

# Efficient Frontier Analysis

## Price Performance Over Time

The goal of the efficient frontier analysis is to balance a portfolio in such a way that returns will be maximized while eliminating the portfolio volatility. Figure 1, below shows the historical prices for the stocks you have selected from 2017-01-03 to 2017-12-29. This will give you an overall sense of the health of the company.

AMZN (\$1169.47) is the most valuable stock in your portfolio

AAPL (\$169.23) is the least valuable stock in your portfolio.

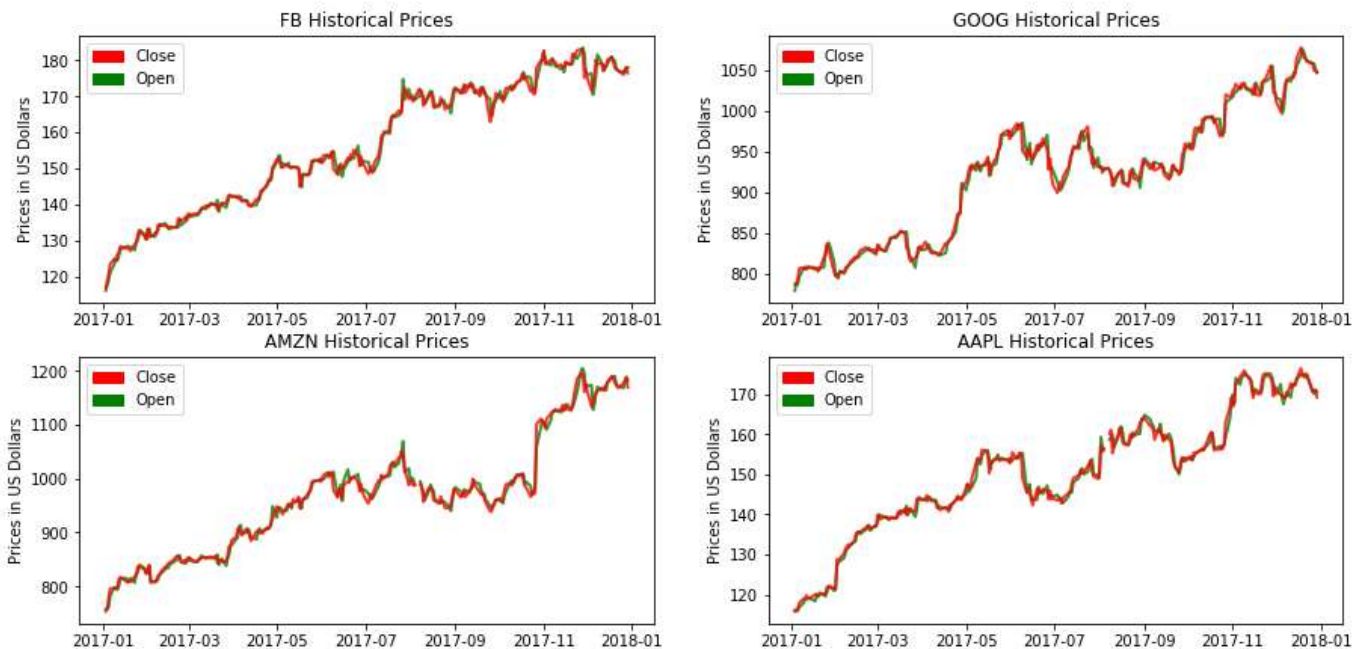


Figure1. Opening and Closing Prices Over Time

## Daily Percent Return

Figure 2, shows the daily returns for the stocks you have selected. Large negative fluctuations in daily percent return may influence your portfolios ability to make steady returns.

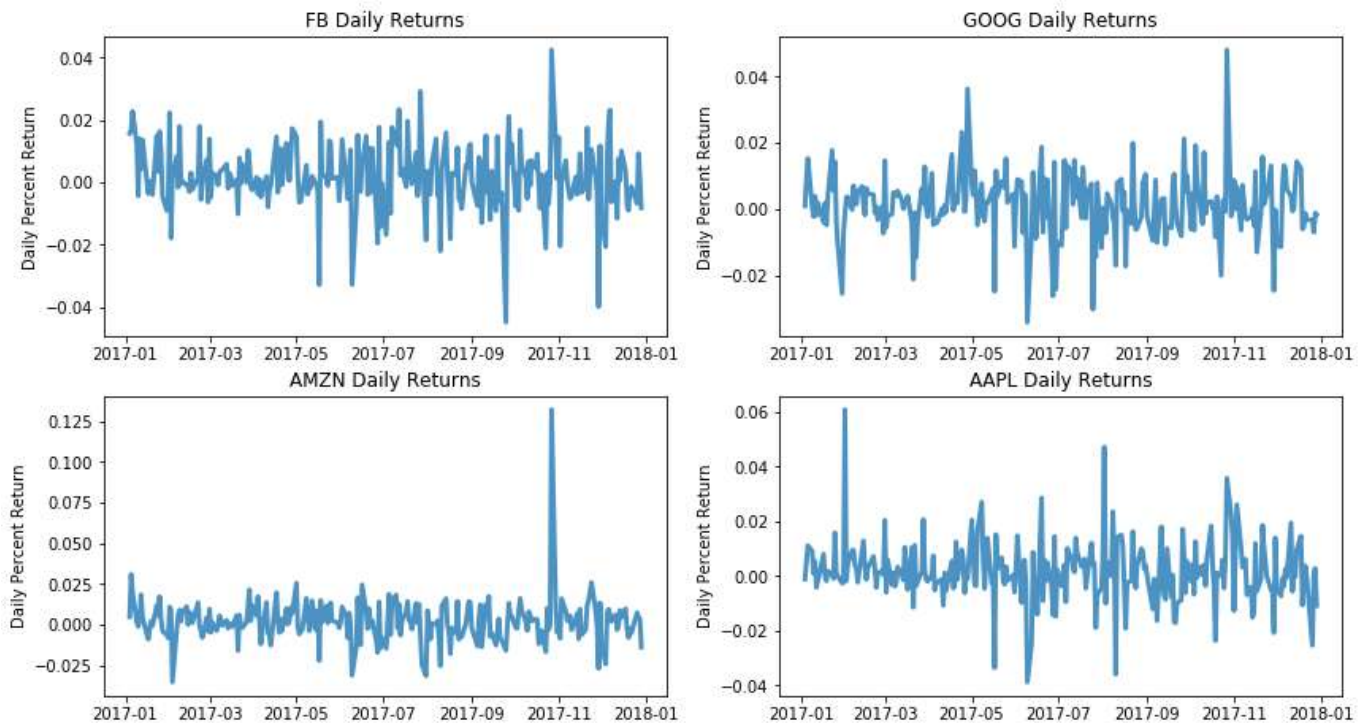


Figure2. Daily Percent Return

## Your Portfolio's Yearly Standard Deviation and Percent Return

Figure 3 compares the average yearly percent return with the average yearly standard deviation. It can be expected that a stock that has a high rate of return and a low standard deviation will compose the majority of your efficient frontier portfolio.

The following stocks in your portfolio performed below the average yearly return (32.55%): GOOG, AAPL.

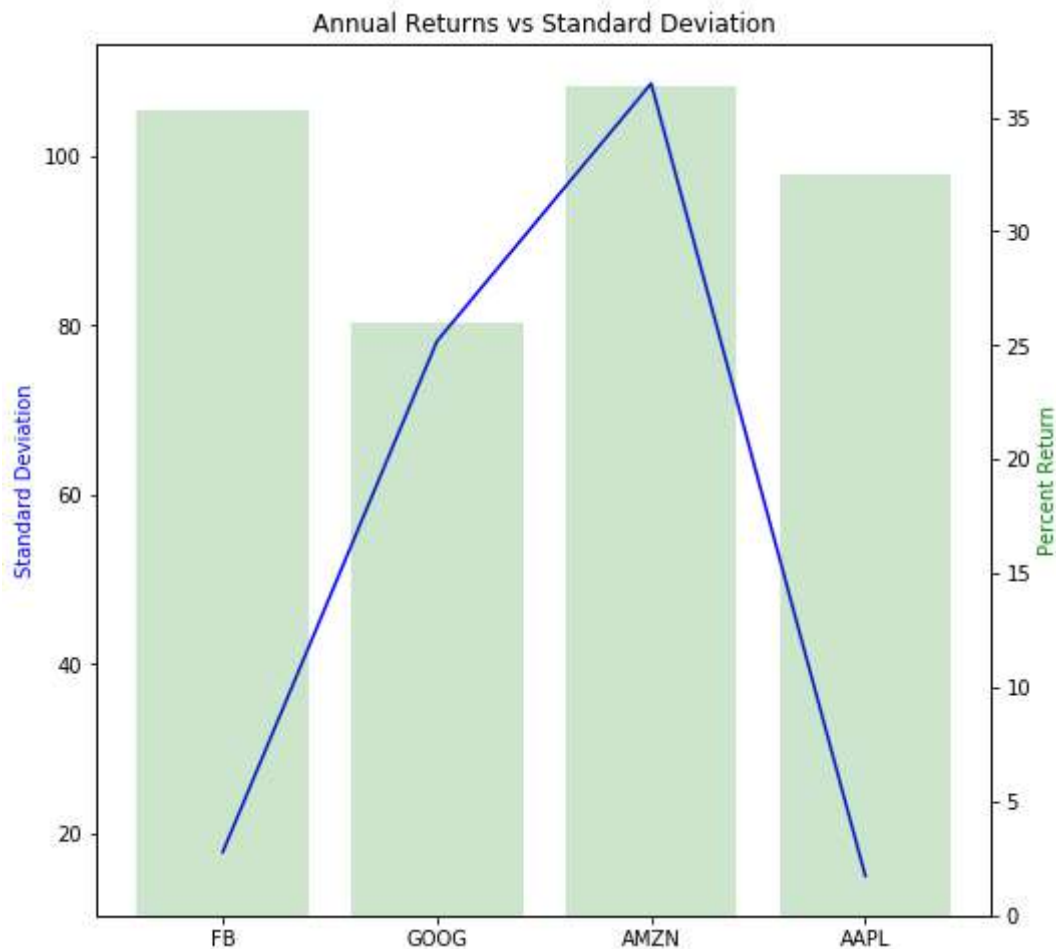


Figure3. Standard Deviation and Percent Return

Stock	Standard Deviation	Percent Return
FB	17.75	35.3
GOOG	78.16	25.95
AMZN	108.63	36.4
AAPL	14.93	32.54

## Your Portfolio's Efficient Frontier

Figure 4, is a graph of your efficient frontier. The point of inflection is the location where your portfolio will minimize its volatility over the interval 2017-01-03 to 2017-12-29. The table below shows the optimized portfolios for the timer interval selected.

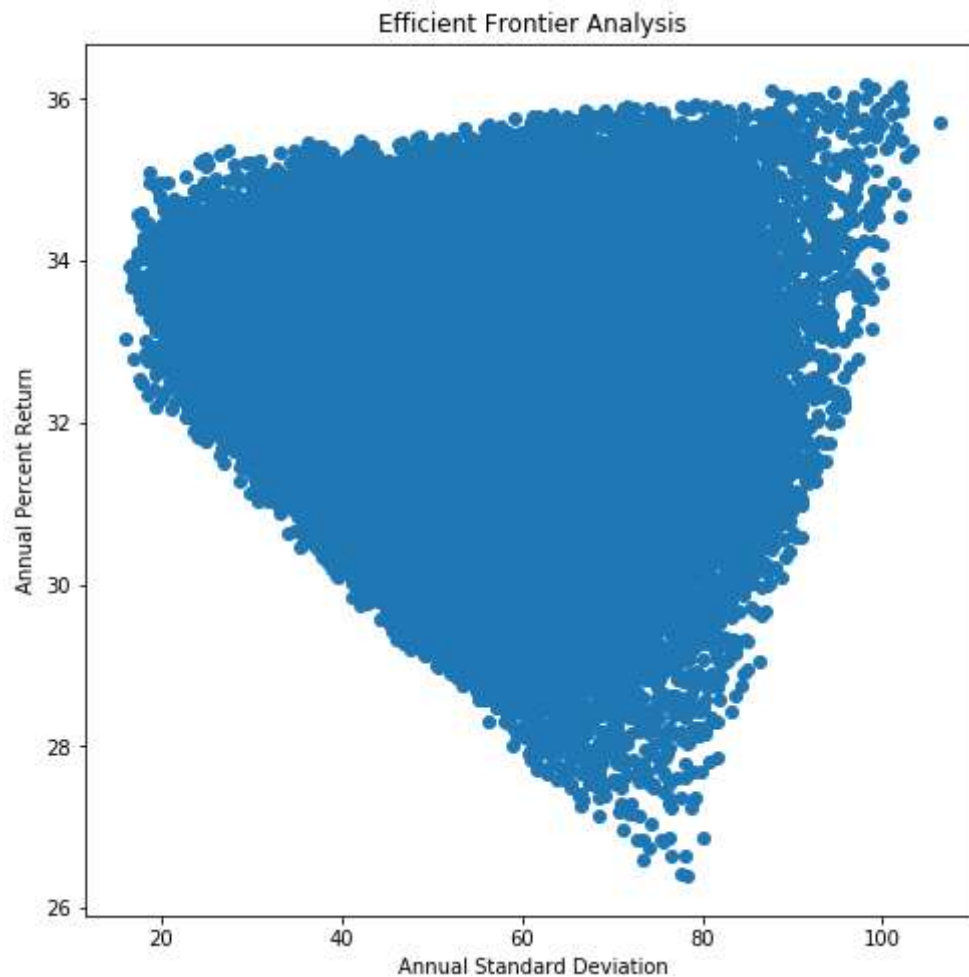


Figure4. Efficient Frontier Analysis

Portfolio Optimization	FB Weight	GOOG Weight	AMZN Weight	AAPL Weight	PercentReturn	StandardDeviation
Minimize Volatility	0.18	0.0	0.01	0.81	33.04	16.04
Maximize Return	0.1	0.0	0.88	0.02	36.19	98.04