

A COMPARATIVE ANALYSIS OF BAJAJ AUTO VERSUS HERO MOTORCORP STOCKS OF NSE NIFTY

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ABSTRACT

The Indian stock markets emerged as one of the efficient and dynamic securities market all over the world because of adopting international standards in its operations. India is the world's third-largest Automobile market. The sector contributes nearly six per cent to India's GDP and thirty five per cent to manufacturing GDP and also percent percent of the country's total exports and accounts for worth more than \$222bn. Since, the automobile sector in the economies is growing highly in India today with a rapid movement for the presence of electric vehicles. Hence, the present study has chosen two largest market competitors i.e. Bajaj Auto and Hero MotorCorp of the automobile sector. The study has set the objectives to determine the returns earned by the selected Automobile companies and also to calculate the mean values i.e. Avg. returns for Bajaj Auto and HMC stocks listed on NSE NIFTY, to determine the risk i.e. standard deviation of the selected stock during the study period and to calculate the coefficient of variation i.e. risk/return for the selected stocks, to identify the highest and lowest market price of the selected stocks and to provide necessary suggestions based on the comparative risk-return analysis and the volume traded among the selected stocks of the Automobile sector in NSE NIFTY. The study used Judgmental sampling technique and selected the sample companies based on their level of competition faced in the market and similar services offered during the last five years. The maximum the risk the maximum will be the returns hence for the investors seeking higher returns can invest with HMC compared to Bajaj Auto. It is also suggested to the investors for lower risks and low returns better to choose the Bajaj Auto stocks when compared to the HMC Stocks. The average returns are

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INTRODUCTION

The performance of the economies depends on its stock market operations. The Indian stock markets emerged as one of the efficient and dynamic securities market all over the world because of adopting international standards in its operations. The two well-known largely operating stock markets in India are the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE). Many large companies enter the capital markets for raising funds initially by participating in the primary market operations through Initial Public Offerings (IPO), Rights Issue, Follow on Public Offerings (FPOs), preferential issues and Debentures/ Bonds to the general public. Later these securities are traded in secondary markets on duly fulfilling the listing process on Stock Exchanges like Bombay Stock Exchange (BSE) or National Stock Exchange (NSE) by receiving the approval of Securities Exchange Board of India (SEBI). The Sensitivity Index (Sensex) also referred as S& P BSE Sensex, is the benchmark of BSE comprising the top 30 listed companies whereas the NSE owns NIFTY, also referred as NIFTY50 as it consists of 50 diversified stocks in its index belonging to 13 sectors of the economy managed by India Index Services and Products limited, presently known as NSE indices Limited, which is a specialized company focused upon the index as a core product.

ABOUT AUTOMOBILE SECTOR

India is the world's third-largest Automobile market. India holds a strong position in the international heavy vehicle like tractors, heavy trucks, second largest two wheeler manufacturer after china and second largest bus manufacturers, produced a total 22.93 Mn vehicles including passenger vehicles, commercial vehicles, three wheelers, two wheelers and quadricycles from April 2021 to March 2022. The sector contributes nearly 6 per cent to India's GDP and 35 per cent to manufacturing GDP and also 8 percent of the country's total exports and accounts for worths more than \$222bn. The foreign direct

investments (FDI) are allowed up-to 100 percent. Some of the largest market competitors contributing to the two wheeler industry were Hero, Bajaj, TVS Motors, Honda, Suzuki and Royal Enfield. The present study has chosen two largest competitors in Automobile sector of India. The two-wheeler brand Bajaj Auto, the most valuable two-wheeler company in the world and Hero MotoCorp, the only two-wheeler listed company to achieve the milestone of one hundred million units sold.

NEED FOR THE STUDY

Investment in stock is a high risky aspect rather than investment in other physical assets like mutual funds, bank deposits, gold, silver, real estate etc., mainly due to the unexpected market fluctuations. It is obvious that higher the risks higher the returns can be. At the same time the Indian stock markets are known for their high volatility and high risk. The increased purchasing power of people also drastically increased the investments in different tangible and intangible assets. The investors decision for investments is mainly influenced by the analysis of risk-returns associated with them. The automobile sector in the economies is growing highly in India today with a rapid movement for the presence of electric vehicles. Hence the present study has chosen two largest market competitors i.e. Bajaj Auto and HMC of the automobile sector.

REVIEW OF LITERATURE

Promod Kumar Patyoshi (2016) studied the Sensex returns with that of sample banking stock returns. Found that the correlation analysis reveals that Sensex returns is high correlation with Axis bank returns & negative correlation between ICICI Bank returns. On the other hand, using duplicate analysis found that Sensex return as well as all the stock returns positive average daily returns except ICICI Bank returns for the selected period.

Ravi B & SK Patil, (2018), highlighted the correlation between risk and return of the Sensex & banking stocks of BSE 30 (Sensex) Viz. HDFC Bank, ICICI Bank, Axis Bank & SBI with the Sensex during the period 2001 Jan to Dec, 2015. The study revealed that Sensex returns are highly correlated with Axis Bank returns & negatively correlation between ICICI Bank returns. The Sensex generated high return, as compared to all other stock apart from Axis Bank returns SBI return shows the highest volatility during the period whereas it is lowest in Sensex returns. In the case of T-Test & P-Value it can conclude that returns of different stock returns that there is no significant difference b/w Sensex & the banking stock returns.

S. Gouthami, Nalla Bala Kalyan (2018) emphasized on the market fluctuations relations to the prices of scripts though it is difficult to observe a pattern for price movements but efforts made using fundamental & technical analysis. Their study observed that the financial position & performance of the firms are in correlation with present market prices using fundamental analysis. Trends followed by the scripts using historical data through the technical analysis.

P.Subrahmanyam & Nalla Bala Kalyan(2018) studied the risk return of selected securities can help the investors to pick up the securities based on their choices to technical analysis, historical data taken to observe the trends followed by scripts. Their study emphasized on the market fluctuations relation to the price of the selected scripts used both fundamental & technical analysis observed the financial position & performance of the firms in correlation with market prices whereas through technical analysis.

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Sushma K S, Charitra C M and Bhavya Vikas

(2019) made assessments of the risk and returns of the selected financial services companies' stocks and also to understand how the occurrence of an event can cause fluctuations in the stock prices of a company. Their study found that there was no significant difference between the performance of the selected 8 companies before and after the demonetization. The study found that the selected financial service companies earning very good returns; they had good improvement in their asset quality and reduction in the non-performing assets. The study also found that the companies like SBI, Mahindra & Mahindra and HDFC Bank had strong correlation with the market but they had high volatility in their prices.

E Rajesh (2019) studies to analysis the risk & return of selected bank stocks of NSE index stocks historical data was tested by mean Standard Deviation, Beta and Correlation. The study concluded that although average of daily returns of the NSE NIFTY50 Index are positive the selected banks stocks negatively except with the ICICI Bank.

M.Giri Kumari & G L Narayanappa (2019) analyzed securities listed on BSE Bankex. Their study gave an idea on the performance of public sector banks & private sector banks. Also revealed volatility of the selected bank securities based on market benchmark and concluded that public sector banks are highly volatile when compared with the private sector banks.

R. Slotiga, S. Sowbarnika & M. Jayanth (2019) their study revealed the intricacies involved with the automobile sector the analysis was made on daily, monthly & yearly basis the study has resulted in positive between the automobile companies viz has Motors Corp. Ltd., Mahindra & Mahindra Limited, Bajaj Auto Limited., they concluded that a firm's risk and expected returns directly affects its share prices. if an investor must earn highest returns than the investor must appreciate that this can be accrued by acutely a commensurate increase in risk.

Sryatha, Meena Maheswari (2021) their study examined the risk & return of select stocks of technologies, steel & pharmaceutical sectors of BSE Sensex and segregated them as best, good, any performer & risky. Highlighted that these sectors are driving the Indian economy, by registering a significant growth year after year so by timely & right invest decisions can gain a good returns & are highly liquid.

Sonia Lobo & Ganesh Bhat S (2021), studied India Infoline Limited returns with a high beta value, the standard deviation and beta value of the Nippon have accounted for the lowest indicating most stable returns and suggesting low risk of investment, JSW holdings monthly returns are negatively skewed whereas AB Capital and IIFL finances monthly returns are positively skewed. Based on the T- Test performed in the study suggested there is a significant different between the monthly returns of the S & P BSE finance index and JSW holdings. Finally, the outcome of correlation coefficient calculation revealed that all the stocks are positively correlated with S & P BSE Finance index. The correlation coefficient of Chola Mandalam recorded the highest with S & P BSE finance index and Nippon logged the least. Their study also suggested that before investing in securities investors should conduct fundamental analysis rather than relying solely on technical analysis diversifying portfolio will reduce the unsystematic risk.

Afreen Tabassum & Baskaran (2022) in their study they selected IT companies of NIFTY tested on NSE found that the mind the company provides average returns among the selected 10 companies with a moderate risk of 0.49 & Infosys has highest value of beta i.e. 0.87 with a S.D. of 6.3 indicating that this stock has high risk. L & T company with above 0.28 indicating this as a low risk stock. TCS & HCL Technologies provides the lowest returns among all the IT Companies. company with above 0.28 indicating this as a low risk stock. TCS & HCL Technologies provides the lowest returns among all the IT Companies.

OBJECTIVES OF THE STUDY

The present study set objectives for comparing the risk - return and volume of the selected stocks of NSE NIFTY. The detailed objectives include:

- To determine the returns earned by the selected Automobile companies and also to calculate the mean values i.e. Avg. returns for Bajaj Auto and HMC stocks listed on NSE NIFTY.
- To determine the risk i.e. standard deviation of the selected stock during the study period and to calculate the coefficient of variation i.e. risk/return for the selected stocks
- To identify the highest and lowest market price of the selected stocks and
- To provide necessary suggestions based on the comparative risk-return analysis and the volume traded among the selected stocks of the Automobile sector in NSE NIFTY.

METHODOLOGY OF THE STUDY

Research Design

This refers to the plan through which the sources of data, sample selection, tools and techniques used for the purpose of analyzing the data. The present study adopted descriptive research design for analyzing the risks, returns and volumes traded of the selected NSE NIFTY automobile sector stocks

Sources of Data and Study Period:

The data is collected from secondary sources like NSE official website, company websites, Yahoo Finance website, Textbooks, and articles published in journals, magazines, newspapers and websites. The data is collected for a period of 60 months i.e. from 1st Aug 2018 to 1st July 2023 (Five years) related to the selected companies of NSE NIFTY for the purpose of calculation of returns, mean / average return, standard deviation (risk), covariance and correlation.

Sample Selection:

Using Judgmental Sampling technique two largest companies from Automobile sector were being selected based on the level of competition being faced in the market and similar services being offered by them viz. Bajaj Auto and Hero Motor Corporation.

Tools used for Analysis:

Using Microsoft Excel the following statistical tools were used to analyze the stock values.

- Mean
- Standard deviation
- Covariance
- Minimum and Maximum Returns

ABOUT BAJAJ AUTO LIMITED:

Bajaj Auto Limited established in the year 1945, currently one of the top five competitors in manufacturing and sales in the two-wheeler market segment. Initially Bajaj Motors imported and sold two & three-wheeler vehicles in India. The company took a manufacturing license from the GoI with an agreement from Piaggio to manufacture the Vespa line of scooters in India. Gradually, Bajaj Auto has expanded its product line to three wheelers, electric scooters, motorcycles and low-cost cars. They currently hold majority stakes in Austrian bike manufacturer KTM, Force Motors and Yulu. They are the third largest motorcycle manufacturer in the world and second largest in India. Bajaj Auto went on to diversify into three entities – Bajaj Auto Ltd (Automobiles), Bajaj Finserv Ltd (NBFI) and Bajaj Holdings & Investment Ltd. They currently hold a 19.2 % market share in the two-wheeler market segment in India. Previously they held a market share of 18.6 % F.Y. 2021. They were the first two-wheeler manufacturer to mark an achievement of crossing a market cap of 1 Trillion rupees, making them the most valuable two-wheeler manufacturer in the world. This achievement is credited to the fact that Bajaj Auto has made reliable motorcycles and scooters over their 70 year history. Low maintenance cost, affordable spare parts and massive scale of manufacturing, making their products accessible

across the country. Also notable is the rapid growth in the presence of electric vehicles in the market in the L3 segment, growing by a staggering 837% (100,000 units sold) in 2022 from 10K units in 2021.

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ABOUT HERO MOTOCORP (HMC)

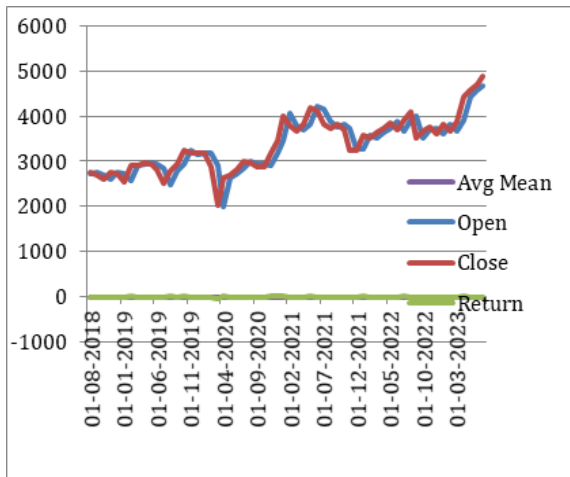
HMC is one of the largest two-wheeler manufacturers in the world established in the year 194 Formerly known as Hero Honda and enjoys a market share of 37% in its segment in India. The company has a merger between Hero Cycles, and Honda, a Japanese motorcycle manufacturer. Both companies sold two wheelers in India under the merger name Hero Honda until the year 2010 when the merger ended through a buy-out. Hero Group bought the 26% Stake owned by the Honda Group, ending the merger between the two companies. Another 26% was bought by the Munjal family over a series of off-market transactions. After the de-merger, Hero began exports to Latin America, West Asia and Africa, as they were no longer restricted by their previous agreement with Honda. HMC also owns 34.5% equity stake in Ather Energy, an electric scooter start-up based in Bangalore. By July 2011, Hero was rebranded to HMC and has been operating under the new name ever since. After Hero's exit from the merger, they have ramped up production, research and development and production of motorcycles. Throughout India it has five manufacturing facilities – Dharuhera, Neemrana, Haridwar, Halol and Gurugram. These facilities contribute to the elevated difference between sales of HMC and all its top competitors combined. Hero has the largest market share in the two-wheeler segment in the country and is also the largest two-wheeler manufacturer in the world. They have also recently announced their collaboration with American Motorcycle manufacturer Harley – Davidson which is a potential growth factor in the years to come.

Hero is also one of the few Indian manufacturers Rally.
to sponsor riders for the world-famous Dakar

Date	Op	Cp	Return (r)= (Cp-Op)/Op	Avg. Return (r') #NAME?	d (r-r')	d2
08-01-2018	2717	2744.85	1.025	1.146	-0.121	0.0146334
09-01-2018	2765	2687.45	-2.8	1.146	-3.9507	15.608057
10-01-2018	2687	2593.7	-3.47	1.146	-4.6183	21.328471
11-01-2018	2613.1	2745.7	5.074	1.146	3.92843	15.432538
12-01-2018	2760	2720.15	-1.44	1.146	-2.5898	6.7072926
01-01-2019	2735	2554.55	-6.6	1.146	-7.7438	59.966507
02-01-2019	2560	2900.6	13.3	1.146	12.1587	147.83377
03-01-2019	2914	2911.1	-0.1	1.146	-1.2455	1.5513106
04-01-2019	2947.95	2984.1	1.226	1.146	0.08028	0.006445
05-01-2019	2984.1	2925.9	-1.95	1.146	-3.0963	9.5873418
06-01-2019	2945	2827.05	-4.01	1.146	-5.1511	26.533746
07-01-2019	2838.4	2516.5	-11.3	1.146	-12.487	155.9225
08-01-2019	2485.05	2788.3	12.2	1.146	11.057	122.25666
09-01-2019	2788.3	2941.8	5.505	1.146	4.35915	19.002157
10-01-2019	2945	3247.35	10.27	1.146	9.12056	83.184556
11-01-2019	3250	3176	-2.28	1.146	-3.4229	11.716402
12-01-2019	3163.1	3185	0.692	1.146	-0.4536	0.2057932
01-01-2020	3183	3180.05	-0.09	1.146	-1.2387	1.534324
02-01-2020	3173.6	2890	-8.94	1.146	-10.082	101.65129
03-01-2020	2920	2022.35	-30.7	1.146	-31.887	1016.8088
04-01-2020	2000	2623.3	31.17	1.146	30.019	901.14051
05-01-2020	2623.3	2710.5	3.324	1.146	2.17806	4.743926
06-01-2020	2730	2826.05	3.518	1.146	2.37232	5.6278871
07-01-2020	2838.05	3004.95	5.881	1.146	4.73479	22.418283
08-01-2020	2990	2967	-0.77	1.146	-1.9152	3.6681089
09-01-2020	2947	2881.1	-2.24	1.146	-3.3822	11.439068
10-01-2020	2940	2886.9	-1.81	1.146	-2.9521	8.7150466
11-01-2020	2918	3173.55	8.758	1.146	7.61171	57.938166
12-01-2020	3175.1	3444.05	8.471	1.146	7.3246	53.649729
01-01-2021	3446	4005.8	16.24	1.146	15.0989	227.97748

02-01-2021	4064	3798.7	-6.53	1.146	-7.6741	58.89108
03-01-2021	3798.7	3670.6	-3.37	1.146	-4.5182	20.414153
04-01-2021	3704	3833.75	3.503	1.146	2.35697	5.5553065
05-01-2021	3815	4192.8	9.903	1.146	8.75701	76.685212
06-01-2021	4204.9	4133.85	-1.69	1.146	-2.8357	8.0411419
07-01-2021	4141	3829.6	-7.52	1.146	-8.6659	75.098176
08-01-2021	3874	3727.85	-3.77	1.146	-4.9186	24.192468
09-01-2021	3754	3832.65	2.095	1.146	0.9491	0.9007831
10-01-2021	3820	3707.25	-2.95	1.146	-4.0976	16.790085
11-01-2021	3721.8	3240.3	-12.9	1.146	-14.083	198.33901
12-01-2021	3280	3249.25	-0.94	1.146	-2.0835	4.3409723
01-01-2022	3258.7	3564.65	9.389	1.146	8.24271	67.9423
02-01-2022	3577	3530.35	-1.3	1.146	-2.4502	6.0032976
03-01-2022	3530.35	3653	3.474	1.146	2.32816	5.4203146
04-01-2022	3636	3729.55	2.573	1.146	1.42688	2.0359969
05-01-2022	3720	3864.1	3.874	1.146	2.72766	7.4401212
06-01-2022	3877.2	3706.6	-4.4	1.146	-5.5461	30.75899
07-01-2022	3667.95	3914.45	6.72	1.146	5.57438	31.073659
08-01-2022	3919.95	4084.85	4.207	1.146	3.06069	9.367824
09-01-2022	4010	3527.75	-12	1.146	-13.172	173.50645
10-01-2022	3527.75	3671.85	4.085	1.146	2.93876	8.6363065
11-01-2022	3686.55	3750.7	1.74	1.146	0.59411	0.3529627
12-01-2022	3744.05	3616.05	-3.42	1.146	-4.5648	20.837013
01-01-2023	3617	3818.25	5.564	1.146	4.418	19.518753
02-01-2023	3829.45	3661.2	-4.39	1.146	-5.5396	30.686962
03-01-2023	3670	3884.75	5.851	1.146	4.7055	22.141717
04-01-2023	3904.8	4431.95	13.5	1.146	12.3541	152.62267
05-01-2023	4431.95	4567.15	3.051	1.146	1.90457	3.6273838
06-01-2023	4587	4691.55	2.279	1.146	1.13326	1.2842856
07-01-2023	4685.2	4878.45	4.125	1.146	2.97869	8.8725962
				$\sum d =$	0.00652	$\sum d^2$ =4205.5489

Chart 1. Bajaj Auto Stock Returns during the last 5 years i.e. from 1st Aug 2018 to 1st July 2023



Interpretation:

It is found that from the above Table 1 and Chart 1 the maximum returns i.e. 31.17 earned by the Bajaj Auto in the month of April, 2020 and earned a minimum return i.e. 0.692 in the month of December 2019. The company also showed negative returns i.e.-30.14 during the month of March 2020. Hence it is concluded that the minimum returns were recovered within one month to maximum returns i.e. from 1st March 2020 to 1st April 2020. The sum of covariance is 0.00652 and the variance is 4205.5489.

The Table 2 and Chart 2 below shows that the maximum returns of HMC i.e.36.261 found in the month of April 2020 and minimum of 0.4983 in the month of December 2019, whereas negative returns i.e the exact minimum returns -23.9786 in the month of March 2020. Hence for both the companies the minimum and maximum returns falls in the same month and in the same year i.e. March and April 2020 respectively.

Table 2. HMC Stock Returns during the last 5 years i.e. from 1st Aug 2018 to 1st July 2023

Date	Op	Cp	Return (r)=	Avg. Return	d (r-r')	d2
			(Cp-Op)/Op	(r')		
08-01-2018	3296	3253.8	-1.28034	0.106	-1.38634	1.9219339
09-01-2018	3280	2933.25	-10.5716	0.106	-10.6776	114.01213
10-01-2018	2910	2762.35	-5.07388	0.106	-5.17988	26.831155
11-01-2018	2778	3055.2	9.9784	0.106	9.8724	97.464281
12-01-2018	3050	3104.25	1.778689	0.106	1.672689	2.7978869
01-01-2019	3089	2613.95	-15.3788	0.106	-15.4848	239.77795
02-01-2019	2629.45	2628.1	-0.05134	0.106	-0.15734	0.0247546
03-01-2019	2649.9	2553.15	-3.65108	0.106	-3.75708	14.11566
04-01-2019	2573	2511.85	-2.3766	0.106	-2.4826	6.1632997
05-01-2019	2511.85	2680.25	6.704218	0.106	6.598218	43.536478
06-01-2019	2712	2581.5	-4.81195	0.106	-4.91795	24.186202
07-01-2019	2596	2356.1	-9.24114	0.106	-9.34714	87.36896
08-01-2019	2335	2572.05	10.15204	0.106	10.04604	100.92285
09-01-2019	2572.05	2704.75	5.159307	0.106	5.053307	25.535909
10-01-2019	2715.7	2704.2	-0.42346	0.106	-0.52946	0.2803317

11-01-2019	2708	2433.55	-10.1348	0.106	-10.2408	104.87366
12-01-2019	2431	2443.05	0.495683	0.106	0.389683	0.1518527
01-01-2020	2454.9	2501.85	1.91251	0.106	1.80651	3.2634769
02-01-2020	2489.85	2051.75	-17.5954	0.106	-17.7014	313.341
03-01-2020	2100	1596.45	-23.9786	0.106	-24.0846	580.06669
04-01-2020	1590.1	2166.7	36.26187	0.106	36.15587	1307.2469
05-01-2020	2166.7	2360.85	8.960638	0.106	8.854638	78.404621
06-01-2020	2360.75	2546.95	7.887322	0.106	7.781322	60.54897
07-01-2020	2556	2676.5	4.714397	0.106	4.608397	21.237327
08-01-2020	2700	3006.05	11.33519	0.106	11.22919	126.09464
09-01-2020	3030.05	3147.3	3.869573	0.106	3.763573	14.164482
10-01-2020	3165	2799.8	-11.5387	0.106	-11.6447	135.59911
11-01-2020	2888	3108.85	7.647164	0.106	7.541164	56.869155
12-01-2020	3120	3110	-0.32051	0.106	-0.42651	0.1819132
01-01-2021	3115	3256.05	4.528091	0.106	4.422091	19.554893
02-01-2021	3300	3224	-2.30303	0.106	-2.40903	5.803427
03-01-2021	3255	2913.6	-10.4885	0.106	-10.5945	112.24293
04-01-2021	2949	2819.15	-4.40319	0.106	-4.50919	20.332802
05-01-2021	2779.95	3007.5	8.185401	0.106	8.079401	65.276719
06-01-2021	3016.5	2902.6	-3.7759	0.106	-3.8819	15.069116
07-01-2021	2905	2763.3	-4.8778	0.106	-4.9838	24.838215
08-01-2021	2770.1	2741.85	-1.01982	0.106	-1.12582	1.2674678
09-01-2021	2759	2832.5	2.664009	0.106	2.558009	6.5434085
10-01-2021	2827.2	2657.1	-6.01655	0.106	-6.12255	37.485599
11-01-2021	2675	2449.3	-8.43738	0.106	-8.54338	72.989365
12-01-2021	2480	2462.1	-0.72177	0.106	-0.82777	0.6852036
01-01-2022	2463	2724.3	10.60902	0.106	10.50302	110.31333
02-01-2022	2748	2535.45	-7.73472	0.106	-7.84072	61.476858
03-01-2022	2535.45	2294.15	-9.51705	0.106	-9.62305	92.603098
04-01-2022	2185	2506.65	14.72082	0.106	14.61482	213.59294
05-01-2022	2460.2	2773.9	12.75099	0.106	12.64499	159.89588
06-01-2022	2799.9	2719.7	-2.86439	0.106	-2.97039	8.8231952

07-01-2022	2715	2818.05	3.795582	0.106	3.689582	13.613015
08-01-2022	2834.95	2837.7	0.097003	0.106	-0.009	8.09E-05
09-01-2022	2820	2549.2	-9.60284	0.106	-9.70884	94.261547
10-01-2022	2538.5	2676.85	5.450073	0.106	5.344073	28.559114
11-01-2022	2690.25	2851.9	6.008732	0.106	5.902732	34.84224
12-01-2022	2855	2738.85	-4.0683	0.106	-4.1743	17.424762
01-01-2023	2738.85	2763.25	0.890881	0.106	0.784881	0.6160386
02-01-2023	2775.55	2419.1	-12.8425	0.106	-12.9485	167.66359
03-01-2023	2415	2347.35	-2.80124	0.106	-2.90724	8.4520338
04-01-2023	2385	2558.6	7.27883	0.106	7.17283	51.449492
05-01-2023	2558.6	2759.9	7.867576	0.106	7.761576	60.24206
06-01-2023	2758.85	2910.1	5.482357	0.106	5.376357	28.90521
07-01-2023	2875	3078.85	7.090438	0.106	6.984438	48.782377
				$\Sigma d =$	0.013653	$\Sigma d^2 =$ 5170.5895

Chart 2. HMC Stock Returns during the last 5 years i.e. from 1st Aug 2018 to 1st July 2023

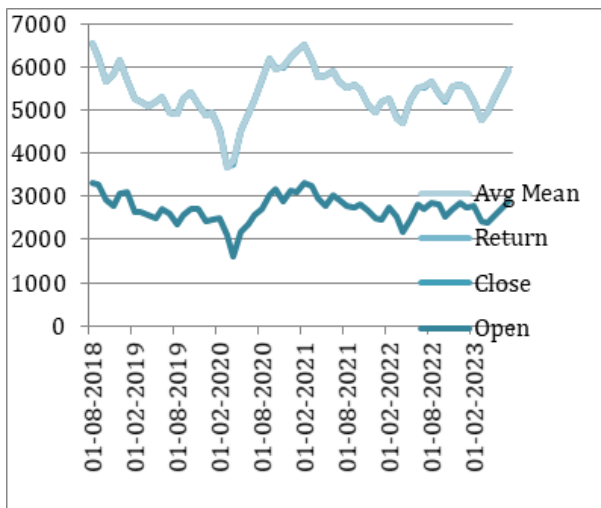
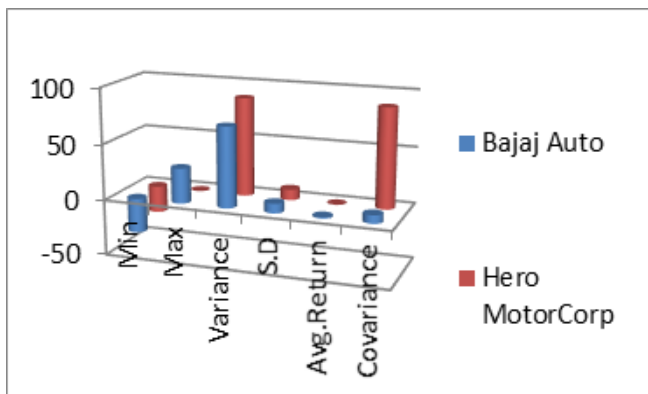


Table 3. Comparative Analysis of Bajaj Auto Vs HMC Stock Risk and Return during the last 5 years i.e. from 1st Aug 2018 to 1st July 2023

	Bajaj Auto	Hero Motor Corp
Max. Returns	31.17	30.14
Min. Returns	30.74	-23.9789
Avg. Return	1.146	0.106
Standard Deviation	8.442777377	9.361469445
Variance	71.28048983	87.63711017
Covariance	7.367170486	88.31574948

Chart 3. Comparative Risk Return Analysis of Bajaj Auto Stock Vs. Hero Motor Corp



Interpretation: From the Table 3 and Chart 3 it is found that that Bajaj Auto is performing well in terms of maximum returns and the risk, variance and covariance are also found better compared to the HMC values.

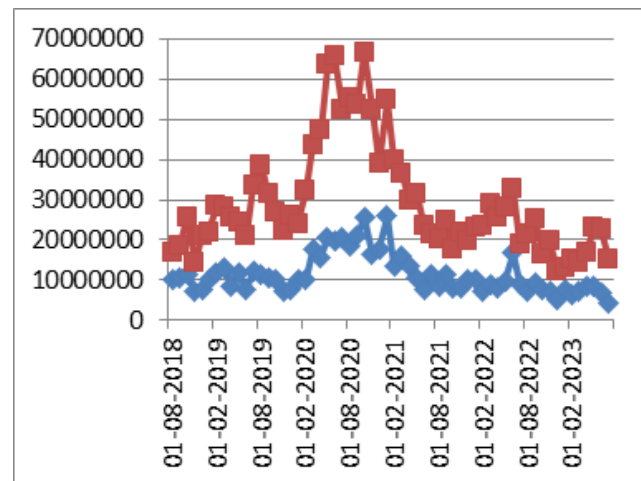
Table 4. Bajaj Auto Vs HMC Stock Volumes traded on NSE NIFTY

Date	Volume of Bajaj Auto	Volume of HMC
08-01-2018	9942396	6661974
09-01-2018	10553099	8009101
10-01-2018	11420760	14295194
11-01-2018	7115498	7173677
12-01-2018	7793001	13397297
01-01-2019	9988068	11991861
02-01-2019	11832212	16557689
03-01-2019	13203582	14953216
04-01-2019	8626225	16857672
05-01-2019	11893479	12592166
06-01-2019	7609656	13466702
07-01-2019	12057664	21520512
08-01-2019	11464238	27125913
09-01-2019	10623779	20693067
10-01-2019	10000030	17036419
11-01-2019	7016469	15273660
12-01-2019	7683441	18230401
01-01-2020	10157779	13911559

02-01-2020	10114668	22304450
03-01-2020	17482885	26204530
04-01-2020	15648184	31556392
05-01-2020	20620496	42918890
06-01-2020	19885284	46048933
07-01-2020	20772627	31714342
08-01-2020	18366165	36813299
09-01-2020	20851449	32869222
10-01-2020	25683718	40978931
11-01-2020	16295671	36307276
12-01-2020	17701860	21198526
01-01-2021	25932974	28906985
02-01-2021	13414834	26412322
03-01-2021	16025837	20358974
04-01-2021	13453110	16448086
05-01-2021	10719090	20655384
06-01-2021	7703042	15887268
07-01-2021	11181750	10344914
08-01-2021	8362441	11729264

09-01-2021	11354363	13614264
10-01-2021	7981343	9770053
11-01-2021	8026970	13948058
12-01-2021	10167029	9733164
01-01-2022	10209965	12932662
02-01-2022	7378607	16200932
03-01-2022	8829811	20152597
04-01-2022	7965648	17658313
05-01-2022	9741297	18291511
06-01-2022	16681906	15863831
07-01-2022	9029908	9862014
08-01-2022	6995673	14465729
09-01-2022	9362637	15906392
10-01-2022	7460056	8914026
11-01-2022	7220939	12404777
12-01-2022	4916322	7138639
01-01-2023	7737153	5336785
02-01-2023	6167650	8809408
03-01-2023	7107277	7116566
04-01-2023	8415644	8555327
05-01-2023	8633407	14363331
06-01-2023	6831471	15714648
07-01-2023	4285135	10645282

Chart 4. Comparison of Bajaj Auto Vs HMC Stocks' Volumes traded on NSE NIFTY



Interpretation: it is found from the Table 4 and Chart 4 that the volume of Bajaj Auto Shares are low compared to the volume of the HMC stocks during the last 5 years i.e. from 1st Aug. 2018 to 1st July 2023.

SUGGESTIONS

- The maximum the risk the maximum will be the returns hence for the investors seeking higher returns can invest with HMC compared to Bajaj Auto.
- It is also suggested to the investors for lower risks and low returns better to choose the Bajaj Auto stocks when compared to the HMC Stocks.
- Although the volume of stocks traded in HMC is more the maximum returns earned through investment in Bajaj Auto are high hence it is suggested to the investors to invest in Bajaj Auto rather than making the investments in HMC stocks.
- It is suggested to the investors for large volumes of investment it is better to invest with HMC compared to the investment in Bajaj Auto.

CONCLUSION

The present study is based on the analysis of the securities listed in NSE NIFTY for deriving a conclusion to prefer the investments among the two major automobile companies Bajaj Auto and HMC. Risk is considered to the chance of variations in actual return whereas return is considered as the gain in the value of investment. The covariance of the Bajaj Auto and HMC reflects the strong relationship between risk and return. The returns on an investment portfolio help to evaluate the financial performance of the investment. During the last five years the average returns are found high with respect to the Bajaj Auto against HMC. Therefore, it is concluded that the investment in Bajaj Auto is preferred compared to the HMC stocks of NIFTY.

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