



Daily Derivatives Report

Nifty Futures

	Value	Change
Most recent settlement	22,480	0.7%▼
Open Interest (OI)	1,58,32,125	0.9%▼
Change in OI (abs)	1,58,32,125	140850▼
Premium / Discount (Abs)	81	14▼
Inference	Long Unwinding	

Bank Nifty Futures

	Value	Change
Most recent settlement	50,469	0.6%▼
Open interest (OI)	27,67,170	0.9%▲
Change in OI (abs)	27,67,170	25500▲
Premium / Discount (Abs)	228	29▼
Inference	Short Build Up	

Volatility Insights

	Value	Change
India VIX Index	21.43	1.0▲
Nifty ATM IV (%)	22.71	1.7▲
Bank Nifty ATM IV (%)	23.73	1.0▲
PCR (Nifty)	0.93	0.09▲
PCR (Bank Nifty)	0.78	0.03▼

The Long Ratio for FII Index Futures **fell** to 21.6%, **down** from 24.3 % in the **last session**..

Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
HUDCO	2,06,68,275	24.4%	213.29	3.3%
MAXHEALTH	1,06,32,300	5.2%	1126.35	4.5%
APOLLOTYRE	87,70,300	4.2%	408.45	1.7%
CUMMINSIND	32,21,550	4.1%	2786.05	1.1%
MFSL	66,72,000	3.5%	1167.45	2.7%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
MUTHOOTFIN	47,11,575	20.0%	2143.5	-6.9%
PHOENIXLTD	22,29,850	19.2%	1497.8	-5.0%
PNBHOUSING	25,47,350	17.6%	926.6	-4.0%
NATIONALUM	8,33,92,500	13.8%	144	-2.2%
IIFL	94,70,500	11.9%	325.25	-2.8%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
HINDUNILVR	1,57,28,400	-3.6%	2350.7	2.3%
MARICO	2,14,32,000	-3.3%	693.8	2.1%
ACC	31,55,700	-2.7%	1990.3	0.5%
AMBUJACEM	3,03,08,400	-2.7%	548	1.9%
DABUR	2,10,51,250	-2.6%	466.75	1.3%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
MANAPPURAM	4,89,33,000	-5.6%	226.16	-1.4%
BALKRISIND	27,56,100	-5.3%	2273.05	-1.8%
NTPC	8,64,07,500	-3.6%	350.4	-1.1%
JSL	70,49,400	-3.4%	512.4	-2.5%
SBICARD	1,52,58,400	-3.3%	847.85	-0.2%

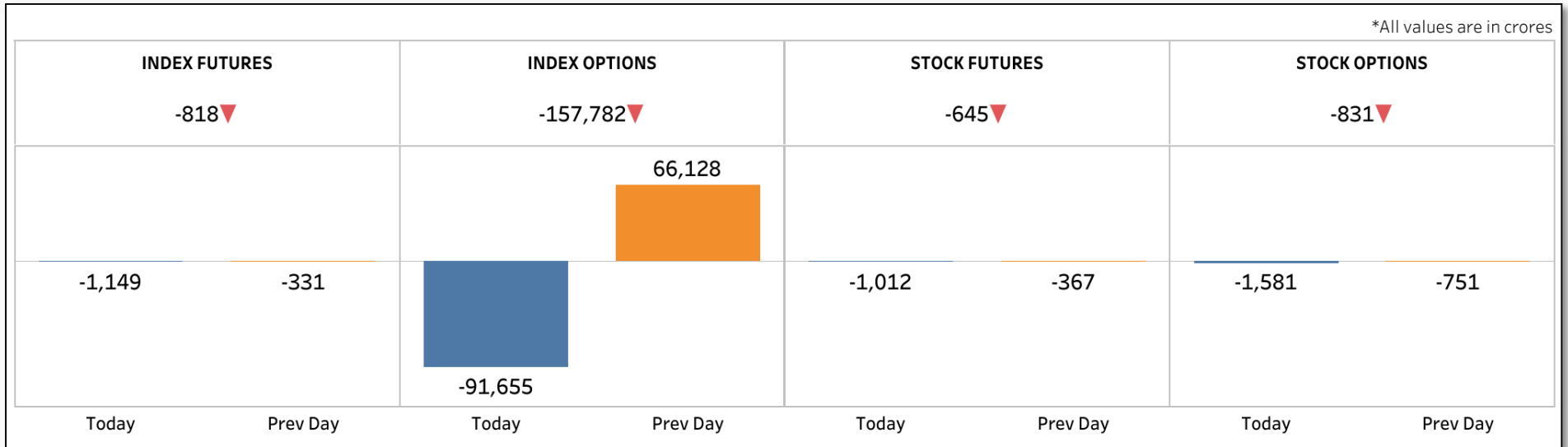
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

Open Interest Trends by Participant

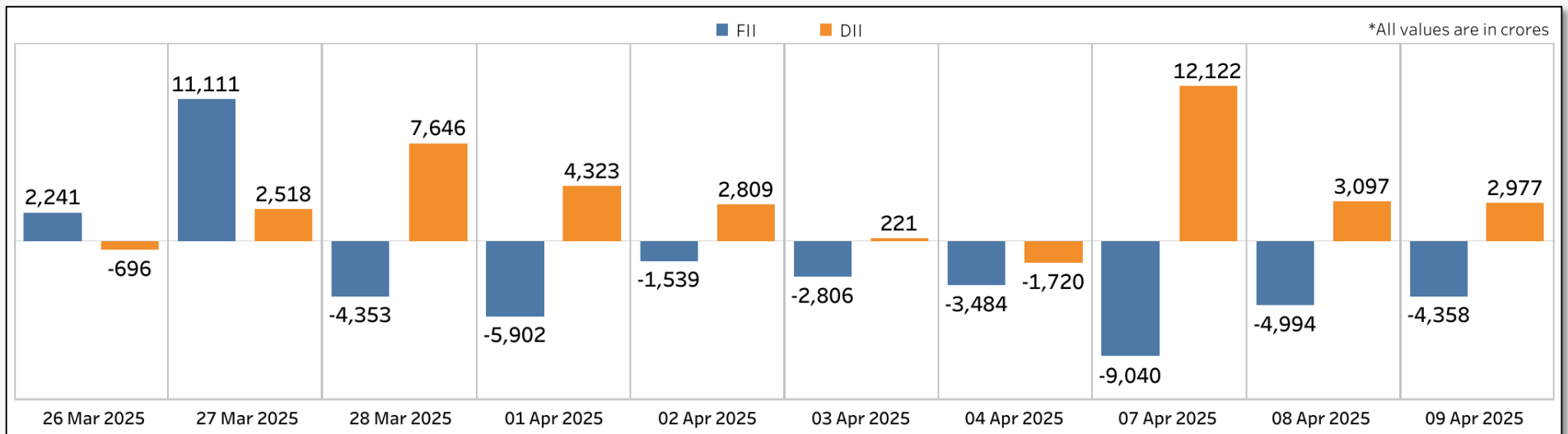
▲ and ▼ indicate positive and negative absolute changes, respectively

FII				DII			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
-397,561 ▼	-5,192 ▼	-377,125 ▼	-13,755 ▼	-60 ▼	-3,016 ▼	-7,022 ▼	-6,172 ▼
192,267		205,347					16,402
-205,294	-6,706 -1,514	-171,778	-21,770 -8,015	90 150	-480 2,536	-8,421 -1,399	10,230
Net O/S 225,144 Today Prev Day	Net O/S -93,116 Today Prev Day	Net O/S 365,626 Today Prev Day	Net O/S 1,515,140 Today Prev Day	Net O/S 310 Today Prev Day	Net O/S 75,449 Today Prev Day	Net O/S 51,477 Today Prev Day	Net O/S -3,779,448 Today Prev Day
Clients				Pro			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
309,935 ▲	10,795 ▲	330,300 ▲	6,144 ▲	87,688 ▲	-2,587 ▼	53,845 ▲	13,783 ▲
190,122		148,481		15,083		31,718	
-119,813	7,900 -2,895	-181,819	17,819 11,675	-72,605	-714 1,873	-22,127	-6,279 -20,062
Net O/S -172,563 Today Prev Day	Net O/S 38,080 Today Prev Day	Net O/S -358,922 Today Prev Day	Net O/S 1,842,011 Today Prev Day	Net O/S -52,890 Today Prev Day	Net O/S -20,413 Today Prev Day	Net O/S -58,182 Today Prev Day	Net O/S 422,297 Today Prev Day

Daily Net Open Interest Change

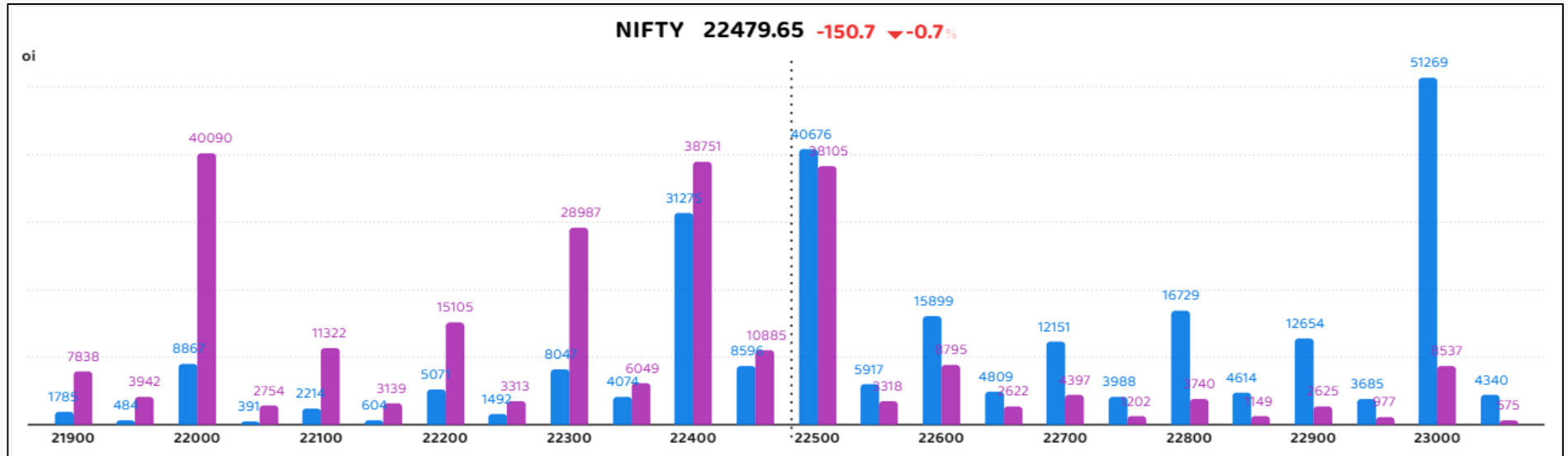


DII and FII Daily Cash Market Flows



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

Call ■ Put ■



For the Nifty, the 23000 Call and the 22000 Put had the highest call and put concentration (contracts). For the Bank Nifty, the 51000 Call and the 50000 Put saw the most amount of open interest.

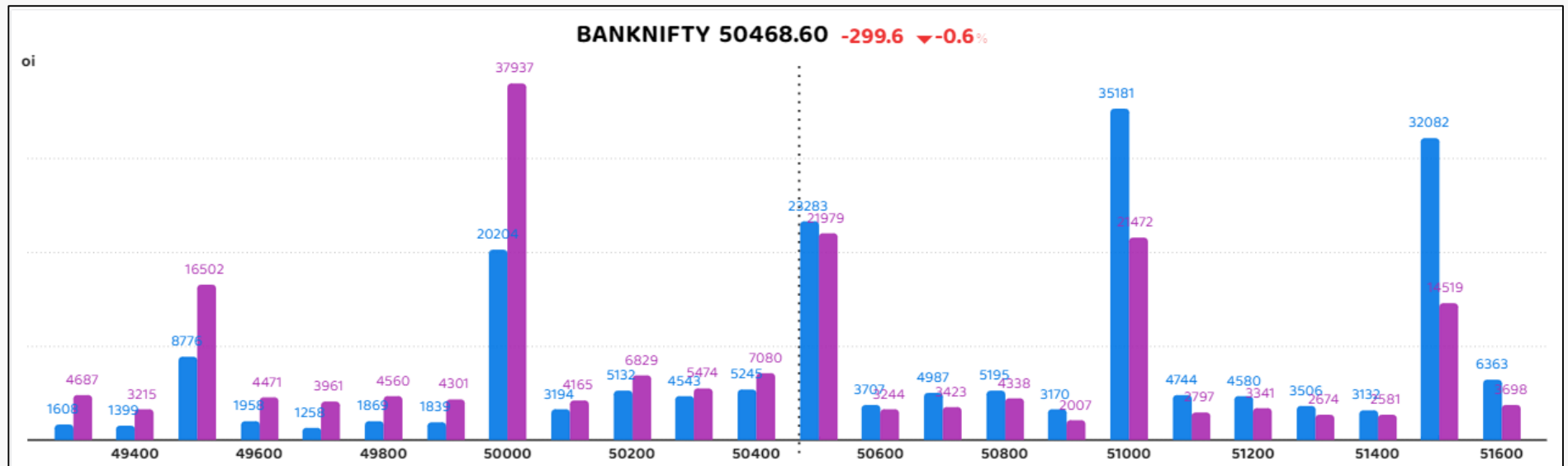
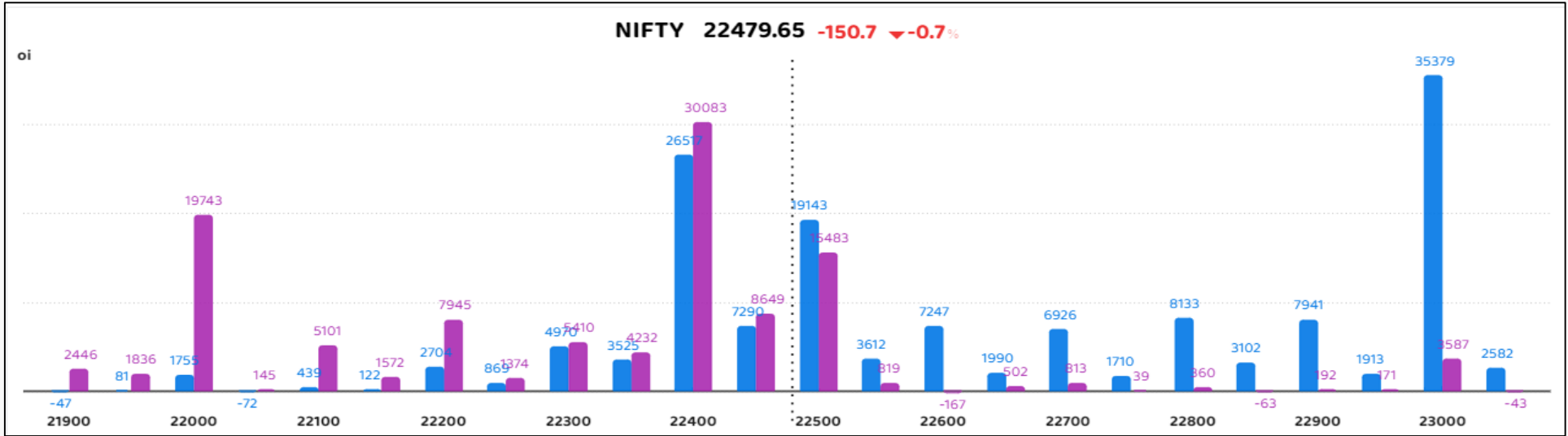


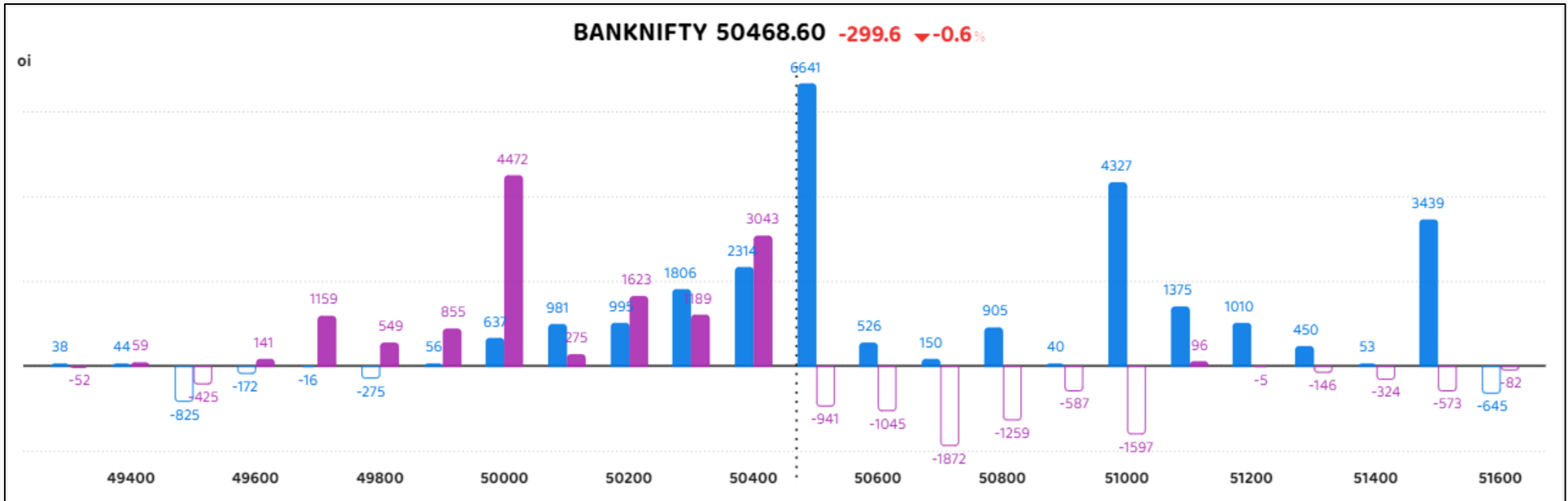
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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

Call ■ Put ■



The largest open interest changes (contracts) were seen at the 23000 Call and the 22400 Put



For the Bank Nifty, the biggest open interest changes were seen at the 50500 Call & the 50000 Put

Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
INDRAPRASTHA GAS	174.88	-2.9	63.7	63.7	22.8	100.0
IIFL FINANCE LTD	325.1	-2.5	73.1	73.1	37.2	100.0
TITAGARH RAIL SY	736.35	-2.9	62.5	62.5	45.3	100.0
INFO EDGE	6406.75	-3.6	54.0	54.0	23.7	100.0
LAURUS LABS LTD	564.25	-2.6	53.2	53.2	16.1	100.0

Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
APOLLO HOSPITALS	6834.1	1.2	12.9	40.3	12.9	0.0
NTPC LTD	349.35	-1.0	33.1	116.6	15.7	17.2
SOLAR INDUSTRIES	10873.55	-0.5	32.5	53.0	28.1	18.0
ADANI PORTS AND	1131.8	0.0	38.0	99.7	23.2	19.4
HDFC LIFE INSURA	684.8	-0.1	32.2	80.6	19.6	20.6

Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
INDRAPRASTHA GAS	174.88	-2.9	63.7	63.7	22.8	100.0
IIFL FINANCE LTD	325.1	-2.5	73.1	73.1	37.2	100.0
TITAGARH RAIL SY	736.35	-2.9	62.5	62.5	45.3	100.0
INFO EDGE	6406.75	-3.6	54.0	54.0	23.7	100.0
LAURUS LABS LTD	564.25	-2.6	53.2	53.2	16.1	100.0

Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
APOLLO HOSPITALS	6834.1	1.2	12.9	40.3	12.9	0.0
BIRLASOFT LTD	356.7	0.1	20.4	53.7	10.8	0.7
SOLAR INDUSTRIES	10873.55	-0.5	32.5	53.0	28.1	7.3
HINDUSTAN COPPER	196.24	1.9	31.4	83.2	16.3	7.6
MAX FINANCIAL SE	1164.55	2.8	29.5	49.3	18.6	17.9

Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
ESCORTS KUBOTA L	3128.75	1.7	7653	1335	5.7
KEI INDUS LTD	2599.7	0.4	10129	1928	5.3
COLGATE PALMOLIV	2508.1	2.8	22306	5305	4.2
PIDILITE INDS	2939.8	0.3	8719	2232	3.9
DABUR INDIA LTD	465.25	1.4	18987	5494	3.5

Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
SUN PHARMA INDU	1688.35	-2.1	20041	30003	1.5
DIVI LABS LTD	5387.3	0.0	9917	14667	1.5
TUBE INVESTMENTS	2569.1	-2.7	1671	2414	1.4
LTIMINDTREE LTD	4175.85	-1.6	11887	16137	1.4
GLENMARK PHARMA	1440.8	-4.5	17074	23131	1.4

Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Relative to Highest Call OI
COFORGE LTD	6472.6	-2.3	40911	40911	100.0
TITAGARH RAIL SY	758.7	-2.9	7401	7401	100.0
TATA TECHNOLOGIE	615.85	-0.4	5910	5910	100.0
PERSISTENT SYS	4595.3	-4.2	27755	27755	100.0
SONA BLW PRECISI	411.05	-0.9	5721	5721	100.0

Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Relative to Highest Put OI
TATA TECHNOLOGIE	613.15	-0.4	3210	3210	100.0
SONA BLW PRECISI	407.45	-0.9	2802	2802	100.0
AUROBINDO PHARMA	1058	-3.6	11837	11837	100.0
MANAPPURAM FINAN	224.93	-1.8	12717	13501	94.2
DELHIVERY LTD	243.35	-2.2	4499	4779	94.1

Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	Relative to Highest CV
MUTHOOT FINANCE	2139.95	-6.7	71899	86419	83.2

Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	Relative to Highest PV
IIFL FINANCE LTD	325.1	-2.5	9058	9058	100.0
MUTHOOT FINANCE	2139.95	-6.7	83007	83007	100.0

Call Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
AUROBINDO PHARMA	1058	-3.6	16975	6890	2.5
DELHIVERY LTD	243.35	-2.2	11837	4827	2.5
INDRAPRASTHA GAS	174.88	-2.9	10922	5077	2.2
KPIT TECHNOLOGIE	1078.35	-3.1	6763	3329	2.0
PERSISTENT SYS	4402.75	-4.2	27755	13807	2.0

Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
AUROBINDO PHARMA	1058	-3.6	11837	5296	2.2
DELHIVERY LTD	243.35	-2.2	4499	2462	1.8
MANAPPURAM FINAN	224.93	-1.8	12717	7328	1.7
DR REDDY'S LABS	1094.05	-1.3	14902	8776	1.7
ZYDUS LIFESCIENC	844.4	-1.7	5669	3425	1.7

Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
MUTHOOT FINANCE	2139.95	-6.7	71899	14781	4.9
NESTLE INDIA LTD	2344.85	3.1	51171	14741	3.5
GODREJ CONSUMER	1242.35	3.8	23465	9417	2.5
GLENMARK PHARMA	1376.3	-4.5	17074	7167	2.4
COLGATE PALMOLIV	2508.1	2.8	22306	9780	2.3

Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
MUTHOOT FINANCE	2139.95	-6.7	83007	11815	7.0
GLENMARK PHARMA	1376.3	-4.5	23131	6296	3.7
TORRENT PHARMA	3126.8	-3.7	5386	1751	3.1
AUROBINDO PHARMA	1058	-3.6	31140	11715	2.7
NESTLE INDIA LTD	2344.85	3.1	19454	8571	2.3

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	1257900	16.2%	2237	2600	2451300	16.2%	INFY	1600	2464800	14.0%	1404	1480	2913200	5.4%
ADANIPTS	1200	2049200	6.0%	1132	1200	1040800	6.0%	ITC	420	11020800	0.9%	416	400	3636800	-3.9%
APOLLOHOSP	6700	441375	-2.0%	6834	6700	171375	-2.0%	JSWSTEEL	1000	1015875	5.8%	946	900	1117125	-4.8%
ASIANPAINT	2400	905600	-0.5%	2411	2400	395800	-0.5%	KOTAKBANK	2200	1064800	7.2%	2053	2000	696400	-2.6%
AXISBANK	1100	3771250	3.6%	1062	1050	1326875	-1.1%	LT	3500	1283400	14.6%	3054	3500	349950	14.6%
BAJAJ-AUTO	8500	251550	12.3%	7572	6800	69075	-10.2%	M&M	2800	891625	11.0%	2523	2500	442925	-0.9%
BAJAJFINSV	2000	1516500	5.5%	1896	1800	530500	-5.0%	MARUTI	12000	359850	4.7%	11457	11000	97950	-4.0%
BAJFINANCE	9000	558625	3.0%	8736	8000	309500	-8.4%	NESTLEIND	2300	314200	-1.9%	2345	2300	226200	-1.9%
BEL	300	1.1E+07	7.1%	280	280	4391850	-0.1%	NTPC	360	13782000	3.0%	349	350	3156000	0.2%
BHARTIARTL	1800	3796200	4.9%	1716	1700	1195575	-0.9%	ONGC	260	16170000	17.1%	222	220	2951025	-0.9%
BPCL	290	4397400	0.7%	288	280	1818000	-2.8%	POWERGRID	300	5295600	2.2%	293	290	2197800	-1.2%
BRITANNIA	5500	73500	3.0%	5339	5000	126100	-6.4%	RELIANCE	1300	13506000	9.7%	1185	1200	2742500	1.2%
CIPLA	1500	1338675	6.0%	1416	1300	642850	-8.2%	SBILIFE	1600	1632750	8.0%	1482	1500	247125	1.2%
COALINDIA	400	4750200	6.8%	375	450	2440200	20.1%	SBIN	800	8848500	7.8%	742	800	4217250	7.8%
DRREDDY	1200	2148750	9.7%	1094	1000	1128750	-8.6%	SHRIRAMFIN	700	1423500	12.1%	625	600	816750	-3.9%
EICHERMOT	5500	207725	4.6%	5258	5000	178325	-4.9%	SUNPHARMA	1800	1370950	8.9%	1652	1600	804300	-3.2%
GRASIM	2600	161250	1.7%	2558	2500	240750	-2.3%	TATACONSUM	1100	696768	0.9%	1090	1000	539904	-8.2%
HCLTECH	1600	896350	15.9%	1380	1360	410550	-1.4%	TATAMOTORS	700	10901550	20.1%	583	500	3757600	-14.2%
HDFCBANK	1860	5973000	5.4%	1765	1760	2258850	-0.3%	TATASTEEL	160	30563500	25.8%	127	120	8948500	-5.6%
HDFCLIFE	700	5142500	2.2%	685	680	746900	-0.7%	TCS	3700	1355025	14.0%	3247	3000	871850	-7.6%
HEROMOTOCO	4000	453450	10.8%	3611	3600	181350	-0.3%	TECHM	1500	932400	17.9%	1273	1200	520200	-5.7%
HINDALCO	700	4202800	24.1%	564	600	1327200	6.4%	TITAN	3200	453775	0.8%	3174	3000	323225	-5.5%
HINDUNILVR	2300	3311400	-2.1%	2350	2300	1173300	-2.1%	TRENT	5000	526500	8.2%	4620	4000	263500	-13.4%
ICICIBANK	1400	1933400	7.6%	1301	1300	2629900	-0.1%	ULTRACEMCO	12500	118550	9.7%	11397	11000	44750	-3.5%
INDUSINDBK	700	2750500	3.2%	679	500	1409500	-26.3%	WIPRO	270	6264000	14.1%	237	240	2580000	1.4%

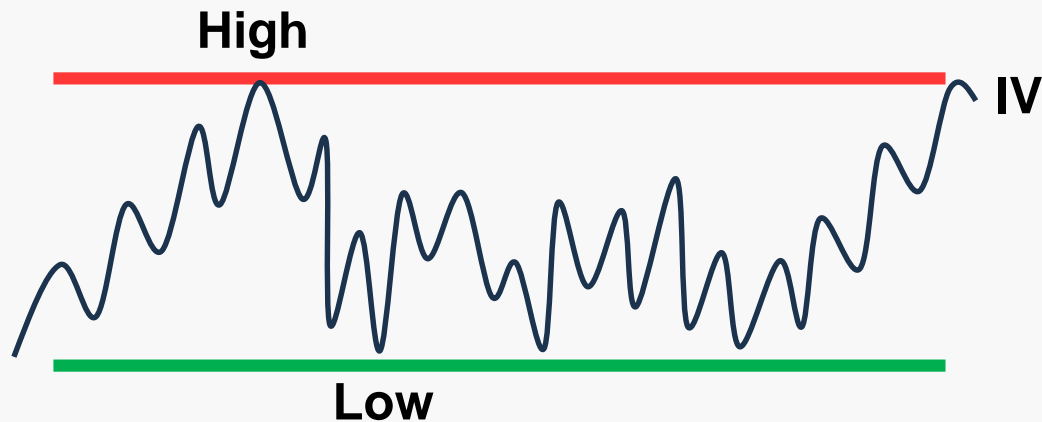
If distance to call strike from current market price < distance to put strike from current market price, then the %Away for the call strike will be colored green
 If distance to put strike from current market price < distance to call strike from current market price, then the %Away for the put strike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

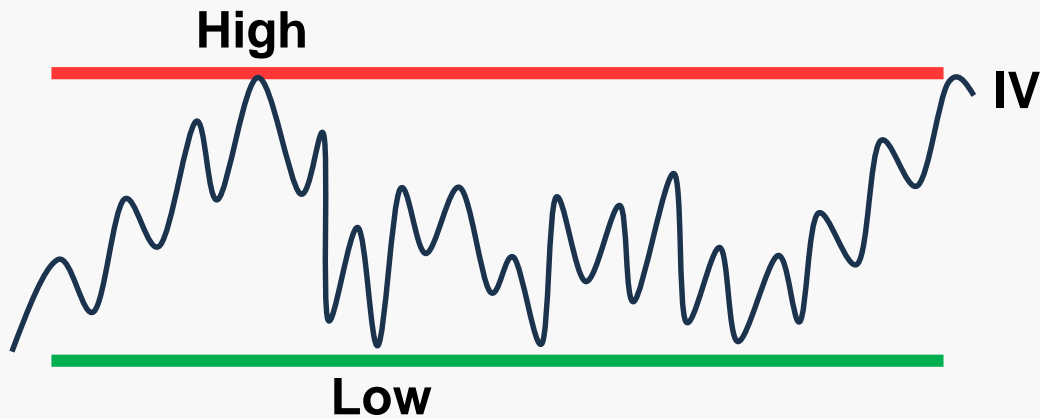


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.



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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