

Section 5

Explanation and Derivation of Time Trending Factors: Time trending refers to an analysis of market conditions over a specific period, with two objectives: 1) First, the assessor must identify whether the market has appreciated, remained stable, or declined since the last valuation/reporting period; 2) Secondly, the assessor must determine the actual rate of such activity, typically on a percentage basis.

The most useful and direct basis for extracting the rate of market change, whether up, down, or neutral, is to identify property that has sold twice with few changes in the property between the two sale dates. In such situations, the rate is calculated by comparing the change in sale price between the two periods. The reliability of this extracted rate of change is greatly improved when a number of such sales are available.

No valid arms-length resales took place during the period:

Another technique, less direct, but generally more statistically reliable due to the number of sales associated with the annual study, is to extract the rate of change in market conditions from the ratio studies.

To extract a meaningful rate of change, median ratios were looked at from the old assessments on sales for the preceding two years:

For the period they were as follows:

Map		4/1/15- 4/1/16		Address	Type	Date	Sale Price	Old Assessed Value	A/S Ratio
117	17 G			20 Ladd St. #G	Office Condo	4/17/2015	\$925,000	\$945,900	102.3%
309	4	10		205 Flight Line Rd	Hangar Condo	5/14/2015	\$73,500	\$69,900	95.1%
106	57A		2	117 Bow St #2A	Office Condo	5/22/2015	\$300,000	\$309,500	103.2%
123	12			203 Maplewood Ave.	Retail	5/27/2015	\$525,000	\$420,100	80.0%
125	8			285 Hanover St.	Apartments	6/22/2015	\$500,000	\$387,500	77.5%
254	5			15 Banfield Rd.	Retail	6/29/2015	\$1,000,000	\$1,040,700	104.1%
125	4			78 Bnridge St	Retail/Apt	7/2/2015	\$550,000	\$447,600	81.4%
137	19			180 Islington St	Ret/Ofc	7/27/2015	\$545,000	\$465,200	85.4%
135	10			34 Highland St.	Apartments	8/3/2015	\$745,500	\$679,400	91.1%
117	17 H			Congress St. #H	Retail Condo	8/7/2015	\$259,000	\$233,500	90.2%
119	1B		3B	59 Deer St.#3B	Retail Condo	9/3/2015	\$430,000	\$324,600	75.5%
130	45			229 Miller Ave	Apartments	10/5/2015	\$1,000,000	\$868,200	86.8%
116	28			12 Fleet St.	Office/Apt	10/19/2015	\$350,000	\$393,800	112.5%
119	1B		2B	59 Deer St.#2B	Retail Condo	10/28/2015	\$375,000	\$330,800	88.2%
172	2			406 US Rte 1 Byp	Auto Sales/Rep	11/19/2015	\$1,100,000	\$804,800	73.2%
284	7		1	280 Heritage Ave #A	Indust Condo	12/30/2015	\$550,000	\$398,800	72.5%
107	44			177 State St.	Retl/Apts	1/20/2016	\$800,000	\$1,179,600	147.5%
120	2		1A	500 Market St #1A	Office Condo	2/2/2016	\$377,500	\$289,000	76.6%
120	2		1F	500 Market St #1F	Office Condo	2/2/2016	\$341,000	\$301,700	88.5%
124	14		102	233 Vaughan St. #102	Office Condo	2/4/2016	\$2,050,000	\$1,808,300	88.2%
240	2		2101	330 Borthwick Ave #101	Office Condo	2/24/2016	\$750,000	\$708,000	94.4%
240	2		2202	330 Borthwick Ave #202	Office Condo	2/24/2016	\$500,000	\$447,300	89.5%
239	15			99 Durgin Ln	Hotel	3/25/2016	\$16,850,000	\$9,276,500	55.1%
							\$30,896,500	\$22,130,700	
Average						10/4/2015			89.5%
Median						10/5/2015			88.2%
Weighted Mean									71.6%
						Avg ABS Deviation			0.116
						COD			13.12
						PRD			1.25

The above represents sales from 4/1/15 – 4/1/16. The median ratio from 10/1/15 was 88.2%.

4/1/16- 4/1/17

Map	Address	Type	Date	Sale Price	Old Assessed Value	A/S Ratio
284 7 4	280 Heritage Ave #D	Indust Condo	5/10/2016	\$260,000	\$226,900	87.3%
284 7 6	280 Heritage Ave #F	Indust Condo	5/10/2016	\$550,000	\$527,900	96.0%
285 5	85 Heritage Ave	Warehouse	5/13/2016	\$1,040,000	\$819,500	78.8%
238 10 2	14646 Woodbury Ave.	Restaurant	6/16/2016	\$3,295,000	\$2,117,900	64.3%
106 6	132 Chapel St	Office	6/21/2016	\$725,000	\$555,900	76.7%
240 2 2301	330 Borthwick Ave #301	Office Condo	7/6/2016	\$384,000	\$332,300	86.5%
253 7	1 Mirona Rd.	Wrhse/Office	7/14/2016	\$1,000,000	\$798,400	79.8%
303 2 1	1 Internationall Dr.	Office Condo/Hotel	7/15/2016	\$11,000,000	\$8,661,600	78.7%
263 1 5	218 Griffin Rd.	Wrhse	8/7/2016	\$3,535,000	\$2,619,800	74.1%
146 24 3	100 Albany St. #C	Retail Condo	8/10/2016	\$220,000	\$153,100	69.6%
107 9 1	79 Daniel St #1	Retail Condo	8/11/2016	\$440,000	\$386,800	87.9%
201 12 +17+18	187 Wentworth House R	Marina	8/15/2016	\$3,000,000	\$2,447,600	81.6%
286 1	2837 Lafayette Rd	Office	8/17/2016	\$750,000	\$680,100	90.7%
156 17	26 Columbia Ct	Apartments	9/28/2016	\$604,000	\$444,000	73.5%
284 2	235 Heritage Ave	Industrial	10/24/2016	\$3,475,000	\$3,376,400	97.2%
267 7 2	1950 Lafayette Rd.	Office Condo	11/18/2016	\$1,550,000	\$1,131,500	73.0%
107 69	238 State St	Restaurant	11/22/2016	\$250,000	\$196,100	78.4%
107 68 101	218 State St.	Retail Condo	11/30/2016	\$525,000	\$432,100	82.3%
263 1 4F	200 Griffin Rd.	Office Condo	12/16/2016	\$400,000	\$402,400	100.6%
126 2	25 Maplewood Ave.	Office	1/6/2017	\$3,000,000	\$1,706,200	56.9%
231 58	150 US RTE 1 Byp	Office	1/19/2017	\$1,350,000	\$1,608,500	119.1%
119 1B 1B	59 Deer St. #1B	Retail Condo	1/27/2017	\$420,000	\$358,300	85.3%
163 1	54 Bartlett St.	Service Shop	1/27/2017	\$765,600	\$541,600	70.7%
286 2	1 Robert Ave	Office/Wrhse	1/31/2017	\$480,000	\$365,600	76.2%
163 35 2	1 Cate St. #2	Office Condo	3/3/2017	\$250,000	\$248,700	99.5%
273 2 5B7	55 Constitution Ave #7	Office Condo	3/3/2017	\$80,000	\$95,100	118.9%

\$39,348,600 \$31,234,300

Average	9/30/2016	84.0%
Median	9/7/2016	80.7%
Weighted Mean		79.4%
Avg ABS Deviation		0.108
COD		13.44
PRD		1.06

The above represents sales from 4/1/16 to 4/1/17 at a median ratio of 80.7%.

The change from 4/1/15 at 88.2% to 4/1/17 at 80.7% was 7.50%, so one might think that indicates about 3.75% per year. Another way to look at it is the relative difference between 80.7% and 88.2% is $((88.2\% / 80.7\%) - 1.00)$ equals a 9.2% difference or $((80.7\% / 88.2\%)) - 1.00$ equals an 8.5% difference or 4.25% per year. One could take this further and also look at that the average timeframe from 4/1/15 to 4/1/16 is 10/1/15 and the average time frame from 4/1/16 to 4/1/17 is 10/1/16. So now you would be looking at the increase over just a 12 month period. So one could draw the conclusion that the average increase was 8.50% per year. There is no doubt that an decreasing ratio indicates an increasing market and it was definitely an increasing market in most categories of C/I. But each sub-strata was different as indicated by the high CODs of over 13 and the high PRDs of 1.06 and 1.25. So without a more uniform across the board increase, and not a great number of sales, the evidence was not consistent enough to apply a useful time adjustment to each of the older sales.

Since time adjustments to all of the sales could inappropriately skew some of those adjusted sale prices, the sale prices will be left as is (unadjusted) for purposes of performing the C/I sales analysis.