CNX NIFTY

Date	*Adjusted Close*	*Returns*
01-04-2015	8181.5	0.00%
01-05-2015	8433.65039	3.0820%
01-06-2015	8368.5	-0.7725%
01-07-2015	8532.84961	1.9639%
01-08-2015	7948.9502	-6.8430%
01-09-2015	7948.8999	-0.0006%
01-10-2015	8065.79981	1.4706%
01-11-2015	7935.25	-1.6186%
01-12-2015	7946.3501	0.1399%
01-01-2016	7563.54981	-4.8173%
01-02-2016	6987.04981	-7.6221%
01-03-2016	7738.3999	10.7535%
01-04-2016	7849.79981	1.4396%
01-05-2016	8160.1001	3.9530%
01-06-2016	8287.75	1.5643%
01-07-2016	8638.5	4.2321%
01-08-2016	8786.2002	1.7098%
01-09-2016	8611.15039	-1.9923%
01-10-2016	8638	0.3118%
01-11-2016	8224.5	-4.7870%
01-12-2016	8185.79981	-0.4705%
01-01-2017	8561.29981	4.5872%
01-02-2017	8879.59961	3.7179%
01-03-2017	9173.75	3.3127%
01-04-2017	9304.04981	1.4204%
01-05-2017	9621.25	3.4093%
01-06-2017	9520.90039	-1.0430%
01-07-2017	10077.0996	5.8419%
01-08-2017	9917.90039	-1.5798%
01-09-2017	9788.59961	-1.3037%
01-10-2017	10335.2998	5.5851%

01-11-2017	10226.5498	-1.0522%
01-12-2017	10530.7002	2.9741%
01-01-2018	11027.7002	4.7195%
01-02-2018	10492.8496	-4.8501%
01-03-2018	10113.7002	-3.6134%
01-04-2018	10739.3496	6.1862%
01-05-2018	10736.1504	-0.0298%
01-06-2018	10714.2998	-0.2035%
01-07-2018	11356.5	5.9939%
01-08-2018	11680.5	2.8530%
01-09-2018	10930.4502	-6.4214%
01-10-2018	10386.5996	-4.9756%
01-11-2018	10876.75	4.7191%
01-12-2018	10862.5498	-0.1306%
01-01-2019	10830.9502	-0.2909%
01-02-2019	10792.5	-0.3550%
01-03-2019	11623.9004	7.7035%
01-04-2019	11748.1504	1.0689%
01-05-2019	11922.7998	1.4866%
01-06-2019	11788.8496	-1.1235%
01-07-2019	11118	-5.6905%
01-08-2019	11023.25	-0.8522%
01-09-2019	11474.4502	4.0932%
01-10-2019	11877.4502	3.5122%
01-11-2019	12056.0498	1.5037%
01-12-2019	12168.4502	0.9323%
01-01-2020	12169.8496	0.0115%
01-02-2020	11201.75	-7.9549%
01-03-2020	8597.75	-23.2464%

Average Returns= 0.210%

Variance= 0.00238462

Standard deviation= 0.04883249

HERO MOTOCORP

Date	***Stock Price***	***Returns***
01-04-2015	1949.16602	0.00%
01-05-2015	2257.12085	15.80%
01-06-2015	2112.03638	-6.43%
01-07-2015	2270.53565	7.50%
01-08-2015	2025.09045	-10.81%
01-09-2015	2026.61414	0.08%
01-10-2015	2151.11401	6.14%
01-11-2015	2284.45776	6.20%
01-12-2015	2280.18408	-0.19%
01-01-2016	2171.46924	-4.77%
01-02-2016	2115.82031	-2.56%
01-03-2016	2493.12866	17.83%
01-04-2016	2487.39453	-0.23%
01-05-2016	2660.38062	6.95%
01-06-2016	2728.5022	2.56%
01-07-2016	2749.87817	0.78%
01-08-2016	3040.22022	10.56%
01-09-2016	2930.63379	-3.60%
01-10-2016	2903.41504	-0.93%
01-11-2016	2742.47266	-5.54%
01-12-2016	2636.448	-3.87%
01-01-2017	2747.92969	4.23%
01-02-2017	2718.26221	-1.08%
01-03-2017	2790.89404	2.67%
01-04-2017	2921.86401	4.69%
01-05-2017	3297.68359	12.86%
01-06-2017	3258.85596	-1.18%
01-07-2017	3244.90186	-0.43%
01-08-2017	3546.11426	9.28%
01-09-2017	3350.35034	-5.52%
01-10-2017	3417.23193	2.00%
01-11-2017	3225.28516	-5.62%

01-12-2017	3359.75903	4.17%
01-01-2018	3276.5896	-2.48%
01-02-2018	3192.48779	-2.57%
01-03-2018	3193.48853	0.03%
01-04-2018	3364.25903	5.35%
01-05-2018	3195.38135	-5.02%
01-06-2018	3131.021	-2.01%
01-07-2018	2969.625	-5.15%
01-08-2018	3000.02246	1.02%
01-09-2018	2704.47339	-9.85%
01-10-2018	2546.90308	-5.83%
01-11-2018	2816.91211	10.60%
01-12-2018	2862.13648	1.61%
01-01-2019	2410.0769	-15.79%
01-02-2019	2423.12354	0.54%
01-03-2019	2398.91406	-1.00%
01-04-2019	2360.10913	-1.62%
01-05-2019	2518.33643	6.70%
01-06-2019	2425.55176	-3.68%
01-07-2019	2213.76831	-8.73%
01-08-2019	2478.61255	11.96%
01-09-2019	2606.4917	5.16%
01-10-2019	2605.96167	-0.02%
01-11-2019	2345.1438	-10.01%
01-12-2019	2354.29883	0.39%
01-01-2020	2410.96289	2.41%
01-02-2020	1977.21399	-17.99%
01-03-2020	1,582.09	-19.98%

Average Returns=	-0.07%
Variance=	0.005383066
Standard Deviation=	0.07336938
Beta=	0.958085374
Total risk=	7.3350%

Systematic risk= 4.6785%
Std. Dev of nifty × Beta

Unsystematic Risk= 2.6615%

BAJAJ AUTOMOBILE

Date	***Stock Price***	***Returns***
01-04-2015	1676.93945	0.00%
01-05-2015	1993.15381	18.857%
01-06-2015	2187.51221	9.751%
01-07-2015	2173.18433	-0.655%
01-08-2015	1959.48364	-9.834%
01-09-2015	2029.16736	3.556%
01-10-2015	2238.35034	10.309%
01-11-2015	2175.86328	-2.792%
01-12-2015	2222.15796	2.128%
01-01-2016	2055.3645	-7.506%
01-02-2016	1931.83789	-6.010%
01-03-2016	2111.53272	9.302%
01-04-2016	2236.07935	5.898%
01-05-2016	2349.50073	5.072%
01-06-2016	2413.74854	2.735%
01-07-2016	2423.48486	0.403%
01-08-2016	2677.70972	10.490%
01-09-2016	2542.04858	-5.066%
01-10-2016	2560.47852	0.725%
01-11-2016	2413.98413	-5.721%
01-12-2016	2366.38135	-1.972%
01-01-2017	2547.30762	7.646%
01-02-2017	2477.58936	-2.737%
01-03-2017	2522.1355	1.798%
01-04-2017	2574.77246	2.087%
01-05-2017	2558.54541	-0.630%
01-06-2017	2509.32422	-1.924%
01-07-2017	2524.92236	0.622%
01-08-2017	2581.50537	2.241%
01-09-2017	2851.99268	10.478%
01-10-2017	2987.46582	4.750%
01-11-2017	3031.85889	1.486%

01-12-2017	3057.63257	0.850%
01-01-2018	3060.88867	0.106%
01-02-2018	2770.54395	-9.486%
01-03-2018	2517.48389	-9.134%
01-04-2018	2708.17334	7.575%
01-05-2018	2522.62036	-6.852%
01-06-2018	2577.65332	2.182%
01-07-2018	2476.53003	-3.923%
01-08-2018	2569.37036	3.749%
01-09-2018	2515.63989	-2.091%
01-10-2018	2427.8833	-3.488%
01-11-2018	2570.16577	5.860%
01-12-2018	2546.24927	-0.931%
01-01-2019	2391.23633	-6.088%
01-02-2019	2715.16333	13.546%
01-03-2019	2724.99194	0.362%
01-04-2019	2793.3252	2.508%
01-05-2019	2738.84546	-1.950%
01-06-2019	2646.31519	-3.378%
01-07-2019	2355.6189	-10.985%
01-08-2019	2668.46777	13.281%
01-09-2019	2815.37085	5.505%
01-10-2019	3107.78931	10.386%
01-11-2019	3039.50562	-2.197%
01-12-2019	3048.11865	0.283%
01-01-2020	3043.38159	-0.155%
01-02-2020	2933.7544	-3.602%
01-03-2020	1,935.44	-34.029%

Average Returns= 0.56%

Variance= 0.005859585

Standard deviation= 0.076547927

Beta= 1.084937571

Total Risk= 7.6547%

Systematic risk= ***std. dev. of nifty × Beta***	5.2980%
Unsystematic risk=	2.3567%
covariance=	**0.003650467**

INTERPRETATION-

1.Average or Simple Returns

- The average monthly returns on HERO MOTOCORP is -0.07% for last 5 years. It means that if you are holding 100 shares of HERO at Rs. 10 each =Rs.1000, then you will receive a return amount of Rs.999.3
- While, BAJAJ AUTOMOBILES is having an average monthly return of 0.56%. Investing Rs. 1000 in BAJAJ will fetch you Rs. 1000.56

NOTE

The difference of 1.26% of average monthly return for 5 years is possible owing to various factors. It does not assure one about the return as the fluctuations are so high that it is quite sketchy to clock the withdraw using average returns.

2.Variance

- The variance of HERO is 0.005383. It shows that how safe investment is.
- Investing in BAJAJ is also not risky as the variability from the average is 0.005859.

NOTE

Both the companies are having a very low rate of risk with their stocks. It helps the investor to develop a portfolio that optimizes the return-risk trade off or, we can say it helps in better investment allocation. But variance is not enough to ensure one to invest in securities as it does not account systematic and unsystematic risk.

3.Standard Deviation

- The S.D. or total risk in securities of HERO is 7.3% which is associated with the average monthly return of -0.07%. It is very riskier to invest in HERO as they are giving high return but with higher risk attached with it.
- On the other hand, BAJAJ has a total risk of 7.6% to generate an average return of 0.56%. It is also not a profitable security to invest but it is better than HERO.

NOTE

It basically shows how much an investment's return van vary from its average return. It measures risk associated with securities. Higher the S.D., higher the risk and vice- versa.

4.Beta

- The beta of HERO MOTOCORP is 0.9 which means that it is 10% less riskier than the share market.
- The beta of BAJAJ is 1.08 it means that the stock is 8% more volatile than the market.

NOTE

It measures the responsiveness of a stock's price to a change in overall stock market.

5.Systematic Risk

- The systematic or market risk of HERO is 4.6% while BAJAJ has a systematic risk of 5.2%. It shows that HERO somehow managed to mitigate the non-diversifiable risk.

NOTE

Market risk is that part of total risk that is caused by the factors beyond the control of a specific company or individual. Political instability, pandemic, wars, tax reforms constitute in systematic risk.

6.Unsystematic Risk

- Unsystematic risk in HERO is 2.6% and BAJAJ has 2.3% as unsystematic risk. It shows that BAJAJ has less internal rigidity than HERO.

NOTE

It is a type of risk which operates within the company. Competitive, legal, reputational all these comes under unsystematic risk.

7.Covariance b/w HERO and BAJAJ

- The covariance between HERO and BAJAJ is 0.003650.
  It helps the investor to determine if stock's returns tend to move with or against each other. Covariance can help one to reduce the overall risk with the portfolio.

  NOTE
  In the above case 0.0036 covariance shows that the number is positive, the stock move in the same direction.