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COMPARISON BETWEEN THE FUNDAMENTAL AND TECHNICAL ANALYSIS OF TOP TWO STOCKS OF INDIAN BANKING SECTOR

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Purpose: Traders and investors always remain interested and excited to invest in right kind of stocks in share market which will ultimately reduce risk. Here comes the role of fundamental and technical analysis to show the way to reduce the risk of investing in share market stocks. Taking up a right kind of strategy is very helpful for investors and traders to gain profit in this risky stock market investment.

Design/methodology/approach: In This regard, the main two schools of thoughts in strategy selection in financial markets are Fundamental analysis and technical analysis. The top two banking stocks of India are SBI and HDFC, which have been chosen on the basis of market capitalisation. The banks fundamental analysis for determining the financial performance situation has shown few relevant points with respect to profitability situation, liquidity situation. Furthermore, the relevant CAMEL methodology, which is popular among researcher for judging the banks financial performance and rating have been undertaken. Additionally, the technical analysis has been carried out with the chosen banking stocks to show the intraday trading situation.

Findings: The outcome of CAMEL methodology shows some interesting aspects on the basis of capital adequacy, asset quality, management efficiency, earnings, liquidity and sensitivity. Latest 5-year analyses have been carried out in both fundamental and technical analysis arena of the two selected top banking stocks. Both the analysis is used for this research study to predict future trends and performance of the banking stocks from historical price and volume data.

Originality: Three separate analysis tools have been combined to analyse the banking companies' performance in a 360-degree comprehensive way.

Key words: Banking stocks, Fundamental analysis, Technical analysis, Trading

Introduction:

Mostly in stock market, the awareness and knowledge of investor plays a crucial role regarding how they invest their hard-earned money. They take a lot of information before investing in stocks. However, banking stocks like Bank Nifty is a popular stock amongst the investors. Fundamental analysis tries to measure the intrinsic value of the stocks based on macroeconomic as well as microeconomic factors which takes in to account both quantitative and qualitative angle. Management structure, competition, business model, corporate governance, business cycles are the relevant qualitative factors that the investors should check before investing. However, financial statement analyses, situation of balance sheet, income statement, cash flow statement analysis are the quantitative factors that the knowledgeable investors used to seek information before investing.

Another important angle which the investors try to understand is analysing the statistical trends which the investors would gather from trading activity like Price trends, Chart patterns, Volume and momentum indicators, Oscillators, Moving averages, Support and resistance levels

Both technical and fundamental analysis was used for trading in the market and have some pros and cons. Revenue, cost component, asset and liability structure are the important characteristics of fundamental analysis.

“Fundamental analysis is a technique for assessing protections by endeavouring to gauge the inherent worth of a stock. Major experts' review everything from the general economy and industry conditions to the monetary condition and the board of organizations. Profit, costs, resources, and liabilities are extremely significant attributes to Fundamental analysis . Nonetheless, in the event of specialized examination the significant information is stock cost and volume, here stock outlines are firmly dissected to distinguish examples and patterns that recommend what a stock will do from now on.”

LITERATURE REVIEW

In their ground-breaking research paper titled "Market Statistics and Technical Analysis: Exploring the Significance of Volume," Lawrence Blume, David Easley, and Maureen O'Hara studied the critical role of volume in technical analysis. Their study shows that volume serves as an important indicator of market activity and participant behaviour. By integrating volume data into technical analysis, researchers uncover a deeper understanding of market dynamics, empowering traders to refine their strategies. Additionally, their findings establish a clear advantage for traders who use market statistics, such as volume, over those who ignore these essential factors.

"Basics of Technical Analysis: Computational Algorithms, Statistics, and Empirical Implementation" is a research paper written in August 2000 by Andrew W. Lo, Harry Mamaisky, and Jiang Wang. The research aims to develop a systematic and automated technical approach. pattern recognition. Their study uses non-parametric kernel regression on selected US stocks within the time period of 1962 to 1996 mainly to assess the effectiveness of technical analysis. By using computational algorithms and statistical research techniques, the author analyses patterns in market data and provides a solid basis for evaluating technical analysis techniques.

In her 2011 paper titled "essential and Technical analysis at the Croatian inventory marketplace,"Veronika Caljkusic investigates the relationship between fundamental and technical analysis using the stock expenses of the Zagreb stock exchange (ZSE). The primary recognition of the studies is to assess the impact of global economic turmoil on the Croatian inventory marketplace. Caljkusic explores the correlation among external monetary elements and the overall performance of the ZSE, dropping light at the diploma to which worldwide monetary situations affect the neighbourhood market. The paper highlights the truth that buyers have a tendency to appoint a combination of strategies instead of relying solely on one method while making funding decisions. This consists of incorporating both technical analysis (which includes the observation of rate styles and market traits) and fundamental analysis (which entails comparing a business enterprise's

monetary fitness and market function). This shows that buyers in the Croatian stock market recall both technical and fundamental elements in their choice-making methods.

Of their studies paper titled "Evaluating essential analysis and Technical analysis as strategies of percentage Valuation," Venkatesh C. Ok. And Ganesh L., published in January-June 2011, the researchers determined that a giant part of brokers and fund managers within the Indian inventory marketplace depend on a mixture of fundamental and technical evaluation for predicting future proportion rate movements throughout diverse time horizons. In line with their findings, an envisioned eighty-five% of brokers and fund managers combine both essential analysis and technical analysis into their selection-making methods. Fundamental analysis includes comparing an employer's monetary statements, control, industry traits, and different applicable elements to determine the intrinsic fee of a stock. On the other hand, technical analysis focuses on analysing historical fee patterns, trading volume, and market tendencies to anticipate destiny fee moves.

In March 2011, R. Chitra conducted a research paper entitled "Technical Analysis of Selected Stocks in the Energy Sector.". Chitra explored the use of moving averages and the Relative Strength Index (RSI) as technical indicators for interpreting buy and sell signals in these stocks. By analysing price trends and patterns through moving averages and utilizing the RSI indicator, potential entry and exit points were identified. Additionally, the study considered the evaluation of stock beta as a means to assess associated risks. Overall, the research provided valuable insights into how technical analysis can be implemented effectively for analyzing stocks in the energy sector.

In their 2012 research paper entitled "Intraday Liquidity Patterns in the Indian Stock Market,"R. Krishnan and Vinod Mishra investigate the liquidity patterns and similarities across various measures of liquidity. The study utilizes intraday data spanning one year from the National Stock Exchange (NSE) in India. The researchers discovered that a substantial number of liquidity measures, including metrics related to trading volume and spread, demonstrate an intraday U-shaped pattern.

Kitloon, Jimmy Honga, Eeliza Wu (2014): Using OLS and state space modelling, they conducted an empirical study on price-based technical indicator variables to explain segment stock returns and found that accounting variables have long-run effects on small-cap stocks. This analysis includes the Russell 3000 index for the years 1999-2012. At the same time, it focuses on investment decisions in various capital segments using Technical and Fundamental analysis based on the NSE index and the period of 2014.

J Hema and V Ariram (2016) had studies about "Fundamental Analysis with special reference to NSE listed pharmaceutical companies" which further stated that investors should always keep a track of market and analyse the market thoroughly and technically before investing in stocks. Study also focuses on the development of the pharmaceutical industry in India.

Suresh A.S. (2015) tried to highlight the importance of fundamental and technical analysis in Indian stocks. The author stated in the main analysis that investors should know about the country's environment and macroeconomic development, the industry prospects of each company and the forecast of the company's performance. When it comes to technical analysis, the author recommends several tools such as line charts, line charts, point and figure charts, trend lines, moving average analysis, relative strength, resistance and support levels, breakout theory, and head and shoulders patterns. Upper and lower limits for predicting future stock prices. Fundamental analysis is the only investment technique introduced in the past. The emergence of high-speed computing is now facilitating technical analysis.

Acharya, N., Roy, M. S. (2020). The Indian telecommunication industry is an important and thriving industry that connects different corners of the country through mobile phones, radio, television, satellite and internet. It contributes to the growth of India's GDP, generates revenue from the government and provides employment opportunities. Major players include Bharti Airtel, Reliance Jio and MTNL. Investors should consider the economic environment, the overall performance of the company and the performance of the organization before making an investment decision. The article recommends selling Reliance shares and holding Airtel and MTNL for potential gains.

Gandhi, K.(2018). Research Paper on Basic Analysis of Indian Paint Industry. This research paper examines the Indian paint industry using fundamental analysis to identify overvalued or undervalued stocks. Two large companies, Asia Paints Ltd and Berger Paints Ltd, were examined. The industry is promising with innovations that attract customers and the Indian economy is the fastest growing in the world, making the investment profitable.

OBJECTIVE OF THE STUDY:

i. Study focuses on analysing the profitability, liquidity and solvency position of SBI and HDFC Bank in the recent 5 years.
ii. Study demonstrates the CAMEL position of the top two selected banks of India in recent 5 years.
iii. Study tries to analyse few selected technical indicators of SBI and HDFC Bank.

RESEARCH METHODOLOGY:

Few important financial indicators have been chosen to analyze the financial performance of the top two selected banks of India. Financial indicators like gross profit ratio (GP ratio), net profit ratio (NP ratio), operating ratio, current ratio, cash ratio have been used in the study. The last 5 years financial data has been taken to analyses the financial performance. Further the CAMEL rating system has been applied to analyze the financial performance and rating has been undertaken.

Study emphasised on secondary data, which has been collected from sources such as internet, websites 'of selected companies, company balance sheets, annual reports, press release etc. Analysis of data is done with help of Fundamental tools for selected two banks. The study is conducted based on the selected Banking sector companies listed in NSE. Initially, companies are selected with respect to their market capitalization, revenue, sales and performance.

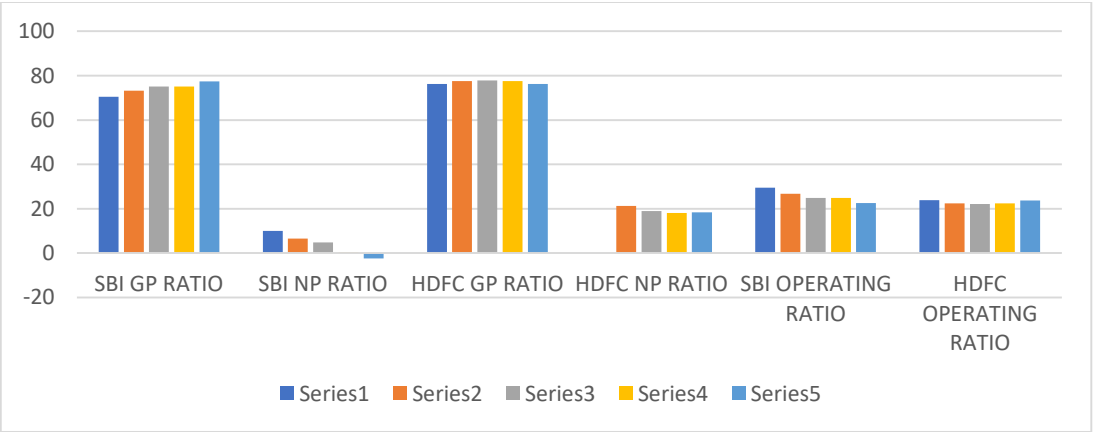
ANALYSIS:

Table 1: Profitability Ratios of SBI and HDFC Bank

RATIO	SBI GP RATIO	SBI NP RATIO	HDFC GP RATIO	HDFC NP RATIO	SBI OPERATING RATIO	HDFC OPERATING RATIO
2022	70.4	10.02	76.19	23.5.	29.5	23.8
2021	73.2	6.61	77.59	21.3	26.7	22.4
2020	75.1	4.78	77.76	19.01	24.8	22.2
2019	75.07	0.3	77.59	18.07	24.9	22.4
2018	77.38	-2.46	76.23	18.31	22.6	23.7

Source: own computation

Graph 1: Profitability Ratio of SBI and HDFC Bank



Source: own computation

The data in the table 1 represents the "Gross Profit Ratio" for two banks, State Bank of India (SBI) and HDFC Bank, for the years 2018, 2019, 2020, 2021, and 2022. The values are expressed as percentages (%).From the data, we can see that SBI's Gross Profit Ratio has been declining over the years. This suggests that the bank's ability to generate gross profit from its revenue has decreased. A declining Gross Profit Ratio may indicate higher costs of goods sold or lower revenue growth. For, HDFC Bank, the Gross Profit Ratio has also shown some fluctuations over the years but has remained relatively stable. The bank has maintained a reasonably consistent ability to generate gross profit from its revenue.

The data in the Table 1shows that SBI's Net Profit Ratio has been improving over the years. Starting from a negative value in 2018, the bank managed to turn around and achieve positive net profit margins in subsequent years. This suggests that the bank's profitability improved, and it generated a higher percentage of profit from its total revenue in recent years. For HDFC Bank, the Net Profit Ratio has also shown a positive trend, consistently increasing over the years. This indicates that HDFC Bank has been able to generate higher profits from its total revenue and has shown an improvement in its overall profitability.

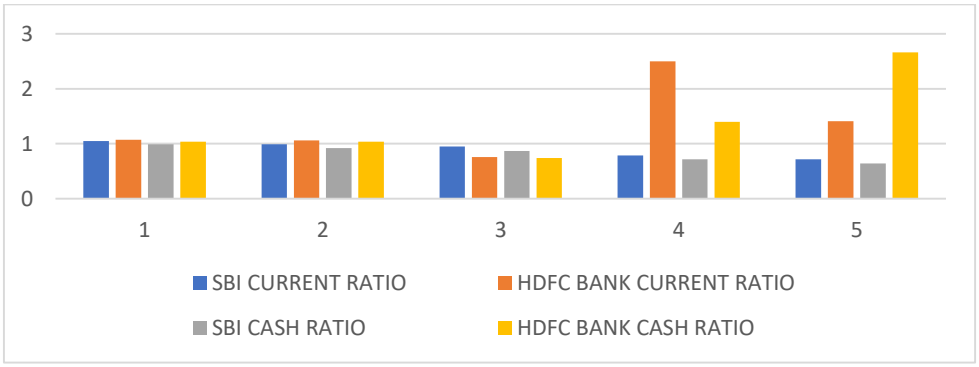
The data shows that SBI's Operating Ratio has been increasing over the years, which suggests that the bank's operating expenses have been growing at a faster rate than its revenue. This could be an indication of reduced operational efficiency during these years. For HDFC Bank, the Operating Ratio has remained relatively stable over the years, with minor fluctuations. This indicates that the bank has been successful in maintaining a consistent balance between its operating expenses and revenue, demonstrating a more stable operational efficiency.

Table 2: Liquidity and solvency ratio of SBI and HDFC Bank

RATIO	SBI CURRENT RATIO	HDFC BANK CURRENT RATIO	SBI CASH RATIO	HDFC BANK CASH RATIO
2022	1.05	1.07	0.99	1.04
2021	0.99	1.06	0.92	1.04
2020	0.95	0.76	0.87	0.74
2019	0.79	2.5	0.72	1.4
2018	0.72	1.41	0.64	2.66

Source: own computation

Graph 2: Liquidity and Solvency Ratio of SBI and HDFC Bank



Source: own computation

Table 2 represent the Current Ratio for the banks, which depicts the trends. From the data, we can see that SBI's Current Ratio has been increasing over the years. It moved from less than 1 (0.72) in 2018 to above 1 (1.05) in 2022. This indicates an improvement in the bank's ability to meet its short-term obligations using its current assets. For HDFC Bank, the Current Ratio has shown

fluctuations over the years. It was high (above 1) in 2018 and 2019, which indicates good liquidity. However, it dropped significantly to 0.76 in 2020, which might raise some concerns about its ability to meet short-term obligations. It then increased to around 1 in the subsequent years.

From the given information, we can see that SBI's Cash Proportion has been expanding throughout the long term. This demonstrates an improvement in the bank's capacity to meet its liquidity commitments utilizing the cash equivalent. For HDFC Bank, the cash ratio has shown changes throughout the long term. It was extraordinarily high in 2018 (2.66), demonstrating a significant measure of cash counterparts contrasted with short term liabilities. Be that as it may, it dropped essentially in 2020 (0.74), showing a lower extent of endlessly cash counterparts contrasted with short term liabilities. In the resulting years, it remained moderately stable at around 1.

Further the CAMEL rating framework has been applied utilizing Capital adequacy, asset position, management capability, earning, liquidity position and sensitivity situation.

Table 3: CAMEL Ratio

Aspect	**Ratio**	**Formula**
Capital Adequacy	Equity Capital to Total Assets	Equity Capital / Total Asset
Assets Quality	Loans & Advances to Total Assets	Loans & Advances/ Total Assets
Management Soundness	Total Advances to Total Deposits	Total Advances / Total Deposits
Earnings	Return on Assets	Net Income / Total Assets
	Return on Equity	Net Income / Shareholder’s Equity
Liquidity	Customer Deposits to total assets	Total Customer Deposits / Total Assets
Sensitivity	Net Interest Income to Total Assets	Net Interest Income/ Total Assets
	Total Reserves to Total Assets	Total Reserves / Total Assets

Source: own computation

Table:4 CAMEL RATIO of SBI and HDFC BANK

YEAR	**SBI CAPITAL ADEQUACY**	**HDFC BANK CAPITAL ADEQUACY**	**SBI ASSETS QUALITY ANALYSIS**	**HDFC BANK ASSETS QUALITY ANALYSIS**	**SBI MANAGEMENT SOUNDNESS ANALYSIS**	**HDFC MANAGEMENT SOUNDNESS ANALYSIS**	**EARNINGS ANALYSIS of SBI (E1)**	**EARNINGS ANALYSIS of SBI (E2)**
2022	0.01	0.02	54.81	66.17	67.4	87.7	6.33	1.12
2021	0.01	0.03	54.01	64.84	66.5	84.8	6.8	1.21
2020	0.02	0.03	58.84	64.92	71.7	86.5	7.65	1.3
2019	0.02	0.04	59.38	65.83	75	88.7	7.59	1.26
2018	0	0.04	56	61.87	71.4	83.4	7.67	1.2

YEAR	EARNINGS ANALYSIS of HDFC (E1)	EARNINGS ANALYSIS of HDFC (E2)	LIQUIDITY ANALYSIS of SBI	LIQUIDITY ANALYSIS of HDFC	SENSITIVITY ANALYSIS of SBI (S1)	SENSITIVITY ANALYSIS of SBI (S2)	SENSITIVITY ANALYSIS of HDFC (S1)	SENSITIVITY ANALYSIS of HDFC (S2)
2022	7.6	0.65	0.81	0.75	5.52	5.59	6.17	11.58
2021	8.36	0.71	0.81	0.76	5.84	5.57	6.91	11.63
2020	9.02	0.8	0.82	0.74	6.51	5.84	7.5	11.17
2019	9.36	0.78	0.79	0.74	6.59	5.97	7.95	11.98
2018	8.97	0.89	0.78	0.74	6.38	6.31	7.72	9.94

Source: own computation

A higher Equity Capital to Total Assets ratio indicates that a high proportion of bank's assets has been funded by equity, which generally implies a lower level of financial risk and a more conservative capital structure.

Table 4 signifies that SBI's Equity Capital to Total Assets ratio has been relatively low and stable over the years, fluctuating between 0.00% and 0.02%. This suggests that a small proportion of the bank's assets are funded by equity capital, and a larger portion is financed through other means such as debt. For HDFC Bank, the Equity Capital to Total Assets ratio has also been relatively stable over the years, with a slightly higher proportion of equity capital compared to SBI. The ratio ranges between 0.02% and 0.04%, indicating large share of HDFC Bank's assets is funded by equity capital compared to SBI.

A higher Loans & Advances to Total Assets ratio implies that a larger portion of a bank's total assets is tied up in loans and advances, which can indicate a higher level of credit risk. However, a lower ratio indicates that the bank has a more diversified asset base and may have a lower level of credit risk. In Table 4, we can observe that SBI's Loans & Advances to Total Assets ratio has fluctuated over the years but has generally remained within the range of 54% to 59%. This suggests that a significant portion of the bank's total assets are in the form of loans and advances.For HDFC Bank, the Loans & Advances to Total Assets ratio has also shown fluctuations but has generally remained within the range of 64% to 66%. Similar to SBI, a significant portion of HDFC Bank's total assets consists of loans and advances.

A higher Total Advances to Total Deposits ratio indicates that the bank is extending more loans and credit (advances) compared to the total customer deposits it holds. This can imply that the bank is taking on a higher level of risk by lending out a larger portion of its deposit base. Conversely, a lower ratio suggests a more conservative approach to lending, where the bank is holding a significant portion of its deposits in more liquid and lower-risk assets.

From the data, we can observe that SBI's Total Advances to Total Deposits ratio has shown some fluctuations over the years but has remained relatively stable within the range of approximately 66.5% to 75.0%. This suggests that the bank has been lending out a substantial portion of its deposits, but it has not taken on excessive risk in terms of lending relative to its deposit base.For HDFC Bank, the Total Advances to Total Deposits ratio has also shown some fluctuations but has generally remained within the range of approximately 84.8% to 88.7%. Like SBI, HDFC Bank has been lending out a significant portion of its deposits to borrowers, but it has managed its lending activities without excessively increasing its risk profile.

From the data, we can observe that both banks have experienced fluctuations in their ROA over the years. HDFC Bank generally has a higher ROA compared to SBI, indicating that HDFC Bank has been more efficient in generating profits from its assets. A higher ROA generally suggests better profitability and operational efficiency.

Similar to ROA, both banks have experienced fluctuations in their ROE over the years. However, SBI generally has a higher ROE compared to HDFC Bank, indicating that SBI has been more efficient in generating profits for its shareholders based on their equity investments.

A higher Customer Deposits to Total Assets ratio indicates that high portion of the bank's assets is funded by customer deposits, which generally indicates a more stable and liquid situation of the selected companies. On the other hand, a lower ratio might suggest that the bank relies more on other funding sources like borrowings or capital issuance.

In Table 4, we can observe that SBI's Customer Deposits to Total Assets ratio has remained relatively stable over the years, fluctuating within a narrow range of approximately 0.78 to 0.82. This suggests that a significant portion of the bank's assets is funded by customer deposits, contributing to a more stable liquidity position.For HDFC Bank, the Customer Deposits to Total Assets ratio has also remained relatively stable over the years, hovering around 0.74 to 0.76. Like SBI, this suggests that a significant portion of HDFC Bank's assets is funded by customer deposits, contributing to a stable liquidity position.

From the data, we can observe that both banks' Net Interest Income to Total Assets ratios have experienced fluctuations over the years. HDFC Bank generally has a higher ratio compared to SBI, indicating that HDFC Bank has been more successful in generating net interest income relative to its total assets.

In Table 4, we can see that both banks' Total Reserves to Total Assets ratios have also experienced fluctuations over the years. HDFC Bank generally has a higher ratio compared to SBI, indicating that HDFC Bank holds a larger proportion of its assets in reserves, which can enhance its financial stability.

TECHNICAL ANALYSIS

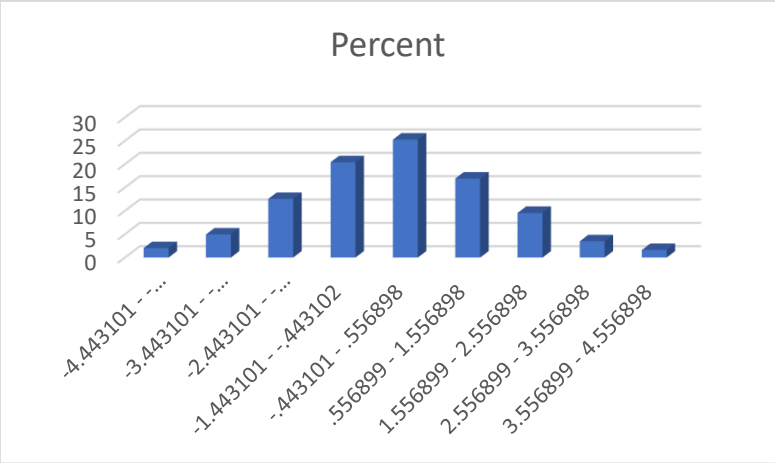
Table 5: Open Close Intraday stock fluctuations of SBI

Range	Percent
-4.443101 - -3.443102	2.024291
-3.443101 - -2.443102	4.939271
-2.443101 - -1.443102	12.55061
-1.443101 - -.443102	20.40486
-.443101 - .556898	25.26316
.556899 - 1.556898	16.92308
1.556899 - 2.556898	9.554656
2.556899 - 3.556898	3.481781
3.556899 - 4.556898	1.619433

Source: own computation

This table shows the distribution of intraday stock fluctuations of SBI based on percentage ranges. Each row represents a specific range of percentage changes in the stock price from its opening to closing during an intraday session. The second column provides the percentage of times the stock's intraday price change falls within each respective range. The majority of the intraday stock fluctuations (25.26316%) fall within the range of -0.443101% to 0.556898%.The range with the second highest percentage of occurrences (20.40486%) is between -1.443101% and -0.443102%.As the percentage ranges move away from zero in both negative and positive directions, the occurrences of intraday stock fluctuations decrease.

Graph 4: Open Close Intraday stock fluctuations of SBI



Source: own computation

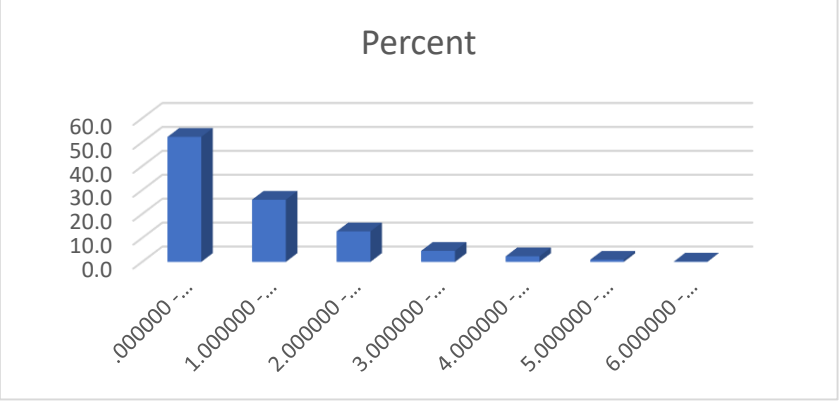
Table 6: Open High Intraday stock fluctuations of SBI

Range	Percent
.000000 - .999999	52.2
1.000000 - 1.999999	26.0
2.000000 - 2.999999	12.8
3.000000 - 3.999999	4.6
4.000000 - 4.999999	2.4
5.000000 - 5.999999	.9
6.000000 - 6.999999	.2

Source: own computation

This table represents the distribution of intraday stock fluctuations of SBI based on percentage ranges from the open price to the high price during an intraday session. Each row corresponds to a specific range of percentage changes.The most common range for intraday stock fluctuations is from 0.000000% to 0.999999%, accounting for 52.2% of the occurrences.As the range of percentage increases, the occurrences of intraday stock fluctuations decrease. For instance, the range from 1.000000% to 1.999999% has 26.0% of the occurrences, and its half of the most common range.The occurrence percentage keeps decreasing as the range increases, indicating that larger intraday fluctuations are less common.

Graph5: Open High Intraday stock fluctuations of SBI



Source: own computation

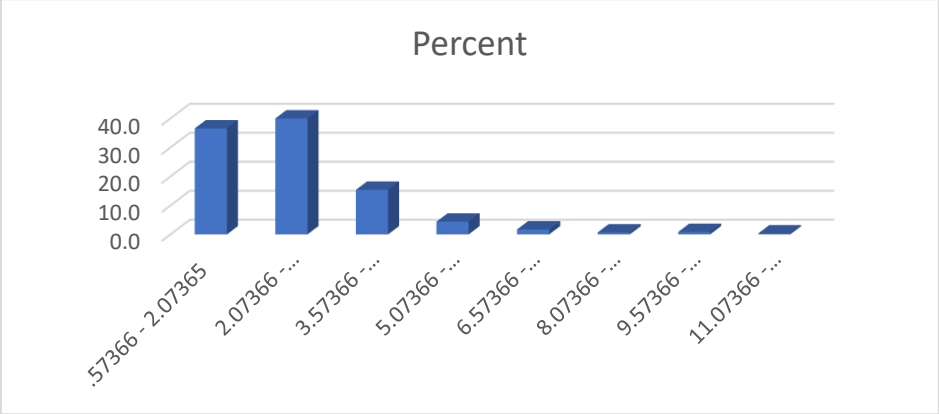
Table7: High-Low Intraday stock fluctuations of SBI

Range	Frequency	Percent
.57366 - 2.07365	450	36.6
2.07366 - 3.57365	492	40.0
3.57366 - 5.07365	189	15.4
5.07366 - 6.57365	54	4.4
6.57366 - 8.07365	21	1.7
8.07366 - 9.57365	8	.6
9.57366 - 11.07365	10	.8
11.07366 - 12.57365	4	.3

Source: own computation

This table represents the distribution of high-low intraday stock fluctuations of SBI based on percentage ranges. Each row corresponds to a specific range of percentage changes between the high and low prices during an intraday session.The most common range for high-low intraday stock fluctuations is from 2.07366% to 3.57365%, with a frequency of 492 occurrences, accounting for 40.0% of the total.The second most common range is from 0.57366% to 2.07365%, with a frequency of 450 occurrences, making up 36.6% of the total.As the percentage range increases, the frequency of occurrences generally decreases, indicating that larger fluctuations between the high and low prices are less common.

Graph 6: High-Low Intraday stock fluctuations of SBI



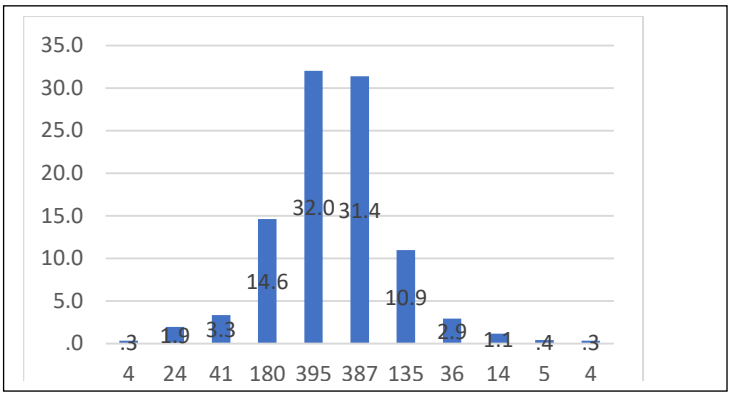
Source: own computation

Table 8: Open Close Intraday stock fluctuations of HDFC Bank

Range	Frequency	Percent
-5.970000 - -4.970001	3	.2
-4.970000 - -3.970001	4	.3
-3.970000 - -2.970001	24	1.9
-2.970000 - -1.970001	41	3.3
-1.970000 - -.970001	180	14.6
-.970000 - .029999	395	32.0
.030000 - 1.029999	387	31.4
1.030000 - 2.029999	135	10.9
2.030000 - 3.029999	36	2.9
3.030000 - 4.029999	14	1.1
4.030000 - 5.029999	5	.4
5.030000 - 6.029999	4	.3

Source: own computation

Graph 7: Open Close Intraday stock fluctuations of HDFC Bank



Source: own computation

Interpretation: Based on the data in the table, we can make the following observations:

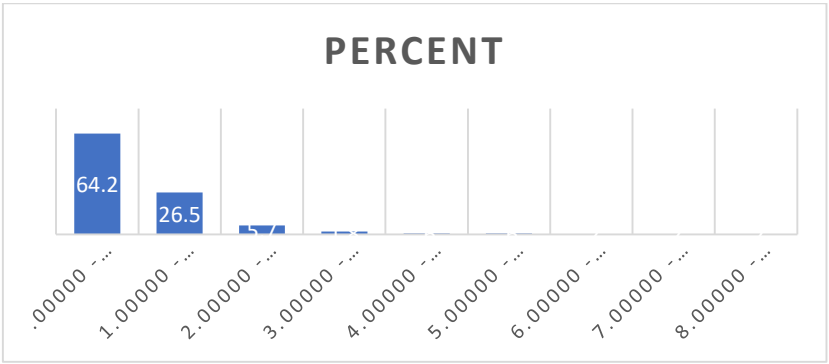
The open close intraday stock fluctuations of HDFC Bank are distributed across various price ranges, ranging from -5.970000 to 6.029999.The most frequently occurring fluctuations are in the ranges close to zero. The two ranges that have the highest frequencies are: -.970000 to .029999 (395 occurrences) and .030000 to 1.029999 (387 occurrences). These two ranges together account for a significant portion of the intraday fluctuations. As the price ranges move further away from zero, the frequency of occurrences decreases. This means that larger fluctuations are less common compared to smaller ones. Fluctuations in the positive direction (above zero) are more common than fluctuations in the negative direction (below zero), as evident from the data. The lowest frequency and percentage of occurrences are observed in the range from 5.030000 to 6.029999, indicating that large upward movements are quite rare during the intraday trading of HDFC Bank's stock.

Table 9: Open High Intraday stock fluctuations of HDFC BANK

Range	Frequency	Percent
.00000 - .99999	791	64.2
1.00000 - 1.99999	327	26.5
2.00000 - 2.99999	70	5.7
3.00000 - 3.99999	22	1.8
4.00000 - 4.99999	7	.6
5.00000 - 5.99999	7	.6
6.00000 - 6.99999	2	.2
7.00000 - 7.99999	2	.2
8.00000 - 8.99999	2	.2

Source: own computation

Graph 8: Open High Intraday stock fluctuations of HDFC BANK



Source: own computation

Interpretation: Based on the data in the table, we can make the following observations:

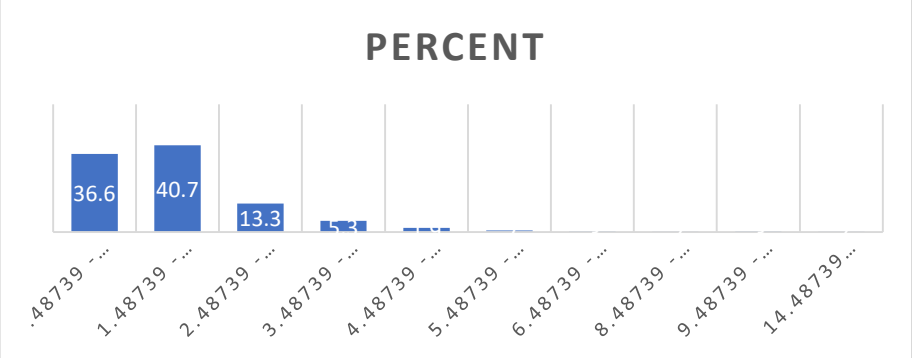
The intraday open high stock fluctuations of HDFC Bank are distributed across various price ranges, starting from 0.00000 and increasing in increments of 1.00000.The most frequently occurring fluctuations are in the smallest range, which is from 0.00000 to 0.99999. This range represents very small price fluctuations in the stock. As the price ranges increase, the frequency of occurrences decreases. This means that larger intraday stock fluctuations are less common compared to smaller ones. There are some fluctuations in the range from 2.00000 to 8.99999, but their frequencies and percentages are quite low.

Table 10: High-Low Intraday stock fluctuations HDFC Bank

Range	Frequency	Percent
.48739 - 1.48738	451	36.6
1.48739 - 2.48738	502	40.7
2.48739 - 3.48738	164	13.3
3.48739 - 4.48738	65	5.3
4.48739 - 5.48738	24	1.9
5.48739 - 6.48738	9	.7
6.48739 - 7.48738	4	.3
8.48739 - 9.48738	2	.2
9.48739 - 10.48738	4	.3
14.48739 - 15.48738	2	.2

Source: own computation

Graph 9: High-Low Intraday stock fluctuations HDFC Bank



Source: own computation

Interpretation: Based on the data in the table, we can make the following observations:

The intraday high low stock fluctuations of HDFC Bank are grouped into different price ranges, representing the difference between the high and low prices during the intraday trading session. The most frequently occurring fluctuations are in the ranges from 0.48739 to 2.48738. These ranges account for a significant portion of the intraday fluctuations. As the price ranges increase, the frequency of occurrences generally decreases, indicating that larger intraday stock fluctuations are less common compared to smaller ones. There are some fluctuations in the higher ranges (e.g., 5.48739 - 15.48738), but their frequencies and percentages are relatively low.

Conclusion:

Fundamental Analysis:

SBI shows declining Gross profit ratio over the years and positive Net profit margins. HDFC Bank has been able to generate higher profits from its total revenue and has shown an improvement in its overall profitability. According to Operating ratio, both banks indicate that they have been successful in maintaining a consistent balance between its operating expenses and revenue, demonstrating a more stable operational efficiency. SBI's Current Ratio indicates an improvement in the bank's position to repay its short-term loan funding using its current assets. Current ratio of HDFC dropped significantly during 2020, which might raise some concerns about its ability to meet short-term liabilities. It then increased to around 1 in the subsequent years. SBI's cash ratio indicates an improvement in the bank's ability to meet its short-term obligations using cash and cash equivalents. However, HDFC's cash ratio dropped significantly in 2020.The capital adequacy analysis ratio ranges between 0.02% and 0.04%, indicating that a high share of HDFC Bank's assets is funded by equity capital compared to SBI. Asset quality analysis percentage depicts that both SBI and HDFC Banks total assets consists of loans and advances. For SBI, it ranges between 54 to 59 percent and for HDFC it ranges between 64 to 66 percent. Like SBI, HDFC Bank has been lending out a significant portion of its deposits to borrowers, but it has managed its lending activities without excessively increasing its risk profile as indicated in management soundness analysis percentage**.** SBI managed to maintain percentage of 66 to 75 percent, and HDFC managed a percentage of 85 to 89 percent. Similar to ROA, both banks have experienced fluctuations in their ROE over the years as indicated in earnings Analysis. SBI generally has a higher ROE compared to HDFC Bank, indicating that SBI has been more efficient in generating profits for its shareholders based on their equity investments. Liquidity analysis of SBI, suggests that a significant portion of HDFC Bank's assets is funded by customer deposits, contributing to a stable liquidity position. SBI's liquidity ratio fluctuates between 78 to 82 percent and HDFC s ranges between 74 to 76 percent. Sensitivity Analysis suggests that both SBI as well as HDFC Bank holds a larger proportion of its assets in reserves, which can enhance its financial stability.

Technical Analysis:

The majority of the intraday Open Close stock fluctuations of SBI (25.26%) fall within the range of -0.44% to 0.55%.The most common range for intraday Open High stock fluctuations of SBI is from 0.00% to 0.99%, accounting for 52.22% of the occurrences. The most common range for high-low intraday stock fluctuations of SBI is from 2.07% to 3.57%, with a frequency of 492 occurrences, accounting for 40.0% of the total. The majority of the intraday Open Close stock fluctuations of HDFC Bank are ranging from -0.97 percent to 1.03 percent (62 percent fluctuations).The intraday open high stock fluctuations of HDFC Bank are distributed across various price ranges, starting from 0 to 0.99 with 64 percent fluctuations. The intraday high low stock fluctuations of HDFC Bank are grouped into different price ranges, representing the difference between the high and low prices during the intraday trading session.76 percent fluctuations ranges between 0.48 to 2.48 percent range.

Reference:

- Acharya, N., & Roy, M. S. (2020). A Study on Fundamental Analysis of Indian Telecom Companies. *International Journal of Technology and Management*, *5*, 28-34.
- Blume, L., Easley, D., & O'hara, M. (1994). Market statistics and technical analysis: The role of volume. *The journal of finance*, *49*(1), 153-181.
- C K Venkatesh and Tyagi Madhu, "Fundamental analysis as a method of share valuation in comparison with technical analysis" , Bangladesh research publications journal, Vol 5, Issue 3, MayJune 2011 pp 167-174.
- Gandhi, K. (2018). Research paper on fundamental analysis of Indian paint industry. *ISOR Journal of Business and Management*, *22*(2), 74-86.
- J Hema and V Ariram, "Fundamental Analysis with special reference to pharmaceutical companies listed in NSE", International journal of management, 7(2), 2016 pp 123-1
- Krishnan, R. & Mishra, Vinod. (2013). Intraday liquidity patterns in Indian stock market. Journal of Asian Economics. 28. 99–114. 10.1016/j.asieco.2013.05.005.
- Lo, A. W., Mamaysky, H., & Wang, J. (2000). Foundations of technical analysis: Computational algorithms, statistical inference, and empirical implementation. The journal of finance, 55(4), 1705-1765.
- Panigrahi, C. M. A., Sharma, R., & Dhande, H. (2018). Fundamental Analysis of Indian Pharmaceutical Companies. Global Management Horizon, 7.
- Technical Analysis on Selected Stocks of Energy Sector R. Chitra , IJMBS Vol. 1, Issue 1, March 2011 ISSN : 2330-9519 (Online) | ISSN : 2231-2463 (Print)
- Venkatesh, C. K. and Ganesh, L (2011), Fundamental Analysis as a method of share valuation in comparison with Technical Analysis. INTERNATIONAL ECONOMICS & FINANCE JOURNAL, Vol. 6, No. 1, January-June (2011): 27-37