My analysis of portfolio of investor of single stock A B C

A: the investor has highest return among A B C but also has highest standard deviation which means the return are highly deviate from mean price of share price. The sharpe ratio suggest that this share is very risky. So my advice to invest less in this stock or go for diversify of portfolio.

B: the investor has moderate stock. Moderate return , risk , deviation . I would suggest to invest in this stock. My advice is diversification because when the market will boom. This stock will not earn much.

C: this investor have least risk , return, deviation. Do the investor should go for diversification.

Diversification is a [risk management](https://www.investopedia.com/terms/r/riskmanagement.asp) strategy that mixes a wide variety of investments within a portfolio. A diversified portfolio contains a mix of distinct asset types and investment vehicles in an attempt at limiting exposure to any single asset or risk. The rationale behind this technique is that a portfolio constructed of different kinds of assets will, on average, yield higher long-term returns and lower the risk of any individual holding or security.

Portfolio holdings can be diversified not just across asset classes, but also within classes by investing in foreign markets as well as domestic markets. The idea is that the positive performance of one area of a portfolio will outweigh the negatives in another.

Variance of return indicate risk factor.

Correlation coefficient between two share indicate how one stocks move in relation to another.

My analysis of portfolio of investors of D E F

D: the investor has highest expected return among the three but also has highest risk. The variance is positive which means that if one increase other will increase this helpful if market is increasing

E: this investor has moderate portfolio because return is less but negative coefficient indicate if one stock increase then other can decrease so they counter each other. My advice as variance is high here so invest in other stocks.

F: this investor has lowest return , correlation is also not great but risk is lowest . my advice is to invest in other stocks or more diversification in the portfolio.

Disadvantages of Diversification

Reduced risk, a volatility buffer: The pluses of diversification are many. However, there are drawbacks, too. The more holdings a portfolio has, the more time-consuming it can be to manage—and the more expensive, since buying and selling many different holdings incurs more transaction fees and brokerage commissions. More fundamentally, diversification's spreading-out strategy works both ways, lessening both the risk and the reward.

What Is Expected Return?

The expected return is the profit or loss that an [investor](https://www.investopedia.com/terms/i/investor.asp) anticipates on an investment that has known historical [rates of return](https://www.investopedia.com/terms/r/rateofreturn.asp) . It is calculated by multiplying potential outcomes by the chances of them occurring and then totalling these results.