

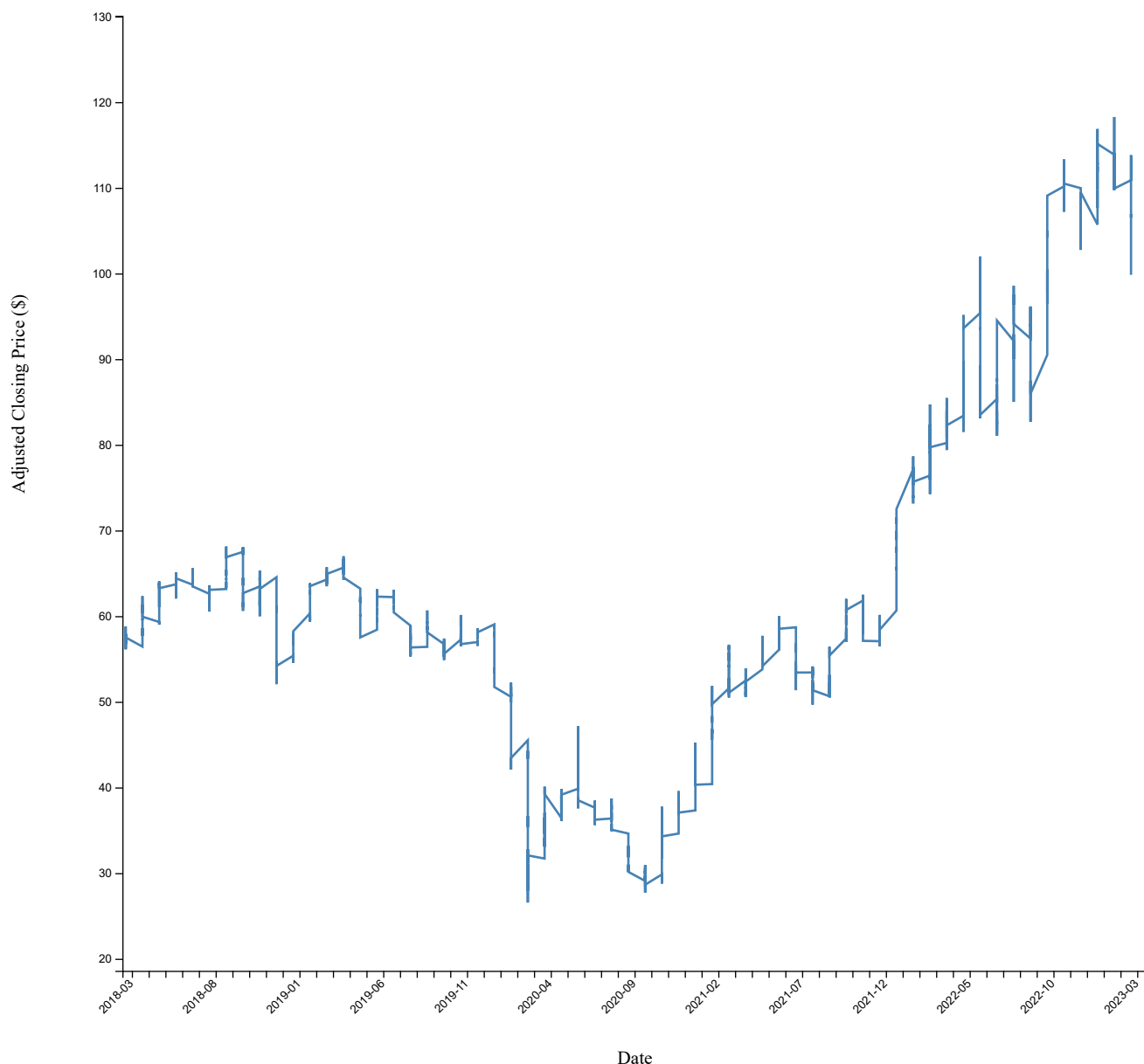
Equity Market Analysis

Equity Market, or stock market, is one of biggest focus for investors and traders. They invest in ETF, trade individual stocks, or simply talk about them for fun. As a trader myself, I thought it would be fun to do some basic analysis of the few most famous stocks, so people who like to study a little bit about the market can have a general idea of what's going on.

Starting from selecting companies, I listed out few stocks that you might have heard it somewhere since they are so popular, and I will first show you their historical prices to start off the analysis. The time was cut from 2018 to 2023 today, and each price represents the adjusted market closing price, or the cost of buying a share. The buttons below allows you to choose the stocks you like, and it will automatically update the prices. Also if you brush over the range you are curious about, it will tell you the highest and lowest price in that range, displaying at the upper right corner.

☐ Apple ☐ Amazon ☐ Berkshire Hathaway ☐ Chevron Corporation ☐ Google ☐ J.P. Morgan
☐ McDonald's ☐ Meta ☐ Microsoft ☐ Tesla ☒ Exxon Mobil

Price of XOM over Past 5 Years

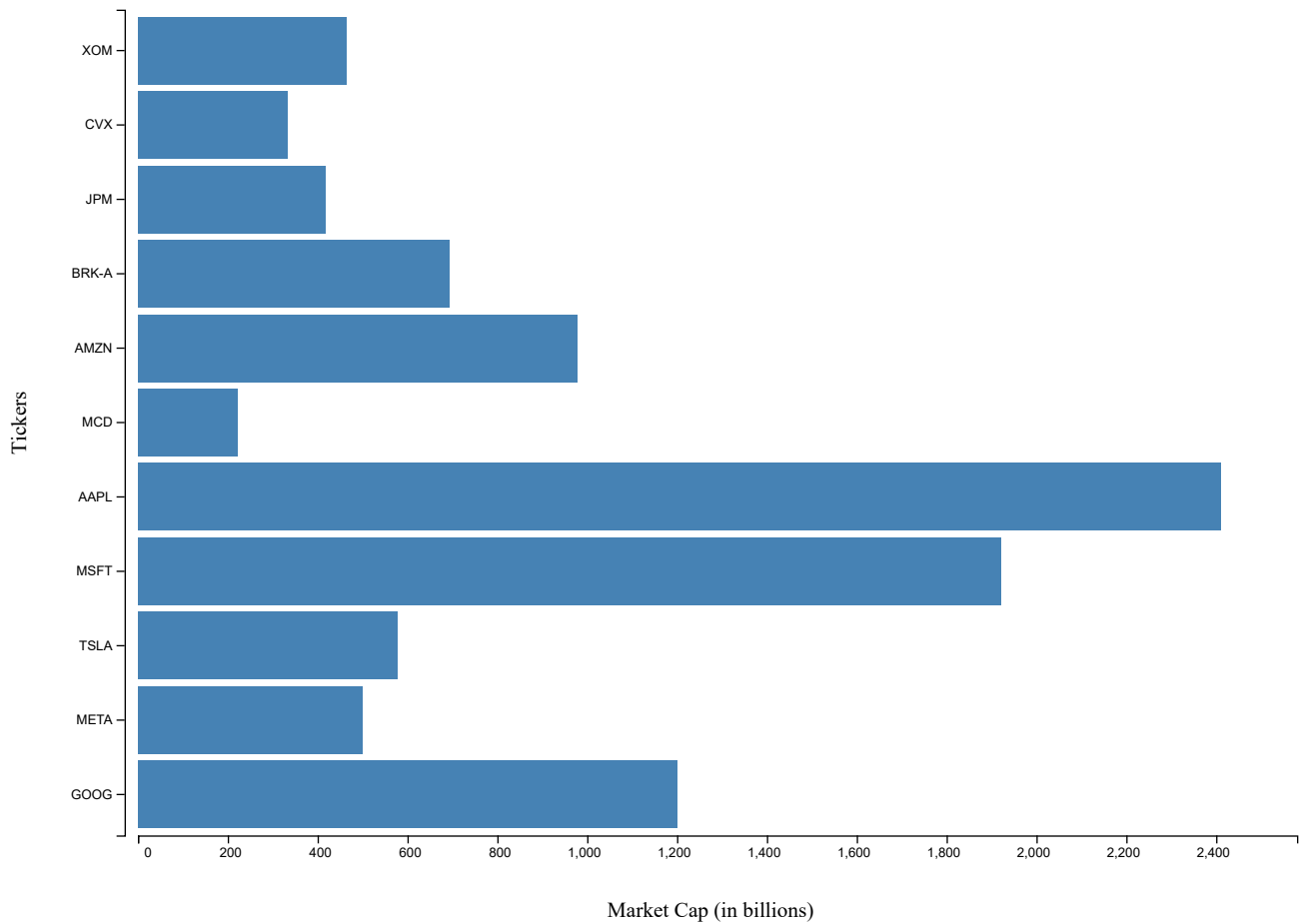


What you may noticed in the first place is that the price for most companies has gone up since 2018. Taking Microsoft as an example, the price was at ultimate low on March 2018 (green pont), and it had reached 340 dollars at the end of 2021, which almost quadrupled.

The reason is that having a large Capital allows these companies to invest in more projects, develop more products, and thus generate more revenue and profits. The chart below scratches their market values, and we can take a look of why they perform so well. Microsoft,

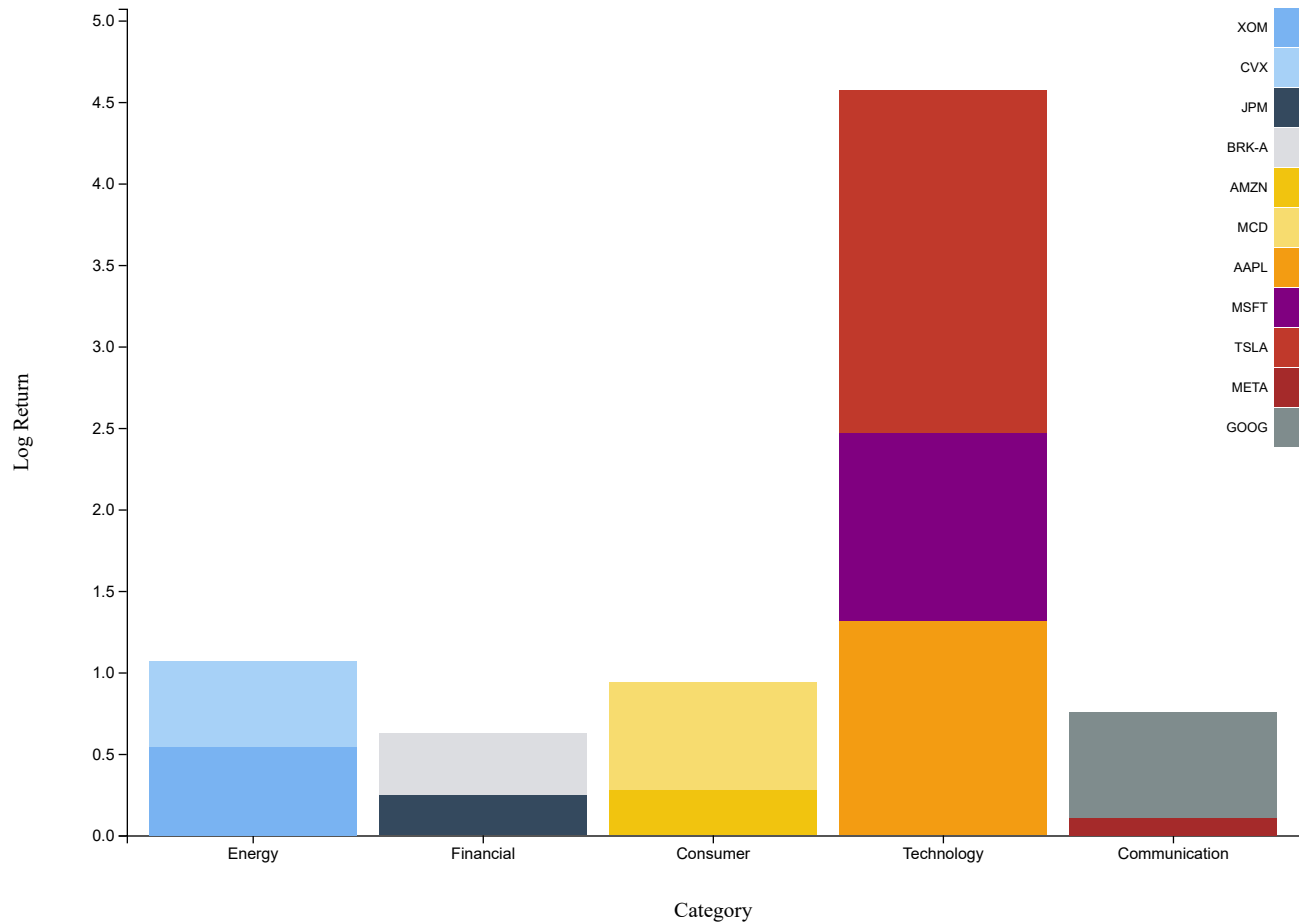
Rank the companies

Market Capitalization



Then, you might wonder, if these companies performed outstanding in the past few years. Are there specific stats that allow us to evaluate the companies, such as how much could I gain if I invest in few of them. Matter of fact, before you invest in any of these companies, you should notice first that each companies can be categorized into different sectors, and when a sector is having its peak, the companies in that sector will also perform well.

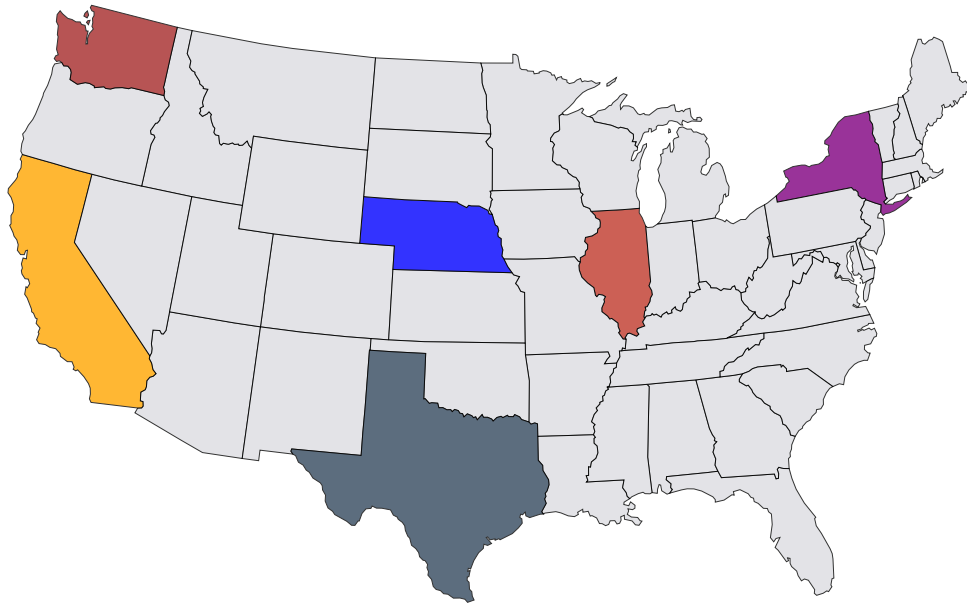
Five Year Log Return by Category.



As this graph depicted, Suppose you equally diversified your portfolio into three stocks: Apple, Microsoft and Tesla five years ago, your accumulated log return would be around 4.5 times of the deposit. That is a total of 50 percent increase on the initial investment for the past five years if you were into the Technology sector.

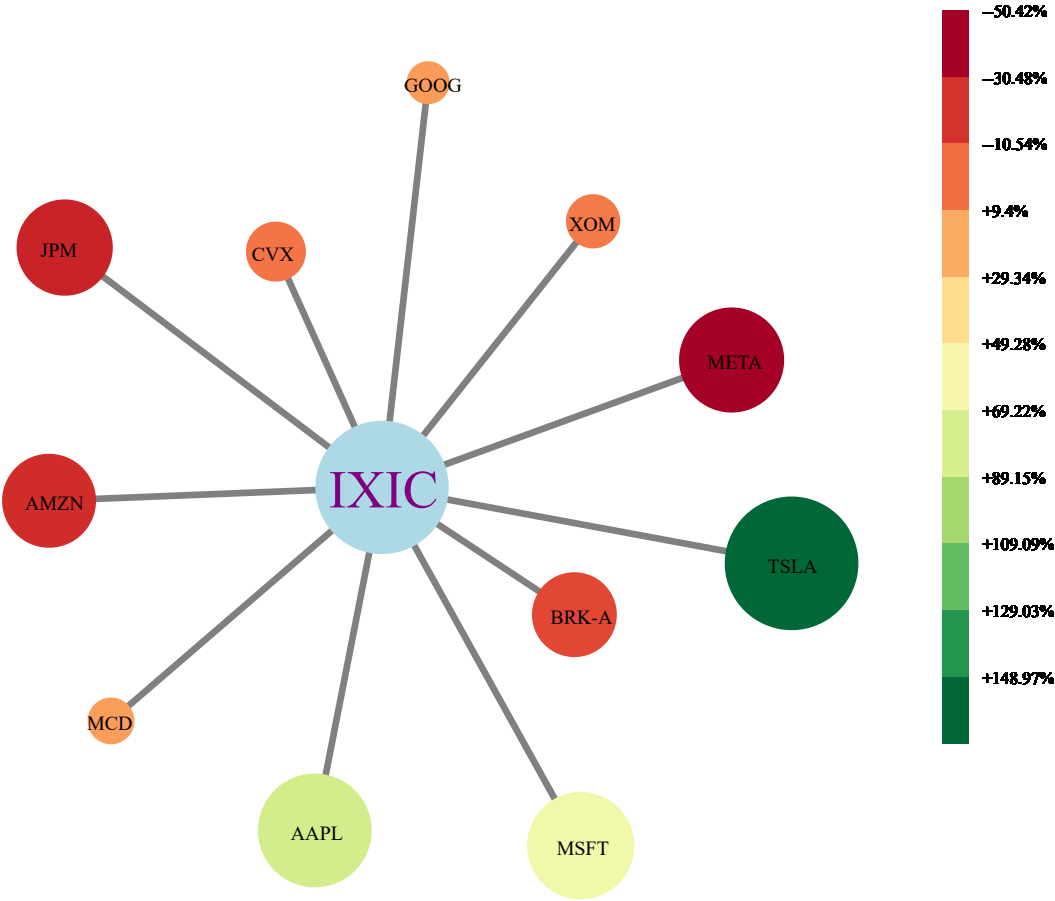
Attractive as that return sounds like, most of these companies blend in our life and we interact with them quite ofently. If we look at the geographic graph below, we see that most of these companies' headquarters are located in some of the most popular and crowded states in the United States. For example, if you hover over California, you will discover that most big tech companies that we selected set your headquarters over there. Therefore, getting a sense of the atmosphere of these companies and gaining an insight of their current status are within easy reach.

Headquarter State of the Companies



So all the information so far make you curious and you like to make your own first trade, you can, and you should, check out the relative performance of each company to the market as a whole (IXIC) to pick your first stock. As depicted by the diagram, companies such as Tesla and Apple show huge outperfoamnncce compared to other stocks in the past, and they are getting more attention from the investors and funds. Meanwhile, J.P Morgan and Amazon did not perform as well as the others, so you might want to investigate more before making a decision.

Relative Performance to the Nasdaq Composite(IXIC)



Among all, stock market is a great place to invest your money. However, the risk associated with it has not yet been discussed. In real cases, we can rarely conclude the future with historical data unless we conducted rigorous analysis. With That being siad, the views above do not constitute investment advice and should not be relied on when making investment. But, I do wish you good luck in your investment journey.

About visualization and data

- Plot 1: Color scheme: blue, red, and green; Mark: lines, points; Channel: Length.
- Plot 2: Color scheme: blue; Mark: lines; Channel: Position(Horizontal).
- Plot 3: Color scheme: random colors with contrast; Mark: lines; Channel: Position(Vertical).
- Plot 4: Color scheme: random colors with contrast; Mark: areas; Channel: color.
- Plot 5: Color scheme: blue, purple, red, and green; Mark: lines, points; Channel: area and color.

Main Source of the two datasets are from Yahoo Finance.