



# FINAL PRESENTATION

NYC Property Sale

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# About Dataset

This dataset is a record of every building & building unit sold in New York City property market over a period of 12 months from September 2016 to September 2017. Although originally posted by New York City Department of Finance, this concatenated and slightly cleaned-up version has been acquired from Kaggle at

<https://www.kaggle.com/new-york-city/nyc-property-sales>

The dataset contains total 22 columns with variable like :

- \* Neighborhood
- \* Address
- \* Sale date
- \* Sale Price
- \* Zip Code
- \* Residential units
- \* Commercial Units
- \* Total Units
- \* Land Square feet
- \* Gross Square feet
- \* Year Built



## OBJECTIVE

To spot the trends in the property market of New York and compare the property sale price with respect to different boroughs, neighbourhoods and tax classes.

# About Dataset

The dataset contains the location, address, type, sale price, and sale date of building units sold. Some of the major variables are:

**1)BOROUGH:** Defines the borough, the property is located in; in order these are Manhattan (1), Bronx (2), Brooklyn(3), Queens (4), and Staten Island (5).

**2)BLOCK & LOT:** A Tax Block is a sub-division of the borough on which real properties are located. And a A Tax Lot is a subdivision of a Tax Block and represents the property unique location.

**3)BUILDING CLASSIFICATION:**Describes a property's constructive use.The 1st position of the Building Class is a letter that is used to describe a general class of properties (e.g. "A" signifies one-family homes, "O" signifies office buildings. "R" signifies condominiums). The 2nd position, a number, adds more specific information about the property's use or construction style (e.g."A0" is a Cape Cod style one family home, "O4" is a tower type office building and "R5" is a commercial condominium unit).

**4)TAX CLASS:** Every property in the city is assigned to one of four tax classes (Classes 1, 2, 3, and 4),based on the use of the property.

The Department of Finance uses a Borough-Block-Lot classification to label all real property in the City. "Whereas" addresses describe the streetlocation of a property, the block and lot distinguishes one unit of real property from another, such as the different condominiums in a single building.

## CLASS 1

- Includes most residential property of up to three units (such as one-,two-, and three-family homes and small stores or offices with one or two attached apartments), vacant land that is zoned for residential use, and most condominiums that are not more than three stories.

## CLASS 2

- Includes all other property that is primarily residential, such as cooperatives and condominiums.

## CLASS 3

- Includes property with equipment owned by a gas, telephone or electric company

## CLASS 4

- Includes all other properties not included in class 1,2, and 3, such as offices, factories, warehouses, garage buildings, etc.

# Analysis

1) Borough 1 i.e. Manhattan has around 11M lots with each lot comprising approximately 40K residential units and 6K commercial units.

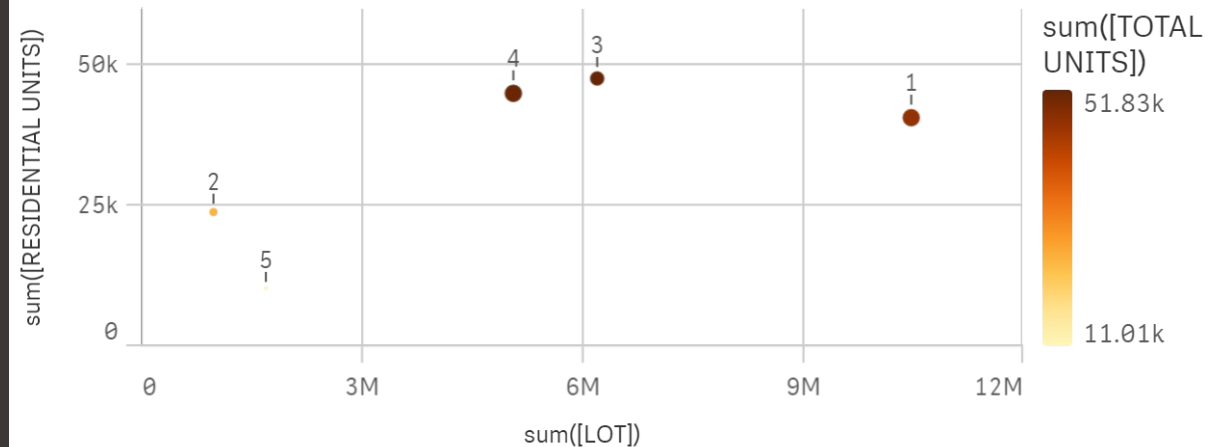
2) Both Borough 5 & 2 have a very low number of commercial units. Borough 5 has 1.68 M lots each comprising 11K residential units and total units just over 11K and Borough 2 has around 966K lots each comprising approx. 23K and total units approx. 25K,

3) Borough 3 and 4 have lots just over 5M with each lot comprising approx. 43K residential units and total units around 51K and about 8k commercial units.

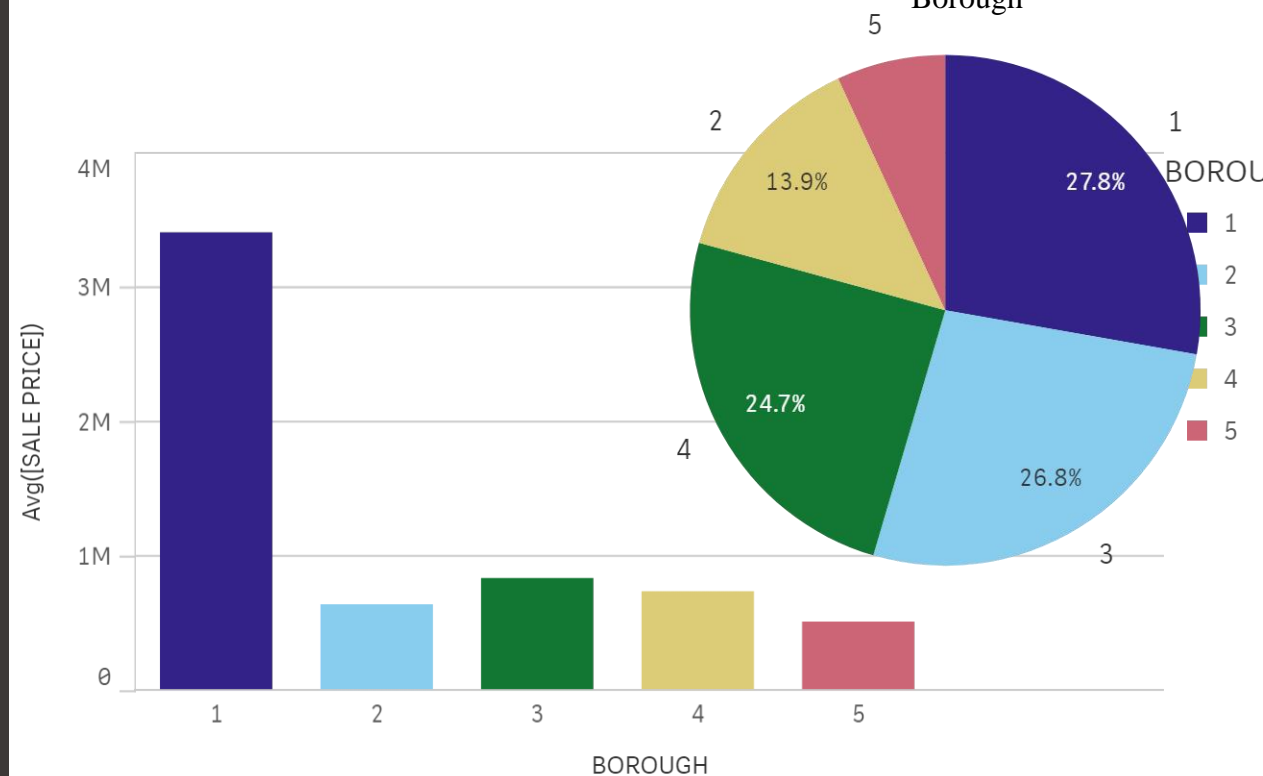
4) Manhattan (also known as the financial hub) has the highest sale price; approximately 3.4 M, while other Boroughs lag behind, with sale price around 1/4th of that of Manhattan.

5) Manhattan with 27.8% has the highest number of residential units closely followed by Brooklyn with 26.8% and Queens with 24.7% and further followed by Bronx and Staten Island.

Comparison of sum(LOT), sum(RESIDENTIAL UNITS), sum(COMMERCIAL UNITS), ...



Residential Units In Each Borough



# Analysis

1) From Sept 2016 to Aug 2017:

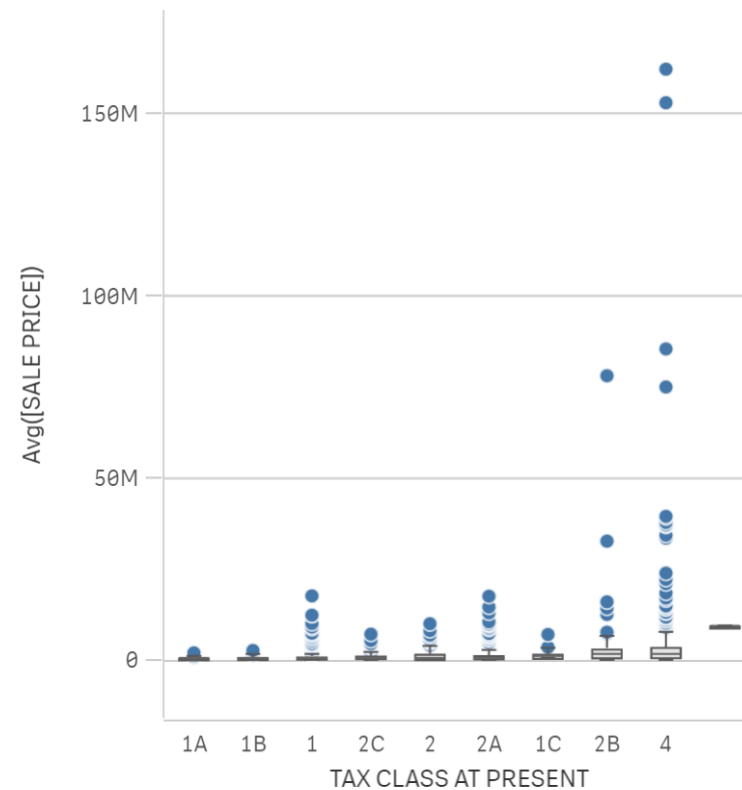
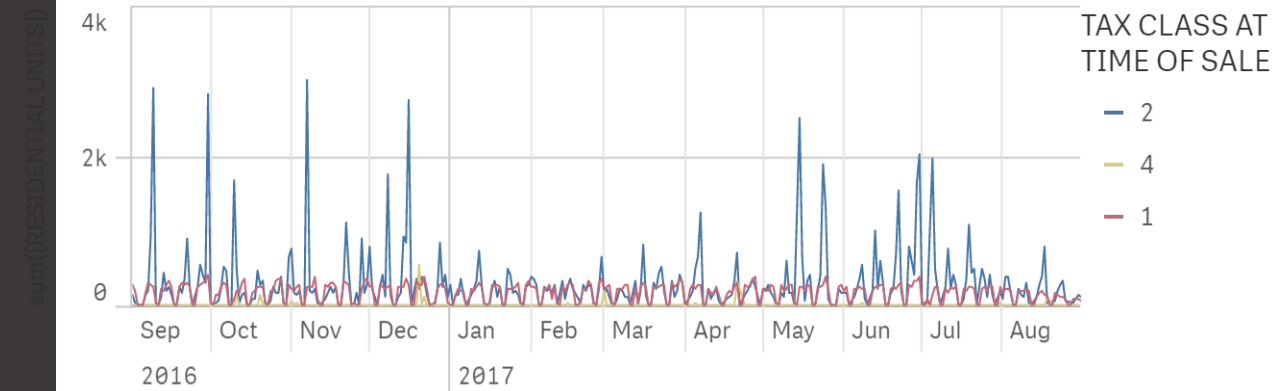
a) the number of residential units for class 4 was the lowest.

b) the number of residential units for the class 1 remained less than 500.

c) the number of residential units for class 2 was the highest among the three. It crossed the sum to little greater 3000 in Nov 2016 and more than 2000 for month from Sept 2016 to Dec 2016 and on May 2017 and July 2017.

2) When comparing the Tax Class and Sale Price, it can be concluded that the average sale price is highest for the tax class 4 and comparably lowest for the tax class 1A and 1B.

sum(RESIDENTIAL UNITS) by TAX CLASS AT TIME OF SALE and SALE DATE





# Analysis

1) Residential units in Tax class 1 amounts to the largest area of 35M sq ft followed by residential units of Tax class 2 with a total area of 30M sq ft. closely followed by properties under Tax class 4 with area around 23M sq ft. Except tax class 2A and 2B which have properties with area upto 7.5M sq ft and 5M sq ft, there is hardly any significant properties in TAX class 1A, 1B, 1C , 2C

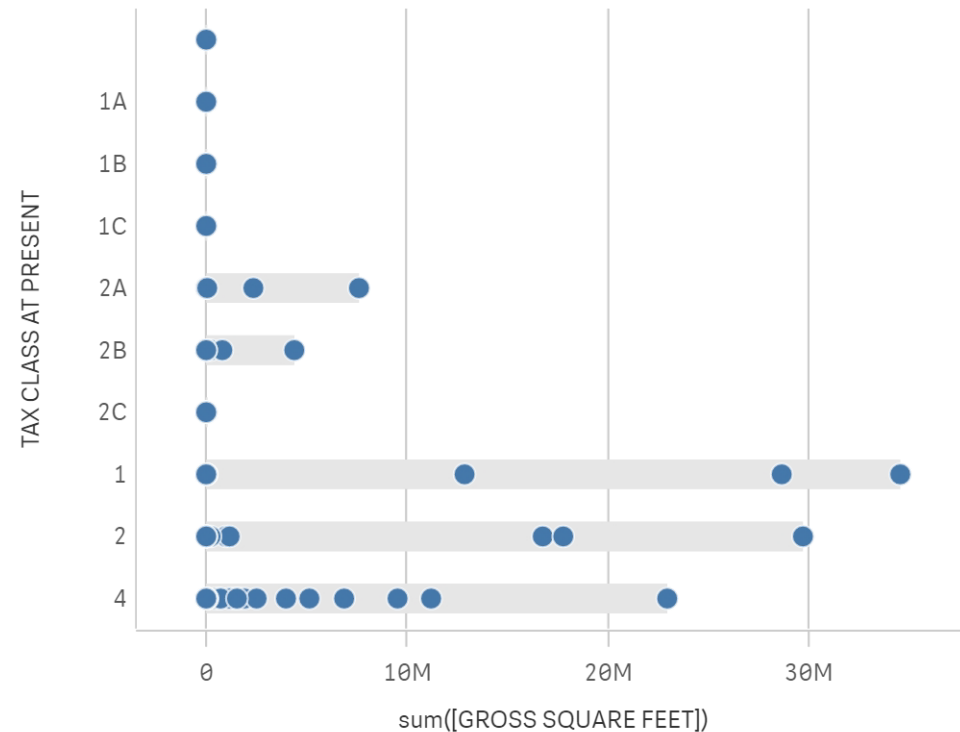
2) When looking at the available sale:

a) From the end of Sept 2016 till Aug 2017, the properties with 6M sq ft area of Tax Class 1 were available for sale and remained the largest area available for sale.

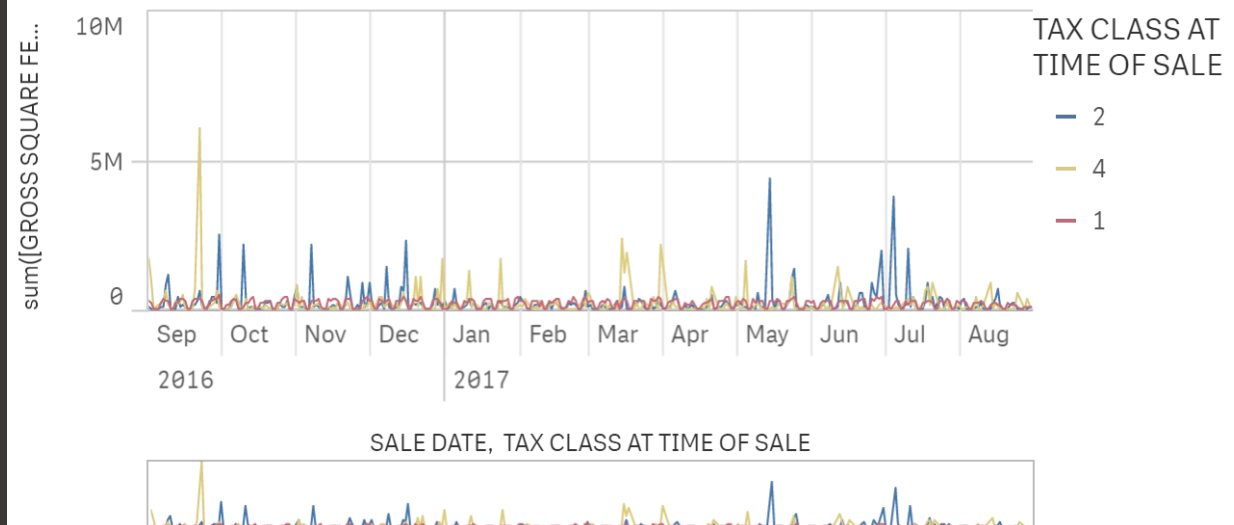
b) Properties among Tax Class 2 with area upto 4.4M(approx) sq ft were available in May 2017 and July 2017 and to a certain extent about 2M sq ft in Oct 2016 to Dec 2016.

c) Property below approx 2.5M and under Tax class 1 were available throughout, from Sept 2016 to Aug 2017.

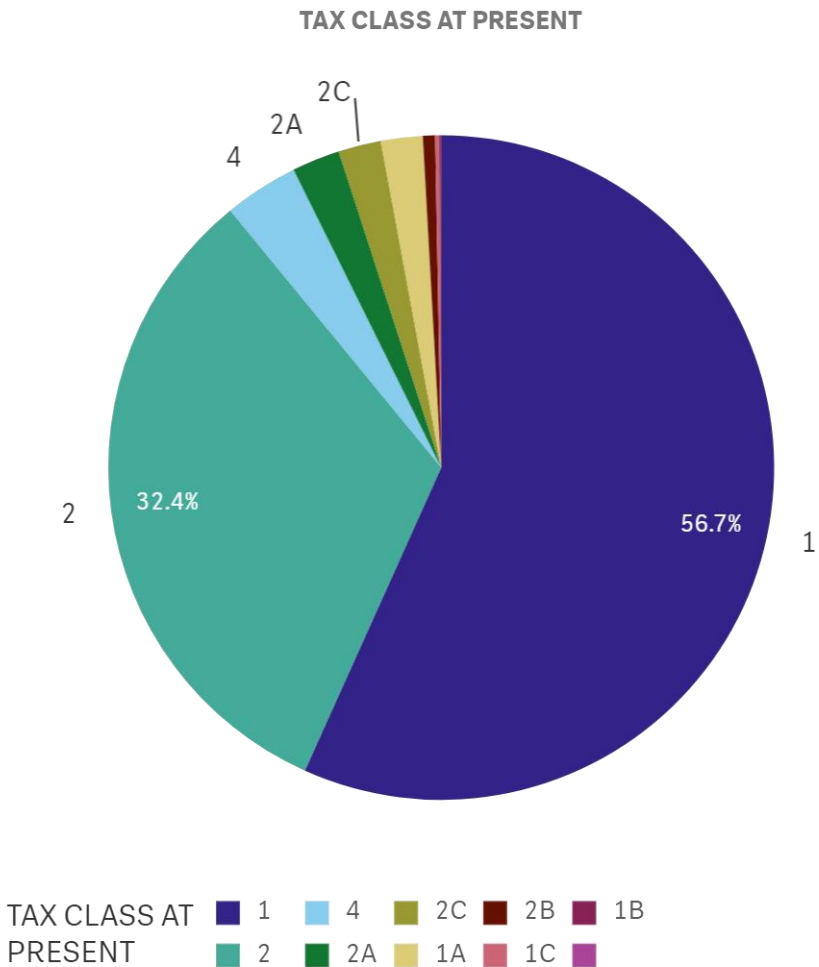
Overview of sum(GROSS SQUARE FEET) by TAX CLASS AT PRES...



sum(GROSS SQUARE FEET) by TAX CLASS AT TIME OF SALE and SALE DATE



TAX CLASS PERCENT IN EACH CLASS



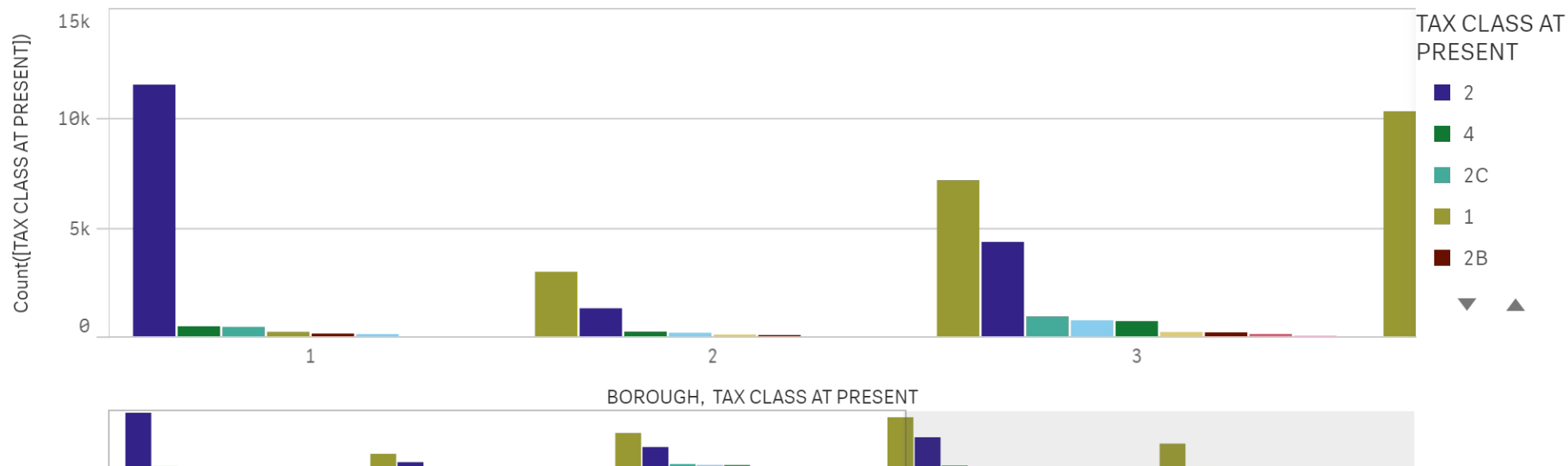
**Class 1 :** Most residential property of up to three units (family homes and small stores or offices with one or two apartments attached), and most condominiums that are not more than three stories.

**Class 2 :** All other property that is not in Class 1 and is primarily residential (rentals, cooperatives and condominiums). Class 2 includes: Sub-Class 2a (4 - 6 unit rental building); Sub-Class 2b (7 - 10 unit rental building); Sub-Class 2c (2 - 10 unit cooperative or condominium); and Class 2 (11 units or more).

**Class 3 :** Most utility property.

**Class 4 :** All commercial and industrial properties, such as office, retail, factory buildings and all other properties not included in tax classes 1, 2 or 3

Maximum 59.5 % TAX Class Present in Class 1 .



\* In Borough 1 which is Manhattan is the most densely populated of the five [boroughs](#) of [New York City](#) have maximum 13.7 K of Class 2 those are primarily residential (rentals, cooperatives and condominiums).

\*In Borough 2 which is Bronx have maximum 4.05 K of Class 1 those are family homes and small stores or offices with one or two apartments which is very smaller in comparison of all borough.

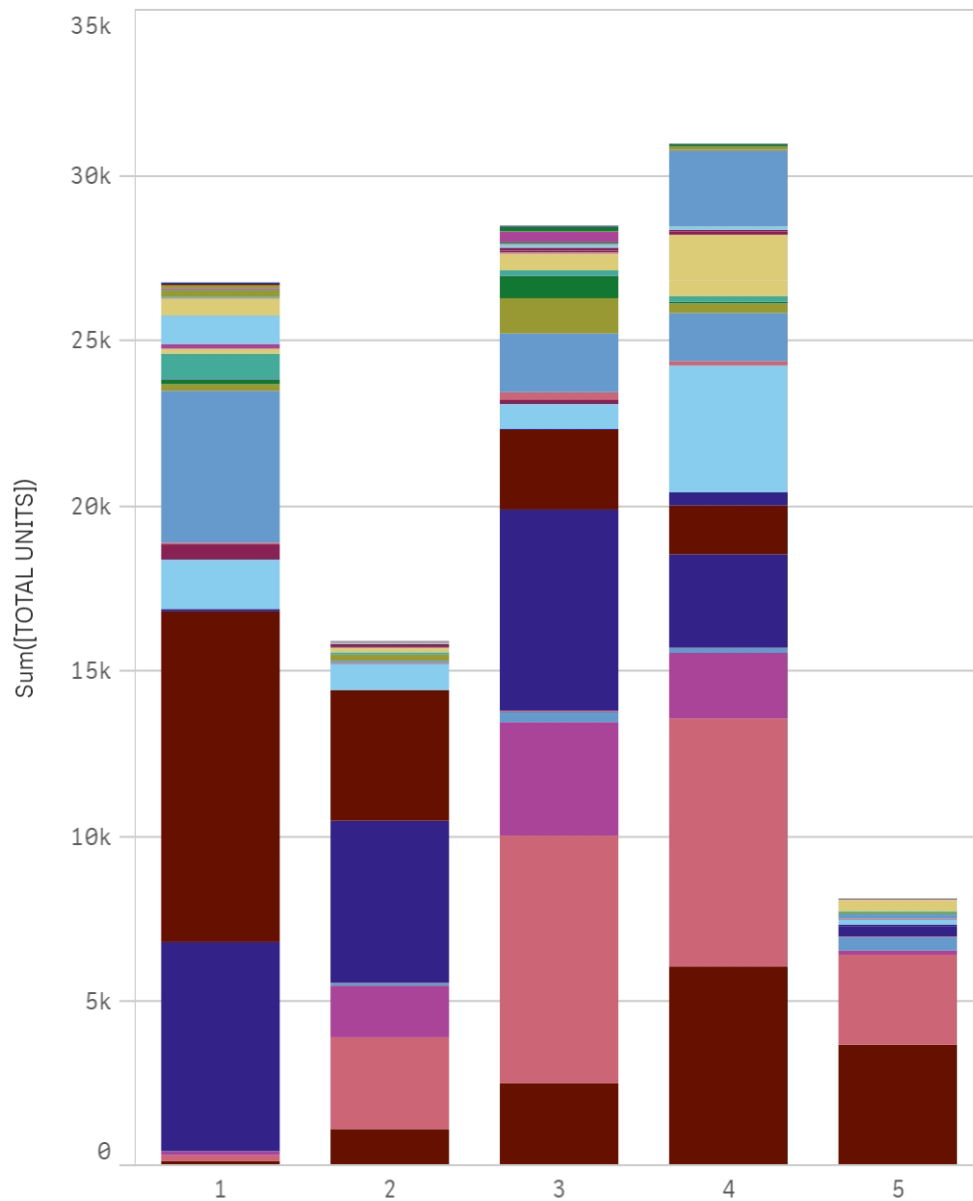
\* In Borough 3 which is Brooklyn have maximum 11.74 K of Class 1.

\*In Borough 4 which is Queens have maximum 15.76 K of Class 1.

\* In Borough 5 which is Staten Island have maximum 6.72k of Class 1 .

Manhattan have more cooperative units.





BUILDING  
CLASS  
CATEG...

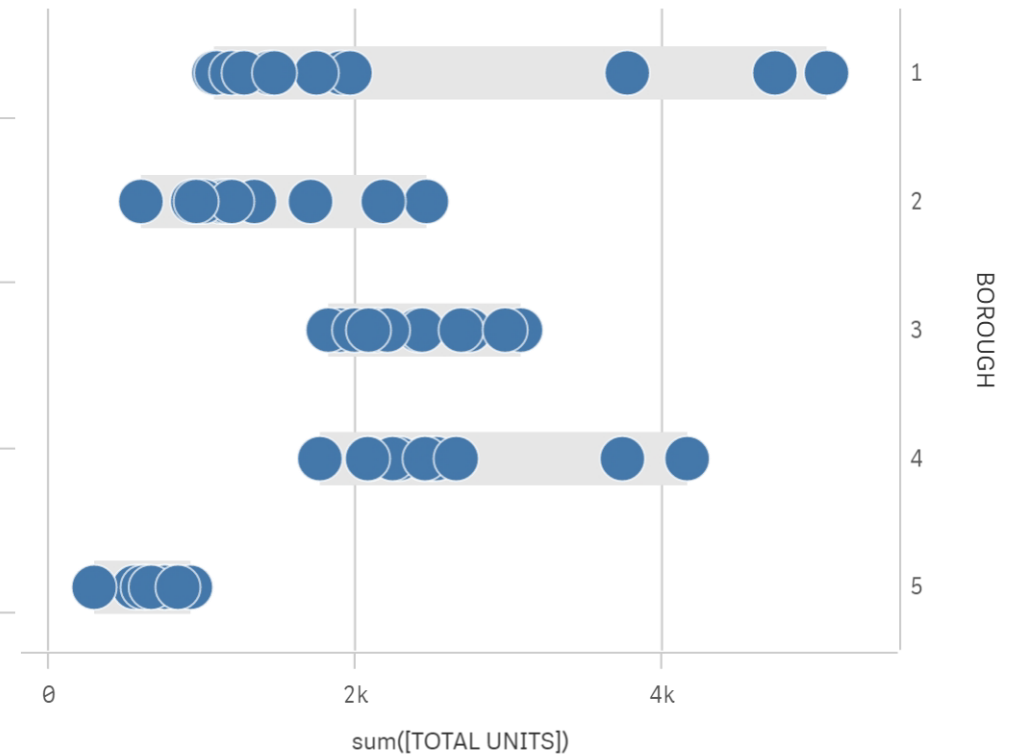
BOROUGH, BUILDING CLASS CATEGORY

01 ONE FAMILY  
DWELLINGS  
02 TWO FAMILY  
DWELLINGS

03 THREE FAMILY  
DWELLINGS  
04 TAX CLASS 1  
CONDOS

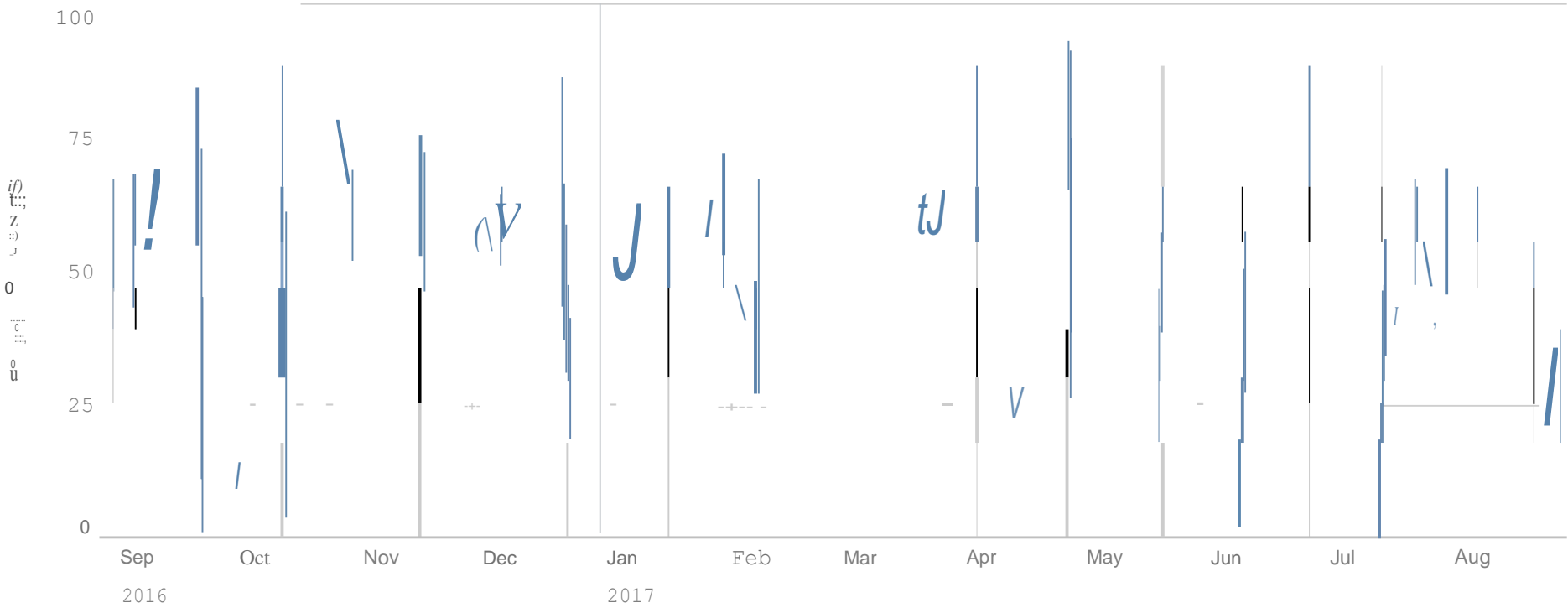


sum(TOTAL UNITS), sum(BLOCK), and sum(LOT) by SALE DATE



Total units of property sales in every Borough , Manhattan have maximum no. of sales which is 5.07 K and after that on second Brooklyn has 4.16 K units sold.

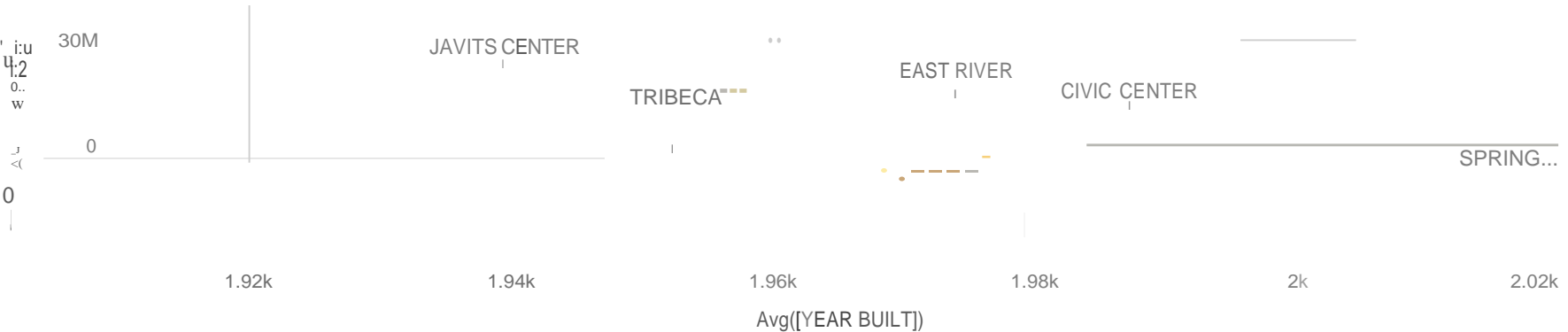
TOTAL UNITS BY SALE DATE



SALE DATE



Comparison of Avg(YEAR BUILT), Avg(SALE PRICE), sum(LOT), and sum(RESIDENTIAL UNITS) for NEIGHBORHOOD





Thank You