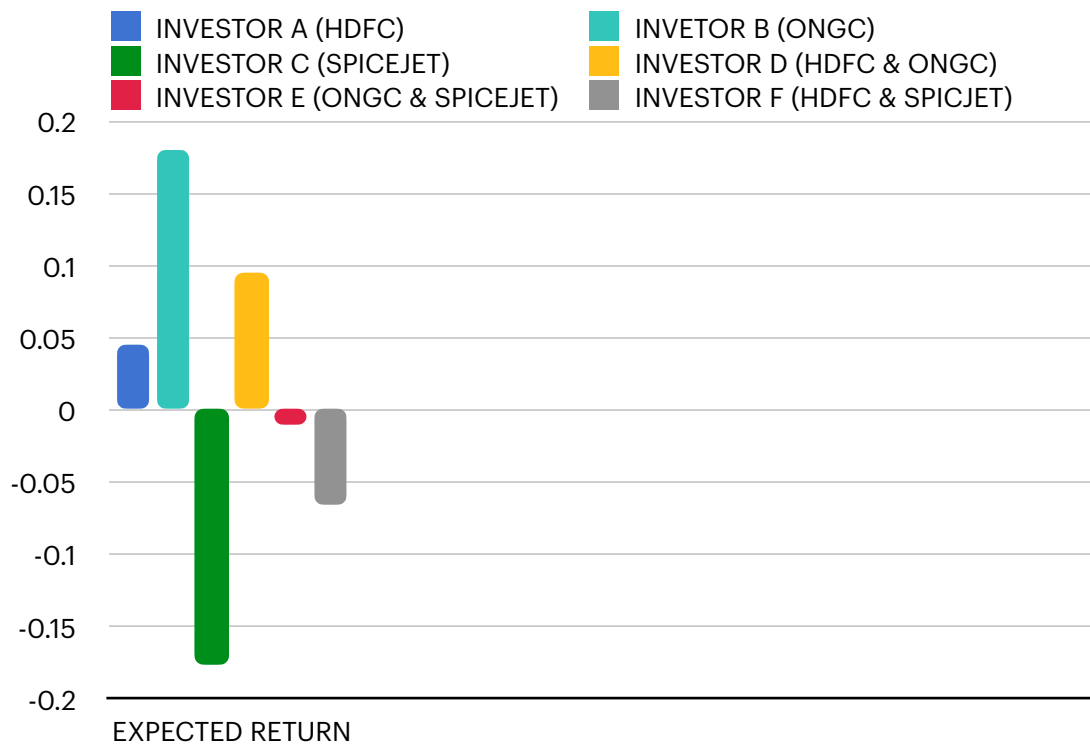


PROBABILITY AND STATISTICS PROJECT (FY SEM-1 2021)

GROUP MEMBERS:
SARTHAK MALOO
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TASK-6

(i) The task stated us to analyse all the different investments made and conclude on the value each investor would be able to produce. The below chart presents the returns made by each investor.



— It can be clearly observed that the investor B that is ONGC made the highest return out of all whereas investor C resulted in negative returns. If we look at the combined investments that is D, E and F , it can be seen that the D portfolio gave the better returns out of the three. The most valuable investment for a single asset portfolio would be B(ONGC) and for the combined D(HDFC & ONGC) .

— If we observe the data a little more carefully, we can also see that the investors who had two assets in their portfolio deviated a lot less from origin compared to the single investors who had very high and very low returns simultaneously. Therefore we can conclude the following facts of single asset portfolio and diversified portfolios :

○ Single asset portfolio:

- It is risky in all the terms as a solo movement of the particular asset will result in major gains or major losses.
- However, you can focus on a single company and invest completely according to your faith and knowledge in that company having the complete control of deposits and withdrawals.
- You don't have to pay a huge amount for a single investment in a company so that limits the personal investment.

○ Diversified portfolio :

- The investments are diversified , which automatically reduces the risk of the investment as a whole.
- Amount required to invest in would be higher as there are multiple companies making it a better and viable option for the long run.
- If a single stock performs bad, then the whole portfolio will not be affected that much protecting your initial investments to a certain extent.

— The diversified benefits are clearly the better ones in majority of the cases, Allowing to have some of both the companies while maintaining the risk profile and reduced volatility.

DIVISION OF WORK

We had 3 members in our group and we divided the work amongst ourselves whichever suited to us. We divided the tasks to do as follows:

- Q1 and Q6 - Raghav Chugh
- Q2 and Q3 - Sanjana Anand
- Q4 and Q5 - Sarthak Maloo

It was so much fun working together. We had meetings in the night where we discussed the whole project together and helped each other in understanding and finding ways to make it better altogether. It gave us an opportunity to interact besides our regular lectures which resulted in better bonding. Everyone in the group contributed to their fullest and put in the best efforts for successful completion of the project. We hope to have more projects in the future so that everything we study can be applied in real life instances and make a better meaning out of it.

THANK YOU !!!

ACKNOWLEDGEMENT

The tasks in the project enabled us a group to understand the practical applications of various statistical methods of data analysis. The project was not very complicated yet quite interesting and fun thing to do.

We would like to thank our professor Mrs Surbhi gupta for her continuous support during the project , helping us understand it in a much better way. We are grateful for your guidance and gave our best efforts in the completion of the tasks assigned.

THANK YOU !!!

