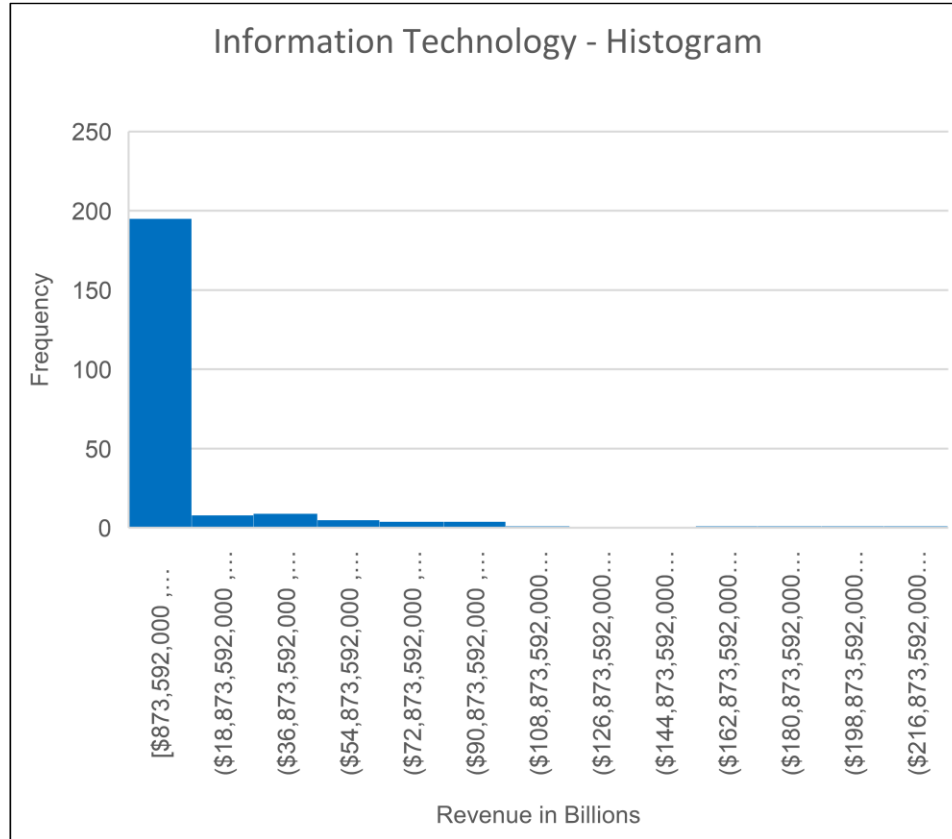




Business Analytics

Analyze NYSE Data

Does the Information Technology sector have similar revenues as the Healthcare sector?

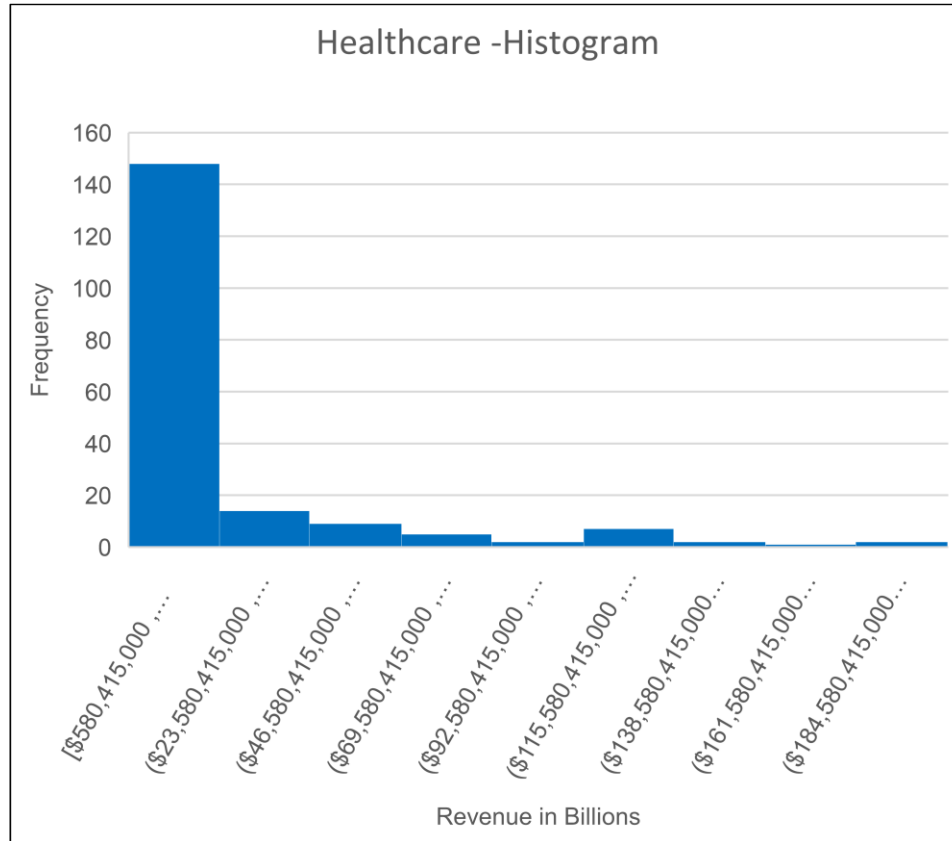


Here is the histogram for the total four-year revenues reported for all companies in the Information Technology sector.

This distribution is right-skewed or positively skewed. That means the mean is higher than the median.

The mean for Information Technology is about \$62 billion, much lower than the mean for the Healthcare sector (\$92.8 billion – as will be discussed below). Also, the median of \$19.5 billion and the standard deviation of \$125 billion are lower than those same values for Healthcare (\$36.7 and \$149 billion respectively). Over 50% of the Information Technology companies earned more than \$19.5 billion. However, the skew for Information Technology (approx. 4.3) is higher than the skew for Healthcare (approx. 2.5) indicating that the Information Technology sector had a larger variance in the revenues than there were within the Healthcare sector. This is better illustrated in the box plot included with this presentation.

Does the Information Technology sector have similar revenues as the Healthcare sector? (Continued)

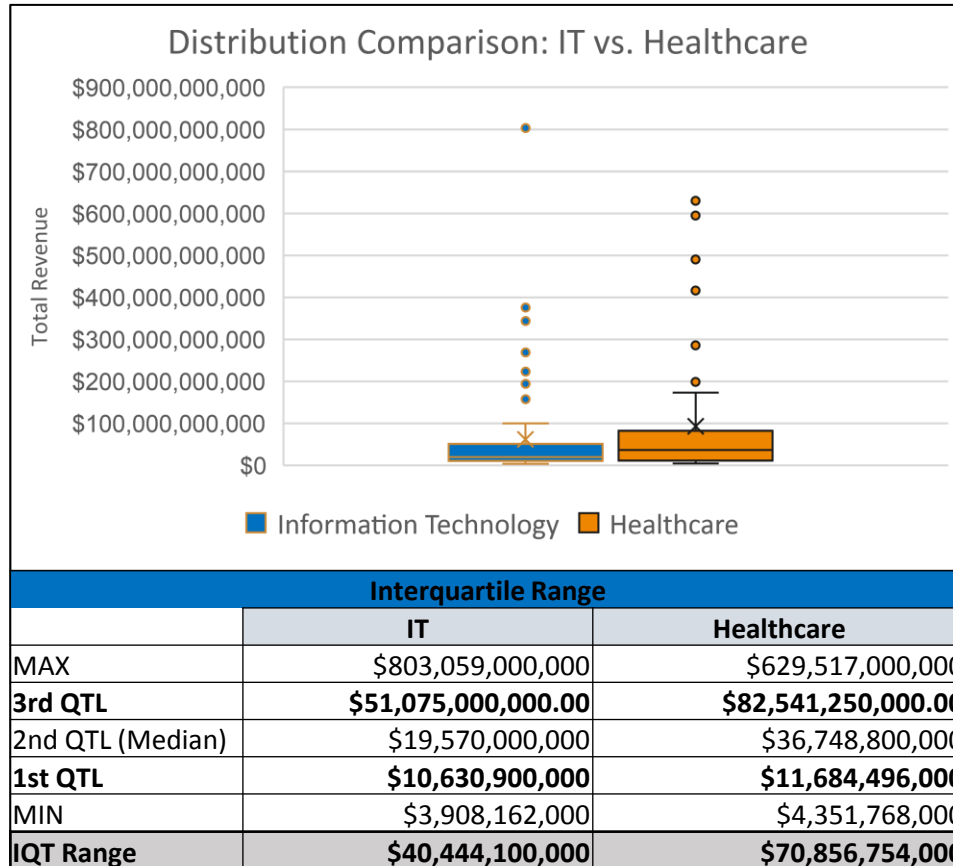


Here is the histogram for the total four-year revenues reported for all companies in the Healthcare sector.

This distribution is right-skewed or positively skewed. That means the mean is higher than the median.

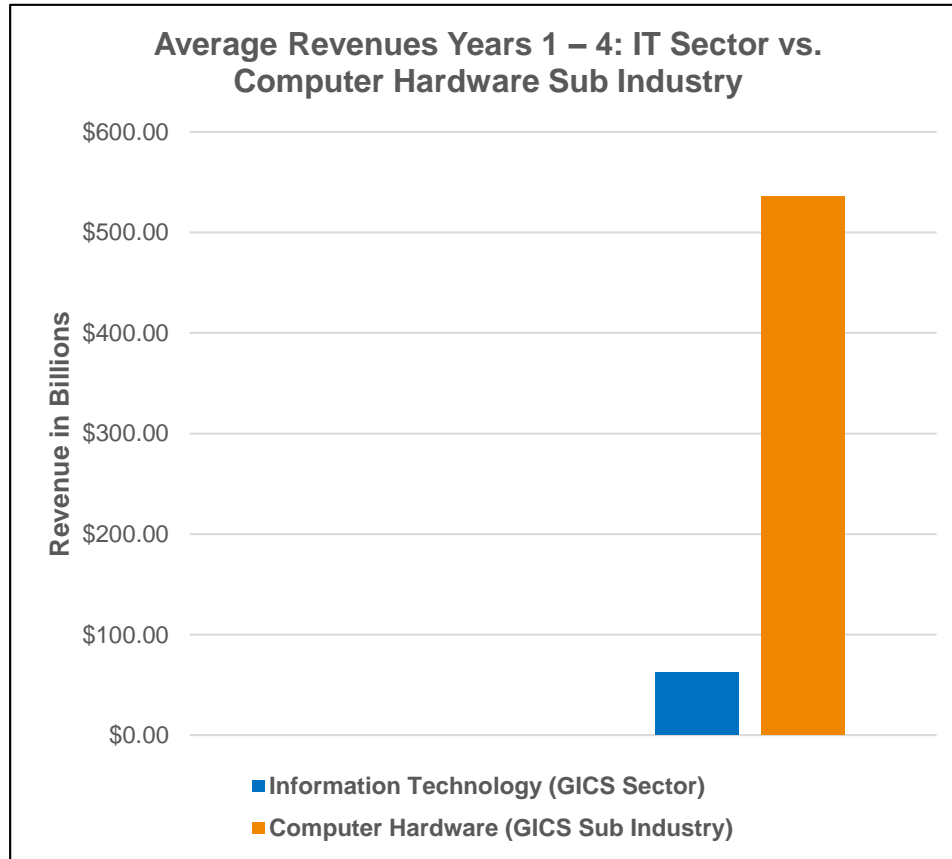
The mean for Healthcare is about \$92.8 billion, much higher than the mean for Information Technology (\$62 billion – as mentioned above). Also, the median of \$36.7 billion and the standard deviation of \$149 billion are higher than those same values for Information Technology (\$19.5 and \$125 billion respectively). Just like with the Information Technology sector the Healthcare sector had 50% of the companies earning more than the median, again for Healthcare that figure was 36.7 billion. The skew for Healthcare (approx. 2.5) indicates that this sector has a large variance in the revenues just as with the Information Technology sector. This is better illustrated in the box plot below.

How does the distribution of the Information Technology revenue compare to Healthcare revenue?



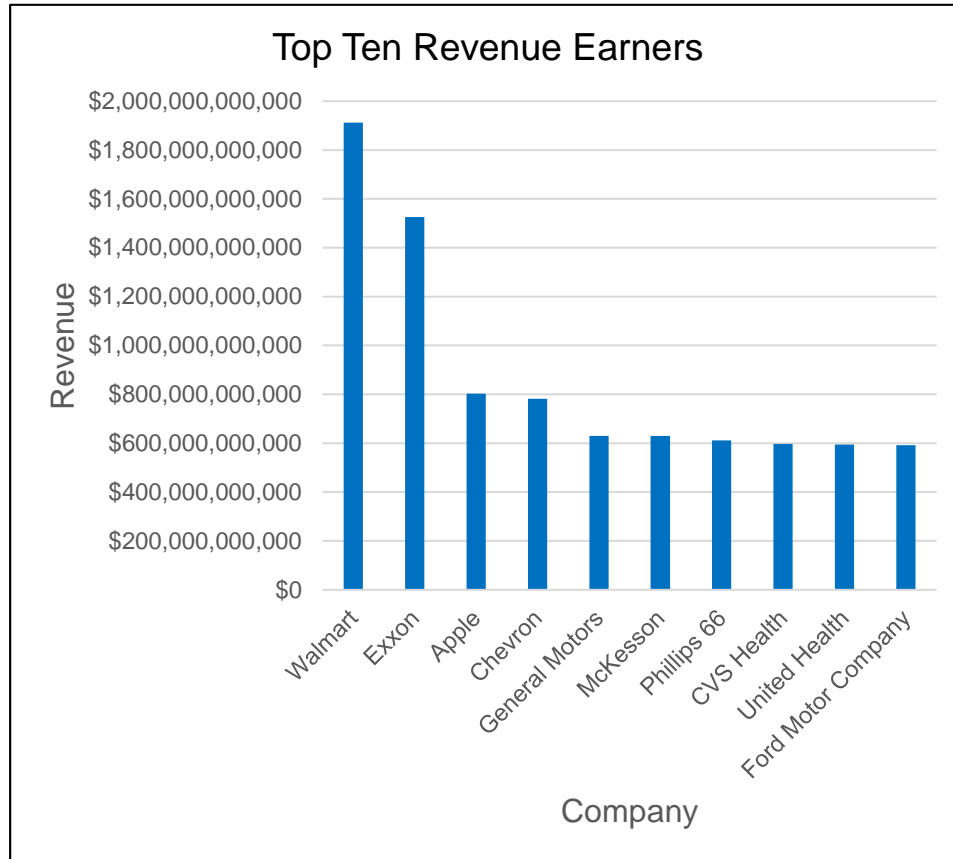
Here is a box plot that better illustrates the variance in the distribution of total revenues for the Information Technology sector and the Healthcare sector. As mentioned above there is a greater variance in the distribution of revenue for the Information Technology sector compared to the Healthcare sector. Both sectors have several outliers that have affected both means with positive skews. The most extreme outlier is Apple, in the Information Technology sector, with total revenues of \$803 billion. This box plot also visualizes the difference in range of the two industries. Whereas both industries have very wide distributions of total revenues, or spread, with outliers causing a great deal of the variance, it can be seen that the range of total revenues for the Information Technology sector (approx. \$800 billion) is larger than that for the Healthcare sector ((\$625 billion). Interestingly, the Interquartile range for Information Technology (\$40 billion) is smaller than that of the Healthcare industry (approx. \$70.1 billion). This means that the range, or spread, of the middle 50% of the Information Technology revenues is smaller than the spread of the middle 50% of the Healthcare sector revenues.

Does the Computer Hardware sub industry have higher or lower average revenues than the Information Technology sector?



Here is a column chart comparing the the mean average revenues of the linformation Technology sector and the Computer Hardware sub industry. The mean total revenue for companies categorized as Computer Hardware industries was approx. \$535 billion and the mean total revenue of all Information Technolgy industries was approx. \$62 billion. Companies in the Computer Hardware industry (which includes just Apple Inc. and HP Inc.) have a higher average total revenue than all Information Technology companies combined. The range of the average total revenues for the Computer Hardware sub industry is greater than the range of the Information Technology sector.

What companies earned the most total revenue?



Here is a column chart of the top ten reported total revenue earners. It is clear that Walmart is the leader with \$1.9 trillion in total revenues for the four-years reported. The top ten total revenue earners account for approximately 24% of the total revenues reported by all companies combined. Three of the top ten companies are in the Energy sector (Exxon, Chevron and Phillips 66) and together account for 8% of the total revenues reported by all companies combined.