



Daily Derivatives Report

Nifty Futures

	Value	Change
Most recent settlement	22,516	0.6% ▼
Open Interest (OI)	1,98,79,875	1.3% ▼
Change in OI (abs)	1,98,79,875	2,54,025 ▼
Premium / Discount (Abs)	55	42 ▼
Inference	Long Unwinding	

Bank Nifty Futures

	Value	Change
Most recent settlement	48,315	0.8% ▼
Open interest (OI)	42,42,630	8.0% ▲
Change in OI (abs)	42,42,630	3,12,600 ▲
Premium / Discount (Abs)	99	84 ▼
Inference	Short Build Up	

Volatility Insights

	Value	Change
India VIX Index	13.98	0.5 ▲
Nifty ATM IV (%)	13.08	0.5 ▲
Bank Nifty ATM IV (%)	15.36	0.8 ▲
PCR (Nifty)	0.91	0.17 ▼
PCR (Bank Nifty)	0.93	0.06 ▼

The Long Ratio for the FII Index Futures drop to 18.2%, against 18.5% recorded in the previous session.

Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
PATANJALI	18,87,600	4.7%	1755.05	0.1%
POLICYBZR	59,75,125	4.1%	1427.6	1.8%
POONAWALLA	1,59,05,050	3.8%	285.8	0.8%
MFSL	48,32,000	2.1%	1042.2	0.2%
ADANIENSOL	1,08,75,625	1.9%	760.25	1.3%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
PHOENIXLTD	13,13,200	16.2%	1552	-0.7%
BSE	60,37,375	15.5%	3982.45	-4.8%
CDSL	1,25,14,950	8.6%	1088.35	-5.1%
HINDPETRO	4,89,13,875	8.5%	326.25	-2.3%
BSOFT	1,13,43,000	8.4%	411.15	-5.6%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
PIIND	14,91,500	-8.7%	3257.65	0.8%
POWERGRID	8,95,51,800	-4.3%	271.55	2.7%
HAVELLS	66,39,000	-3.8%	1470.3	0.4%
ASIANPAINT	1,45,49,600	-1.8%	2282.8	0.5%
HDFCLIFE	2,56,41,000	-1.8%	626.3	0.1%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
HINDALCO	3,91,72,000	-4.4%	689.5	-0.4%
HAL	89,60,100	-4.0%	3419.9	-1.2%
JSWSTEEL	2,72,20,725	-3.5%	1014.15	-0.1%
JKCEMENT	5,76,125	-3.2%	4403.85	-0.7%
CUMMINSIND	34,26,450	-3.0%	2864.6	-1.6%

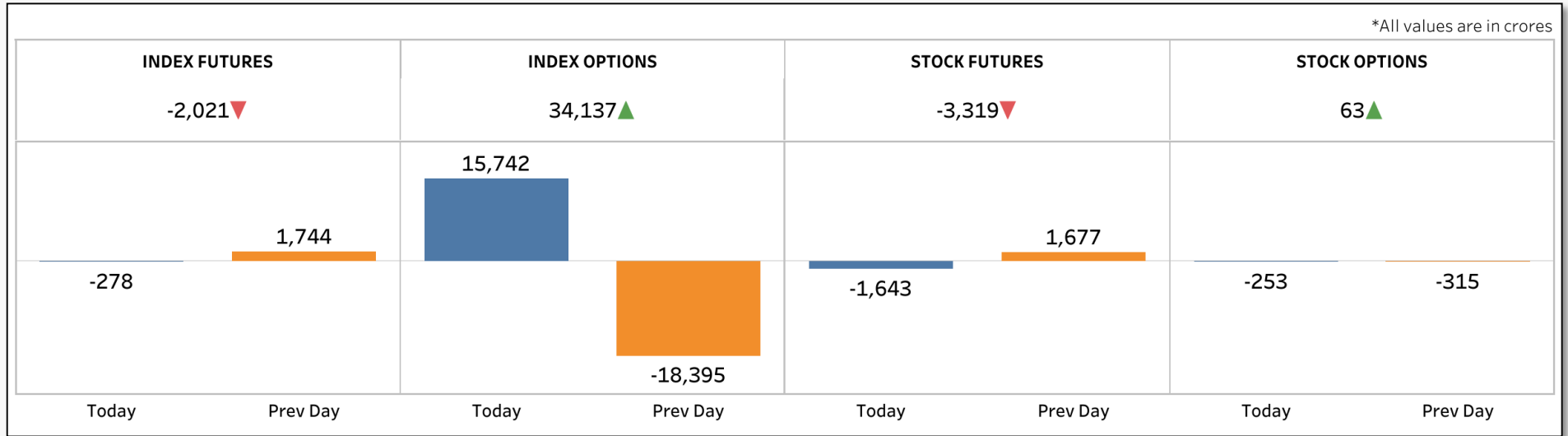
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

Open Interest Data by Participant

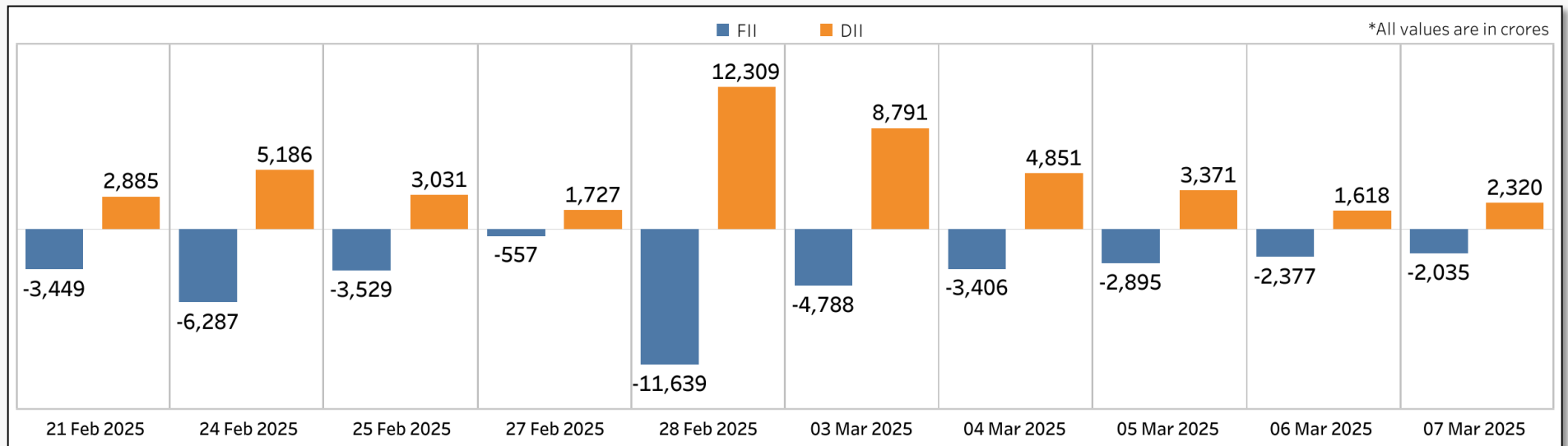
▲ and ▼ indicate positive and negative absolute changes, respectively

FII				DII			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
43,307 ▲	-12,026 ▼	80,584 ▲	-50,652 ▼	0	-10,172 ▼	1,500 ▲	-20,160 ▼
35,745		50,464					41,392
	10,223		23,952		8,616		21,232
-7,562	-1,803			0		0	
		-30,120	-26,700		-1,556	-1,500	
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
83,305	-153,439	247,031	1,542,900	4,870	51,494	16,094	-3,965,524
Today	Prev Day	Today	Prev Day	Today	Prev Day	Today	Prev Day
Clients				Pro			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
6,745 ▲	6,493 ▲	20,142 ▲	21,452 ▲	-50,052 ▼	15,705 ▲	-102,227 ▼	49,360 ▲
			4,918			75,171	
-5,795	-852			20,102	4,211		550
-12,540	-7,345				-11,494		
		-23,408	-16,534	-29,950		-27,056	
		-43,550					-48,810
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
-267,893	135,837	-234,903	2,053,251	179,718	-33,892	-28,224	369,373
Today	Prev Day	Today	Prev Day	Today	Prev Day	Today	Prev Day

Daily Net Open Interest Change

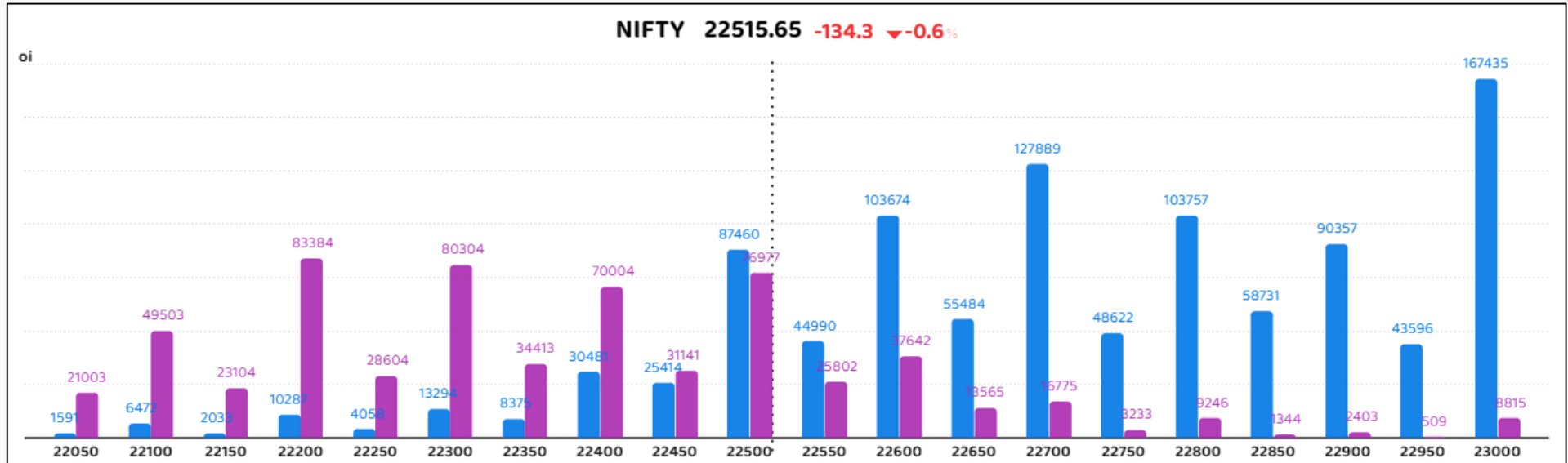


DII and FII Daily Cash Market Flows



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

Call ■ Put ■



For the Nifty, the 23000 Call and the 22200 Put had the highest call and put concentration (contracts). For the Bank Nifty, the 49000 Call and the 48000 Put saw the most amount of open interest.

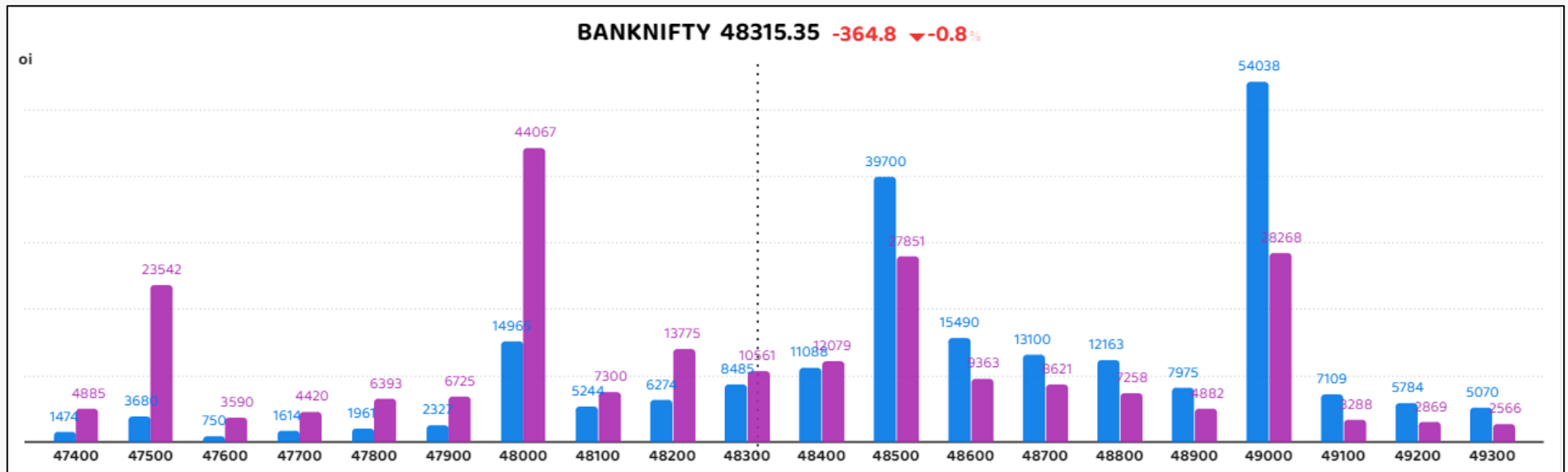
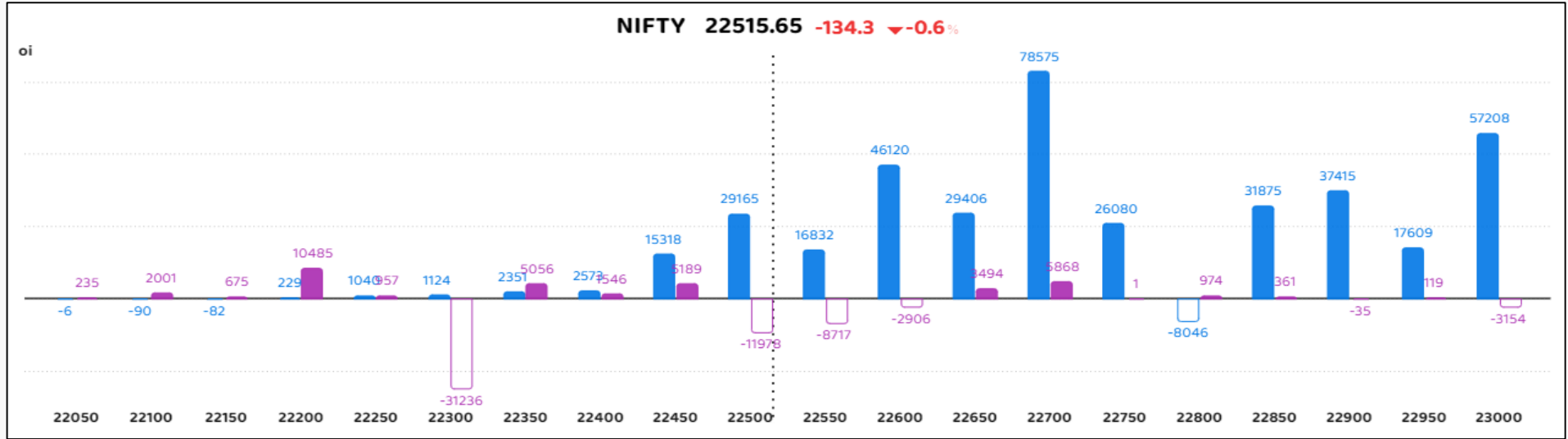


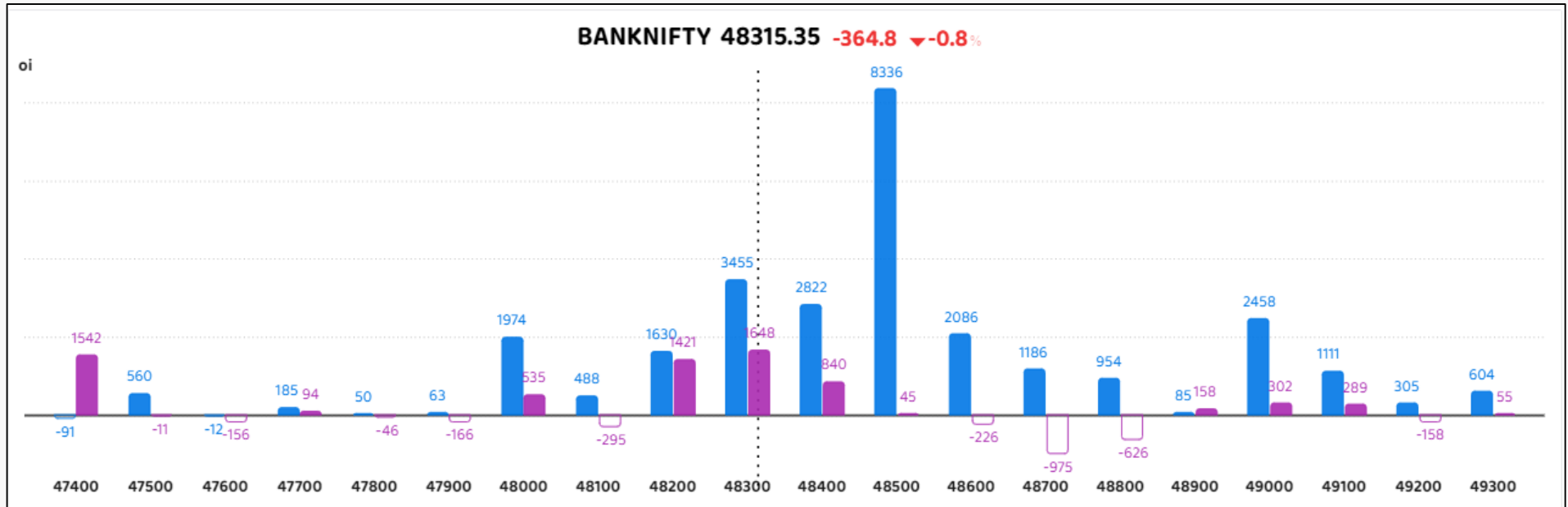
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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

Call ■ Put ■



The largest open interest changes (contracts) were seen at the 22700 Call and the 22300 Put



For the Bank Nifty, the biggest open interest changes were seen at the 48500 Call & the 48300 Put

Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
ADANI PORTS AND	1142.9	-0.1	99.7	99.7	23.2	100.0
OIL INDIA LTD	362.85	-1.9	51.8	51.9	31.3	99.5
BIRLASOFT LTD	409.75	-5.7	52.7	53.7	10.8	97.5
LAURUS LABS LTD	559	-2.1	43.8	44.8	16.1	96.6
DIXON TECHNOLOGI	13131.15	-5.6	47.6	51.5	1.8	92.2

Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
IIFL FINANCE LTD	313.7	-2.6	37.2	62.1	37.2	0.0
TATA TECHNOLOGIE	653.7	-2.7	34.0	47.2	34.0	0.0
MACROTECH DEVELO	1075.7	-3.4	31.7	57.6	31.7	0.0
BALKRISHNA INDS	2555.85	-0.1	18.3	58.3	17.8	1.2
DR REDDY'S LABS	1120.2	-1.2	14.9	35.3	14.4	2.3

Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
ADANI PORTS AND	1142.9	-0.1	99.7	99.7	23.2	100.0
OIL INDIA LTD	362.85	-1.9	51.8	51.9	31.3	99.9
BIRLASOFT LTD	409.75	-5.7	52.7	53.7	10.8	99.8
LAURUS LABS LTD	559	-2.1	43.8	44.8	16.1	99.2
CENTRAL DEPOSITO	1107.3	-4.0	51.1	53.8	31.2	98.5

Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
IIFL FINANCE LTD	313.7	-2.6	37.2	62.1	37.2	0.0
TATA TECHNOLOGIE	653.7	-2.7	34.0	47.2	34.0	0.0
MACROTECH DEVELO	1075.7	-3.4	31.7	57.6	31.7	0.0
ICICI BANK LTD	1214.85	0.0	10.4	46.1	9.3	0.5
MARICO LTD	607.3	-0.4	15.0	38.6	14.2	0.7

Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
PHOENIX MILLS	1551.7	-0.5	5826	1308	4.5
BERGER PAINTS	504.5	-1.0	6619	1507	4.4
TORRENT POWER LT	1349.9	1.3	6387	1511	4.2
ACC LTD	1860.6	-1.3	15991	4318	3.7
SUPREME INDS LTD	3319.5	-2.1	5999	1718	3.5

Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
L&T TECHNOLOGY S	4653.55	-3.5	3729	10450	2.8
LAURUS LABS LTD	559	-2.1	9723	16048	1.7
BIRLASOFT LTD	409.75	-5.7	8500	9977	1.2
ZYDUS LIFESCIENC	893.7	-0.8	4713	5436	1.2
GRANULES INDIA	478.65	-2.9	5196	5965	1.1

Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Call OI Diff
TITAGARH RAIL SY	709	-6.6	3681	3681	100.0
SOLAR INDUSTRIES	9837.1	3.7	2811	2811	100.0
TATA TECHNOLOGIE	653.7	-2.7	2635	2635	100.0
BSE LTD	3998.95	-4.3	88094	88094	100.0
INDIAN RENEWABLE	143.95	-3.8	4012	4012	100.0

Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Put OI Diff
JINDAL STAINLESS	640.6	-2.1	1675	1675	100.0
TITAGARH RAIL SY	709	-6.6	1889	1889	100.0
SOLAR INDUSTRIES	9837.1	3.7	1611	1611	100.0
TATA TECHNOLOGIE	653.7	-2.7	1695	1695	100.0
BSE LTD	3998.95	-4.3	38796	38796	100.0

Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	CV Diff
SOLAR INDUSTRIES	9837.10	3.7	14560	14560	100.0

Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	PV Diff
ADANI ENERGY SOL	759.1	1.5	13979	14332	97.5
TITAGARH RAIL SY	709	-6.6	6377	7284	87.6

Call Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
TITAGARH RAIL SY	709	-6.6	3681	1562	2.4
BSE LTD	3998.95	-4.3	88094	42277	2.1
INDUSIND BANK	900.5	-3.9	69626	33994	2.0
KEI INDUS LTD	3030.75	-6.0	12254	6474	1.9
BAJAJ AUTO LTD	7383.4	-2.5	30065	19422	1.5

Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
TITAGARH RAIL SY	709	-6.6	1889	896	2.1
KEI INDUS LTD	3030.75	-6.0	6536	3333	2.0
SOLAR INDUSTRIES	9837.1	3.7	1611	965	1.7
BALKRISHNA INDS	2555.85	-0.1	1688	1071	1.6
HINDUSTAN COPPER	217.47	-2.9	3798	2414	1.6

Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
INDUSIND BANK	900.5	-3.9	162717	44158	3.7
AARTI INDUS LTD	391	-3.8	23604	7167	3.3
POWER GRID CORP	271.3	3.0	58064	17853	3.3
DALMIA BHARAT LT	1673.7	-1.3	5864	2014	2.9
ICICI LOMBARD GE	1699.6	0.7	6741	2804	2.4

Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
DALMIA BHARAT LT	1673.7	-1.3	5051	1599	3.2
INDUSIND BANK	900.5	-3.9	95320	31815	3.0
POWER GRID CORP	271.3	3.0	23238	8917	2.6
ICICI LOMBARD GE	1699.6	0.7	4610	1995	2.3
AARTI INDUS LTD	391	-3.8	9713	4422	2.2

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	1264800	16.7%	2228	2600	2709900	16.7%	INFY	1900	1856000	11.7%	1701	1600	1128400	-6.0%
ADANIPTS	1200	1062000	5.0%	1143	1100	884000	-3.8%	ITC	420	6094400	3.7%	405	400	3324800	-1.2%
APOLLOHOSP	6800	110000	10.6%	6150	6000	70375	-2.4%	JSWSTEEL	1020	814725	0.6%	1014	1000	733050	-1.3%
ASIANPAINT	2400	709200	5.3%	2279	2200	324400	-3.4%	KOTAKBANK	2000	1297200	4.1%	1922	1900	746000	-1.1%
AXISBANK	1050	2098750	1.4%	1036	1000	1813750	-3.5%	LT	3300	825300	3.8%	3178	3200	517650	0.7%
BAJAJ-AUTO	8000	299325	8.4%	7383	7000	142800	-5.2%	LTIM	5000	146850	7.0%	4671	4500	113400	-3.7%
BAJAJFINSV	1900	1068500	3.2%	1840	1560	466000	-15.2%	M&M	3000	1338575	11.0%	2703	2500	694925	-7.5%
BAJFINANCE	9000	575375	7.9%	8343	8000	310250	-4.1%	MARUTI	13000	220950	12.2%	11586	11500	128550	-0.7%
BHARTIARTL	1700	1215050	4.2%	1631	1600	1396025	-1.9%	NESTLEIND	2260	200400	0.5%	2248	2100	232000	-6.6%
BPCL	270	8071200	5.1%	257	250	1603800	-2.7%	NTPC	340	8433000	3.2%	329	380	2655000	15.4%
BRITANNIA	5000	78700	5.5%	4738	4100	90900	-13.5%	ONGC	240	10739575	7.5%	223	230	2192575	3.1%
CIPLA	1600	703625	9.4%	1463	1240	593125	-15.2%	POWERGRID	280	7074000	3.2%	271	260	2354400	-4.2%
COALINDIA	395	4470900	5.3%	375	450	2727900	20.0%	RELIANCE	1300	7819000	5.0%	1238	1200	4602000	-3.1%
DIVISLAB	6000	175000	8.8%	5514	4700	95300	-14.8%	SBLIFE	1500	534375	5.7%	1419	1400	276000	-1.4%
DRREDDY	1200	1993125	7.1%	1120	1020	372500	-8.9%	SBIN	800	7749000	9.8%	729	700	5540250	-4.0%
EICHERMOT	5100	230125	2.2%	4991	4800	253925	-3.8%	SUNPHARMA	1600	927850	-0.7%	1612	1400	506800	-13.1%
GRASIM	2420	288250	1.5%	2384	2300	158000	-3.5%	TATACONSUM	1100	448248	14.9%	957	900	428184	-6.0%
HCLTECH	1600	659050	3.3%	1549	1360	703150	-12.2%	TATAMOTORS	700	7096650	8.0%	648	600	2792350	-7.4%
HDFCBANK	1700	4778400	0.7%	1688	1700	2450800	0.7%	TATASTEEL	160	25690500	5.9%	151	140	14036000	-7.3%
HDFCLIFE	630	1486100	0.7%	626	550	959200	-12.1%	TCS	4000	1355900	11.4%	3590	3500	605850	-2.5%
HEROMOTOCO	4000	518100	11.6%	3583	3200	169500	-10.7%	TECHM	1800	1084200	21.1%	1487	1400	513600	-5.8%
HINDALCO	700	2587200	1.6%	689	620	2522800	-10.0%	TITAN	3200	618450	5.7%	3027	3000	318675	-0.9%
HINDUNILVR	2400	808800	6.8%	2248	2200	524700	-2.1%	ULTRACEMCO	11000	146900	4.6%	10520	10000	71700	-4.9%
ICICIBANK	1300	2494800	7.0%	1215	1200	2994600	-1.2%	UPL	640	2077215	4.0%	615	610	930885	-0.9%
INDUSINDBK	1000	5504000	11.0%	901	900	2028000	-0.1%	WIPRO	300	6687000	6.8%	281	280	2862000	-0.3%

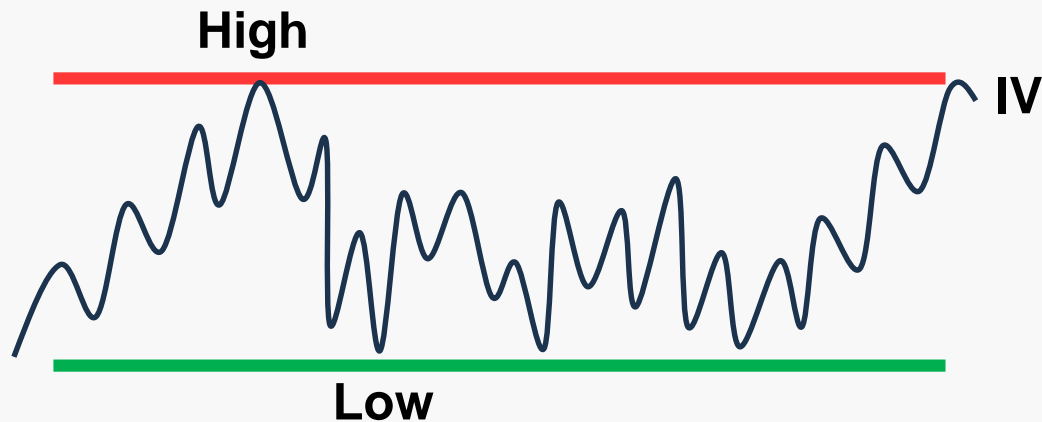
*If distance to call strike from current market price < distance to put strike from current market price, then the %Away for the call strike will be colored green
If distance to put strike from current market price < distance to call strike from current market price, then the %Away for the put strike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

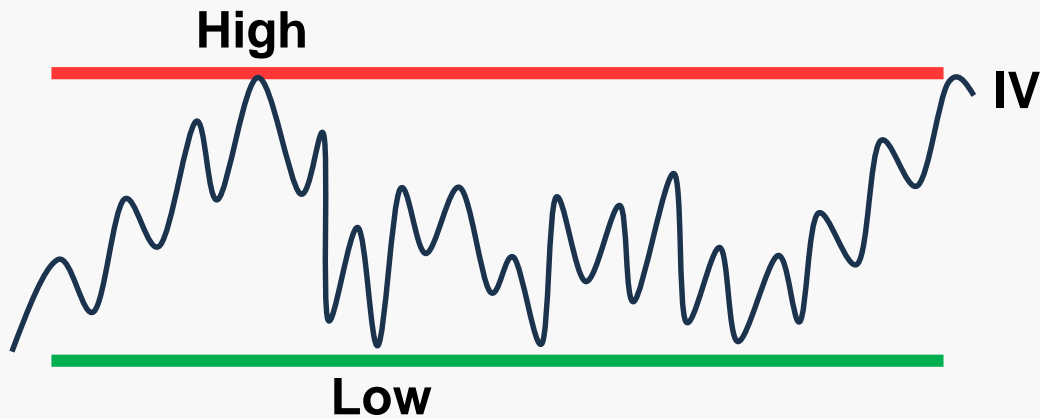


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.



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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