Homework 6

Investing in IPO stocks

Due February 23rd by 11:59 PM

Summary:

This assignment will consider whether actively investing in IPOs will produce a higher profit than investing in simple index funds. To make the comparison, assume that an investor buys $500 of each IPO stock from January 2010 through December 2018, and holds the stocks until December 2019. To evaluate the strategies effectiveness, compare it against two other cases. The first is if an investor were to buy $500 worth of SPY on the same dates as the IPO transactions, and the second is if instead, an investor where to buy $500 worth of QQQ on the same dates as the IPO transactions.

The IPO data is available on Canvas, while the stock data is available through CRSP. For the portfolio returns, make sure to include both capital gains and dividends. To make things simple, use month end. When filtering the IPO transaction file, filter the IPOs within Python, and only include those listed on either the NASDAQ or NYSE (`HPRIMEXC` codes "Q" and "N"), and that the IPO date is between January 2010 and December 2018.

Homework Instructions:

With the data, create a Python script that accomplishes the following:

1. Create a table which compares the returns of the IPO portfolio against SPY, and the returns of the IPO portfolio against QQQ.
2. Plot a line-graph of the investment return of the strategy from January 2010 through December 2019.
3. Plot a scatter-lot graph of the average monthly return against the average monthly standard deviation for each of the three portfolios.

Grading Process

I will award points according the rubric in the syllabus. Focus first on organization and readability, then make sure the program accomplishes the desired tasks. Once those are complete, then see if you can shorten the code or make the code run quicker.