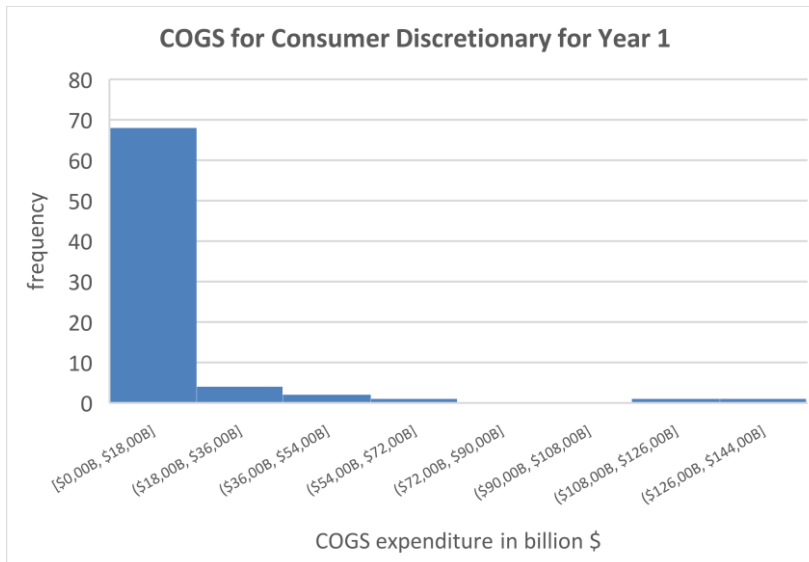


Quantitative Variable

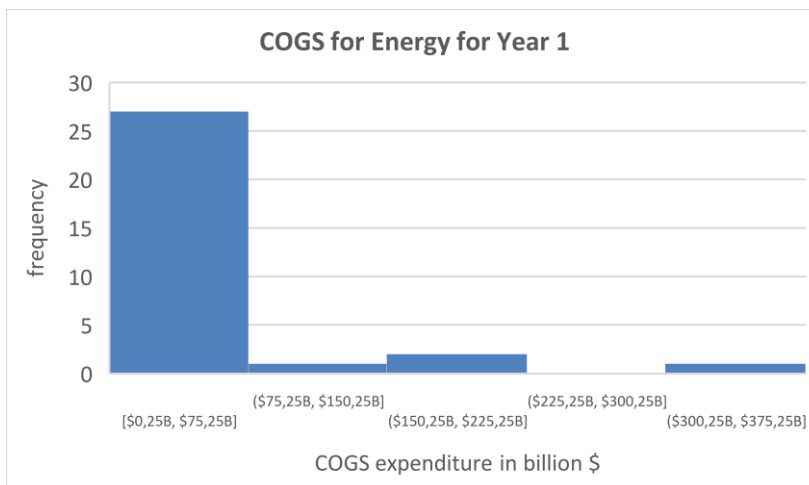
Does the Consumer Discretionary sector have similar expenditure for COGS than the Energy sector for Year 1?



The following figures show the expenditure for **cost of goods sold (COGS)** for the sectors **consumer discretionary** and **Energy** for **year 1**. This report includes all companies that fall under this sector.

Both distributions are right-skewed or positively skewed. That means, the mean for each is higher than the median.

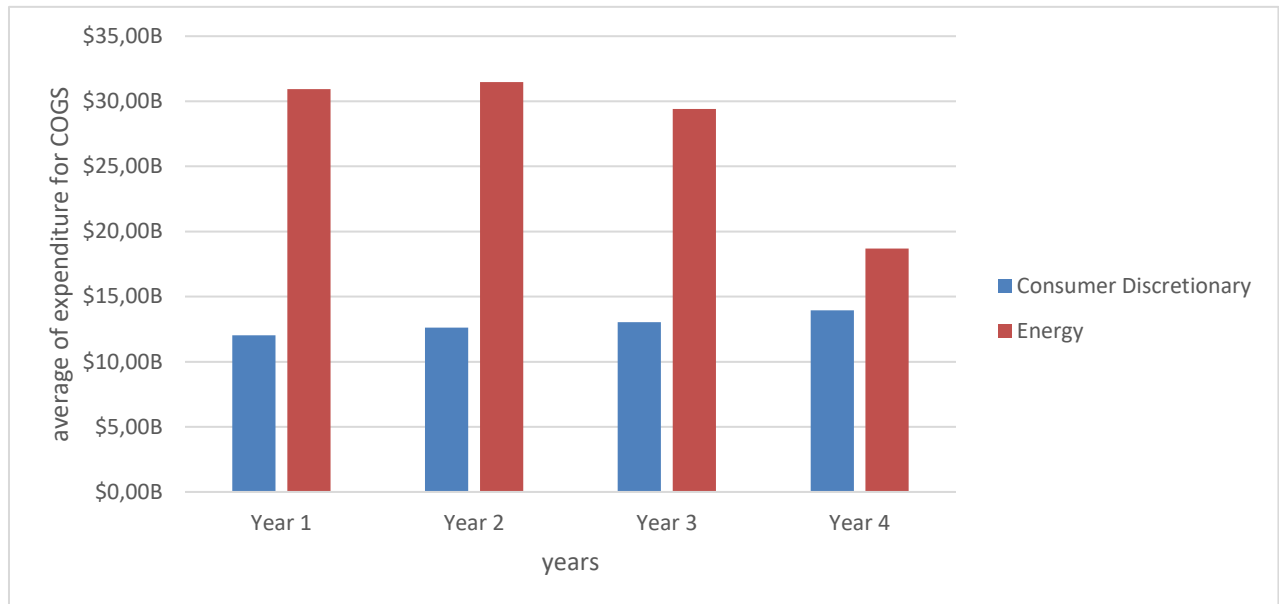
The mean for consumer discretionary is \$12,0 billion, \$19 billion below the mean for the energy sector. However, the median of consumer discretionary (\$4.9 billion) is about \$1.8 billion higher than the energy sector (\$3.1 billion). However, if we look at the standard deviation, which is a measure of dispersion, we see that the standard deviation of the energy sector, at 66.3 billion dollars, is three times higher than that of the consumer sector, at only \$22.3 billion. In terms of standard deviation, this means that there are many more outliers up and down from the mean in the energy sector than in the consumer discretionary sector. This insight can also be seen in the big differences in the range. For example, the range in the Consumer Discretionary sector is \$137.4 billion and in the Energy sector \$301.9 billion.



	mean	median	standard deviation	range
Consumer discretionary	~ \$ 12.0 B	~ \$4.9 B	~ \$22.3 B	~ \$137.4 B
Energy	~ \$ 31.0 B	~ \$3.1 B	~ \$66.3 B	~ \$301.9 B

Categorical Variable

What is the average COGS trend for the Consumer Discretionary sector and the Energy Sector over the years?



This chart compares the average expenditure **cost for goods sold (COGS)** over **years 1-4** for **consumer discretionary** and **energy**. At first glance, one can see the different control variables. For example, the average COGS for the consumer discretionary sector ranges from \$18.7 trillion to \$31.5 billion, with the average COGS for the energy sector ranging from \$12.0 billion to \$14.0 billion. Based on a trend reading, a plateau can be seen for the consumer discretionary sector in years 1 and 2, which decreases slightly to strongly in years 3 and 4. In terms of the energy sector, a slight but constant increase can be seen between years 1 and 4.