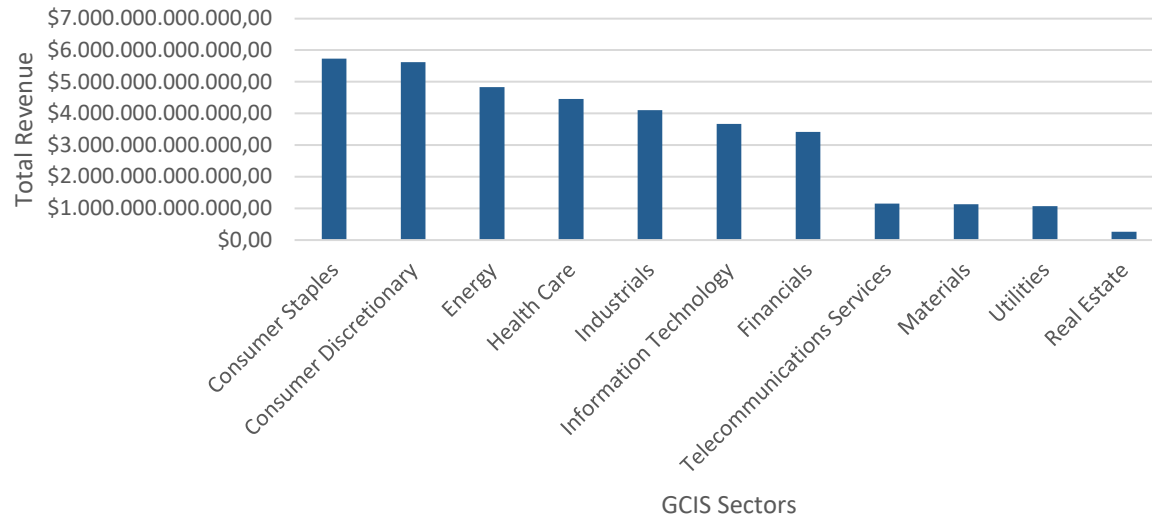
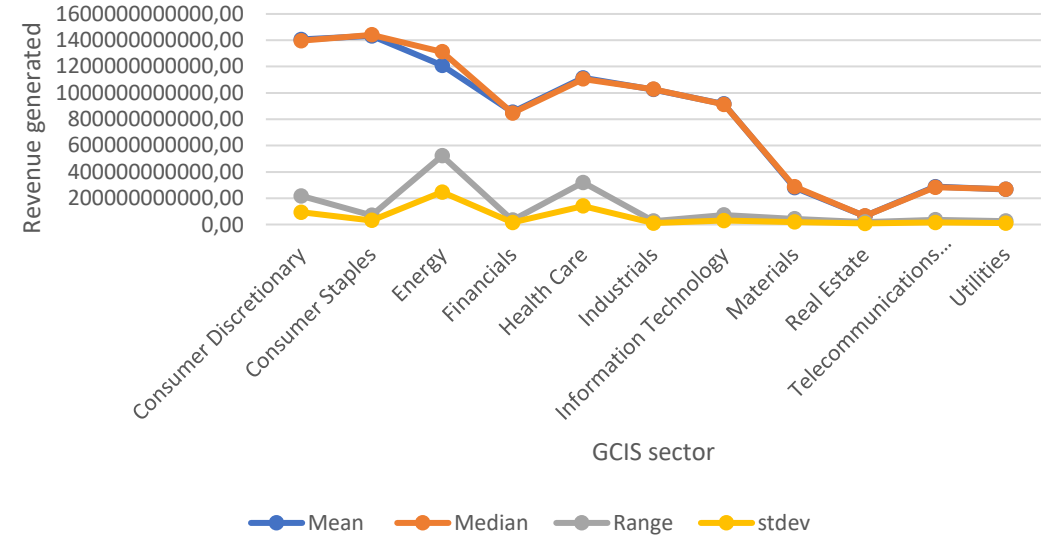


# NYSE data analysis

Total revenue Generation by different GCIS sectors, Year1- Year4



Summary Stats for all sectors from year1-year4



Which sector is performing better in terms of total revenue generation.

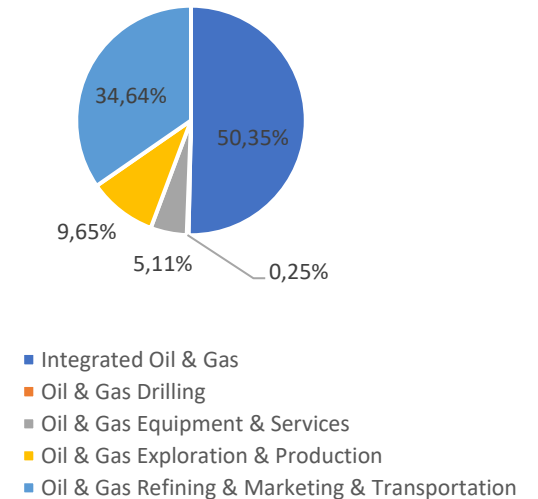
- It can be noticed that consumer Discretionary and consumer staples are performing better in comparison to other sectors generating highest revenue including all years total \$572B, while energy and finance sectors are taking major fall in year 2016. Lowest revenue generation is Real estate. The mean of total revenue for Consumer discretionary is 1405 B and Utilities is 267B which tells the average income of CD companies has been 1405 B per month, and that is almost 6 times higher than those in utilities sector.

Conclusion from Summary Statistics for all sectors from year1- year4

It can be noticed that mean and median of total revenue for all the years combined doesn't have huge difference between them for most of the sectors, it means revenue earned each year is not very distant for these sectors except Energy and Healthcare.

- it can be said that Consumer Discretionary has low standard deviation showing better market volatility, so investments can come at low risk for this sector, as well as for consumer staples. Sectors that have very high deviation rates are energy and Healthcare with rate of 246742166064,84 and 141642781812,21 respectively, We can conclude that the revenue income from each sub sector for these two have significant difference between them, hence very unstable market for investment. That also reflects their poor growth rate in year 2015 by -52 % and -1 %.
- 1396590089500,00 median of Consumer Discretionary is higher than Real State median 65304607250,00 shows, 50% of the average income of companies in CD is at least 50% higher of those in Real state.
- Very High range and standard deviation value for Energy and Healthcare sector confirms the spread of data, which means income has not been static each year for most of the companies and has a lot of variability between them.

percentage of total revenue from each companies under energy sector, year1-year4



For example, taking closer look to energy sector from the pie chart, We can notice that 50.35% of revenue in energy sector is being generated from “integrated oil and gas” companies. While the rest revenue is combined revenue of the other sub sectors, Which explains the reason of variability in income under this sector and that not all corporations are profitable.

-The maximum amount of revenue is from company XOM (1525 B), Far more higher than most corporations combined in energy sector. Yet this company has huge value of range, further investigating shows, High average rate doesn’t always mean stable market. As XOM has very huge decline in earnings in year 4 (259B), half in comparison to year1-year3. Thus review of all measures is important before concluding stability of any.

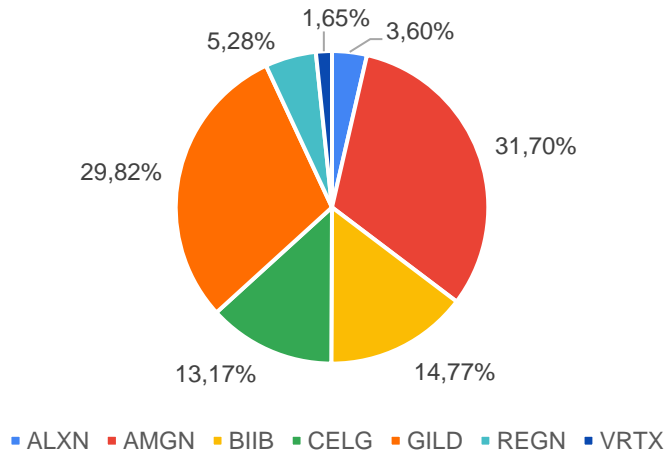
- Growth rate of 7% is visible in year 2015 in IT, Telecommunications, Consumer Discretionary, and 12% in Healthcare sector, However huge decline in all the sectors in year 2016.

- Including year 1-year4, It can be observed that IT sectors are having highest Research and development budget of \$325 m in comparison to other sectors 52.3% of total investment in R&D is from IT only of which 977m is invested in semiconductors. Following IT, Healthcare has second highest investment of amount in R&D department of about \$204m and Pharmaceuticals is top subcategory in it followed by biotechnology. Telecommunications & Utilities have \$0 investment in R&D department.

Biotechnology category under Healthcare sector (period ending 2013-2015) for all years

- AMGN and GILD combined is generating more revenue in comparison to rest of the corporations.
- AMGN turns out to be more stable corporation, since the range and standard deviation value for it is low as well as mean and median is almost same, showing less spread of income yearly and hence stable market than other corporations which have either high growth one year or very low growth the other year.

Percentage of revenue in Biotechnology subcategory



Summary statistics for Biotechnology sub-category in Healthcare for period ending 2013-2015)

