



Daily Derivatives Report

Nifty Futures

	Value	Change
Most recent settlement	24,839	0.5%▲
Open Interest (OI)	2,01,16,275	1.5%▼
Change in OI (abs)	2,01,16,275	3,13,125▼
Premium / Discount (Abs)	18	12▼
Inference	Short Covering	

Bank Nifty Futures

	Value	Change
Most recent settlement	56,332	0.3%▲
Open interest (OI)	25,24,375	0.5%▲
Change in OI (abs)	25,24,375	12,005▲
Premium / Discount (Abs)	110	16▲
Inference	Long Build Up	

Volatility Insights

	Value	Change
India VIX Index	11.53	0.53▼
Nifty ATM IV (%)	10.57	1.0▼
Bank Nifty ATM IV (%)	12.84	1.1▼
PCR (Nifty)	0.80	0.16▲
PCR (Bank Nifty)	0.69	0.00▲

The FII Long Ratio in Index Futures **drop** to 13.3 %, **down** from 14.6% in the previous session.

Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
AMBER	6,32,100	75.5%	7819.5	4.7%
BOSCHLTD	3,66,600	10.1%	39950	6.1%
APLAPOLLO	54,94,300	8.7%	1516.6	0.6%
INDUSINDBK	4,88,11,000	8.3%	811.1	0.9%
IGL	2,14,61,000	7.7%	205.67	0.8%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
COFORGE	1,70,87,625	6.3%	1715.2	-0.3%
IEX	4,34,77,500	4.6%	134.68	-3.3%
HAL	98,86,800	3.2%	4507.2	-0.2%
MARICO	2,10,44,400	2.7%	699.2	-0.1%
CANBK	22,01,98,500	2.3%	110.26	-0.3%

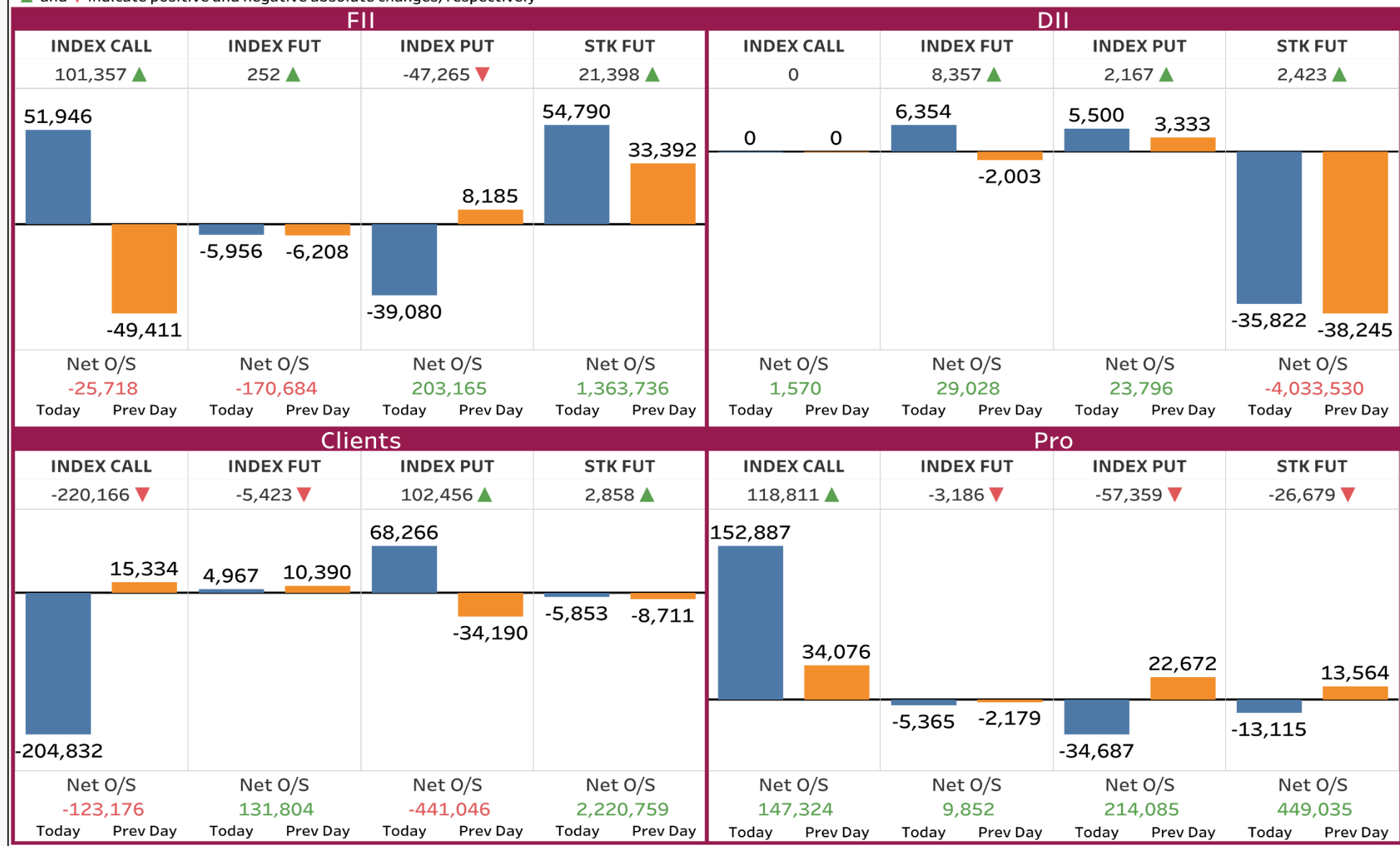
Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
MGL	9,11,200	-40.9%	1388.6	0.8%
BSOFT	52,02,600	-26.1%	409.25	6.4%
M&MFIN	1,05,49,336	-23.1%	251.8	1.2%
AARTIIND	75,85,625	-19.8%	442.05	3.3%
CHAMBLFERT	71,36,400	-14.4%	532.8	0.5%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
DELHIVERY	1,35,60,125	-6.9%	421.8	-1.7%
INOXWIND	4,14,36,608	-6.7%	156.72	-0.5%
ICICIBANK	9,63,46,600	-3.7%	1484.2	-0.2%
KFINTECH	22,32,000	-2.9%	1129.4	-1.9%
CHOLAFIN	1,21,06,875	-2.0%	1489.5	-0.2%

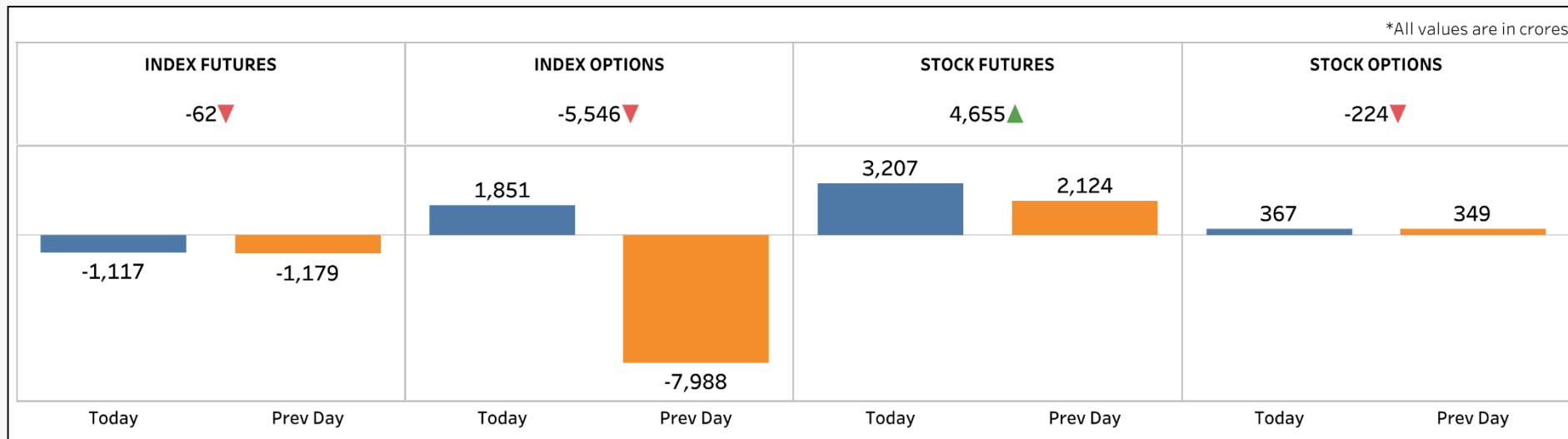
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

Open Interest Trends by Participant

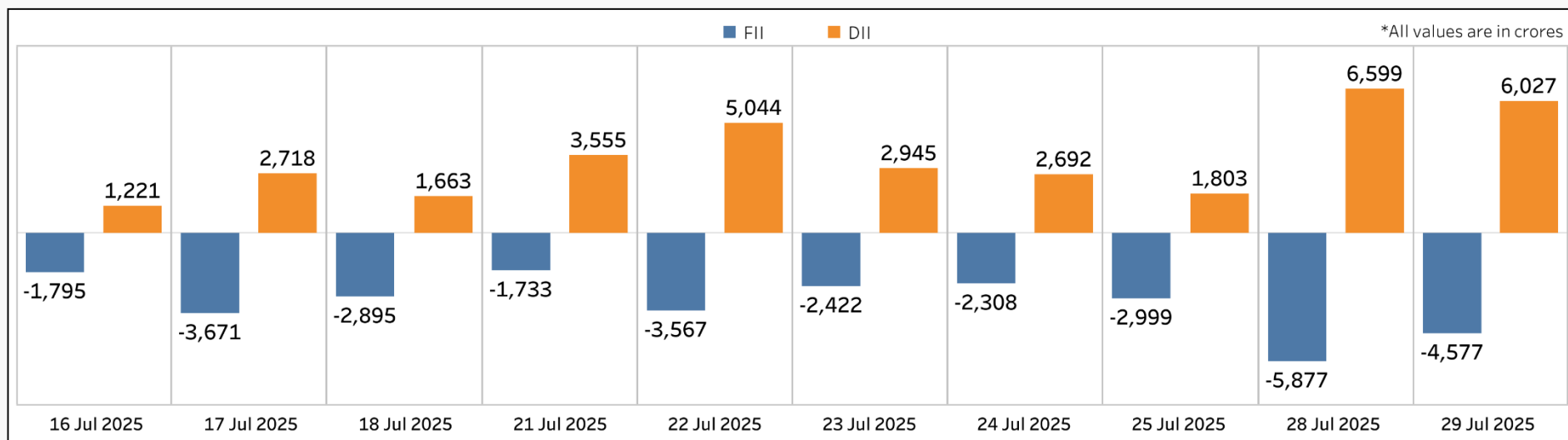
▲ and ▼ indicate positive and negative absolute changes, respectively



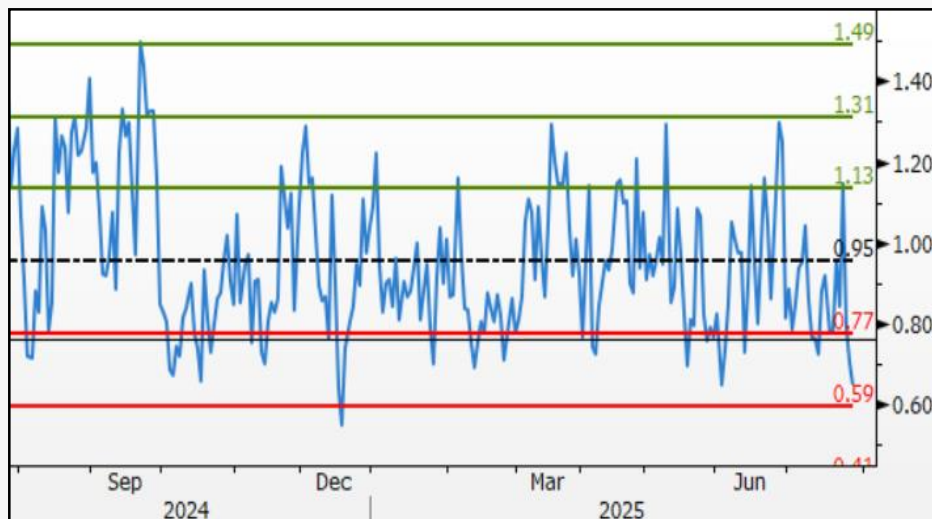
Daily Net Open Interest Change



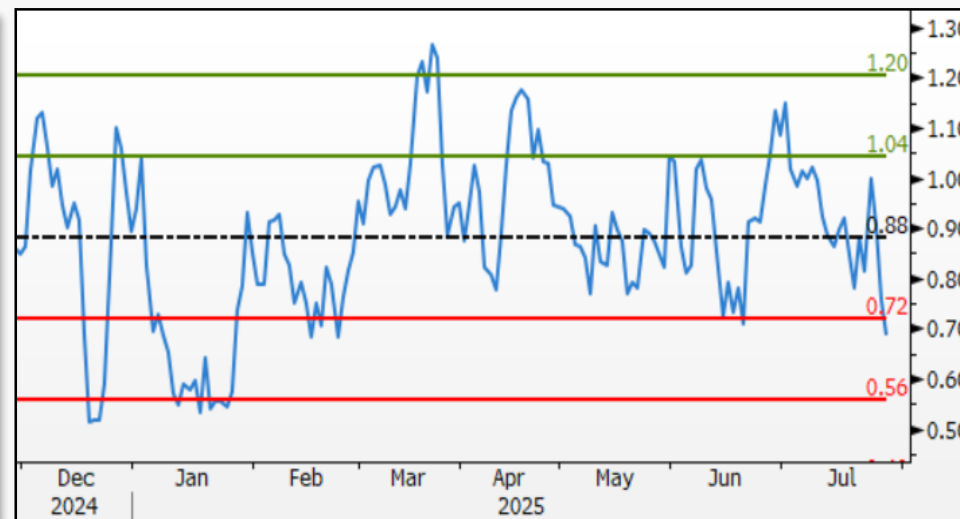
DII and FII Daily Cash Market Flows



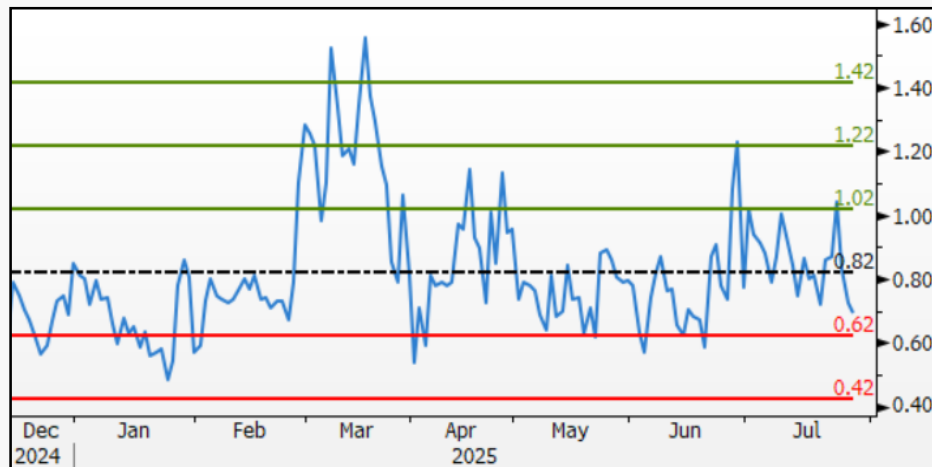
Nifty



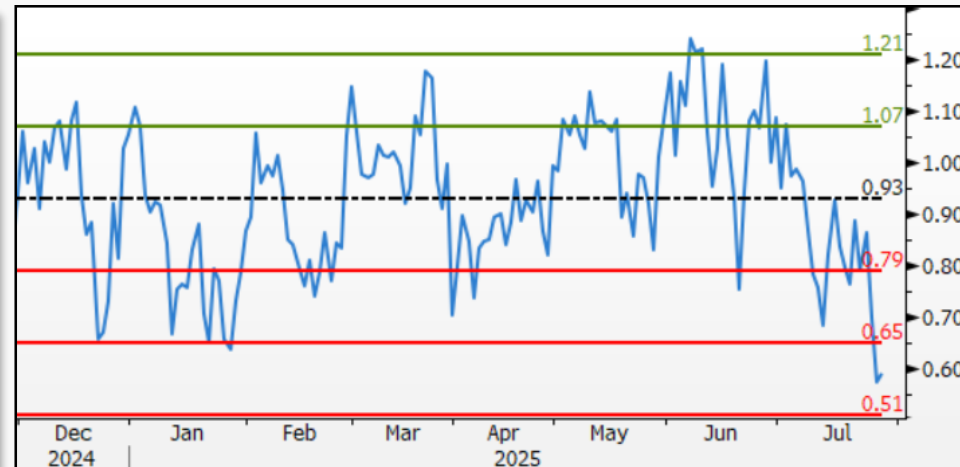
Bank Nifty



Fin Nifty

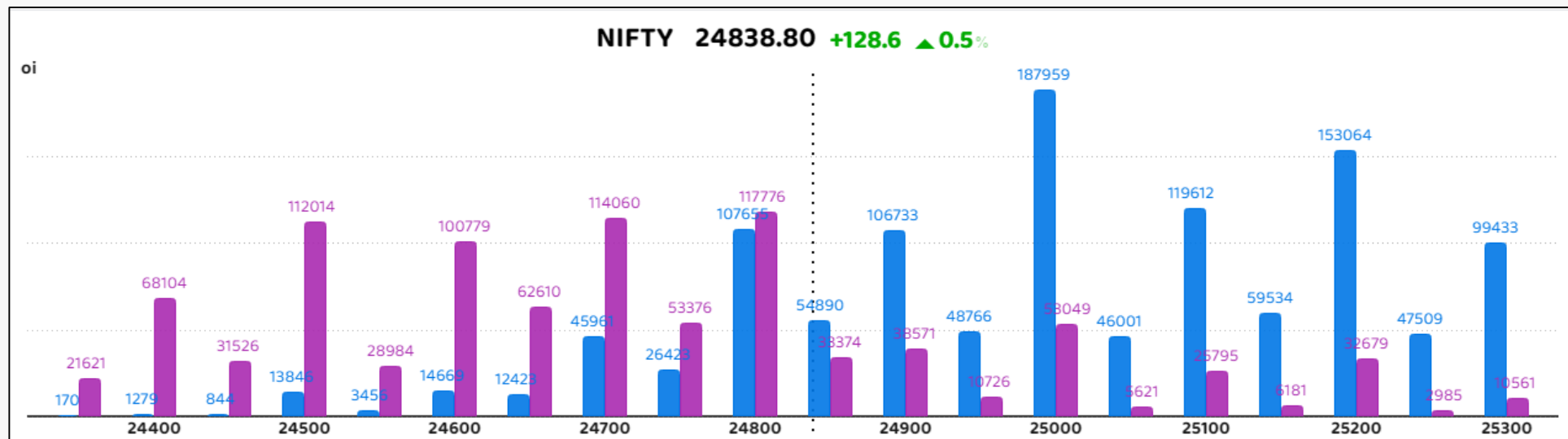


Midcap Select Nifty



Positioning Stack by Strike (Nifty Current Week Expiry & BankNifty Monthly Expiry)

Call  Put 



For the Nifty, the 25,000 Call and the 24,800 Put had the highest call and put concentration (contracts). For the Bank Nifty, the 57,000 Call and the 56,000 Put saw the most amount of open interest.

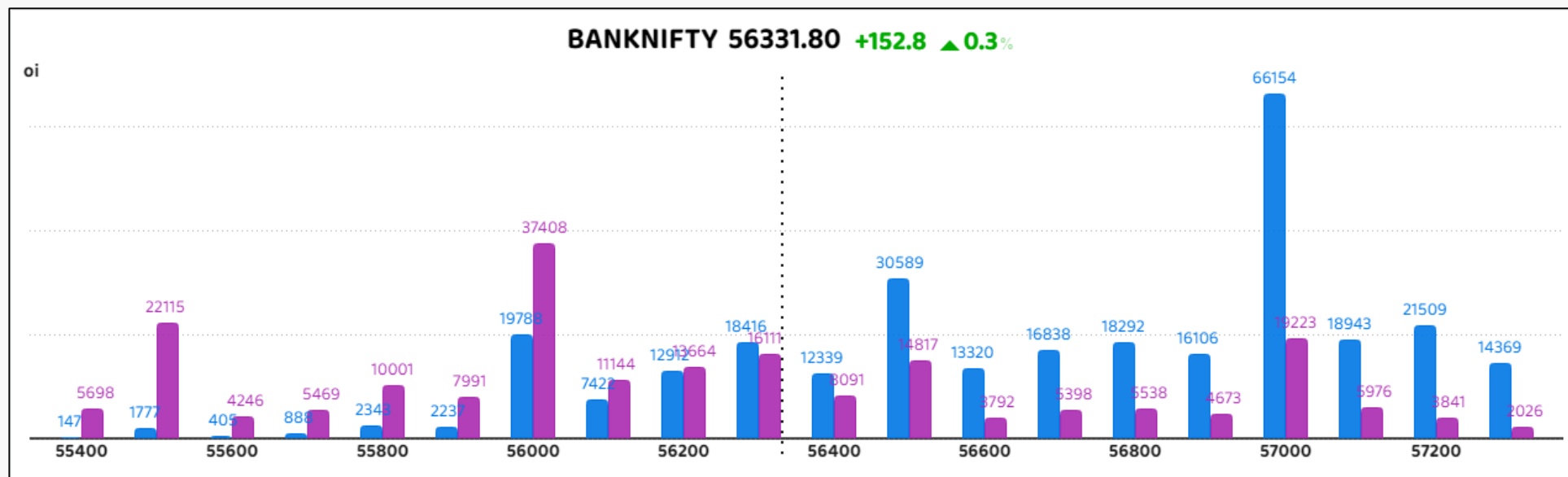
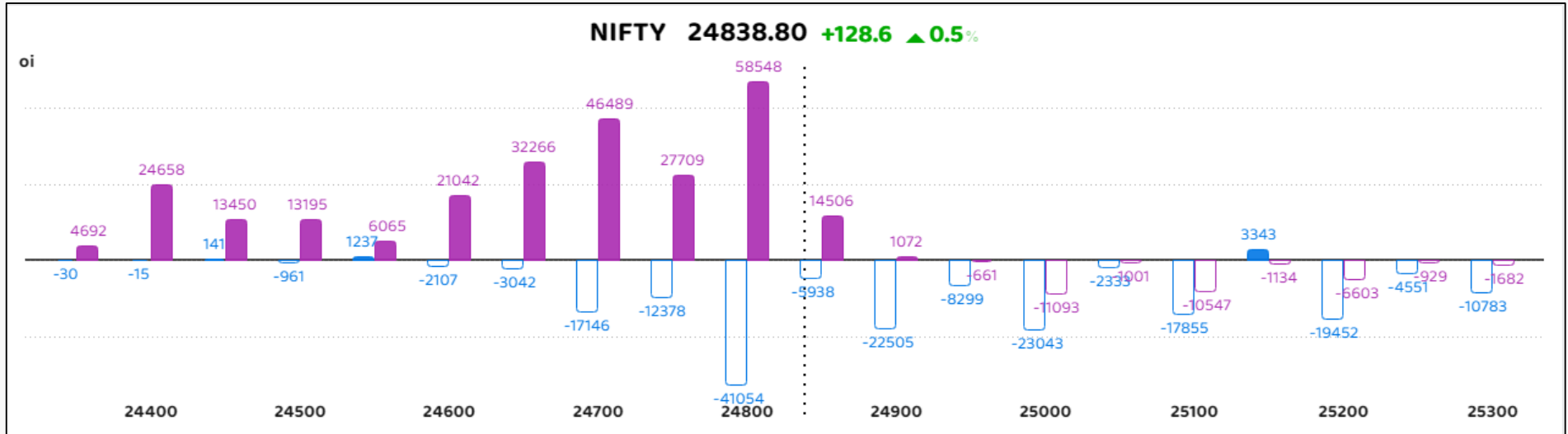


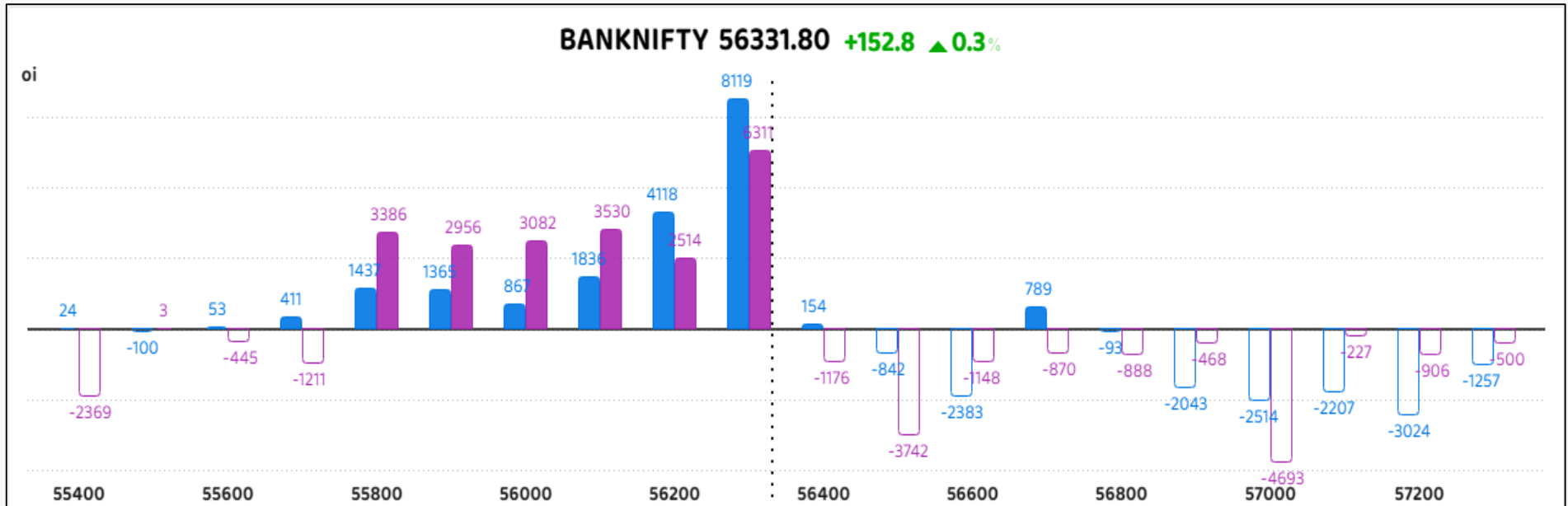
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

Open Interest Change (Nifty Current Week Expiry & BankNifty Monthly Expiry)

Call ■ Put ■



The largest open interest changes (contracts) were seen at the 24,800 Call and the 24,800 Put



For the Bank Nifty, the biggest open interest changes were seen at the 56,500 Call & the 56,500 Put

Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
BOSCH LTD	39915.0	4.3	35.4	35.4	3.3	100
RAIL VIKAS NIGAM	359.5	1.4	46.6	46.6	32.0	100
PIRAMAL ENTERPRI	1295.0	-0.1	52.3	55.3	15.3	92.4
SHREE CEMENT	30410.0	-0.9	27.6	31.9	7.9	82.3
MANKIND PHARMA L	2554.7	0.5	36.0	39.5	25.0	75.6

Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
HINDUSTAN ZINC	437.4	1.2	24.0	54.2	24.0	0
ACC LTD	1827.4	0.1	18.9	40.5	18.8	0.2
TATA TECHNOLOGIE	707.4	1.1	25.8	54.4	25.6	0.7
BALKRISHNA INDS	2735.6	1.5	18.1	42.7	17.8	1
TATA ELXSI LTD	6090.5	0.9	23.4	51.9	23.0	1.5

Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
BOSCH LTD	39915.0	4.3	35.4	35.4	3.3	100.0
RAIL VIKAS NIGAM	359.5	1.4	46.6	46.6	32.0	100.0
PIRAMAL ENTERPRI	1295.0	-0.1	52.3	55.3	15.3	99.8
INDIAN ENERGY EX	134.7	-3.2	48.4	76.3	25.8	97.8
MANKIND PHARMA L	2554.7	0.5	36.0	39.5	25.0	95.4

Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
HINDUSTAN ZINC	437.4	1.2	24.0	54.2	24.0	0.0
ACC LTD	1827.4	0.1	18.9	40.5	18.8	0.4
BALKRISHNA INDS	2735.6	1.5	18.1	42.7	17.8	0.6
UNION BANK INDIA	132.7	-0.5	26.9	52.4	26.2	1.0
TATA TECHNOLOGIE	707.4	1.1	25.8	54.4	25.6	1.3

Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
PI INDUSTRIES	4249.5	3.3	15884	3102	5.1
OBEROI REALTY	1664.8	2.3	23746	5445	4.4
BOSCH LTD	39915	4.3	109660	26763	4.1
TORRENT PHARMA	3768.1	4.0	78899	20210	3.9
SYNGENE INTERNAT	711.4	3.0	15708	4152	3.8

Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
YES BANK LTD	19.4	0.3	3002	6356	2.1
POWER GRID CORP	293.1	0.4	6659	9500	1.4
ETERNAL LTD	306.6	-0.2	49581	47342	1
BLUE STAR LTD	1744.9	0.3	2195	2050	0.9
GAIL INDIA LTD	183.0	1.3	28978	26650	0.9

Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Relative to Highest Call OI
BANK OF INDIA	112.2	0.6	7465	7465	100.0
TORRENT PHARMA	3768.1	4.0	6486	6535	99.3
APL APOLLO TUBES	1514.9	0.6	9993	10709	93.3
POONAWALLA FINCO	415.7	-1.1	4945	5398	91.6
TECH MAHINDRA LT	1453.8	0.2	23812	26423	90.1

Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Relative to Highest Put OI
TORRENT PHARMA	3768.1	4.0	4641	4641	100.0
PIRAMAL PHARMA L	205.6	0.6	2014	2014	100.0
APL APOLLO TUBES	1514.9	0.6	7125	7125	98.1
LAURUS LABS LTD	909.9	2.3	13160	13160	97.8
L&T FINANCE LTD	206.0	2.0	7135	7135	96.9

Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	Relative to Highest CV
VARUN BEVERAGES	512.2	5.2	127874	127874	100.0
TORRENT PHARMA	3768.1	4.0	78899	78899	100.0
JINDAL STAINLESS	677.9	2.7	10584	10584	100.0

Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	Relative to Highest PV
VARUN BEVERAGES	512.2	5.2	51648	51648	100.0
MAZAGON DOCK SHI	2720.4	-2.4	69614	69614	100.0

Call Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
PERSISTENT SYS	5176.5	0.5	35032	17131	2.0
KOTAK MAHINDRA	1972.7	0.3	41603	22270	1.9
LODHA DEVELOPERS	1246.5	3.6	8692	4714	1.8
COLGATE PALMOLIV	2215	0.4	13198	7765	1.7
NESTLE INDIA LTD	2223.7	-0.2	16620	9994	1.7

Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
SUPREME INDS LTD	4325.4	0.6	3184	1761	1.8
TORRENT PHARMA	3768.1	4.0	4641	2577	1.8
TATA CHEMICALS	1000.0	7.0	10211	5837	1.7
LODHA DEVELOPERS	1246.5	3.6	4909	2835	1.7
ETERNAL LTD	306.6	-0.2	33904	20307	1.7

Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
TATA CHEMICALS	1000.0	7.0	135706	17567	7.7
TORRENT PHARMA	3768.1	4.0	78899	11489	6.9
VARUN BEVERAGES	512.2	5.2	127874	22406	5.7
MAZAGON DOCK SHI	2720.4	-2.4	102821	19263	5.3
PI INDUSTRIES	4249.5	3.3	15884	3333	4.8

Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
MAZAGON DOCK SHI	2720.4	-2.4	69614	8999	7.7
TATA CHEMICALS	1000.0	7.0	44122	6073	7.3
TORRENT PHARMA	3768.1	4.0	20210	2976	6.8
PIRAMAL PHARMA L	205.6	0.6	10763	1630	6.6
VARUN BEVERAGES	512.2	5.2	51648	8112	6.4

Nifty 50 Constituents Open Interest (OI) Dashboard – Support / Resistance

Distance of Strike With Highest Open Interest From Current Market Price (%)

Stock Name	CE STRIKE	CE OI	%Away	CMP	PE Strike	PE OI	%Away	Stock Name	CE STRIKE	CE OI	%Away	CMP	PE Strike	PE OI	%Away
ADANIENT	2600	1434300	2.0%	2548	2600	692400	2.0%	ITC	420	9745600	2.8%	408	420	3531200	2.8%
ADANIPTS	1400	1120050	0.3%	1396	1400	1029800	0.3%	JIOFIN	330	7912450	2.8%	321	300	4309900	-6.6%
APOLLOHOSP	8000	316625	7.3%	7456	7000	142625	-6.1%	JSWSTEEL	1180	1299375	14.0%	1035	1000	585900	-3.4%
ASIANPAINT	2500	1410500	4.1%	2402	2300	525250	-4.2%	KOTAKBANK	2000	1343200	1.4%	1973	2100	662000	6.5%
AXISBANK	1200	5988125	12.8%	1064	1200	1213750	12.8%	LT	3700	2574250	5.8%	3496	3500	469350	0.1%
BAJAJ-AUTO	8500	171900	4.6%	8128	8000	99600	-1.6%	M&M	3300	931000	3.1%	3199	3200	409400	0.0%
BAJAJFINSV	2100	1158000	6.5%	1973	1760	331500	-10.8%	MARUTI	12800	585150	2.7%	12469	11200	73850	-10.2%
BAJFINANCE	950	2092500	7.2%	887	900	1320000	1.5%	NESTLEIND	2500	442250	12.4%	2224	2400	200750	7.9%
BEL	400	9302400	3.0%	388	380	3662250	-2.1%	NTPC	345	34470000	3.1%	335	345	3169500	3.1%
BHARTIARTL	2000	2386400	4.3%	1918	1900	693025	-1.0%	ONGC	250	18650250	3.5%	241	240	2081250	-0.6%
CIPLA	1600	1045125	1.7%	1574	1480	554625	-6.0%	POWERGRID	300	3750600	2.4%	293	290	2209700	-1.1%
COALINDIA	400	5196150	4.3%	384	395	2425950	3.0%	RELIANCE	1500	8118500	5.8%	1417	1400	1787500	-1.2%
DRREDDY	1300	1810000	0.0%	1300	1100	775000	-15.4%	SBILIFE	1860	1566375	1.5%	1833	1800	284250	-1.8%
EICHERMOT	5800	235550	6.0%	5471	5200	89600	-4.9%	SBIN	820	18447000	2.6%	799	820	6716250	2.6%
ETERNAL	315	6103725	2.8%	307	300	8637850	-2.1%	SHRIRAMFIN	700	2333925	9.7%	638	600	957000	-6.0%
GRASIM	2900	183000	5.7%	2743	2600	97750	-5.2%	SUNPHARMA	1720	2522450	0.6%	1711	1700	791700	-0.6%
HCLTECH	1580	885500	7.3%	1472	1440	360500	-2.2%	TATACONSUM	1100	1314500	3.6%	1062	980	504350	-7.7%
HDFCBANK	2020	5531900	-0.1%	2022	2000	2868250	-1.1%	TATAMOTORS	700	4647200	1.1%	692	680	2040000	-1.8%
HDFCLIFE	820	3043700	8.4%	756	740	1064800	-2.2%	TATASTEEL	170	18821000	5.1%	162	160	8134500	-1.0%
HEROMOTOCO	4500	676200	4.0%	4325	3700	149100	-14.5%	TCS	3400	1823500	11.3%	3056	3000	641725	-1.8%
HINDALCO	700	1871800	1.1%	693	670	952000	-3.3%	TECHM	1600	2230200	10.1%	1454	1390	332400	-4.4%
HINDUNILVR	2460	1110300	0.3%	2454	2300	549900	-6.3%	TITAN	3500	672175	3.6%	3379	3400	188825	0.6%
ICICIBANK	1490	2851100	0.3%	1486	1460	1764000	-1.8%	TRENT	5500	695500	10.0%	5002	6000	262400	20.0%
INDUSINDBK	900	3467800	11.4%	808	800	1039500	-1.0%	ULTRACEMCO	13000	164300	6.4%	12221	12000	58800	-1.8%
INFY	1600	3388000	5.7%	1514	1600	1082400	5.7%	WIPRO	270	8769000	7.2%	252	260	2754000	3.3%

If distance to call strike from current market price < distance to put strike from current market price, then the %Away for the call strike will be colored green

If distance to put strike from current market price < distance to call strike from current market price, then the %Away for the put strike will be colored red

If distance to call strike from current market price = distance to put strike from current market price, then the %Away columns will be uncolored

- Open interest **goes up** when **both** the buyer and the seller are **opening a new position**
- Open interest remains the **same** when one party is **opening a new position** and the other is **liquidating an existing position**
- Open interest **falls** when both the buyer and the seller are **liquidating existing positions**
- **Long build up:** Prices increase with a rise in open interest and is considered **bullish**
- **Long liquidation:** Existing longs liquidate their positions and open interest also falls; **moderately bearish**
- **Short build up:** Prices drop with a rise in open interest, and this is considered **bearish**
- **Short covering:** Existing shorts cover their positions, and open interest drop; this is **moderately bullish**
- PCR goes up when 1) both put and call open interest go up, but puts rise faster, or 2) both put and call open interest go down, but calls fall faster or, 3) when puts go up and calls go down
- Generally, a **rising PCR is bearish**, but when it reaches an extremely **high** reading, it means people are likely to take contrarian bets, i.e., they are likely to turn **bullish**
- PCR goes down when 1) both put and call open interest go up, but calls rise faster, or 2) both put and call open interest go down, but puts fall faster or, 3) when puts go down and calls go up
- Typically, a **falling PCR is bullish**, but when it reaches an extremely **low** reading, it means people are likely to take contrarian bets, i.e., they are likely to turn **bearish**

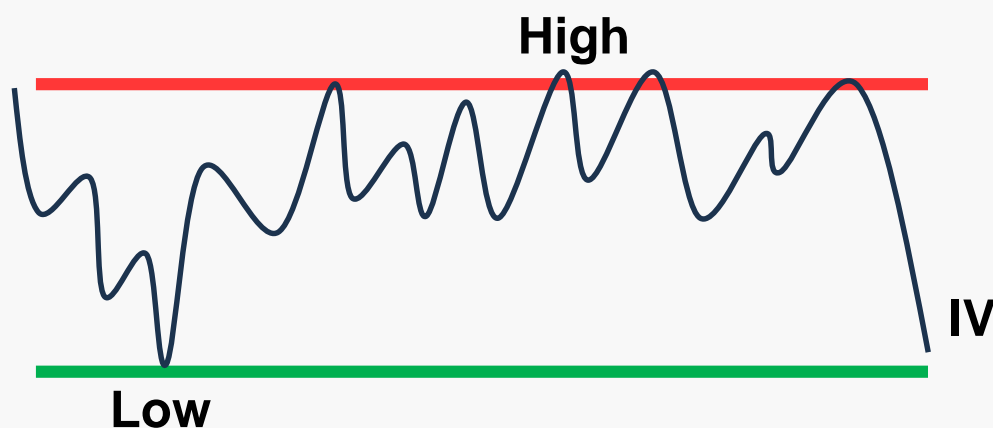
**ATM IV is the midpoint of the IV for the ATM call and put respectively*

- **Volume:** Number of contracts traded for the day. If A bought 10 calls & B sold 10 calls, the volume for the day is 10 contracts
- **Open Interest:** The number of derivatives contracts that are open (have not been closed out). If A bought 10 calls, B bought another 10 calls and C sold 20 calls, then the open interest for the day is 20 contracts
- **Total open interest:** Total of all open positions for all available expirations. It is the sum of all outstanding long positions OR short positions. This is because the total number of long positions must equal the total number of short positions
- **Premium:** When the front-month futures are more expensive than the cash market price. For instance, if Nifty futures (first month contract) are at 25,500 when the cash Nifty is at 25,450, the premium is 50 points
- **Discount:** When the front-month futures are cheaper than the cash market price. For instance, if Tata Steel futures (first month contract) are at 160 when the stock is trading at 162 in the cash market, the discount is 2 points
- **At-the-Money (ATM):** When the strike price of an option is the same as the spot price, the option is called an ATM option
- **Implied Volatility (IV):** Measure of how much a stock is expected to move in the future (in either direction)
- **Put-Call Ratio (PCR):** Ratio of total number of outstanding puts to total number of calls outstanding. If this ratio is more (less) than one, it means more puts (calls) are open relative to calls (puts)
- **Derivatives market participants:** Foreign Institutional Investors (FIIs), Domestic Institutional Investors (DII)s, proprietary traders and Retail investors
- **Derivatives Instruments:** Index options, index futures, stock options, stock futures
- **Expirations covered:** Index options (weekly, monthly), stock options, stock futures and index futures (monthly)
- For pages 7 to 11, “Last px” refers to the closing price of the cash market ticker
- **Source(s):** www.nseindia.com, Bloomberg, MyFnO

- **Strike concentration:** Visual representation of how many calls and puts are outstanding at each strike in the vicinity of the current underlying price. The strike with the highest call open interest is considered as resistance, while the put strike with the highest number of outstanding positions is considered as support
- **Shifting concentration:** Strikes with highest call and put concentration are dynamic in nature and keep changing as per movements in the markets
- **Implied Volatility Rank (IVR):** Measure of how expensive or cheap the IV of an ATM option is, relative to its 12-month history. The reading oscillates between 0 and 100



Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.



In this chart, notice that today's IV is close to the lowest low seen in the last 12 months. This means that IV for this option is cheap today compared to where it has traded over the last one year.

- **Implied Volatility Percentile (IVP):** Measures the number of days IV has been below the current IV in the last 252 trading days. The reading moves between 0 and 100.



In the chart to the left, one can see that the bulk of the time the IV has been below its current level. In this case, the IVP will be close to 100. An IVP of 100 means that 100% of the time IV has been below its current reading in the last one year.



Notice that IV has mostly traded at the high end of its one-year range, and there have been very few values below the current IV. In such a scenario, the IVP is going to be close to 0. An IVP of say, 5, means that IV has been below the current IV only 5% of the time in the last 252 trading sessions.

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