposed by the state or federal government and local governing bodies, including, but not limited to, restrictions on property rented or leased to low income individuals and families as authorized by section 42 of the federal internal revenue code of 1986, as amended:
(g) earning capacity as indicated by lease price or by capitalization of net income, or by absorption or sell-out period;
(h) rental or reasonable rental values or rental values restricted by the state or federal government or local governing bodies, including, but not limited to, restrictions on property rented or leased to low income individuals and families, as authorized by section 42 of the federal internal revenue code of 1986, as amended
(i) sale value on open market with due allowance to abnormal inflationary factors influencing such values;
(j) restrictions or requirements imposed upon the use of real estate by the state or federal government or local governing bodies, including zoning and planning boards or commissions, and including, but not limited to, restrictions or requirements imposed upon the use of real estate rented or leased to low income individuals and families, as authorized by section 42 of the federal internal revenue code of 1986, as amended; and
(k) comparison with values of other property of known or recognized value. The assessment-sales ratio study shall not be used as an appraisal for appraisal purposes.

The appraisal process utilized in the valuation of all real and tangible personal property for ad valorem tax purposes shall conform to generally accepted appraisal procedures which are adaptable to mass appraisal and consistent with the definition of fair market value unless otherwise specified by law.

History: L. 1982, ch. 391, § 2; L. 1990, ch. 346, § 3; L. 1995, ch. 254, § 5; L. 1997, ch. 126, § 42; L. 2003, ch. 156, § 4; L. 2009, ch.97, § 3; July 1.

79-1437c. **Real estate sales validation questionnaires; required to accompany transfers of title; retention time; use of information.**

No deed or instrument providing for the transfer of title to real estate or affidavit of equitable interest in real estate shall be recorded in the office of the register of deeds unless such deed, instrument or affidavit shall be accompanied by a completed real estate sales validation questionnaire completed by the grantor or grantee or the agent of such grantor or grantee concerning the property transferred. Such questionnaire shall not be filed of record by the register of deeds but shall be retained for a period of five years at which time they shall be destroyed. The register of deeds shall in conjunction with the county clerk use the

information derived from such questionnaires in cooperating with and assisting the director of property valuation in developing the information as provided for in K.S.A. 79-1487, and amendments thereto.

History: L. 1991, ch. 162, § 3; L. 1992, ch. 159, § 1; L. 1992, ch. 282, § 18; L. 1995, ch. 252, § 25; Jan. 1, 1996.

79-1437d.   Same; devised by director of property valuation; approval by legislature; information to be contained therein.

The real estate sales questionnaire shall be devised by the director of property valuation, and the director shall furnish copies thereof to the register of deeds. Upon proposing modifications or changes to the real estate sales validation questionnaire devised and used prior to 1992 or any validation questionnaire approved by the legislature in 1992 or thereafter, the director of property valuation shall submit such proposal to the legislature. Upon the failure of the legislature to enact legislation modifying the director's proposal within 60 days of submission thereof, such proposal shall be deemed to be approved, and the director's modified questionnaire may be utilized at anytime thereafter. The questionnaire shall be devised to obtain information regarding the identification and location of the property, name and address of the purchaser, sales price, date of sale, the classification and subclassification to which such property belongs, nature and circumstances peculiar to the sale, whether any personal property was included in the sales price, whether the purchaser assumed any mortgage or liens, loans, leases or taxes, the method of financing, whether any special assessments are levied against the property and such other information as the director of property valuation shall require. No information shall be requested in such questionnaire which would require the disclosure of the interest rate paid by the purchaser or the specific term of any mortgage.

History: L. 1991, ch. 162, § 4; July 1.

79-1437e. Same; inapplicability to certain transfers of title.

(a) The real estate sales validation questionnaire required by this act shall not apply to transfers of title:

    (1) Recorded prior to the effective date of this act;

    (2) made solely for the purpose of securing or releasing security for a debt or other obligation;

    (3) made for the purpose of confirming, correcting, modifying or supplementing a deed previously recorded, and without additional consideration;

    (4) by way of gift, donation or contribution stated in the deed or other instrument;

    (5) to cemetery lots;

    (6) by leases and transfers of severed mineral interests;

    (7) to or from a trust, and without consideration;

    (8) resulting from a divorce settlement where one party transfers interest in property to the other;

    (9) made solely for the purpose of creating a joint tenancy or tenancy in common;

    (10) by way of a sheriff's deed;

    (11) by way of a deed which has been in escrow for longer than five years;

    (12) by way of a quit claim deed filed for the purpose of clearing title encumbrances;

    (13) when title is transferred to convey right-of-way or pursuant to eminent domain;

(14) made by a guardian, executor, administrator, conservator or trustee of an estate pursuant to judicial order;

(15) when title is transferred due to repossession; or

(16) made for the purpose of releasing an equitable lien on a previously recorded affidavit of equitable interest, and without additional consideration.

(b) When a real estate sales validation questionnaire is not required due to one or more of the exemptions provided in subsection (a), the exemption shall be clearly stated on the document being filed.

History: L. 1991, ch. 162, § 5; L. 1992, ch. 159, § 2; L. 1994, ch. 275, § 12; L. 2002, ch.22, §1; July 1.

79-1437f.   **Same; disposition and use of contents thereof, to and by whom.** Except as otherwise provided by K.S.A. 79-1460, and amendments thereto, contents of the real estate sales validation questionnaire shall be made available only to the following people for the purposes listed hereafter:

(a) County officials for cooperating with and assisting the director of property valuation in developing the information as provided for in K.S.A. 79-1487, and amendments thereto;

(b) any property owner, or the owner's representative, for prosecuting an appeal of the valuation of such owner's property or for determining whether to make such an appeal, but access shall be limited to the contents of those questionnaires concerning the same constitutionally prescribed subclass of property as that of such owner's property;

(c) the county appraiser and appraisers employed by the county for the appraisal of property located within the county;

(d) appraisers licensed or certified pursuant to K.S.A. 58-4101 *et seq.*, and amendments thereto, for appraisal of property and preparation of appraisal reports;

(e) financial institutions for conducting appraisals as required by federal and state regulators;

(f) the county appraiser or the appraiser's designee, hearing officers or panels appointed pursuant to K.S.A. 79-1602 or 79-1611, and amendments thereto, and the state court of tax appeals for conducting valuation appeal proceedings;

(g) the board of county commissioners for conducting any of the boards statutorily prescribed duties;

(h) the director of property valuation for conducting any of the director's statutorily prescribed duties; and

(i) a person licensed pursuant to the real estate brokers' and salespersons' act for purposes of fulfilling such person's statutory duties and providing information on market value of property to clients and customers.

History: L. 1991, ch. 162, § 6; L. 1992, ch. 282 § 19; L. 1999, ch. 123, § 2; L. 2002, ch. 23 § 1; L. 2006, ch 151, § 3; L 2007, ch. 63, § 1; 2008, ch. 109, §87; July 1.

79-1437g.   **Same; penalty for violations.**

Any person who shall falsify the value of real estate transferred shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined not more than $500.

History: L. 1991, ch. 162, § 7; L. 1992, ch. 159, § 3; April 30.

79-1444   **Same; technical advisory committee; membership; qualifications, compensation and allowance; duties; additional advisory committee, appointment.**

There is hereby established a technical advisory committee on the assessment-sales ratio study. The committee shall consist of three (3) members, appointed by and serving at the pleasure of the secretary of revenue. Members of the committee shall have such education and training as may be necessary to advise the director in the methodology of conducting studies of the type required under the provisions of this act. Members of the advisory committee on assessment-sales ratio study attending meetings of such committee, or attending a subcommittee meeting thereof authorized by such committee, shall be paid amounts provided in subsection (e) of K.S.A. 75-3223 and amendments thereto. The same shall be paid from appropriations to the secretary of revenue upon warrants of the director of accounts and reports issued pursuant to vouchers approved by the secretary of revenue or a person or persons designated by him or her.

It shall be the duty of the committee to advise and consult with and assist the director in the review and evaluation of the procedures used by the director of property valuation in making the assessment-sales ratio study and to make recommendations for any changes deemed necessary. It shall be the duty of the board of regents and the administration of each of the state institutions thereunder to authorize any staff members so selected to participate as members in the activities of such committee. The secretary of revenue may appoint an additional advisory committee of not to exceed seven (7) members to serve at his or her pleasure.

History: L. 1965, ch. 516, § 6; L. 1968, ch. 208, § 14; L. 1972, ch. 362, § 7; L. 1974, ch. 348, § 99; L. 1974, ch. 428, § 7; L. 1975, ch. 416, § 27; July 1.

79-1485   **Kansas real estate ratio study act: purposes.**

(a)   This act shall be known and may be cited as the Kansas real estate ratio study act.

(b)   The purpose of this act is to provide statistical information regarding the relationship of the appraised value to the selling price of real estate which has sold during the study year and the relative level of uniformity of appraisal within and among counties and to report such information in convenient form to the legislature and other interested parties. The statistical information determined pursuant to this act may be used by the director in carrying out such director's duties, including, but not limited to, assisting such director in the determination of substantial compliance under K.S.A. 79-1445, and amendments thereto.

History: L. 1992, ch. 131, § 1; L. 1994, ch. 275, § 8; July 1.

79-1486   **Same; definitions. As used in this act:**

(a)   "Sale" or "sales" shall include all transfers of real estate for which a real estate sales validation questionnaire is required by K.S.A. 79-1437c, and amendments thereto; however, all sales for which a real estate sales validation questionnaire is required by K.S.A. 79-1437c, and amendments thereto, need not be included in the final ratios determined;

(b)   "valid sale" is a sale that is an indicator of fair market value as defined in K.S.A. 79-503a, and amendments thereto;

(c)   "invalid sale" is a sale that is not an indicator of fair market value as defined in K.S.A. 79-503a, and amendments thereto;

(d) "unvalidated sale" is a residential subclass sale that was not selected through a random sampling process and has not been determined to be either a valid sale or an invalid sale;

(e) "real estate" shall include land, improvements and structures which are appraised as real property;

(f) "director" shall mean the director of property valuation;

(g) "classification" shall mean those classifications which apply to real property contained in K.S.A. 79-1439, and amendments thereto, or any stratification which may be prescribed by the director;

(h) "average" shall mean that measure or measures of central tendency which the director shall determine best describes a group of individual ratios;

(i) "ratio" shall mean the numerical relationship between the appraised or assessed value and the selling price; and

(j) "study year" shall mean that twelve-month period beginning annually on January 1.

History: L. 1992, ch. 131, § 2; L. 1994, ch. 275, § 9; July 1.

79-1487 **Same: duties of local officials; access of records by director.**

It shall be the duty of all county officials to cooperate with and assist the director in the development of the information required by this act. Such county officials shall exchange such information as may be necessary to carry out the intent and purposes of this act. The director or the director's agents shall have access to all county records for the purpose of carrying out the intent and purposes of this act.

History: L. 1992, ch. 131, § 3; July 1.

79-1488 **Same; authorities and duties of director.**

It shall be the duty of the director to obtain all information relating to each sale of real estate as the director shall deem necessary to carry out the intent and purposes of this act. The director shall prescribe the form in which the data is obtained. The director shall assign agents who shall verify and categorize each sale as valid, invalid or unvalidated. The director shall determine the median ratio in relation to the county's certified value, the price-related differential, and the coefficient of dispersion for each classification of property in each county. If, in the director's opinion, sales from the study year are insufficient to determine reliable ratios for any classification of property in any county, sales from the four-year period preceding the study year may be used to supplement study year sales or the director may obtain or conduct appraisals for the purpose of supplementing, verifying or correcting ratios for the study year. The director may select random samples of residential subclass sales from counties having a total parcel count in excess of 15,000 to determine reliable residential subclass ratios for any such county. The random sample shall be selected prior to any validation process Data from deeds, other instruments of conveyance and real estate sales validation questionnaires recorded or filed with the register of deeds on or after the first day of February following the study year shall not be used in determining the ratios for any county.

History: L. 1992, ch. 131, § 4; L. 1994, ch. 275, § 10; July 1.

79-1489 **Same; notification of ratios to county by the director; appeals, procedure.**

The director shall determine the mid-year ratios for each county and notify the board of county commissioners thereof. When the final ratios are determined, the director shall notify the board of county commissioners of each county of the ratios determined for such county. If the board of county commissioners disagrees with the ratios determined for the county, such board, within 15 days after receipt of such notice, may appeal such determination to the state court of tax appeals. Written notice of appeal shall be served on the state court of tax appeals and the director by certified mail. The notice of appeal shall clearly and specifically state the facts upon which the appeal is based. The state court of tax appeals shall conduct a summary proceeding in accordance with the provisions of the Kansas administrative procedure act within 30 days of receipt of the written notice of appeal and shall issue findings and a final order within 30 days after the conclusion of such summary proceeding. If the state court of tax appeals finds that corrections in the ratios are necessary, it shall order the director to make necessary corrections consistent with such findings prior to the publication of the study.

History: L. 1992, ch. 131, § 5; L. 1994, ch. 275, § 11; L 2008, ch. 109, § 94; July 1.

79-1490   **Same; publishing of study, when.**

The director shall publish the ratio study after the procedures prescribed in K.S.A. 79-1489 have been concluded. If it is determined that the ratio study cannot be published by April 1, the director shall provide a preliminary ratio study to the governor, the speaker of the house and the president of the senate and their respective tax committees on or before March 15.

History: L. 1992, ch. 131, § 6; July 1.

79-1491   **Same; rules and regulations.**

The secretary of revenue shall adopt rules and regulations providing for the administration of this act.

History: L. 1992, ch. 131, § 7; July 1.

79-1492   **Same; application of act.**

The provisions of K.S.A. 79-1437e, 79-1485, 79-1486, 79-1488 and 79-1489 shall apply to all taxable years commencing after December 31, 1993.

History: L. 1992, ch. 131, § 8; L. 1994, ch. 275, § 13; July 1.

79-1493   **Same; authority to compile and publish other statistics not affected.**

Nothing in this act shall preclude the director from gathering, compiling or publishing any information or statistics in addition to those required by this act.
History: L. 1992, ch. 131, § 9; July 1.

Division of Property Valuation Directives

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Sam Brownback, Governor

DIRECTIVE #14-046

TO: **County Appraisers**

SUBJECT: **Scope of Work and Substantial Compliance**

This Directive Supersedes Directive #92-002 and #92-003

This directive is adopted pursuant to the provisions of K.S.A. 79-505 and shall take effect and be in full force from and after its publication in the Kansas Register.

The following criteria and standards shall be used for appraisals developed in the 2014 valuation cycle (in preparation for January 1, 2015 valuation date) and subsequent years to determine whether a county is in substantial compliance with the statutory requirement to uniformly appraise real and personal property at its fair market value, as defined by K.S.A. 79-503a, and amendments thereto. In order to establish compliance or lack of compliance in each county, the Division of Property Valuation (PVD) shall conduct a ratio study to develop statistical performance measures as required by K.S.A. 79-1485 *et. seq.* PVD shall conduct a procedural audit in each county covering items deemed essential to establishing fair market value. PVD shall determine whether specific Kansas statutes pertaining to property taxation have been followed. In accordance with K.S.A. 79-1445, PVD will publish annually a list of the substantial compliance results for each county.

Criteria and Standards

The annual substantial compliance process uses an objective scoring system that PVD has developed to evaluate completion of key mass appraisal steps, accomplishment of assessment administration functions, and achievement of accuracy standards in each county. Points are awarded when a county meets minimum statistical performance measures, documentation is verified to confirm that mass appraisal procedures have been followed, and statutory requirements have been met. A maximum score of 100 is possible. A county must achieve a minimum score of 75 to attain substantial compliance. Any county achieving a score less than 75 shall be found in noncompliance and may be required to submit a detailed plan to correct areas of noncompliance.

Substantial compliance is based upon ratio study performance measures, an audit of procedural steps required to develop a credible mass appraisal, and verification that important statutory mandates have been met. The ratio study conducted by PVD is used to

verify that overall value conclusions meet minimum standards of reasonableness, consistency and accuracy. Refusal by county officials to cooperate in the ratio study may result in a noncompliance order. The procedural steps are tied to Kansas statutes and regulations, the International Association of Assessing Officers (IAAO) Standard on Mass Appraisal and the Uniform Standards of Professional Appraisal Practice (USPAP). Refusal by a county or district appraiser to perform any procedural step may result in a noncompliance order. Kansas statutes require critical functions to be performed and annual processing deadlines to be met by the county or district appraiser. Refusal to comply with any statutory requirement may result in a noncompliance order.

If a county is determined to be in noncompliance, the director may pursue all legal options, including, but not limited to, proceedings before the Kansas Court of Tax Appeals and/or the removal of the county or district appraiser from office. PVD may require the county to submit a detailed plan to correct areas of noncompliance. A PVD audit of all property tax functions and responsibilities may be initiated if the county does not implement its approved plan or the plan is ineffective in bringing the county back into compliance.

The director may include an administrative note on the final report if a county fails to achieve industry standard ratio study performance measures. Counties receiving an administrative note may be required to submit a plan to correct the area or areas not meeting the basic statistical standards.

The Compliance Scorecard along with the points possible follows:

Compliance Scorecard - *Example of total points possible*

Subclass	Appraised Value	Percent of Total Appraised Value
Residential		
Commercial/Industrial		
Total Appraised Value		

Subclass	Percent of Appraised Value (weighted)	Compliance Points Possible	Weighted Points	Points Received
1. Statistical Measures				
Residential				
Appraisal Level		25		
Appraisal Uniformity		25		
Commercial/Industrial				
Appraisal Level		25		
Appraisal Uniformity		25		
Statistical Compliance Points		50		

2. Procedures	Compliance Points Possible	Points Received
a. Scope of Work Appraisal Plan	4	
b. Sales File	4	
c. Parcel Maintenance Inspection	4	
d. Land Valuation Model Calibration	4	
e. Construction Cost Multiplier Analysis	4	
f. Depreciation Analysis	4	
g. Income Approach	4	
h. Comparable Sales Approach	4	
i. Final Review Process	4	
Total	36	
3. Agricultural Use Valuation	2	
4. Cadastral Mapping	2	
5. Statutory Compliance		
a. Trend Study and CVN Mailing	2	
b. Informal Hearings	2	
c. Appraised Value Certification	2	
d. Personal Property	2	
e. Preservation and Protection of Property Tax Records	2	
Total	10	
I. Total Points Possible	100	
II. Total Points Received		
III. Overall Score (II/I)*100		

1. STATISTICAL MEASURES COMPLIANCE REVIEW (50 points)

Statistical compliance for the *residential* and *commercial/industrial* subclasses shall be determined separately. A maximum of 50 ratio study compliance points are possible for a county that achieves the median ratio (25 points) and COD (25 points) performance goals through statistical point estimates in both subclasses. Subclass points shall be weighted by the percentage of appraised value within the combined subclasses, as derived from the most recent statistical abstract. The percentage of appraised value, divided between the residential and commercial/industrial subclass will be shown at the top of the form. These percentages will be used to develop the point weighting for each statistical measure in the two subclasses. Subclass weights are expected to vary from county to county and from year to year.

The following is an example of the weighting procedure:

Subclass	Appraised Value	Percent of Total Appraised Value
Residential	$250,000,000	84.7
Commercial/Industrial	$45,000,000	15.3
Total Appraised Value	$295,000,000	100.0

Subclass	Percent of Appraised Value (weighted)	Compliance Points Possible	Weighted Points	Points Received
1. Statistical Measures				
Residential				
Appraisal Level	84.7	25	21.2	
Appraisal Uniformity	84.7	25	21.2	
Commercial/Industrial				
Appraisal Level	15.3	25	3.8	
Appraisal Uniformity	15.3	25	3.8	
Statistical Compliance Points			50.0	

1. Sum the residential and commercial/industrial appraised value
($250,000,000 + $45,000,000 = $295,000,000)

2. Divide each subclass appraised value by the total appraised value.
$250,000,000/$295,000,000 = 84.7 percent (Residential)
$45,000,000/$295,000,000 = 15.3 percent (Commercial-Industrial)

3. Multiply the percent of appraised value (weighted) by the compliance points possible in each subclass for both the median ratio and COD.

$$.847 \text{ times } 25 = 21.2$$
$$.847 \text{ times } 25 = 21.2$$
$$.153 \text{ times } 25 = 3.8$$
$$.153 \text{ times } 25 = 3.8$$

Median ratio: 115.2 95% Confidence interval: 110.1 to 120.0 would not be considered in statistical compliance because the lower end (110.1) does not reach the acceptable range of 90.0 to 110.0 percent.

b. Appraisal Uniformity

The average deviation of ratios about the median appraisal level shall be measured by the coefficient of dispersion (COD). The COD measure must suggest a deviation of 20.0 or less for the *residential* subclass and the *commercial/industrial* subclass to achieve statistical compliance. If a subclass fails to meet this goal, confidence interval estimates shall be developed about the COD. If the range estimate for the subclass includes a COD of 20.0 or less at the 95% level of confidence, appraisal uniformity shall not be found out of statistical compliance.

For example:

COD: 18.0   95% Confidence interval: 13.0 to 22.0

This example is not considered out of compliance because the COD point estimate is less than 20.0. The confidence interval does suggest, however, there is a small probability the true COD could actually be greater than 20.0, due to sampling error.

COD: 30.0   95% Confidence interval: 22.0 to 38.0

This example is considered out of compliance because the COD point estimate is 30.0 and the lower range of the 95% confidence interval does not fall below 20.0 (the maximum limit for compliance).

COD: 22.0   95% Confidence interval: 17.0 to 26.0

This example is not considered out of compliance although the COD point estimate is 22.0. Due to sampling error, it is probable that the true COD is somewhere within the range of 17.0 to 26.0 at the 95% level of confidence. The county would not fail the compliance test because of insufficient statistical confirmation. The lower end of the confidence interval does fall below 20.0 (the maximum limit for compliance).

c. Sample Size

If less than six valid sales are collected for a subclass during the study period, valid sales within the same subclass from the four previous study periods may be included to develop a larger and more reliable sample for analysis.

If less than five valid sales are available in a subclass sample, ratio study performance measures will not be used to determine statistical compliance. The points allocated to the statistical measures for that subclass shall be subtracted from the total compliance points, thereby establishing a new base of total possible points.

All reinspection activity must have an inspection history record entered into the CAMA system showing the reviewer name, inspection date, and process code to adequately indicate the purpose of the review.

d. Land Valuation Model Calibration (4 points)

PVD shall verify that the county has developed and calibrated land valuation models in accordance with the Revaluation Maintenance Specifications. Neighborhood analysis forms, analysis documentation, and data summary must be complete to be considered in compliance. PVD shall also confirm land pricing tables have been updated. A market analysis for agricultural land must also be documented. Deviations from model assignments must be documented.

e. Construction Cost Multiplier Analysis (4 points)

If the county deviates from the current cost valuation system, PVD shall verify the county has a current residential and/or commercial/agricultural construction cost multiplier analysis in accordance with the Revaluation Maintenance Specifications. If the county recognizes a deviation from the current cost valuation system, cost tables must be updated to reflect the study. Deviation from the current cost valuation system without documentation will result in the loss of two points for the applicable property type. Two points for residential and two for commercial/agricultural are possible and are evaluated independently.

Sales of newly constructed properties may be used in the analysis for actual construction cost when appropriate.

f. Depreciation Analysis (4 points)

PVD shall verify the county has developed a depreciation analysis in accordance with the Revaluation Maintenance Specifications and PVD sales validation guidelines that utilizes all available valid sales. The county must include appropriate statistics, graphics reports and statistical analyses to test percent good calibration assignments. All forms of depreciation must be documented. The county must update percent good tables, if appropriate, with the results of the yearly analysis. Deviations from model assignments must be documented. Two points for residential and two for commercial/agricultural are possible and are evaluated independently.

g. Income Approach (4 points)

PVD shall verify that the county has developed or attempted to develop an income approach to value appropriate properties. The appraiser must document all income approach analysis and conclusions in accordance with the Revaluation Maintenance Specifications. Updated income and expense model calibration must be completed. Deviations from model assignments must be documented.

h. Comparable Sales Approach (4 points)

PVD shall verify the county has developed a sales comparison approach to value by analyzing the relationship between the sales prices and the real property characteristics. The county must document all sales approach analysis, model specification, model calibration and conclusions in accordance with the Revaluation Maintenance Specifications. Deviations from model assignments must be documented.

i. Final Review Process (4 points)

PVD shall verify that the county has performed the final review of values in accordance with the Revaluation Maintenance Specifications. The county must document the date and person performing the final review.

3. AGRICULTURAL USE VALUATION (2 points)

PVD shall verify that the county has met the review/inspection requirements for current agricultural use and influence factors in accordance with the Revaluation Maintenance Specifications. The county must identify current use of agricultural land, which includes cropland, grassland, irrigated land, waterways, non-productive land, and farm home sites. Agricultural use values issued annually by PVD must be updated into the CAMA system (see Appendix A. Scoring Example).

4. CADASTRAL MAPPING (2 points)

PVD shall verify that accurate property ownership maps are being maintained in accordance with the Revaluation Maintenance Specifications. Updated field maps (showing new plats, splits, and combinations), an updated assessment administration file and adherence to the parcel definition must be maintained (see Appendix A. Scoring Example).

5. STATUTORY COMPLIANCE (10 points)

The following review areas are to establish whether the county is following Kansas statutes not previously covered (see Appendix A. Scoring Example).

a. A real estate value trend study is published at least five business days prior to the mailing of the CVN's (K.S.A. 79-1460A). Change of value notices are mailed on or before the statutory deadline, provided an extension has not been granted pursuant to K.S.A. 79-1404, *Seventeenth*, or an alternate form of notification approved pursuant to K.S.A. 79-1460 (K.S.A. 79-1460).

b. Informal hearings are held within statutory timeframe, provided an extension has not been granted pursuant to K.S.A. 79-1404, *Seventeenth* (K.S.A. 79-1448).

c. Values are certified to county clerk by statutory deadline, provided an extension has not been granted pursuant to K.S.A. 79-1404, *Seventeenth* (K.S.A. 79-1466 and 79-1467).

d. Personal property is listed as required and penalties applied where applicable (K.S.A. 79-306 and 79-1422; K.S.A. 79-332a).

e. The preservation and protection of all property tax records (K.S.A. 45-403).

Approved: June 3, 2014

David N. Harper
Director of Property Valuation

APPENDIX A. Scoring Example

The scorecard on the following page demonstrates the scoring process based on the following information.

- The residential subclass failed to meet the required level of appraisal statistical standards and did not receive the 21.2 points possible.
- The commercial subclass had less than six sales; therefore, there were zero points possible for the commercial/industrial subclass. The total weighted points possible for statistical analysis changed to 42.4.
- A total of 50 points were possible for procedures, agricultural use valuation, cadastral mapping and statutory compliance.
- Compliance points possible total 92.4.
- The county deviated from the default residential construction cost multiplier and did not do a residential construction cost analysis. The county used the default commercial cost multiplier. Therefore 2 of the 4 possible points for the construction cost multiplier were deducted for failure to provide documentation to support deviation from the use of the residential default construction cost multiplier.
- The total points received for procedures totals 34 out of a possible 36.
- The county failed to mail their change of value notices before the statutory deadline and lost two points. Eight of a possible 10 points were earned for procedural compliance.
    - Total compliance points possible 92.4
    - Total points received 67.2

Total points received (67.2) divided by the total points possible (92.4) = final substantial compliance score (72.7 percent).

The county failed substantial compliance because the county did not reach the passing score of 75.0 percent.

Compliance Scorecard
Example

Subclass	Appraised Value	Percent of Total Appraised Value
Residential	$250,000,000	84.7
Commercial/Industrial	45,000,000	15.3
Total Appraised Value	$295,000,000	100.0

Subclass	Percent of Appraised Value (weighted)	Compliance Points Possible	Weighted Points	Points Received
1. Statistical Measures				
Residential				
Appraisal Level	84.7	25	21.2	0
Appraisal Uniformity	84.7	25	21.2	21.2
Commercial/Industrial				
Appraisal Level	15.3	25		
Appraisal Uniformity	15.3	25		
Statistical Compliance Points		50	42.4	21.2

2. Procedures	Compliance Points Possible	Points Received
a. Scope of Work Appraisal Plan	4	4
b. Sales File	4	4
c. Parcel Maintenance Inspection	4	4
d. Land Valuation Model Calibration	4	4
e. Construction Cost Multiplier Analysis	4	2
f. Depreciation Analysis	4	4
g. Income Approach	4	4
h. Comparable Sales Approach	4	4
i. Final Review Process	4	4
Total	36	34
3. Agricultural Use Valuation	2	2
4. Cadastral Mapping	2	2
5. Statutory Compliance		
a. Trend Study and CVN Mailing	2	0
b. Informal Hearings	2	2
c. Appraised Value Certification	2	2
d. Personal Property	2	2
e. Preservation and Protection of Property Tax Records	2	2
Total	10	8
I. Total Points Possible	92.4	
II. Total Points Received		67.2
III. Overall Score (II/I)*100		72.7

K A N S A S

DEPARTMENT OF REVENUE
DIVISION OF PROPERTY VALUATION

DIRECTIVE 03-041

TO: **REGISTER OF DEEDS**

FROM: **Mark S. Beck, Director**

SUBJECT: **Real Estate Sales Validation Questionnaires; Filing Requirements**
(To replace Directive #92-016 and 94-028)

This directive is adopted pursuant to the provisions of K.S.A. 79-505, and shall be in force and effect from and after the Director's approval date.

Register of Deeds shall comply with the following procedures in handling and processing real estate sales validation questionnaires.

1. The only exceptions to the requirement to file a real estate sales validation questionnaire are statutory.

    K.S.A. 79-1437e(a), as amended by L. 2002, ch. 22, provides:

    The real estate sales validation questionnaire required shall not apply to transfers of title:

(1) recorded prior to the effective date of this act;

(2) made solely for the purpose of securing or releasing security for a debt or other obligation;

(3) made for the purpose of confirming, correcting, modifying or supplementing a deed previously recorded, and without additional consideration;

(4) by way of gift, donation or contribution stated in the deed or other instrument;

(5) to cemetery lots;

(6) by leases and transfers of severed mineral interests;

(7) to or from a trust, and without consideration;

(8) resulting from a divorce settlement where one party transfers interest in property to the other;

(9) made solely for the purpose of creating a joint tenancy or tenancy in common;

(10) by way of a sheriff's deed;

(11) by way of a deed which has been in escrow for longer than five years;

(12) by way of a quit claim deed filed for the purpose of clearing title encumbrances;

(13) when title is transferred to convey right-of-way or pursuant to eminent domain;

(14) made by a guardian, executor, administrator, conservator or trustee of an estate pursuant to judicial order;

(15) when title is transferred due to repossession; or

(16) made for the purpose of releasing an equitable lien on a previously recorded affidavit of equitable interest, and without additional consideration.

When a real estate questionnaire is not required due to one of the exemptions listed above, the exemption number or reason for an exemption must be clearly stated on the deed. The register of deeds should not make changes to the face of the deed by adding the exemption number or exemption description. *(Also see Att'y Gen. Op. No. 92-122)*

2. The Division of Property Valuation supplies a three-part real estate sales validation questionnaire (form number PV-RE-21) which is required when an affidavit of equitable interest, deed in real estate, or any other instrument used to transfer real property is recorded in the office of the register of deeds. Only counties having prior written approval from the director may use a special one-part version of the form (PV-RE-21-OP). The one-part form can be used in conjunction with image document management systems. Photocopies are not acceptable; however, filers may submit a computer-printed form. The digital version of the form (PV-RE-21-OP-CG) can be obtained from the Department of Revenue website. Instructions for completing the questionnaire must be printed on the reverse side or attached on a separate page. Counties accepting one-part forms are required to provide the original document(s) to the Division of Property Valuation.

3. The "total sale price" must be entered on the real estate sales validation questionnaire. If one dollar ($1.00), ten dollars ($10.00) or any nominal sale price is entered on the real estate sales validation questionnaire, the register of deeds shall question the accuracy of the sale price as entered. If the grantor, grantee, or agent affirms that the sale price as entered is correct, the deed should be recorded.

4. A real estate sales validation questionnaire is not required on a deed that states "without consideration" or that has one dollar ($1.00), ten dollars ($10.00) or some other nominal value entered thereon. "Without consideration" as used in K.S.A. 79-1437(e)(7), as amended by L. 1992, ch. a59, § 2, means "gift." Therefore, an entered consideration of one dollar ($1), ten dollars ($10) or "love and affection" on a deed shall be construed as a "gift," and the deed accepted without a real estate sales validation questionnaire. However, if the phrase "one dollar ($1.00) and other valuable consideration" has been entered on the deed, a real estate sales validation questionnaire is required to record the deed.

5. The buyer, seller or agent thereof may complete and sign the real estate validation questionnaire.

6. If a government entity, such as a county, conveys real property, the real estate sales validation questionnaire must be signed by the government official(s) who signed the deed or an agent.

7. Multiple deeds conveying partial interests and filed simultaneously, do not require multiple real estate sales validation questionnaires, provided the real estate sales validation questionnaire filed is annotated to state that the consideration entered thereon is the total consideration for the transfer of the entire interest. The register of deeds shall indicate in the upper left-hand corner of the real estate sales validation questionnaire the deed book and page number range assigned to the corresponding deeds.

8. A real estate sales validation questionnaire with the phrase "other valuable consideration" entered as the sales price shall not be accepted. It shall be returned for the sale price to be entered before the deed, instrument or affidavit may be recorded.

9. The Register of Deeds has a legal obligation to see that the real estate sales validation questionnaire is completed. At a minimum, this requires that each real estate sales validation questionnaire be scrutinized for completion of the identification and location information and all questions thereon.

10. A real estate sales validation questionnaire without every question answered, including the sale price, the signature and phone numbers entered is not "completed". Incomplete real estate sales validation questionnaires accompanied by the deed, other instrument transferring title to real estate or affidavit of equitable interest must be returned to the filer with notice that such deed, instrument or affidavit has not been recorded.

11. Phone numbers for both the buyer and the seller are required when the agent completes a real estate sales validation questionnaire.

12. The phrase "made for the purpose of confirming, correcting, modifying or supplementing a deed previously recorded, and without additional consideration," (K.S.A. 79-1437e) is explained as follows:

    Confirm means "to support or establish the certainty or validity of; verify." The American Heritage Dictionary of the English Language, 386 (4th Edition, 2000).

    Correct means "to remove errors from." Webster's II New Riverside University Dictionary, 314 (1984).

    Modify means "To change in form or character; alter." The American Heritage Dictionary of the English Language, 1130 (4th Edition, 2000).

    Supplement means "something added to offset a deficiency, or strengthen the whole; a section added to a document to provide additional data, or to correct errors." Webster's II New Riverside Dictionary, 1163 (1984).

    The recurrent theme of these definitions is an incidental change, not a change in substance. In the case of a deed previously recorded, this would mean that the change does not change the grantor or the grantee (although, e.g., a change may be made in the spelling of the grantor or grantee's name). Whatever the change, the intent to convey the real property to a named person or entity is not changed. Also, there can be no additional consideration.

13. It is a misdemeanor to falsify the sale price of real estate transferred on a real estate sales validation questionnaire (K.S.A. 79-1437g). Any Register of Deeds or other county official who has information

or suspects that a real estate sales validation questionnaire has been falsified shall notify the County Attorney or County Counselor for possible legal action.

14. Individuals may obtain photocopies of real estate sales validation questionnaires if they have statutory access to them (K.S.A. 79-1437f). K.S.A. 45-219(a) provides that any person may make abstracts or copies of any public record to which such person has access under the Open Records Act. Public officials may require advance payment of the actual cost of furnishing copies, including the cost of staff time, to make the information available. K.S.A. 45-218(f); K.S.A. 45-219(c)(1). *(Also see Att'y Gen. Op. No. 92-38)*
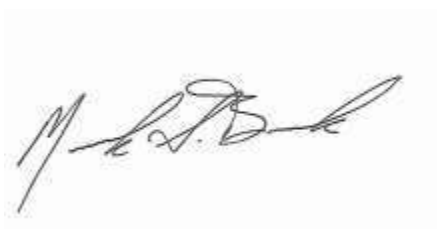
    Financial institutions can also obtain copies of real estate sales validation questionnaires for conducting appraisals or evaluations that are being conducted pursuant to state and federal regulations.

    The Internal Revenue Service (IRS) also has access to real estate sales validation questionnaires (*United States v. Martin*, 542 F. Supp. 22 (1982)).

15. Transfer on Death Deeds do not require the completion of the *Kansas Real Estate Sales Validation Questionnaire* because it does not actually transfer property at the time of filing.

16. Only those deeds to and from a trust and *without consideration* do not require a questionnaire be completed.

17. The Register of Deeds shall also comply with the Permanent Administrative Regulations promulgated by the Department of Revenue, Division of Property Valuation. Article 4 (Real Estate Ratio Study), 93-4-2 and 93-4-3 reference the duties of the Register of Deeds.

Approved: February 5, 2003
               Date

_____
Mark S. Beck
Director of Property Valuation.

REAL PROPERTY SUBCLASSES & ASSESSMENT RATES

CONSTITUTION OF THE STATE OF KANSAS
Article II.-§ 1. Nov. 3, 1992

System of taxation; classification: exemption.

(a) The provisions of this subsection shall govern the assessment and taxation of property on and after January 1, 1993, and each year thereafter…

Class 1 shall consist of real property. Real property shall be further classified into seven subclasses. Such property shall be defined by law for the purpose of subclassification and assessed uniformly as to subclass at the following percentages of value:

(1) Real Property used for residential purposes including multi-family residential real property and real property necessary to accommodate a residential community of mobile or manufactured homes including the real property upon which same homes are located   **11.5%**

   (KSCAMA Suffix Codes RR, RU, FR, FU)

(2) Land devoted to agricultural use that shall be valued upon the basis of its agricultural income or agricultural productivity pursuant to section 12 of article 11 of the constitution   **30.0%**

   (KSCAMA Suffix Codes AU, AR)

(3) Vacant Lots   **12.0%**

   (KSCAMA Suffix Codes VU, VR)

(4) Real property which is owned and operated by a not-for-profit organization not subject to federal income taxation pursuant to section 501 of the federal internal revenue code, and which is included in this subclass by law   **12.0%**

   (KSCAMA Suffix Codes NR, NU)

(5) Public utility real property, except railroad real property that shall be assessed at the average rate that all other commercial and industrial property   **33.0%**

   (KSCAMA Suffix Codes UL, UU)

(6) Real property used for commercial and industrial purposes and buildings and other improvements located upon land devoted to agricultural use   **25.0%**

   (KSCAMA Suffix Codes CU, CR, AU & AR with agricultural improvements)

(7) All other urban and rural real property not otherwise specifically sub-classed   **30.0%**

   (KSCAMA Suffix Codes OU, OR)

State of Kansas

Department of Revenue

Division of Property Valuation

Permanent Administrative Regulations

Article 4. – REAL ESTATE RATIO STUDY

93-4-2. Annotation and disposition of real estate sales validation questionnaires; duties of county officials. (a) Not later than three business days after the receipt of a three-part real estate sales validation questionnaire, the register of deeds shall annotate each copy with the following information:

(1) The volume and page entry from the general index, indicating where the deed, instrument, or affidavit of equitable interest that accompanies it is recorded;

(2) the county official validation number;

(3) the type of instrument; and

(4) the recording date.

The register of deeds shall retain the original copy and forward the county appraiser's copy and the director of property valuation's copy to the county appraiser. Not later than three business days after the receipt of the county appraiser's and the director's copies, the county appraiser shall enter the parcel identification number on both paper copies of each real estate sales validation questionnaire received from the register of deeds.

(b) The register of deeds may accept a one-part real estate sales validation questionnaire when authorized by the director of property valuation to process real estate sales validation questionnaires by electronic imaging. An electronic copy may be

accepted by the register of deeds if questionnaires are received by means of digital media transmission and retained in an electronic document management system. (Authorized by K.S.A. 79-1491; implementing K.S.A. 79-1487 and 79-1488; effective June 26, 1998; amended Oct. 3, 2014.)

93-4-3. Split and combined real estate parcel sales; duties of county officials. Not later than 10 business days after the receipt of a real estate sales validation questionnaire concerning the sale of a split parcel or a parcel to be combined with one or more parcels, the county appraiser shall perform one of the following:

(a) On or after January 1 of the current appraisal year and before the creation of working files for the next appraisal year, enter the sales information on the parent parcel record in the county's computer-assisted mass appraisal system; or

(b) on or after the creation of working files for the next appraisal year and before January 1 of the next appraisal year, enter the sales information on the split or combined parcel record in the county's computer-assisted mass appraisal system. (Authorized by K.S.A. 79-1491; implementing K.S.A. 79-1487; effective June 26, 1998; amended Oct. 3, 2014.)

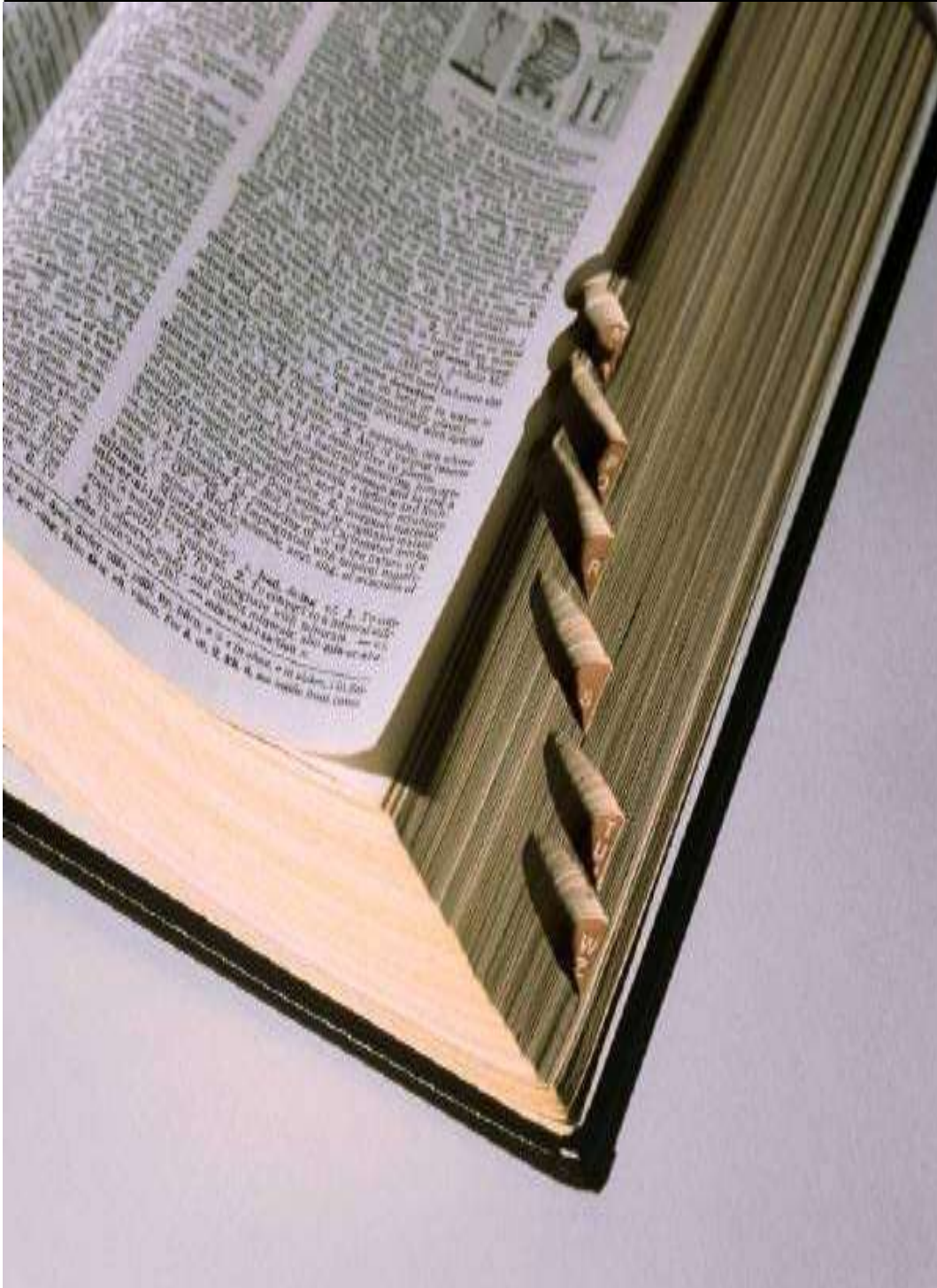**93-4-4. Assemblage and entering of sales data; accounting for real estate sales validation questionnaires; duties of county officials.** (a) Not later than the 10th day of each month, the county appraiser shall assemble and enter into the county's computer-assisted mass appraisal system the sales data pertaining to property transfers that were recorded on or before the last day of the preceding month, as obtained from the real estate sales validation questionnaires received from the register of deeds.

(b) The county appraiser shall meet the following requirements:

(1) Account for all real estate sales validation questionnaires by entering sales information from all questionnaires into the database fields in the county's computer-assisted mass appraisal system;

(2) maintain in a void file those questionnaires that cannot be matched with a parcel of real estate, those that contain information that cannot be entered in the county's computer-assisted mass appraisal system, and those that were not required by K.S.A 79-1437e and amendments thereto;

(3) electronically upload the recorded monthly sales data from the county's computer-assisted mass appraisal system to the current year's ratio study database at the division of property valuation, not later than the 15th day of the following month; and

(4) perform one of the following, not later than the 15th day of the following month:

(A) Submit the complete set of sales validation questionnaire documents recorded in the previous month to the director of property valuation or the director's agents; or

(B) electronically upload the complete set of recorded monthly sales as digital image files that meet specified file-naming conventions, resolution, and format standards to the sales validation questionnaire database at the division of property valuation. (Authorized by K.S.A. 79-1491; implementing K.S.A. 79-1487 and 79-1488; effective June 26, 1998; amended Oct. 3, 2014.)

93-4-5. Access to county records by the director of property valuation; duties of county officials. (a) The county shall make its computer-assisted mass appraisal system available to the director of property valuation and the director's agents, to generate and print reports and to prepare data files to enable the electronic extraction of sale information on a monthly basis.

(b) The county appraiser shall prepare and transmit the electronic assessment administration file of all appraised values to the director not later than three business days after the mailing of the annual valuation notices pursuant to K.S.A. 79-1460, and amendments thereto. (Authorized by K.S.A. 79-1491; implementing K.S.A. 79-1487; effective June 26, 1998; amended Oct. 3, 2014.)

93-4-6. Performance standards. Table 2-3 of the "standard on ratio studies," adopted by the executive board of the international association of assessing officers in April 2013, is hereby adopted by reference and shall constitute the performance standards used to evaluate the appraisal of residential and commercial and industrial real estate. However, the coefficient of dispersion shall have a range of 5.0 to 20.0, with a level of confidence of 95 percent. (Authorized by K.S.A. 79-1491; implementing K.S.A. 79-1485, 79-1486, 79-1487, and 79-1488, K.S.A. 2013 Supp. 79-1489, K.S.A. 79-1490, 79-1492, and 79-1493; effective June 26, 1998; amended April 20, 2001; amended Oct. 3, 2014.)

Doc. No. 042890   Nick Jordan Secretary of Revenue

Section V

Glossary of Terminology

Glossary*	

Adjusted Sale Price
The sale price that results from adjustments made to the stated sales price to account for the effects of time, personal property, financing or the like.

Aggregate Mean Ratio
See weighted mean ratio.

Alternative Hypothesis
The negation of the null hypothesis and usually consists of a statement saying "H_0 is not true" or "Fail to accept H_0." It is denoted by H_1. A statement indicates the opposite of the null hypothesis.

Appraisal-Sales Price Ratio
The ratio of the appraised value to the sale price *(or adjusted sale price)* of a property. The appraised value divided by the sale price.

Array
An ordered arrangement of data such as a listing of sales ratios in order to magnitude from high to low or low to high.

Assessment Progressivity *(Regressivity)*
An appraisal bias such that high-value properties are appraised higher *(lower)* than low-value properties. *(See also Price-Related Differential.)*

Assessment Ratio
The ratio of the assessed value to an indicator of market value.

Average Absolute Deviation
The sum of the absolute *(sign ignored)* differences between the individual observations and the average of all the observations, divided by the number of observations.

Average Market Value
Sum of the market values divided by the number of values added together.

Average Sale Price
Mean sale price. The sum of all sales divided by the number of samples.

Bootstrap
A computer intensive statistical procedure designed to provide numerous random samples from the original data set, which are in turn used to generate the statistics of interest, such as point estimates and confidence intervals. This procedure is particularly helpful when the original data set is small, in order to give more accurate statistics.

Broadened Median
A special type of median that reduces insensivity to rounding and grouping of observations around the middle ratio.

Coefficient of Concentration *(COC)*
The percentage of ratios falling within a specified percentage range ($\pm$) of the median ratio.

Coefficient of Dispersion *(COD)*
The average of the absolute deviation of a sample of ratios from the median ratio, expressed as a percentage of the median. The most common measure of uniformity in sales ratio studies. Low COD's tend to be associated with good appraisal uniformity.

Coefficient of Quartile Deviation
The interquartile ranges of a sample of ratios divided by 2 and expressed as a percentage of the median ratio. This measure of uniformity was referred to as the coefficient of dispersion when it was first adopted for use in assessment performance in 1954. Like the median, it is very resistant to the influence of outlier ratios.

Coefficient of Variation *(COV)*

The standard deviation expressed as a percentage of the mean ratio.

Confidence Interval

For a given confidence level, the range within which one can conclude that a population parameter *(such as the median ratio)* lies. The reliability of confidence intervals depends on the extent to which required statistical assumptions are met. A range of numbers within that we expect the true value of the population parameter to be contained. The high and low endpoints of the interval are computed based on sample information.

Confidence Level

The degree of precision selected for a confidence interval and other statistical tests. Ratio study confidence intervals are based on 95 percent confidence levels.

Consideration

The amount of money and other valuable goods or services upon which a buyer and a seller agree to consummate a sale.

Critical Values

Hypothesis testing uses a decision rule that specifies for every possible value of a statistic whether the null hypothesis should be accepted or rejected. The test procedure divides the sample space *(a set of possible values of a sample statistic)* into mutually exclusive parts called the acceptance region and the rejection *(or critical)* region. The critical region calls for rejecting the null hypothesis. The values that lie exactly on the boundary of the region of rejection are the critical values.

Descriptive Statistics

Statistics used to describe or summarize information about a sample. These measures include point estimates.

Dispersion

The degree to which data are distributed either tightly or loosely around a measure of central tendency. Measures of dispersion include the range, average deviation, median absolute deviation, standard deviation, coefficient of dispersion, median percent deviation and coefficient of variation.

Geometric Mean Ratio

A measure of central tendency computed by multiplying the values of all of the observations by one another and then taking the result to an exponent equal to one divided by the number of observations. The geometric mean is less sensitive to extreme ratios than the arithmetic mean.

Harmonic Mean Ratio

A specially calculated mean that is based upon the reciprocal of the arithmetic mean of the reciprocals of each value in the data set. *(Reciprocal: the inverse of a number, i.e., the reciprocal of 0.40 is 2.50.)* It is less affected of extreme values in the data set than the arithmetic mean or the geometric mean.

Histogram

A bar chart or graph of a frequency distribution in which the frequencies of the various classes are indicated by horizontal or vertical bars whose lengths are proportional to the number or percentage of observations in each class.

Hypothesis

An unproved proposition that tentatively explains certain facts; a proposition that is empirically testable; a probable answer to a question.

Inferential Statistics

Statistics used to make judgments about a population based on information obtained from a sample.

Interquartile Range *(Interquartile Deviation)*   The result obtained by subtracting the first quartile from the third quartile. The interquartile range contains the middle 50 percent of the observations.

Market   The "place" in which buyers and sellers interact. The collective body of buyers and sellers for a particular product.

Market Price   The price a particular buyer and seller agree to in a particular transaction that occurs in an open and competitive market.

Market Value   Pursuant to K.S.A. 79-503a, *"…The amount in terms of money that a well informed buyer is justified in paying and a well informed seller is justified in accepting for property in an open and competitive market, assuming that the parties are acting without undue compulsion…"*

Maximum Ratio   Largest sales ratio in the sample.

Mean Ratio   Result of adding all the ratios and dividing by the number of ratios. *(Also called the arithmetic mean or average.)*

Median   The midpoint or middle value when a set of values is ranked in order of magnitude; if the number of values is even, the midpoint or average of the two middle values. It is the second quartile.

Median Absolute Deviation *(MAD)*   The median of the absolute deviation from the median. In a symmetrical distribution, the measure approximates one-half of the interquartile range.

Median Percent Deviation   A relative measure of uniformity that is found by the median absolute deviation *(MAD)* by the median ratio.

Median Ratio   Middle ratio in a sorted array of ratios. If the number of ratios is even, it is the average of the middle two ratios.

Minimum Ratio   Lowest sales ratio in the sample.

Mode   A value most often assumed by a variable. By extension for grouped data, the class in which a plurality of the observations falls.

Nonparametric   A statistic whose interpretation or reliability does not depend on the distribution of the underlying data.

Normal Distribution   A theoretical frequency distribution often approximated in real world situations. It is a symmetrical and bell-shaped distribution where 68 percent of the observations occur within one standard deviation of the mean and 96 percent within two standard deviations of the mean.

Normality Test   A mathematical test to determine if the data is considered to be normally distributed or conforms to a bell-shaped curve *(Gaussian shape)*.

Null Hypothesis   A hypothesis that one chooses to accept in the absence of sufficient evidence to the contrary.

Observation   An observation is one recording or occurrence of the value of a variable. One ratio from a sample of ratios is an example.

Open Market

A freely competitive market in which any buyer or seller may trade and in which prices are determined by competition.

Outliers

Observations that have unusual values differing markedly from a measure of central tendency. Some outliers occur naturally. Others may be due to data errors.

Parameter

Numerical descriptive measures of the population, for example, the arithmetic mean or the standard deviation. Parameters are generally unknown and estimated from statistics calculated from a sample of the population.

Parametric Statistic

A statistic whose interpretation or reliability depends on the distribution of the underlying data.

Percentile

Values that divide a set of data into specified percentages when the data are arrayed in ascending order. The tenth percentile is the value of the observation below which the lowest 10 percent of the values fall, the twentieth percentile is the value below which the lowest 20 percent of the values fall, and so forth.

Population

All the items of interest, for example, all the properties in a subclass, jurisdiction or neighborhood.

Price-Related Differential *(PRD)*

A performance statistic used to measure appraisal regressivity or progressivity. It may also be referred to as vertical inequity. It is calculated by taking the mean ratio and dividing it by the weighted mean ratio.

Price-Related Bias *(PRB)*

A coefficient that provides an index of price-related bias (vertical equity) obtained by regressing the ratio deviations from the median ratio (percentage changes) on the proxy of market value. The PRB is the slope of the regression line. This statistical measure can supplement information provided by the price-related differential.

Quartiles

The values that divide a set of data into four equal parts when the data are arrayed in ascending order.

Random Sample

A sample in which each item in the population has an equal chance of being included and by extension, each possible combination of *n* items has an equal chance of occurrence.

Range

(1) The maximum value of a sample minus the minimum value.
(2) The difference between the maximum and minimum values that a variable may assume.

Ratio Study

A study of the relationship between appraised (or assessed) values and the market values of property. Indicators of market values may be either sales *(sales ratio study)* or independent "expert" appraisals *(appraisal ratio study)*. Of common interest in ratio studies is the level and uniformity of the appraisals or assessments.

Representative Sample

A sample of observations from a larger population of observations, such that statistics calculated from the sample can be expected to represent the characteristics of the population being studied.

Sales Price

Price a parcel of real property sold for. In some cases, this value must be adjusted to remove non-real estate components or trended back to January 1 *(the appraisal date).*

Sales Ratio

A ratio of the county appraiser's estimate of value to the sale price of a property *(appraised value ÷ sale price).*

Sales Data

Information about the nature of the transaction and the sale price and property characteristics as of the date of sale.

Sample

A set of observations selected from a population. If the sample was randomly selected, basic concepts of probability may be applied. *(See random sample and representative sample.)*

Skewed

Quality of a frequency distribution that makes it asymmetrical. Distributions with longer tails on the right than on the left are said to be skewed to the right or to be positively skewed. Distributions with longer tails to the left are said to be skewed to the left or to be negatively skewed.

Standard Deviation

The statistic calculated from a set of numbers by subtracting the mean from each value and squaring the remainders, adding together these squares, dividing by the size of the sample less one, and taking the square root of the result. When the data are normally distributed, one can calculate the percentage of observations within any number of standard deviations of the mean from normal probability tables. When the data are not normally distributed, the standard deviation is less meaningful and should be used with caution.

Statistics

(1) Numerical point estimates calculated from a sample *(for example, the mean, median or coefficient of dispersion).* Statistics are used to estimate corresponding measures, termed parameters for the population.

(2) The science of studying numerical data systematically and presenting useful results. Two main branches of statistics exist: *descriptive and inferential.*

Stratify

To divide, for purposes of analysis, a sample of observations into two or more subsets according to some criterion or set of characteristics.

Stratum, Strata *(Pls.)*

A class or subset as a result of stratification.

Subclass

A group of properties with related use characteristics. In Kansas, the following subclasses of real property, defined in the Constitution, are used in the ratio study:
(1) residential, including multi-family residential mobile homes and condominiums;
(2) land devoted to agricultural use;
(3) vacant lots;
(4) property owned and operated by not-for-profit organizations;
(5) public utility property;
(6) commercial and industrial property and buildings and other improvements located upon land devoted to agricultural use;
(7) all other urban and rural real property not otherwise specifically subclassed.

Tolerance Limits

Interval measure that provides a specified degree of confidence that a prescribed proportion of the population values is thought to be contained within.

Trending

Adjustment to the sale price to account for inflation or deflation that has occurred in the local market between January 1 *(the appraisal date)* and the date of sale.

Weighted Coefficient of Dispersion

The coefficient of dispersion when absolute differences between individual assessment ratios and the median ratio are weighted on the basis of sale price.

Weighted Mean

In ratio studies, the value weighted mean is calculated by weighting the ratios based on their sale prices. A shortcut method is to sum the appraisals *(or assessments)*, sum the sale prices and divide the first result by the second.

Weighted Mean Ratio

Sum of the appraised values divided by the sum of the sales price, which weights each ratio in proportion to its sale price. Also known as the sum of the aggregates.

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