



Daily Derivatives Report

Nifty Futures

	Value	Change
Most recent settlement	23,162	1.4% ▼
Open Interest (OI)	1,66,11,325	5.4% ▲
Change in OI (abs)	1,66,11,325	8,48,975 ▲
Premium / Discount (Abs)	76	7 ▲
Inference	Short Build Up	

Bank Nifty Futures

	Value	Change
Most recent settlement	48,2666	1.3% ▼
Open interest (OI)	33,67,590	0.4% ▲
Change in OI (abs)	33,67,590	13,755 ▲
Premium / Discount (Abs)	225	73 ▲
Inference	Short Build Up	

Volatility Insights

	Value	Change
India VIX Index	16	1.1 ▲
Nifty ATM IV (%)	16.12	3.1 ▲
Bank Nifty ATM IV (%)	19.25	1.5 ▲
PCR (Nifty)	0.72	0.16 ▼
PCR (Bank Nifty)	0.56	0.02 ▼

*The Long Ratio for the FII Index Futures **dip further** to close at 15.4%, against 16.2% recorded in the previous session.

Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
ABCAPITAL	6,71,49,000	8.7%	170.46	1.3%
HINDUNILVR	1,58,69,100	6.5%	2452.1	0.2%
INDUSTOWER	9,26,90,800	1.6%	321.9	0.1%
INDUSINDBK	5,85,40,000	0.7%	945.85	0.6%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
AARTIIND	2,16,54,000	18.9%	409.7	-3.3%
NYKAA	3,54,73,750	18.8%	163.94	-3.5%
PAYTM	1,99,10,800	18.6%	791.15	-7.1%
ATGL	48,62,350	17.4%	594.1	-8.6%
ANGELONE	36,35,000	14.8%	2399.2	-4.7%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
BIOCON	3,20,87,500	-2.5%	365.75	1.1%
BSE	24,31,500	-0.3%	5175.7	0.6%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
AUROPHARMA	1,31,38,950	-8.3%	1162.05	-3.3%
NCC	66,29,625	-8.1%	237.7	-5.2%
HINDCOPPER	3,77,30,700	-7.7%	218.86	-6.5%
NAVINFUOR	16,55,850	-6.7%	3626.7	-0.4%
LAURUSLABS	2,19,82,700	-5.8%	559.8	-4.5%

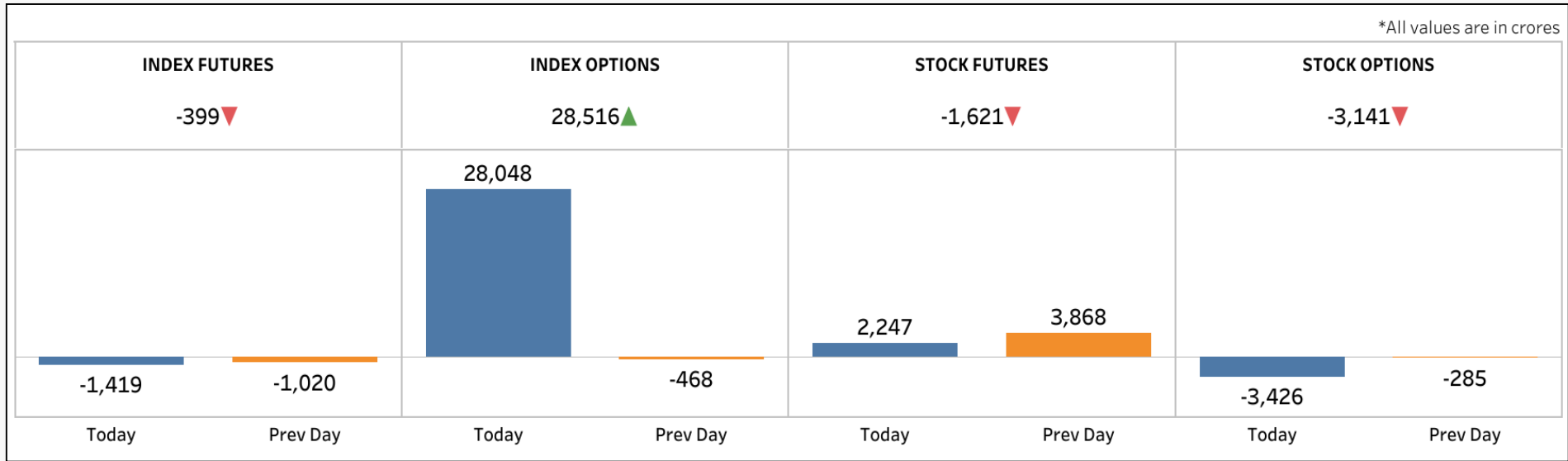
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

Open Interest Data by Participant

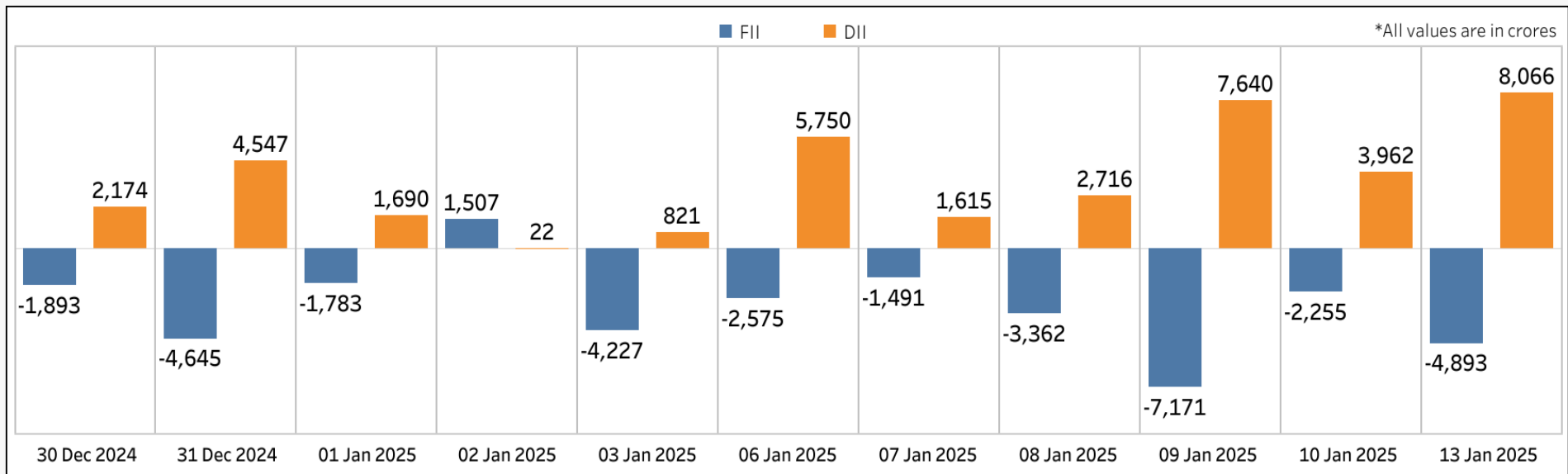
▲ and ▼ indicate positive and negative absolute changes, respectively

FII				DII			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
88,523 ▲	-7,419 ▼	144,350 ▲	-17,359 ▼	0	-150 ▼	1,188 ▲	-28,365 ▼
77,109		168,717		0	902	-4,540	8,056
		24,367		0	1,052	-5,728	
		40,730	58,089				-20,309
-11,414	-17,400	-9,981					
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
-36,958	-272,491	415,894	1,169,262	70	-4,911	158,931	-3,827,717
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
130,696 ▲	-15,419 ▼	45,084 ▲	-3,201 ▼	-219,219 ▼	22,988 ▲	-190,623 ▼	48,925 ▲
172,059					6,342	26,283	33,583
41,363							
10,156	25,575	163		-29,949	-16,646	-164,340	-15,342
		-44,921	-54,004	-249,168			
			-50,803				
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
567,924	319,354	-606,155	2,192,967	-531,036	-41,952	31,328	465,488
Today	Prev Day	Today	Prev Day	Today	Prev Day	Today	Prev Day

Daily Net Open Interest Change

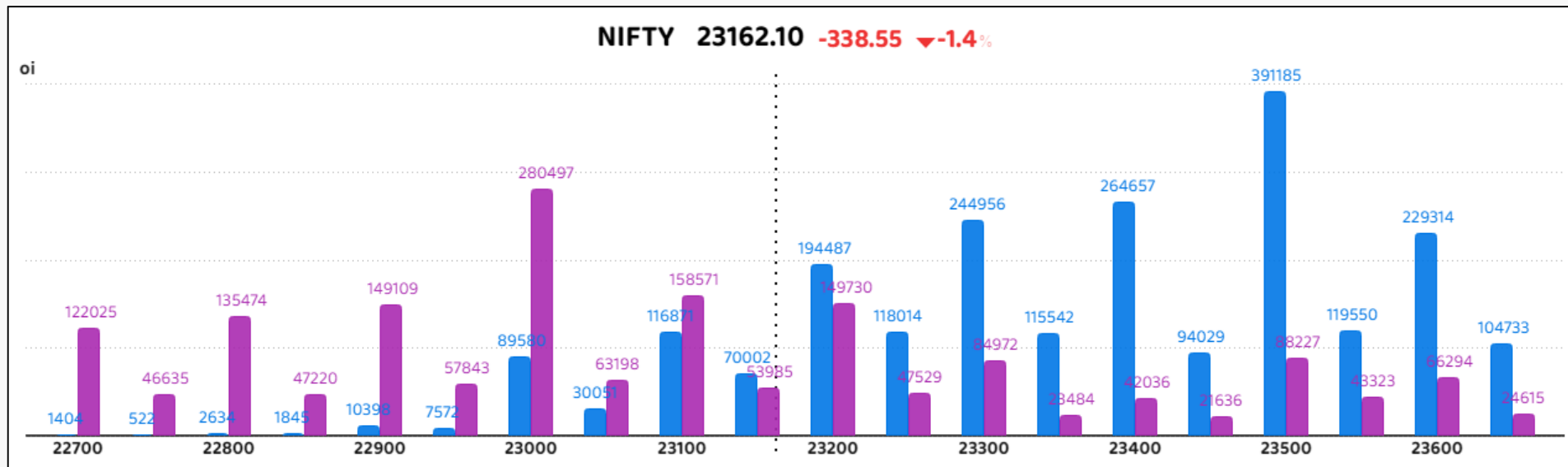


DII and FII Daily Cash Market Flows



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

Call ■ Put ■



For the Nifty, the 23500 Call and the 23000 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.

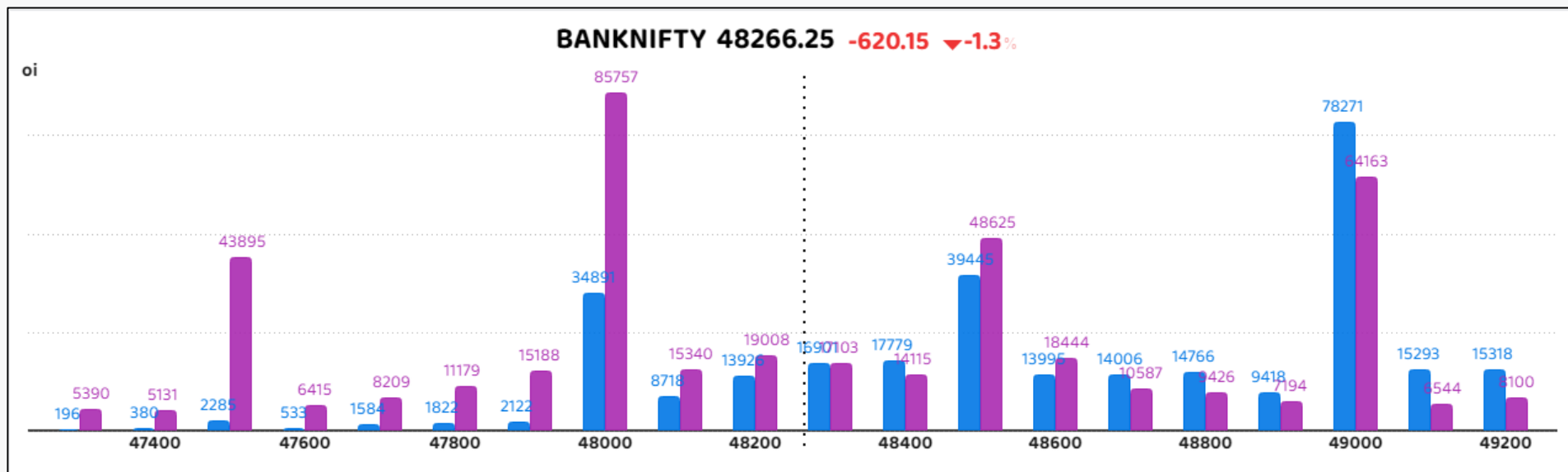
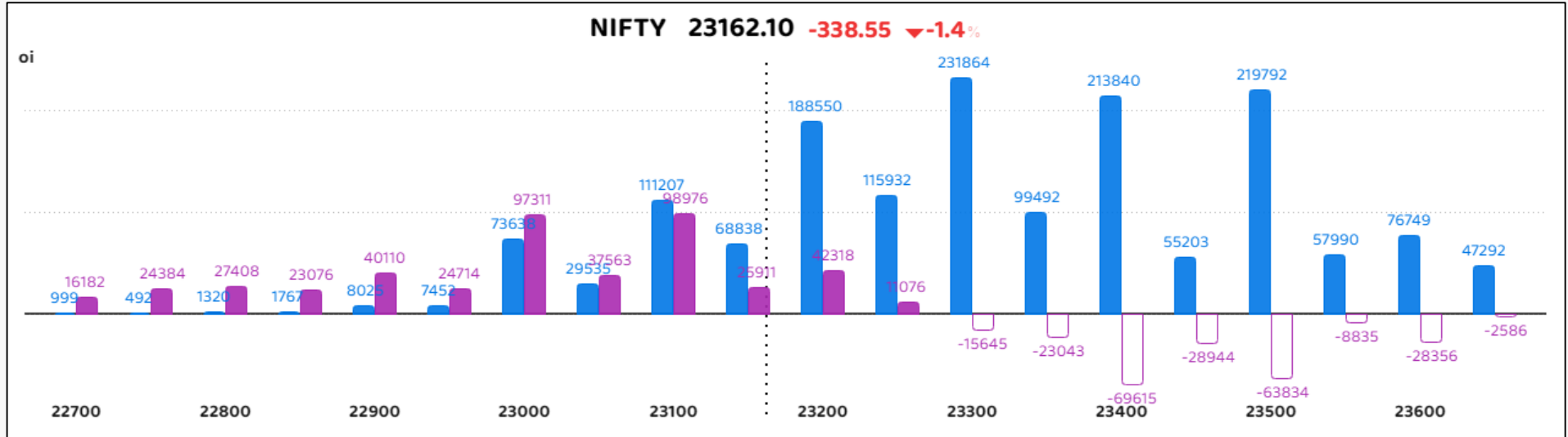


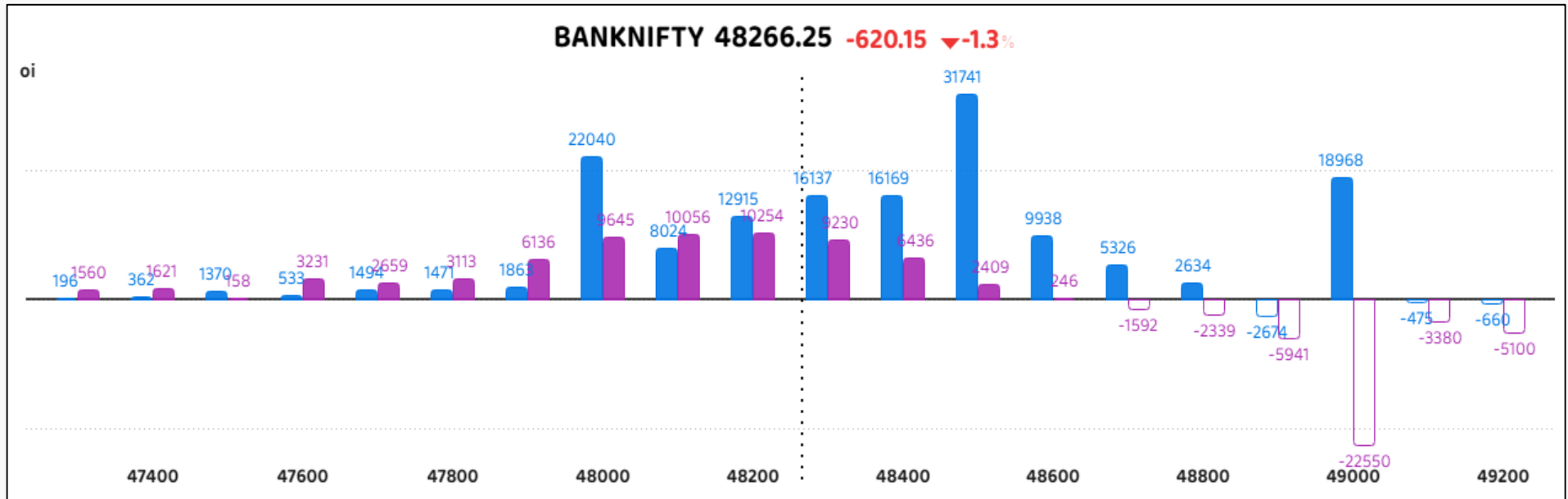
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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

Call ■ Put ■



The largest open interest changes (contracts) were seen at the 23300 Call and the 23000 Put



For the Bank Nifty, the biggest open interest changes were seen at the 48500 Call & the 49000 Put

Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
SHRIRAM FINANCE	521.1	-2.0	43.5	44.9	22.3	94.0
PVR INOX LTD	1077.95	-5.1	40.4	43.7	14.8	88.6
KOTAK MAHINDRA	1738.4	-1.0	24.5	28.7	1.9	84.5
DIXON TECHNOLOGI	15835.15	-5.2	42.1	51.3	1.8	81.3
TATA POWER CO	339.95	-4.6	40.6	50.0	4.0	79.6

Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
METROPOLIS HEALT	1882.8	-3.6	19.3	54.6	19.3	0.0
UNITED BREWERIES	1944.45	-4.2	15.7	47.4	13.6	6.3
L&T FINANCE LTD	130.89	-6.0	26.1	66.4	22.6	7.9
BALKRISHNA INDS	2595.75	-5.0	21.7	58.3	18.4	8.1
ADANI PORTS AND	1066.65	-4.1	30.7	97.8	23.2	10.0

Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
PVR INOX LTD	1077.95	-5.1	40.4	43.7	14.8	98.8
SHRIRAM FINANCE	521.1	-2.0	43.5	44.9	22.3	98.1
INDUSIND BANK	941.7	0.4	34.2	60.4	12.4	93.5
ABB INDIA LTD	6109.25	-4.8	40.1	56.4	23.7	93.1
INFO EDGE	7253.15	-7.4	38.6	48.1	23.7	92.5

Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
METROPOLIS HEALT	1882.8	-3.6	19.3	54.6	19.3	0.0
AMBUJA CEMENTS	493.2	-3.5	18.8	70.4	2.3	0.8
BANDHAN BANK LTD	137.67	-4.4	22.3	54.2	15.9	1.8
UNITED BREWERIES	1944.45	-4.2	15.7	47.4	13.6	1.8
BALKRISHNA INDS	2595.75	-5.0	21.7	58.3	18.4	1.9

Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
BALKRISHNA INDS	2595.75	-5.0	4783	1170	4.1
BIOCON LTD	365.2	1.2	41062	15475	2.7
VODAFONE IDEA LT	7.74	-0.1	17308	6530	2.7
AARTI INDUS LTD	409.45	-2.9	39488	15668	2.5
IPCA LABS LTD	1579.65	-3.2	2241	919	2.4

Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
ATUL LTD	6614.65	-2.7	645	1444	2.2
SHREE CEMENT	24874.5	-3.4	954	2086	2.2
COROMANDEL INTER	1808	-6.0	6067	9815	1.6
CIPLA LTD	1439.2	-2.0	9527	12214	1.3
JK CEMENTS LTD	4364.35	-3.9	2233	2841	1.3

Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Call OI Diff
CUMMINS INDIA	2873.35	-4.2	12967	12967	100.0
DIXON TECHNOLOGI	15835.15	-5.2	48229	48247	100.0
INFO EDGE	7253.15	-7.4	18299	20002	91.5
PVR INOX LTD	1077.95	-5.1	13184	15156	87.0

Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Put OI Diff
ICICI LOMBARD GE	1836.95	-2.2	3823	4193	91.2
SYNGENE INTERNAT	822.75	-4.3	2419	2654	91.2
BRITANNIA INDS	4927.05	-0.2	15225	17415	87.4
INFO EDGE	7253.15	-7.4	8456	9814	86.2
BANK OF BARODA	217.69	-3.4	17335	20549	84.4

Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	CV Diff
NO STOCK OPTION MET THE CONDITION IN THE PREVIOUS TRADING SESSION					

Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	PV Diff
NO STOCK OPTION MET THE CONDITION IN THE PREVIOUS TRADING SESSION					

Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
HCL TECH LTD	1989.4	-0.3	133449	33031	4.0
AARTI INDUS LTD	409.45	-2.9	39488	12399	3.2
BIOCON LTD	365.2	1.2	41062	13368	3.1
DIVI LABS LTD	5732.5	-0.7	56151	21417	2.6
BIRLASOFT LTD	525.65	-4.7	20775	8305	2.5

Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
PI INDUSTRIES	3400.3	-5.9	17226	3803	4.5
SYNGENE INTERNAT	822.75	-4.3	6458	1705	3.8
GRANULES INDIA	568	-4.3	5559	1469	3.8
HCL TECH LTD	1989.4	-0.3	69356	19904	3.5
HAVELLS INDIA	1532.05	-4.3	13739	4650	3.0

Call Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
SRF LTD	2516	-3.3	12256	4778	2.6
MRF LTD	113003.8	-3.5	9787	4032	2.4
INFO EDGE	7253.15	-7.4	18299	8271	2.2
HCL TECH LTD	1989.4	-0.3	38106	17858	2.1
HDFC ASSET MANAG	3834.55	-0.3	9007	4936	1.8

Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
SRF LTD	2516	-3.3	13793	4613	3.0
HCL TECH LTD	1989.4	-0.3	20210	10197	2.0
NAVIN FLUORINE I	3617.85	-0.4	4404	2311	1.9
TATA CONSULTANCY	4291.1	0.6	54532	29127	1.9
INFO EDGE	7253.15	-7.4	8456	4673	1.8

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	2800	1492800	25.8%	2225	2800	2731500	25.8%	INFY	2000	6738800	1.9%	1962	1800	1317200	-8.3%
ADANIPTS	1200	1506800	12.5%	1067	1200	783200	12.5%	ITC	460	6966400	4.8%	439	440	1915200	0.2%
APOLLOHOSP	7500	181125	9.7%	6840	7200	72375	5.3%	JSWSTEEL	1000	920025	13.2%	884	900	545400	1.8%
ASIANPAINT	2500	1052200	11.0%	2253	2200	795400	-2.3%	KOTAKBANK	1800	1702400	3.5%	1738	1800	960800	3.5%
AXISBANK	1200	2683750	14.4%	1049	1100	1403750	4.8%	LT	3700	706950	6.8%	3464	3500	553650	1.0%
BAJAJ-AUTO	10000	245100	16.3%	8596	7600	131850	-11.6%	LTIM	6500	144750	7.8%	6031	5700	115650	-5.5%
BAJAJFINSV	1700	1937000	1.5%	1674	1700	715000	1.5%	M&M	3200	588175	6.7%	3000	3000	356125	0.0%
BAJFINANCE	7500	634750	4.9%	7151	7000	329000	-2.1%	MARUTI	12000	569750	4.4%	11498	11000	129500	-4.3%
BHARTIARTL	1640	2901300	2.7%	1597	1600	623675	0.2%	NESTLEIND	2300	433000	2.8%	2237	2200	272200	-1.7%
BPCL	300	6688800	13.1%	265	250	3218400	-5.8%	NTPC	340	9234000	14.0%	298	300	2521500	0.6%
BRITANNIA	4850	240600	-1.6%	4927	4700	531400	-4.6%	ONGC	275	13971650	7.5%	256	250	3322550	-2.2%
CIPLA	1540	629200	7.0%	1439	1320	278850	-8.3%	POWERGRID	310	3639600	7.8%	288	300	1805400	4.3%
COALINDIA	400	4204200	10.2%	363	400	1525650	10.2%	RELIANCE	1300	11345000	4.9%	1240	1200	4836500	-3.2%
DIVISLAB	6000	118600	4.7%	5733	5700	98300	-0.6%	SBLIFE	1440	556125	-1.9%	1467	1440	221625	-1.9%
DRREDDY	1400	1566875	4.9%	1335	1350	382500	1.1%	SBIN	800	11709750	9.7%	730	800	3697500	9.7%
EICHERMOT	5000	306600	1.2%	4939	4800	145950	-2.8%	SUNPHARMA	1920	1559600	9.9%	1747	1760	241150	0.7%
GRASIM	2600	316750	13.6%	2288	2500	197250	9.3%	TATACONSUM	1000	609216	3.6%	965	900	772464	-6.8%
HCLTECH	2000	2365650	0.5%	1989	1900	1269450	-4.5%	TATAMOTORS	800	9133850	6.5%	751	750	3535950	-0.1%
HDFCBANK	1800	7758300	10.4%	1631	1560	2523950	-4.3%	TATASTEEL	140	29067500	13.9%	123	135	11924000	9.8%
HDFCLIFE	640	2428800	6.7%	600	600	844800	0.0%	TCS	4200	1147825	-2.1%	4291	4000	1418900	-6.8%
HEROMOTOCO	4300	436650	6.3%	4044	4000	139650	-1.1%	TECHM	1760	1698600	6.0%	1660	1600	384600	-3.6%
HINDALCO	600	3481800	6.4%	564	600	1607200	6.4%	TITAN	3600	505575	6.4%	3383	3400	231175	0.5%
HINDUNILVR	2500	1159800	2.0%	2451	2400	744600	-2.1%	ULTRACEMCO	12000	126250	13.0%	10615	11000	42700	3.6%
ICICIBANK	1300	3663800	5.7%	1230	1200	1799700	-2.4%	UPL	600	2051470	12.4%	534	500	689695	-6.3%
INDUSINDBK	1000	5498000	6.2%	942	1100	1024000	16.8%	WIPRO	310	5562000	6.2%	292	280	4209000	-4.1%

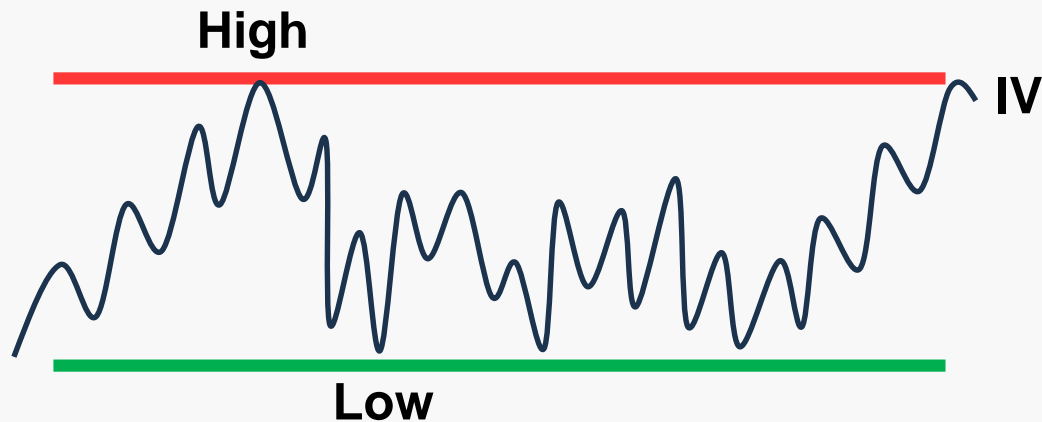
*If distance to call strike from current market price < distance to put strike from current market price, then the %Away for the call strike will be colored green
If distance to put strike from current market price < distance to call strike from current market price, then the %Away for the put strike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

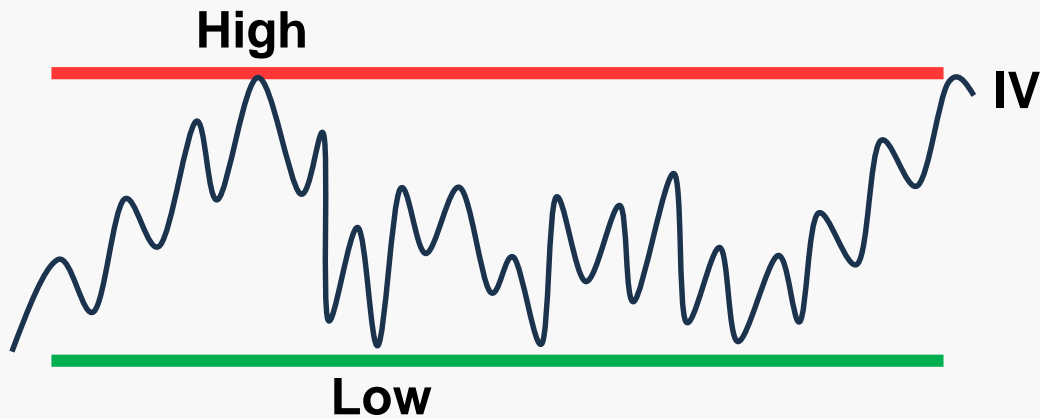


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.



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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Compliance Officer Details: Name – Mr. Maneesh Mathew, Tel No. – 022-68555574, Email id – compliance.officer@axisdirect.in;

Registered Office Address – Axis Securities Limited, Unit No.002, Building- A, Agastya Corporate Park, Piramal Realty, Kamani Junction, Kurla (W), Mumbai – 400070.

Administrative office address: Aurum Q Parc, Q2 Building, Unit No. 1001, 10th Floor, Level – 6, Plot No. 4/1 TTC, Thane – Belapur Road, Ghansoli, Navi Mumbai, Pin Code – 400710.

In case of any grievances please call us at 022-40508080 or write to us helpdesk@axisdirect.in.

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Sr. No	Name	Designation	E-mail
1	Rajesh Palviya	SVP Research (Head Technical & Derivatives)	rajesh.palviya@axissecurities.in
2	Hemang Gor	Derivative Analyst	hemang.gor@axissecurities.in
3	Rahil Vora	Derivative Analyst	rahil.vora@axissecurities.in