

# Chapter 4

# Equalization

## Section 4.1- The Equalization Process

RSA 21-J:3, XIII requires the Department of Revenue Administration (DRA) to equalize annually by May 1 the [valuation](#) of all properties within each town, city, or unincorporated place in the State of New Hampshire, in order to bring such valuations to their true [market value](#). To accomplish this requirement, the DRA annually conducts an assessment to sales ratio study for each municipality in the State, the result of which is the establishment of an overall [assessment ratio](#).

The assessment ratio is a measurement of the [assessment level](#) of a municipality. The ratio for an individual [property](#) is found by dividing the local [assessed value](#) for the property by the sales price paid for the property. The overall ratio for a municipality is then derived from a statistical analysis of the compilation of all of the individual ratios.

### **Median Ratio:**

The preferred measurement of assessment equity is the middle ratio from all individual ratios.

Three types of ratios are calculated and utilized by the DRA. The first is the **Median Ratio**. This ratio is the middle ratio when all the individual ratios are [arrayed](#) by order of magnitude, either highest to lowest or lowest to highest. The [median](#) ratio is the generally preferred measure of [assessment equity](#), and is an indication of the [average](#) level of assessment for individual properties. The median ratio should, therefore, be the ratio used to modify the market value of properties under review for abatement and annually for current use properties.

The second ratio is the **Weighted Mean Ratio**. This ratio is calculated by dividing the total assessed values of all properties included in the [ratio study](#) by the total sales prices of all properties included in the ratio study. The weighted mean ratio is the generally preferred measure to use for indirect equalization, and is usually the ratio used to equalize the assessed valuations of each municipality.

### **Weighted Mean Ratio:**

The Equalized Assessed Valuation and is the total of assessed values divided by the total sales prices for all properties included in the study.

### **Mean Ratio:**

The [mean](#) ratio is the simple average of all ratios.

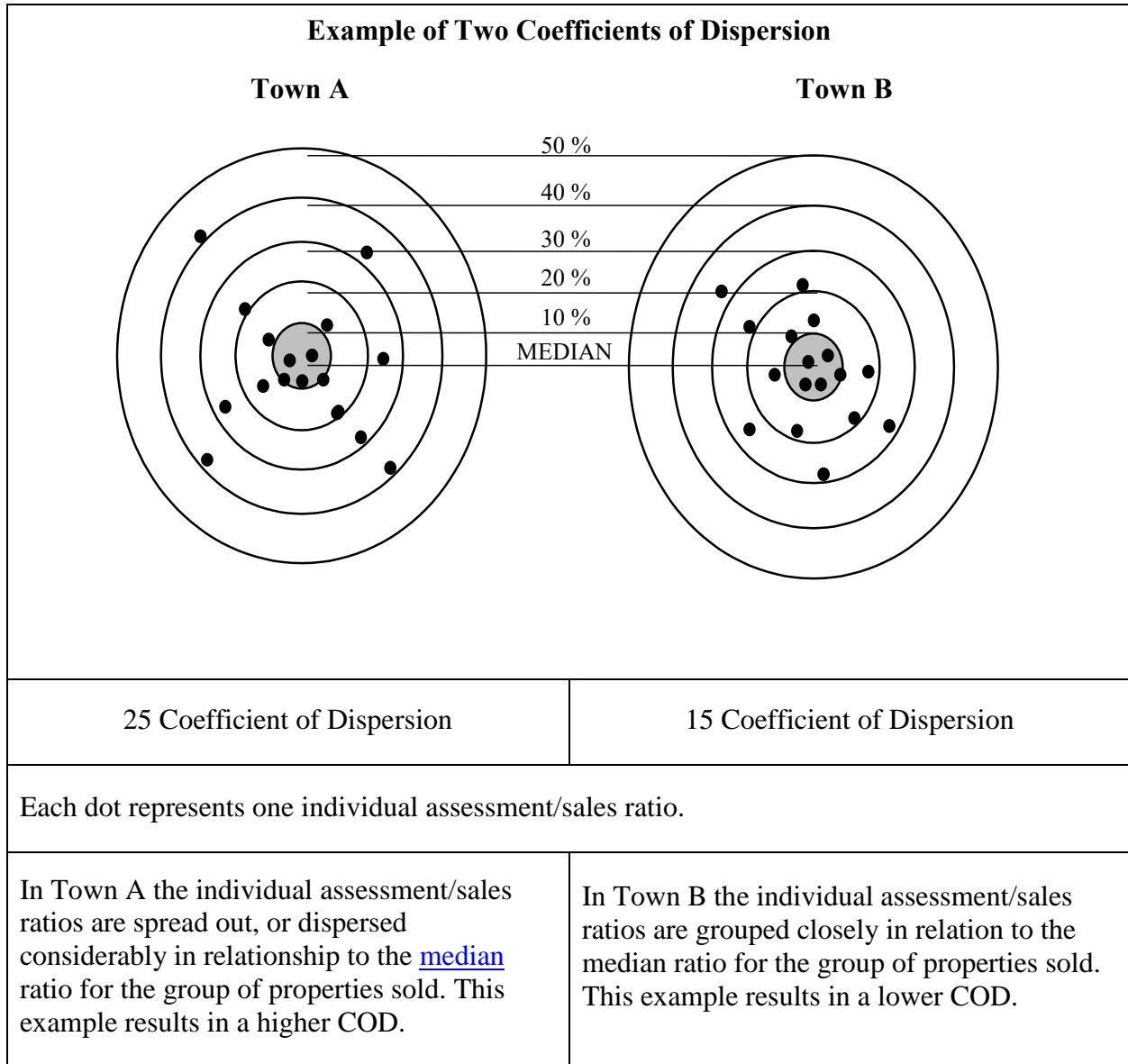
And the third is the **Mean Ratio**. This ratio is calculated by dividing the sum of all the ratios in the overall study by the number of ratios in the sample. This ratio is of limited value and is used primarily as a component in calculating the price-related differential (PRD), as explained below.

Two other statistics generated from an overall ratio study are also of importance. The first is the **Coefficient of Dispersion, or COD**, which measures assessment [equity](#) between taxpayers in a municipality. The COD is calculated by dividing the average absolute deviation of each individual ratio from the overall median by the median ratio itself. The smaller this number is the better the equity. The New Hampshire Assessing Standards Board (ASB) has established an acceptable guideline of 20.0 or less for the COD. This guideline is also consistent with that established by the International Association of Assessing Officers (IAAO) in the 2013 edition of their Standard on Ratio Studies.

### **COD:**

Shows assessment equity between taxpayers -  $\leq 20.0$  is an acceptable ASB / IAAO guideline.

Table 1



An additional analysis conducted measures the **Price Related Differential, or PRD**. This statistic measures the [equity](#) between [taxpayers](#) owning high-value properties versus taxpayers owning low-value properties. The PRD is calculated by simply dividing the [mean](#) ratio by the weighted mean ratio. A result of a number greater than 1.0, suggests higher value properties may be assessed at lower ratios than lower value properties. If the result is less than 1.0, the opposite is true.

Another important element in the [equalization](#) process is stratification. Stratification is the process of classifying property for analysis by property type, such as residential homes, vacant residential [land](#), apartments, commercial improved [parcels](#), vacant commercial land, waterfront properties, etc. This allows separate ratio statistics to be calculated and generated for each of these property types or [strata](#). The ratios and [CODs](#) can then be compared to each strata statistics and to the overall statistics to determine whether different types of properties are being assessed consistently and proportionately.

**PRD:**

A measure of equity between high and low-value properties (vertical equity)  
> 1.0 = high-value properties have lower assessment ratios.  
< 1.0 = low-value properties have lower assessment ratios.

After the annual ratio studies are completed and equalization ratios have been calculated and certified to each municipality, the DRA utilizes those ratios in computing the total equalized valuation for each municipality. The equalized value is of great importance, as it is used in calculating the apportionment of county taxes, the statewide enhanced education tax, and, to varying degrees, cooperative school district taxes.

The total equalized valuation takes into account adjustments for the equalization ratio, shared revenues, payments in lieu of taxes and monies received from the railroad tax.

The DRA publishes the Equalization Surveys Including and Not Including Utilities. Below is an example of the report including utilities. Reports can be found on the DRA website at [http://revenue.nh.gov/munc\\_prop/equalization/index.htm](http://revenue.nh.gov/munc_prop/equalization/index.htm)

NH DEPARTMENT OF REVENUE ADMINISTRATION  
MUNICIPAL AND PROPERTY DIVISION  
2018 Equalization Survey Including Utilities and Railroad  
Alpha Order by Municipality

Municipality	Modified Local Assessed Valuation	DRA Inventory Adjustment	Equalized Assessed Valuation	Equalized Payments in Lieu of Taxes*	Equalized Railroad Tax	Total Equalized Valuation**	2018 Local Tax Rate	2018 Equalization Ratio	Full Value Tax Rate	% Proportion to County Tax	% Proportion to State Tax
Acworth	98,783,050	2,296,543	101,079,593	5,665	0	101,085,258	28.03	97.7	27.28	2.0255%	0.0519%
Albany	114,694,800	(1,124,054)	113,570,746	1,334,183	0	114,904,929	14.85	99.6	14.74	0.7879%	0.0590%
Alexandria	198,301,893	18,865,826	217,167,719	242,842	0	217,410,561	22.78	86.0	20.48	1.4354%	0.1117%
Allenstown	294,032,871	17,541,805	311,574,676	376,702	0	311,951,378	30.15	93.0	28.15	1.7558%	0.1603%
Alstead	163,681,936	28,339,584	192,021,520	84	0	192,021,604	27.05	84.8	22.98	2.5422%	0.0986%
Alton	1,723,212,542	135,244,302	1,858,456,844	396,794	0	1,858,853,638	13.99	92.7	12.94	15.1086%	0.9549%
Amherst	1,727,110,308	203,200,817	1,930,311,125	1,314,134	16,770	1,931,642,029	27.23	88.6	24.15	3.8523%	0.9923%
Andover	258,804,368	41,535,705	300,340,073	8,740	0	300,348,813	22.94	84.2	19.63	1.6905%	0.1543%

**Section 4.2 - Sales Chasing**

Sales chasing is the practice of changing an individual property assessment to or near to the recent selling price of that property with the intention of manipulating equalization ratio study results.

Sales chasing may be accomplished by changing a characteristic of a sale property while not considering corrections to that same characteristic on similar unsold properties. Characteristics may include quality of construction, neighborhood factors, special site pricing, etc. Correcting erroneous data as described on the existing property record card is not sales chasing.

An example might be a 2-bedroom ranch that sold for \$150,000 with an assessment of \$100,000. The unjustified act of changing only that sale property’s quality grade from fair to good might cause the assessment to increase to \$145,000, when a comparison to other unsold properties reveals that it is a fair quality grade property. Other similar 2-bedroom ranch properties may remain assessed around \$100,000, although they may be very similar to the property that sold.

When a single property assessment is changed in the direction of the sale price and that same change is not made to other similar unsold properties, the results may not accurately reflect the assessment level of the municipality.

When applied correctly, a ratio study is also used to measure levels of assessment to see if adjustments need to be made to improve assessment equity. If the ratio study results are accurate, the municipality’s total equalized value will be accurate.