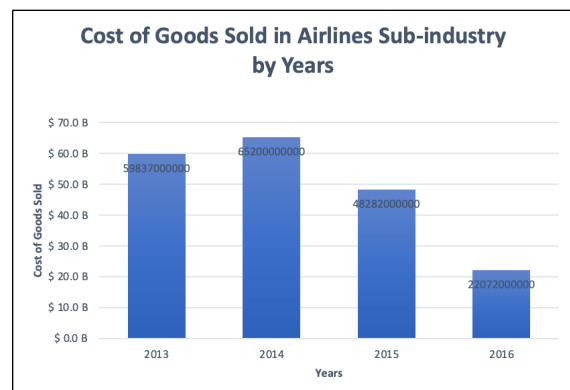
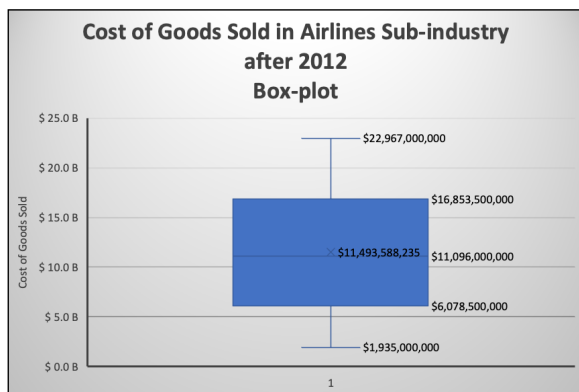


## Project: Analyze NYSE Data

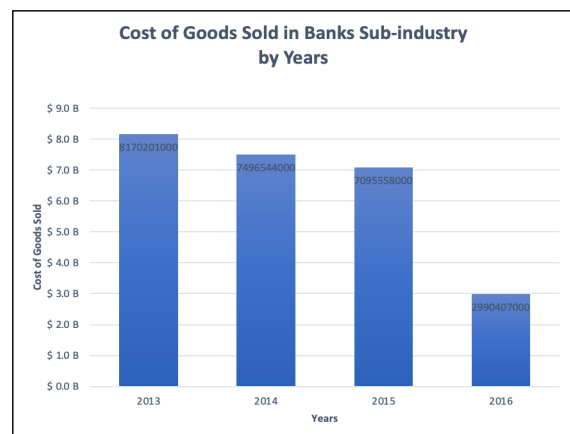
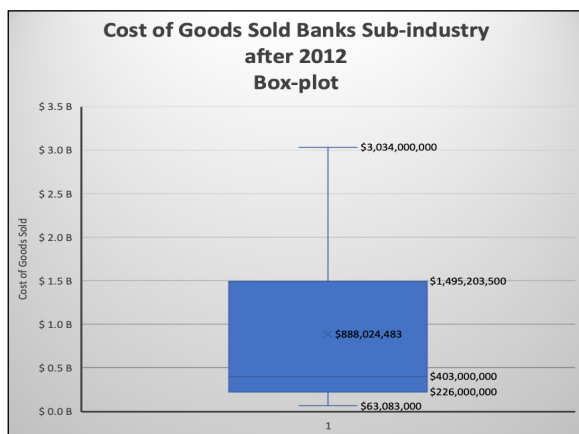
### Task 1

Is the cost of goods sold average for Airlines which is a sub-industry category, higher than the average for Banks in the period from 2013 to 2016?

Cost of goods sold for airlines:



Cost of goods sold for banks:



Above, cost of goods sold values for both Airlines and Banks sub-industries between 2013 and 2016 are shown in box-plot and bar charts on the basis of years.

It can be clearly seen from the box-plots that the average cost of goods sold for the Airline industry is higher than for the Bank industry.

For Airlines, the median and mean values are close to each other, which indicates an almost symmetrical data distribution, while the mean on the banks chart is greater than the median, indicating a right-skewed distribution.

Also, the difference (range) between maximum spending and minimum spending amount for Airline is \$21,032,000,000, similarly this difference is \$2,970,917,000 for bank.

When we look at the bar charts showing the distribution of costs by years, it is seen that although the most spending transactions occurred in 2013, the most spending in the airline industry is \$65,200,000,000 in 2014. Besides, in the banking industry, it is seen that the highest expenditure is realized in 2013 with \$8,170,201,000.

Moreover, the standard deviation for the spending by years in the airline industry is 19,195,664,066, while the standard deviation for the bank industry is 2,340,891,254, which indicates that there are more variable cost goods sold in the airline industry.