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## Data Analysis Of Share Market By Future And Option Chain

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### Abstract:

This research explores the effect of social media on investment decisions in the stock market, with specific reference to the influence of Facebook and Instagram on investor behavior. Investors have become more dependent on social media, as it has become a go-to source of real-time data, market sentiment, and trends. The research draws on data from surveys undertaken with different respondents to gain a better insight into the connection between social media usage and investment behavior. Implications of the findings are expected to shed light on the influence of social media on investors' decision-making process, specifically regarding risk perception, trust, and the tempo of investment behavior. Through the examination of these dynamics, the study hopes to inform policymakers, educators, and investors on how to best leverage social media to create well-informed and responsible investing behavior. Overall, this study illustrates the increasing importance of digital communication in financial markets and how it may increase and complicate the investment environment.

**Keywords:** Social Media, Stock Market, Investor Behavior, Financial Decision-Making, Online Platforms.

### Introduction:

- ▶ The exponential expansion of the social media has transformed a dissemination and uptake of information, particularly in the financial markets. Investors now no longer use only classical financial news but also tap into information obtained from social media. Tweets, posts, comments can influence investor opinion, and the impact reflects upward instantly in share prices. This study seeks to fill the knowledge gap in understanding individual investment choices affected by social media. As online platforms make up one's lifestyle, their influence on financial decision-making cannot be overlooked. This study seeks to bring more light regarding this influence and points to the influence of financial literacy in the usages of social media. As we seek to understand this changing dynamic, we need to learn about how investors process, consume, and respond to online information.

- ▶ The share market, also known as a stock market or equity market, is a marketplace where share of publicly traded companies are bought and sold. It play a crucial role in the global economy by allowing businesse to raise capital and giving investors a chance to earn returns on their investments.
- ▶ National Stock Exchange was incorporated in the year 1993 to bring about transparency in the Indian equity markets.
  - ▶ **Purpose of the Share Market:**
- ▶ A share market trading app allows users to buy, sell, and monitor stocks, commodities, ETFs, and other securities. I
- ▶ **1. For Companies:** It provides businesses with a way to raise fund by issuing share to the public. This capital can then be a used for expansion, product developments, or debt reduction.
- ▶ **For Investors:** It offers individuals and institutions an opportunity to invest in companies, giving them ownership and a stake in the company's growth and profitability.

### **Methodology:**

The present study utilizes a descriptive research design to collect information on investor behavior. A well-structured questionnaire was administered to a sample of 50 with different investment experience. Data were collected, tabulated, and analyzed to identify major trends and patterns. The research aimed to know qualitative and quantitative information about the relationship between investor and social media. Data were depicted in tabular form and basic statistical measures in Excel. Specialized software or sentiment mining did not have to be employed, and the examination remained rudimentary and tangible. The procedure is employed to effectively condense the answers and graphically illustrate how the different demographics utilize social media when investing.

### **1. Methodological Framework:**

The study uses a descriptive research design whose aim is to establish patterns and behaviour displayed by investors as affected by social media. The research design was applied because it can study existing conditions without having to manipulate the environment. It works best in studying attitudes and opinions through the use of surveys. The data presented were analysed using simple statistical analysis, to create informative findings towards determining patterns of behavior. The non-experimental design provides a true reflection of investor opinion and facilitates confirmation or falsification of existing research findings through collection of primary data.

### **2. Sampling Design:**

Simple random sampling technique was applied to collect unbiased data. 50 people filled in the questionnaire. Students, working professionals, and part-time investors formed the sample. The mixed sample assisted in providing a general impression of how different age group and professional utilize social media for stock market investments. The random choice technique also helped each subject have an equal chance of being picked, which strengthens the objectivity and credibility of the findings of the study.

### **3. Data Collection Methods:**

Data were gathered with an online Google Forms survey questionnaire. The questionnaire contained multiple-choice questions, Likert-scale questions, and demographics. Subjects covered varied from a social media website utilized to favored sources of investment counsel. The information gathered was then analyzed and quantified using Microsoft Excel to identify significant trend. This online method permitted convenience and speedy response, so that it could reach a high number of individuals in a brief time period. The instrument used for data collection was constructed to allow quantitative measurements as well as qualitative behavior so that the whole method of approaching the study was guaranteed. Findings and Discussion.

**Analysis:**

**Order Types:** Basic options include market, limit, stop-loss, and bracket orders. Advanced apps offer conditional and contingent orders, such as OCO (One Cancels Other).

**Research and Analysis Tools:** Essential for traders, these may include technical indicators, charts, and financial data like P/E ratios, EPS, etc

**Options and Futures:** For derivatives traders, options chains and futures prices need to be readily available.

**Algorithmic and Automated Trading:** Some advanced platforms allow for automation of trades using pre-set conditions.

**Based on the answers of the survey:**

- 90% know about the stock market.
- 65% of investor are guided by social media.
- 75% make use of Instagram to seek investment information, then Twitter and Telegram.
- 55% of the respondents spend less than 2 hours a day on financial content.
- 60% like making investment decisions influenced by influencers.
- 70% of the investors belong to the 18–25 age bracket.

The research indicates that investors belonging to younger age groups make more use of social media websites than traditional sources. Surprisingly, Instagram and Telegram appear to be more influential, while sites like YouTube were not included in this study. This indicates an interesting shift in the way information is gathered, added to the growing power of social media influencers in shaping investment decisions. The research indicates a growing inclination to trust such influencers, which can have profound long-term impacts on investor success or failure.

**Analysis:-**

NIFTY		CEOI	20	PEOI	499	INTRADAY		POSITIONAL	EXPIRY DATE			
24180.8		CE OI CHNG	0	PE OI CHNG	0			BULLISH	31-12-2026			
		CL VOLUME	0	PE VOLUME	0	STRONG		STRONG				
MAX CE OI	25000	PCR OI	PCR VOLUME	CE IV	PE IV							
MAX CEOI CHNG	25000	24.95	#DIV/0!	76.06	85.03							
MAX PE OI	23000											
MAX PEOI CHNG	23000											
CEOI	CE OI CHNG	CE VOLUME	CE IV	CE LTP CHNG	CE LTP	STRIKE	PELTP	PELTP CHNG	PE IV	PE VOLUME	PE OI CHNG	PE OI
21356	9107	33568	66.68	-1793.3	5619.45	23500	711.4	213.2	101.2	1498614	86773	348726
145	143	190	15.92	-2932.15	2369	38550	364.95	131.55	67.1	321699	5001	17355
1305	981	3456	25.82	-1549.05	2299.8	23600	643.65	191.9	82.72	803938	14336	80809
1929	1816	4328	26.34	-734.65	2171.55	23650	416.45	156	65.71	399369	12926	20833
3197	2665	14129	34.36	-1485.75	2697.85	23700	737.45	234.9	81.24	925949	43677	108853
1719	1625	3690	38.41	-4043.8	2961.95	23750	654.85	198.7	64.13	434387	11812	21427
16210	11008	47680	56.71	-3311.8	3433.15	23800	828.85	239.1	79.81	1462394	56844	131685
4177	3698	14383	34.53	-2099.8	1677.1	23850	886.15	426.6	79.01	539270	8876	25398
10375	9584	84597	59.71	-1560.55	3083.7	23900	1170.7	350.35	94.16	1356412	33876	103336
7511	6749	53097	47.17	-3409.2	2302.85	23950	1291.8	682	95.98	775389	10091	29598
144599	59797	777707	91.91	-1843	9237.9	24000	3279.8	613.3	146.32	3582610	29835	493311
15667	14161	257969	49.08	-1320.45	1685.05	24050	1167.85	333.55	76.48	1024943	11218	26062
67150	69003	1561500	85.79	-2228.05	3441.85	24100	1251.2	399.9	76.08	2970126	50271	120653
41744	39230	1207167	74.49	-3582.35	2680.25	24150	1614.85	564.8	90.66	1773989	23419	47658
131371	112380	2467063	84.66	-635.05	2959.35	24200	1731.05	508.75	90.8	3007667	45761	152746
48630	44152	1171438	74.59	-1892.5	2329.45	24250	1594.9	526.75	76.35	1269950	5630	23495
167389	130022	2247978	93.62	-1179.9	2874.5	24300	2005.05	588.65	90.2	2168988	-12711	128230
73170	56143	1044071	72.96	-1187.5	1969.4	24350	2180	675.8	91.06	847034	-963	36022
246904	78688	2755528	73.26	-806	1829.05	24400	2267.25	640.1	88.59	1780904	-67867	155274
97474	29920	1019149	82.81	-1021.1	2049.65	24450	2013.4	575.4	74.07	448447	-13358	65463
376860	94860	2909500	85.71	-908.6	1966.3	24500	2616.7	748.45	89.3	1080848	-49832	287723
53400	23074	697358	70.45	-719.35	1395.9	24550	2753.65	724.3	88.05	92919	-1468	19642
181186	68417	1559602	72.14	-623.35	1333.2	24600	3021.95	875.4	92.14	229914	-16642	70339
61240	19106	675716	72.3	-587.35	1235.05	24650	1998.5	593.2	59.99	33739	-1964	8782

Figure 1: Analysis of Nifty

- CEOI= SUMIF (NIFTY [CE expiry Date], Analysis \$L\$2, NIFTY [CE. Open Interest])
- CE OI CHNG=SUMIF (NIFTY [CE. Expiry Date], Analysis! \$ L\$2, NIFTY [CE. Change in Open Interest])
- CE VOLUME== SUMIF (NIFTY [CE. Expiry Date], Analysis! \$L\$2, NIFTY [CE. Total Traded Volume])
- MAX CE OI= SUMIFS (NIFTY [CE. Strike Price], NIFTY [CE. Open Interest], MAX (NIFTY [CE. Open Interest]))
- MAX CEOI CHNG= SUMIFS (NIFTY [CE. Strike Price], NIFTY [CE. Change in Open Interest], MAX (NIFTY [CE. Change in Open Interest]))
- INTRADAY =IF (F2>D2,"BULLISH", IF(D2>F2,"BEARISH",""))

- POSITIONAL= IF(F1>D1,"BULLISH", IF(D1>F1,"BEARISH", ""))
- CEIV / PEIV = Find the average
- PCR OI = PEOI/CEOI (find the ratio)
- PCR VOLUME= PE VOLUME/CE VOLUME

Commodity:-

NIFTY		CEOI	7041316	PEOI	6160099	INTRADAY	POSITIONAL
24180.8		CE OI CHNG	1749185	PE OI CHNG	835020	BEARISH	BEARISH
		CL VOLUME	40513816	PE VOLUME	38695363	STRONG	
MAX CE OI	25000						
MAX CEOI CHNG	25000	CE IV	76.06	PE IV	85.03	PCR OI	0.87
MAX PE OI	23000					PCR VOLUME	0.96
MAX PEOI CHNG	23000						

CEOI	CE OI CHNG	CE VOLUME	CE IV	STRIKE	PE IV	PE VOLUME	PE OI CHNG	PE OI
21356	9107	33568	66.68	23500	101.2	1498614	86773	346726
145	143	190	15.92	23550	67.1	321699	5001	17355
1305	981	3456	25.82	23600	82.72	803938	14336	80809
1929	1816	4328	26.34	23650	65.71	399369	12926	20833
3197	2665	14129	34.36	23700	81.24	925949	48677	108853
1719	1625	3690	38.41	23750	64.13	434387	11812	21427
16210	11008	47680	56.71	23800	79.81	1462394	36844	131685
4177	3698	14383	34.53	23850	79.01	539270	8876	25398
10375	9584	84597	59.71	23900	94.16	1356412	33876	103336
7511	6749	53097	47.17	23950	95.98	775389	10091	25958
144599	59797	777707	91.91	24000	146.32	3582610	29835	493311
15667	14161	257969	49.08	24050	76.48	1024943	11218	26062
67150	63003	1561500	85.79	24100	76.08	2970126	50271	120653
41744	39230	1207167	74.49	24150	90.66	1773989	23419	47658
131371	112300	2467063	84.66	24200	90.8	3007667	45761	152746
48630	44152	1171438	74.59	24250	76.35	1269950	5630	23495
167339	130022	2247978	93.62	24300	90.2	2168988	-12711	128230
73170	56143	1044071	72.96	24350	91.06	847034	-963	36022
246904	78688	2755528	73.26	24400	88.59	1780904	-67867	155274
97474	29920	1019149	82.81	24450	74.07	448447	-13358	65463
376860	94860	2909500	85.71	24500	89.3	1080848	-49832	287723

Result:

Main:-

NIFTY	Cumulative		Cumulative		Analysis		Analysis		
24329.2	CEOI	7347420	PEOI	7040112	INTRADAY	POSITIONAL	CE IV	PCR OI	
MAX CE OI	25000	CE OI CHNG	364608	PE OI CHNG	1012246	BULLISH	BEARISH	83.76	0.96
MAX CEOI CHNG	24800	CL VOLUME	47619326	PE VOLUME	42061024	STRONG	STRONG	PE IV	PCR VOLUME
MAX PE OI	23000							93.90	0.88
MAX PEOI CHNG	24000								

BANKNIFTY	Cumulative		Cumulative		Analysis		Analysis		
45595	CEOI	4321899	PEOI	3266168	INTRADAY	POSITIONAL	CE IV	PCR OI	
MAX CE OI	62000	CE OI CHNG	437547	PE OI CHNG	709575	BULLISH	BEARISH	84.16	0.76
MAX CEOI CHNG	52000	CL VOLUME	46457698	PE VOLUME	43141294	STRONG	STRONG	PE IV	PCR VOLUME
MAX PE OI	50000							81.87	0.93
MAX PEOI CHNG	50500								

FINNIFTY	Cumulative		Cumulative		Analysis		Analysis		
23879.75	CEOI	848753	PEOI	706945	INTRADAY	POSITIONAL	CE IV	PCR OI	
MAX CE OI	24000	CE OI CHNG	305895	PE OI CHNG	323616	BULLISH	BULLISH	33.76	0.83
MAX CEOI CHNG	24000	CL VOLUME	11688865	PE VOLUME	1.3E+07	STRONG	STRONG	PE IV	PCR VOLUME
MAX PE OI	23000							30.64	1.10
MAX PEOI CHNG	23800								

MIDCP NIFTY	Cumulative		Cumulative		Analysis		Analysis		
12409.65	CEOI	2496881	PEOI	2193874	INTRADAY	POSITIONAL	CE IV	PCR OI	
MAX CE OI	12400	CE OI CHNG	1782479	PE OI CHNG	1745491	BEARISH	BEARISH	23.73125	0.8786458
MAX CEOI CHNG	12400	CL VOLUME	59069062	PE VOLUME	50289970	STRONG	STRONG	PE IV	PCR VOLUME
MAX PE OI	12400							32.11375	0.8513758
MAX PEOI CHNG	12400								

The picture show a holistic option chain analysis of the four key indices: NIFTY, BANKNIFTY, FINNIFTY, and MIDCP NIFTY, organized in a result-driven format for positional and intraday traders alike. The index sections under each index outline the key information such as:

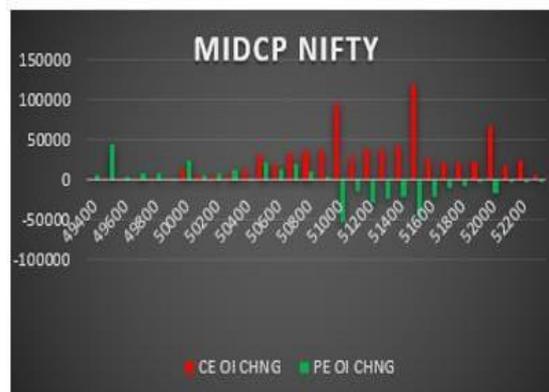
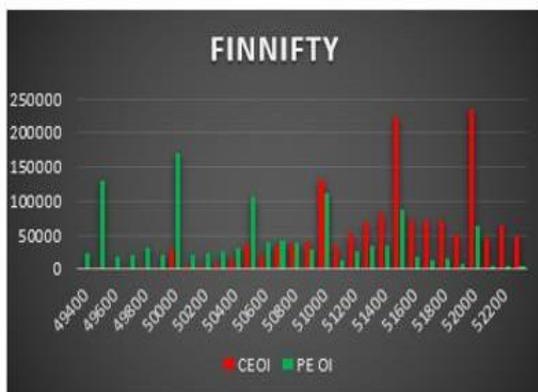
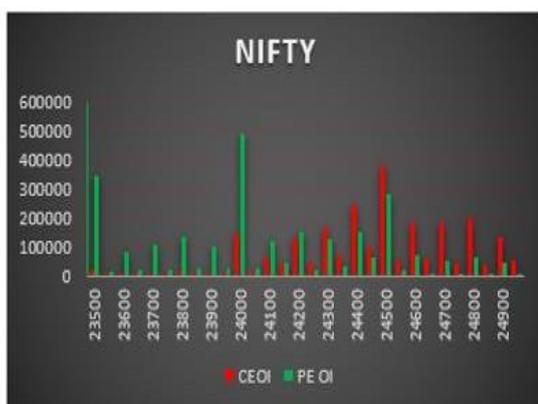
Max CE OI and Max PE OI and their variations, reflecting the position of the most open interest in calls and puts, and thus revealing strong resistance and support levels.

Cumulative Data (CEOI, PEOI, CE OI CHNG, PE OI CHNG, Volume) provides a general view of directional bias and market participation.

Implied Volatility (CE IV, PE IV) and Put Call Ratios (PCR OI, PCR Volume) are important parameters to measure the market sentiment. Bullishness is indicated by high PCR, whereas bearishness is shown by low PCR.

Also, there's an Analysis section providing aggregated insights in INTRADAY and POSITIONAL trends terms with phrases such as Bullish, Bearish, or Strong indicating momentum strength.

### Chart:-



### Conclusion:

Social media is found to have a significant role to play in making investment choices, especially in young investors. While giving instantaneous access to peer view and market sentiment, it also holds risks through misleading information. It is hence extremely important to have responsible generation and consumption of content. Social media has to be used as a secondary source of information and never as the primary grounds for financial choice. Increased digital financial literacy is the most meaningful step in empowering investors in the current digital age. Investment for the future is most likely to include a greater more active presence in digital media, and thus this type of research is an indispensable one in understanding and shaping investor behavior.

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