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Tax Rate Discussion – 2022

Median vs. Average

The median of a set of numbers is that number where half of the numbers are lower, and half of the numbers are higher. In the case of real estate, that means the median is the price where half of the homes sold in any given area that month were cheaper, and half were more expensive.
The average of a set of numbers is the total of those numbers divided by the number of items in that set. The median and the average might be close, but they could also be significantly different. It all depends on the numbers.

Here's an example. Take a look at these 11 hypothetical home prices:

  1} $100,000 2) $101,000 3) $102,000 4) $103,000 5) $104,000 6) $105,000 7) $106,000
  8) $107,000 9) $650,000 10) $1 million 11) $3 million

The median price of these 11 houses is $105,000. That's arrived at because five houses were lower priced and five were higher priced.

Meanwhile, the average price of these 11 houses is $498,000. That's what you get when you add up all of those prices and divide by 11—quite a difference from the median.

Why is this Difference Significant?

Median is a better measure of impact if values skew to either extreme. In the example above, high priced houses skew the read on the market. One might conclude that someone was priced out of this market at an average price of $498K. But, in reality, with a median price of $105k there are six houses priced at $105 or lower and another two at $106k and $107k. Looking at the average would provide a false read on true circumstances.

Number of single-family homes in Newburyport in FY23 = 4351

AVG Assessed Value FY23 = $818,783
Median Assessed Value FY23 = $744,200
This is a **18.27%** increase in overall assessed value

AVG Assessed Value of single-family homes < Median, however, increased by **19.76%**
AVG Assessed Value of single-family homes > Median increased by **17.44%**

AVG tax paid by less than Median assuming shift + FC = $6,360
AVG tax paid by higher than Median assuming shift + FC = $11,096

AVG tax paid by less than Median assuming shift + no FC = $6,419 - $59.68 additional tax
AVG tax paid by more than Median assuming shift + no FC = $11,200 - $104.09 additional tax

AVG tax paid by less than Median assuming no shift + no FC = $6,497 - $137.22 additional tax
AVG tax paid by higher than Median assuming no shift + no FC = $11,335 - $239.40 additional tax

By adding the Free Cash to the shift, the bottom half of residents of single-family homes receive a tax reduction of only $59.68 per year while the top half receive a reduction of $104.00 per year, 74% higher.

By doing both the shift and using Free Cash, the bottom half of residents receive an average tax reduction of only $137.22 per year while the top half receive a reduction of $239.40 per year.

Single family households' total taxes are reduced by $818,381 by using both shift and FC

Single family households below the median receive $298,451 of the decrease (36%)
Single family households above the median receive $520,930 (64%)

For Condos:

Number of residential condominiums in Newburyport = 2370

Overall AVERAGE Condo owner benefit of shift + FC = $120.96

Lower than then Median AVERAGE Condo benefit of shift + FC = $75.37

Higher than the Median AVERAGE Condo benefit of shift + FC = $166.55

Lower than then Median Condo owners receive 31.16% of benefit of shift + FC

Higher than the Median Condo owners receive 68.84% of benefit of shift + FC