



# Daily Derivatives Report

## Nifty Futures

	Value	Change
Most recent settlement	23,264	0.3%▲
Open Interest (OI)	1,95,04,675	0.1%▼
Change in OI (abs)	1,95,04,675	15,300▼
Premium / Discount (Abs)	58	15▲
<b>Inference</b>	<b>Short Covering</b>	

## Bank Nifty Futures

	Value	Change
Most recent settlement	48,696	0.4%▼
Open interest (OI)	38,12,295	2.1%▲
Change in OI (abs)	38,12,295	77,520▲
Premium / Discount (Abs)	107	56▼
<b>Inference</b>	<b>Short Build Up</b>	

## Volatility Insights

	Value	Change
India VIX Index	16.7	0.1▼
Nifty ATM IV (%)	14.63	1.9▲
Bank Nifty ATM IV (%)	17.77	0.6▼
PCR (Nifty)	0.95	0.07▲
PCR (Bank Nifty)	0.57	0.00▲

\*The Long Ratio for the FII Index Futures closed **higher** at 18.8% against 17.5%, as recorded in the previous session.

## Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
ADANIENSOL	73,97,500	18.6%	810.65	0.8%
PERSISTENT	22,36,500	14.4%	6268.2	10.4%
KPITTECH	24,81,200	11.8%	1348.05	3.7%
COFORGE	26,42,475	9.8%	9172.1	11.1%
DIVISLAB	35,15,900	9.3%	5870.9	0.6%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
KALYANKJIL	1,72,46,850	16.4%	479.2	-2.3%
JIOFIN	8,97,83,100	14.4%	256.55	-2.5%
CGPOWER	86,19,525	10.1%	627.7	-1.7%
DRREDDY	1,54,78,125	7.4%	1290.6	-0.3%
BPCL	7,00,86,600	7.0%	267.05	-3.2%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
KEI	8,59,500	-18.0%	4488.5	9.1%
POLYCAB	24,03,250	-7.9%	6268.2	1.9%
MCX	17,11,800	-6.9%	5853.4	2.2%
PAGEIND	1,98,615	-6.7%	46850.95	1.9%
COROMANDEL	30,31,350	-5.4%	1851	4.2%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
INDIAMART	20,98,500	-6.6%	2101.2	-1.3%
KOTAKBANK	3,98,96,800	-3.7%	1896.2	-1.2%
CUB	2,96,95,000	-3.1%	170.77	-1.2%
LT	1,51,62,150	-2.9%	3508.95	-0.4%
CHOLAFIN	1,12,51,875	-2.7%	1248.2	-0.8%

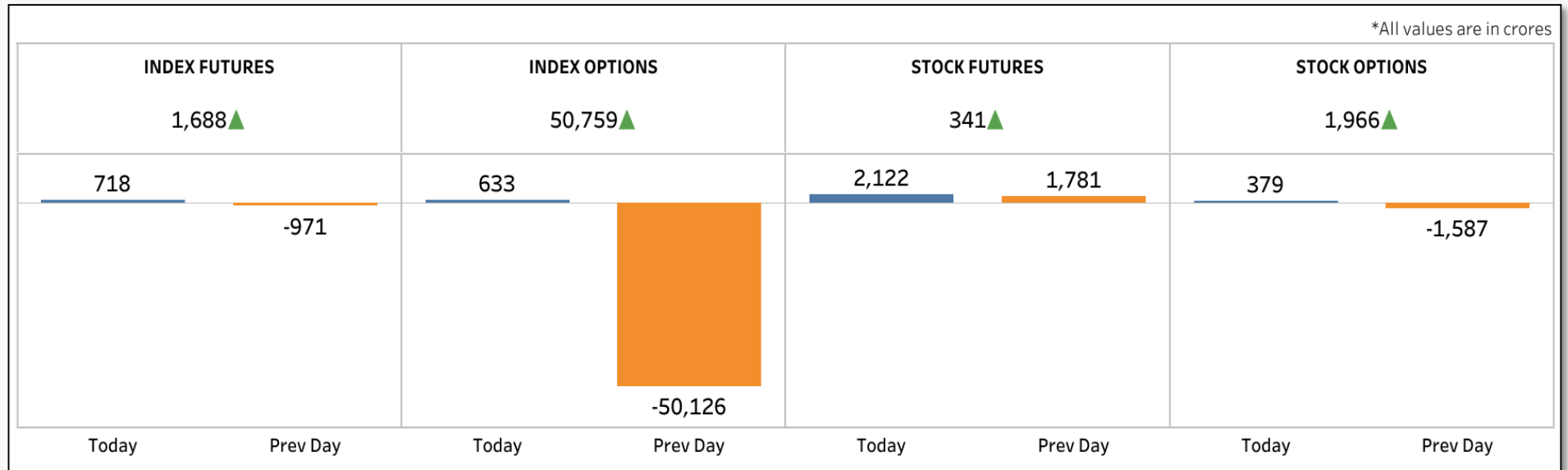
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

## Open Interest Data by Participant

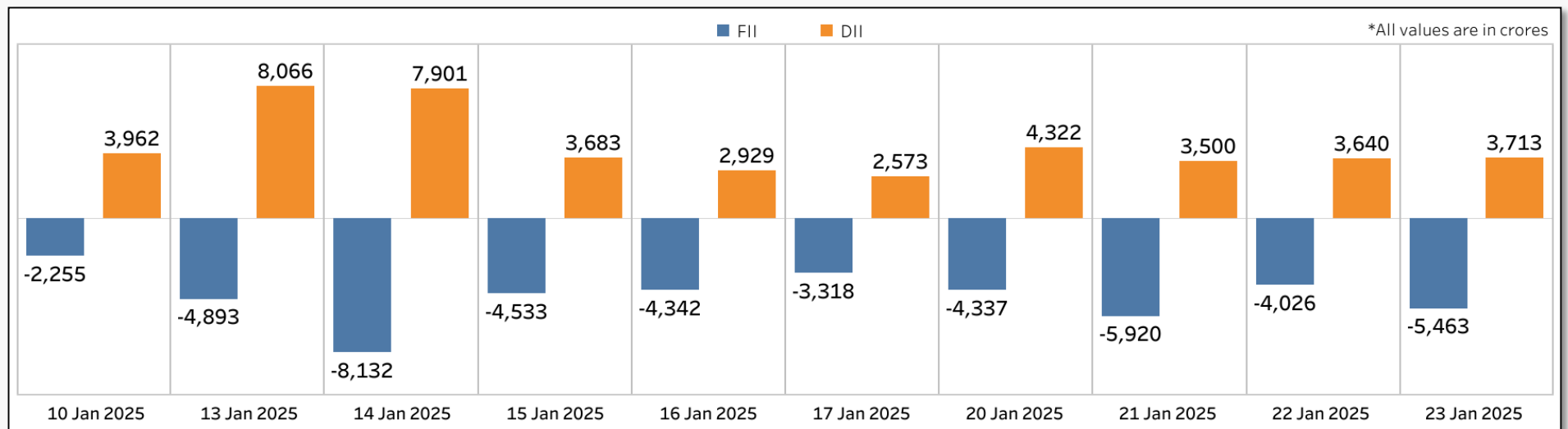
▲ and ▼ indicate positive and negative absolute changes, respectively

FII				DII			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
292,664 ▲	22,168 ▲	418,801 ▲	13,103 ▲	0	-8,360 ▼	96 ▲	-32,430 ▼
246,019		147,582		0	9,562	96	
	21,817		37,206	0	1,202	0	-5,828
-46,645	-351	-271,219	24,103				-38,258
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
282,729	-305,792	245,284	1,171,382	70	37,493	144,371	-3,877,300
Today Prev Day	Today Prev Day	Today Prev Day	Today Prev Day	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
-360,723 ▼	-1,126 ▼	-287,895 ▼	36,952 ▲	68,059 ▲	-12,682 ▼	-131,000 ▼	-17,625 ▼
		232,903		158,471			
			26,170	90,412			
-43,767	-6,400	-54,992	-10,782		-16,619	38,316	-25,118
-404,490	-5,274				-3,937		-7,493
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
-137,692	299,427	-409,955	2,285,788	-145,107	-31,128	20,299	420,130
Today Prev Day	Today Prev Day	Today Prev Day	Today Prev Day	Today Prev Day	Today Prev Day	Today Prev Day	Today Prev Day

## Daily Net Open Interest Change

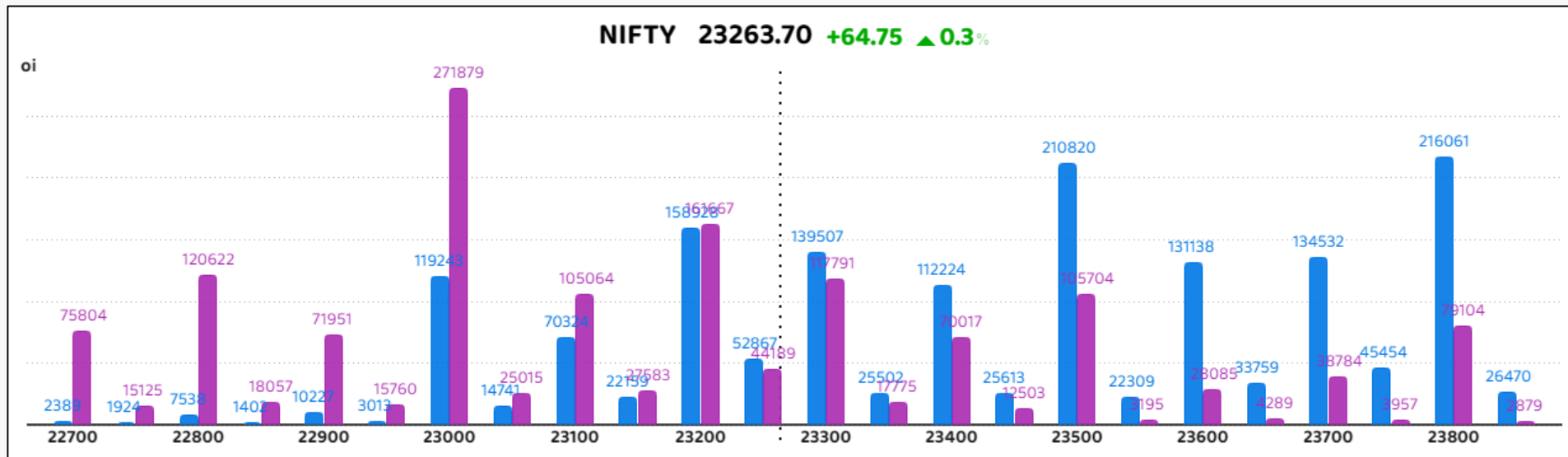


## DII and FII Daily Cash Market Flows



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

Call ■ Put ■



For the Nifty, the 23800 Call and the 23000 Put had the highest call and put concentration (contracts). For the Bank Nifty, the 49500 Call and the 47500 Put saw the most amount of open interest.

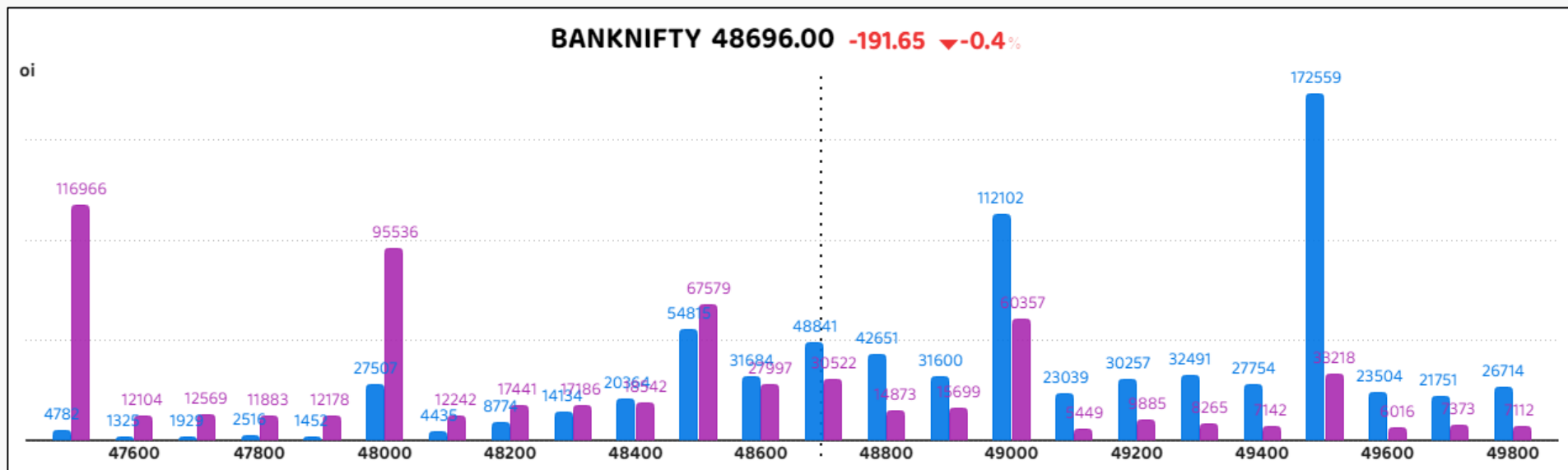
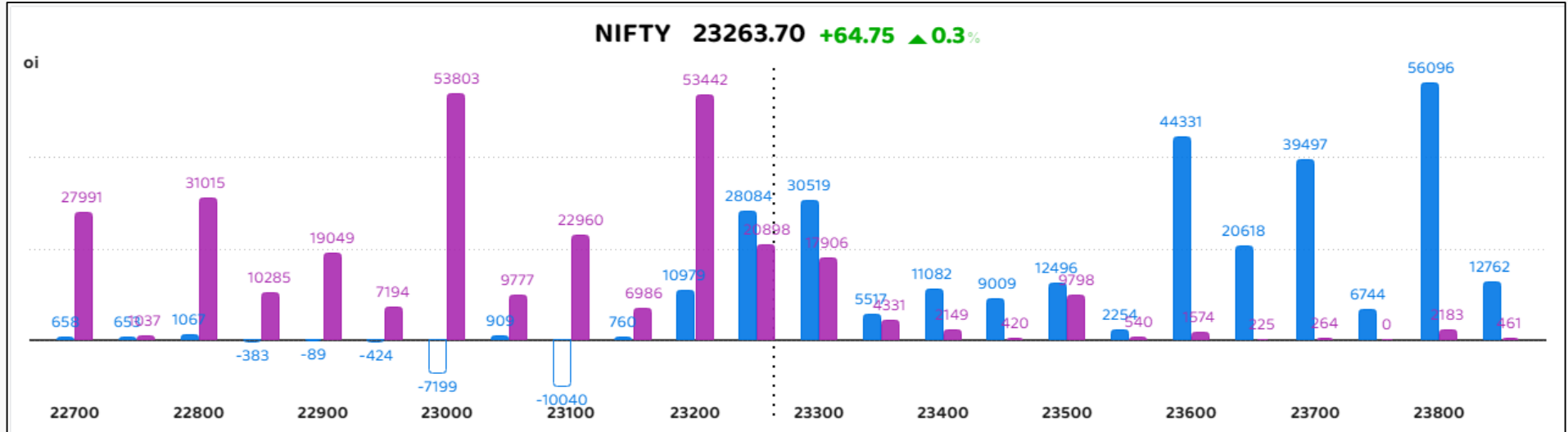


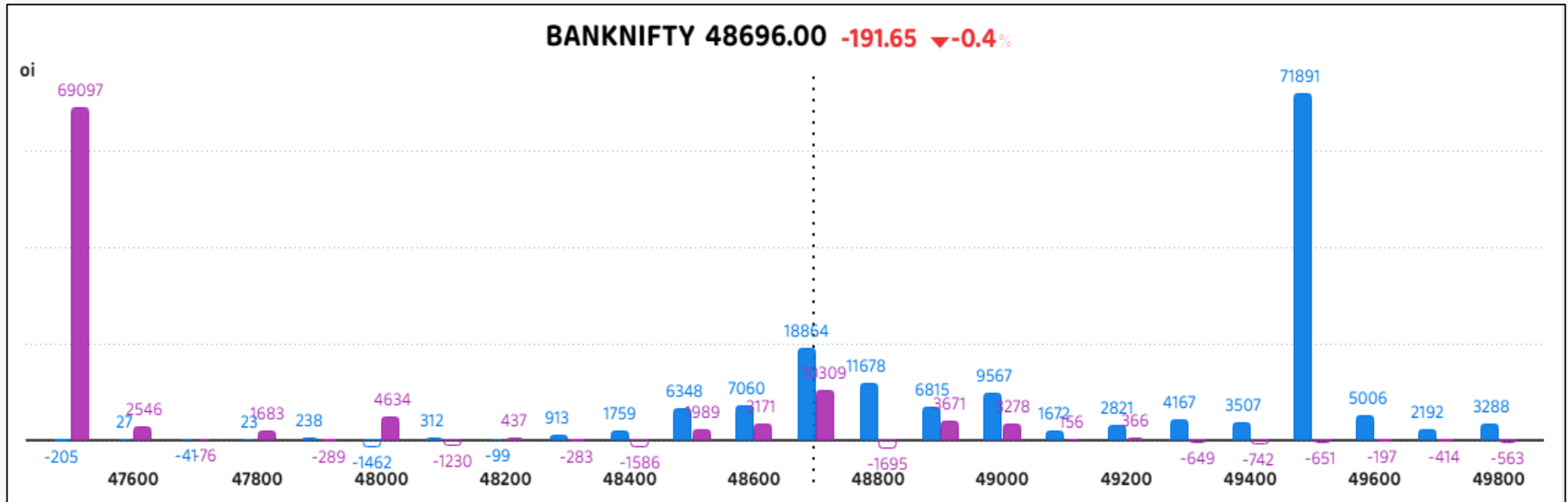
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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

Call ■ Put ■



The largest open interest changes (contracts) were seen at the 23800 Call and the 23000 Put



For the Bank Nifty, the biggest open interest changes were seen at the 49500 Call & the 47500 Put

**Stocks with High IVR:**

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
BRITANNIA INDS	5012.6	1.1	31.2	31.2	15.1	100.0
PVR INOX LTD	1092.8	2.3	42.5	43.7	14.8	95.9
SHRIRAM FINANCE	529.8	2.1	42.2	44.9	22.3	88.1
TATA CONSUMER PR	983.9	1.7	29.8	32.3	13.6	86.2
COLGATE PALMOLIV	2738.95	-1.2	28.6	32.8	9.5	82.3

**Stocks with Low IVR:**

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
BALKRISHNA INDS	2728.9	0.8	17.8	58.3	17.8	0.0
MAHANAGAR GAS LT	1312.9	2.6	19.9	48.5	19.9	0.0
CAN FIN HOMES	690.95	0.7	12.7	46.5	12.7	0.0
RBL BANK LTD	155.97	0.6	15.8	79.2	13.3	3.8
MAX FINANCIAL SE	1056.4	1.7	21.0	49.3	18.2	8.9

**Stocks With High IVP:**

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
BRITANNIA INDS	5012.6	1.1	31.2	31.2	15.1	100.0
PVR INOX LTD	1092.8	2.3	42.5	43.7	14.8	99.7
INDUSIND BANK	970.95	0.0	36.6	60.4	12.4	98.9
BAJAJ AUTO LTD	8399.95	-0.7	33.3	40.6	2.1	98.4
TATA CONSUMER PR	983.9	1.7	29.8	32.3	13.6	96.1

**Stocks With Low IVP:**

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
BALKRISHNA INDS	2728.9	0.8	17.8	58.3	17.8	0.0
MAHANAGAR GAS LT	1312.9	2.6	19.9	48.5	19.9	0.0
CAN FIN HOMES	690.95	0.7	12.7	46.5	12.7	0.0
MAX FINANCIAL SE	1056.4	1.7	21.0	49.3	18.2	0.6
RBL BANK LTD	155.97	0.6	15.8	79.2	13.3	1.6



### Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
TORRENT PHARMA	3263.75	3.1	7632	1585	4.8
DIXON TECHNOLOGI	15463.6	5.1	10092	2472	4.1
PUNJAB NATL BANK	99.43	1.3	2026	538	3.8
SIEMENS LTD	6067.85	3.6	52667	15240	3.5
BOSCH LTD	30990.5	1.3	2200	637	3.5

### Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
DALMIA BHARAT LT	1828.4	1.6	14053	20354	1.4
SBI CARDS & PAYM	760.0	0.5	12444	14611	1.2
AU SMALL FINANCE	582.4	-3.6	20206	23420	1.2
LARSEN & TOUBRO	3503.3	-0.4	65195	64450	1.0
INDIAMART INTERM	2086.6	-2.7	1032	1015	1.0

### Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Call OI Diff
ULTRATECH CEMENT	11420.9	6.8	42989	42989	100.0
TRENT LTD	5733.6	1.9	57064	57064	100.0
COFORGE LTD	9196.45	11.8	32393	32393	100.0
ICICI PRUDENTIAL	594.7	-0.6	12285	12554	97.9
SBI LIFE INSURAN	1449.85	-0.7	22294	23507	94.8

### Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Put OI Diff
ULTRATECH CEMENT	11420.9	6.8	33945	33945	100.0
PERSISTENT SYS	6287.7	10.6	15899	15899	100.0
COFORGE LTD	9196.45	11.8	29916	29916	100.0
MCX INDIA LTD	5860	2.4	16242	16242	100.0
INDUS TOWERS LTD	366.6	2.7	14890	14913	99.9

**Call Volume Relative to Record High**

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	CV Diff
ULTRATECH CEMENT	11420.9	6.8	639270	639270	100.0
COFORGE LTD	9196.45	11.8	407944	407944	100.0
PERSISTENT SYS	6287.7	10.6	233101	233101	100.0
PIDILITE INDS	2909.65	5.6	102836	102836	100.0
SYNGENE INTERNAT	847	2.3	22820	28895	79.0

**Put Volume Relative to Record High**

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	PV Diff
ULTRATECH CEMENT	11420.9	6.8	305271	305271	100.0
COFORGE LTD	9196.45	11.8	213846	213846	100.0
PERSISTENT SYS	6287.7	10.6	110873	110873	100.0
PIDILITE INDS	2909.65	5.6	68071	68071	100.0

**Call Open Interest to 20-day Average**

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
ULTRATECH CEMENT	11420.9	6.8	42989	15396	2.8
POLYCAB INDIA LT	6250.9	1.4	22648	8638	2.6
ICICI PRUDENTIAL	594.7	-0.6	12285	4875	2.5
OBEROI REALTY	1821.9	3.3	22066	9517	2.3
INDIAMART INTERM	2086.55	-2.7	6167	2943	2.1

**Put Open Interest to 20-day Average**

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
ULTRATECH CEMENT	11420.9	6.8	33945	9860	3.4
COFORGE LTD	9196.45	11.8	29916	11316	2.6
DALMIA BHARAT LT	1828.35	1.6	8544	3333	2.6
PERSISTENT SYS	6287.7	10.6	15899	6913	2.3
POLYCAB INDIA LT	6250.9	1.4	13125	6106	2.1

### Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
ULTRATECH CEMENT	11420.9	6.8	639270	58349	11.0
PIDILITE INDS	2909.65	5.6	102836	9734	10.6
COFORGE LTD	9196.45	11.8	407944	45401	9.0
PERSISTENT SYS	6287.7	10.6	233101	30193	7.7
SYNGENE INTERNAT	847	2.3	22820	3850	5.9

### Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
PIDILITE INDS	2909.65	5.6	68071	6264	10.9
ULTRATECH CEMENT	11420.9	6.8	305271	29611	10.3
COFORGE LTD	9196.45	11.8	213846	31078	6.9
PERSISTENT SYS	6287.7	10.6	110873	20279	5.5
SYNGENE INTERNAT	847	2.3	11644	2379	4.9

## 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	1153800	17.4%	2385	2800	723900	17.4%	INFY	2000	6232800	7.2%	1865	1800	1696800	-3.5%
ADANIPTS	1200	1859200	8.7%	1104	1200	770800	8.7%	ITC	460	6382400	4.5%	440	440	2192000	0.0%
APOLLOHOSP	7500	200125	8.4%	6921	6700	70875	-3.2%	JSWSTEEL	950	1447875	2.2%	930	900	925425	-3.2%
ASIANPAINT	2500	975800	9.8%	2276	2200	615200	-3.4%	KOTAKBANK	2000	2496800	5.5%	1895	1800	1338400	-5.0%
AXISBANK	1000	6822500	5.1%	951	1000	1946250	5.1%	LT	3700	881700	5.6%	3503	3600	452550	2.8%
BAJAJ-AUTO	10000	205350	19.0%	8400	7600	147525	-9.5%	LTIM	6500	180900	8.3%	6002	5800	138600	-3.4%
BAJAJFINSV	1700	1525000	-2.6%	1746	1700	1100000	-2.6%	M&M	3200	781375	10.9%	2886	2800	410025	-3.0%
BAJFINANCE	7500	483500	0.8%	7443	7200	372000	-3.3%	MARUTI	12000	671650	-0.4%	12046	12000	255500	-0.4%
BHARTIARTL	1640	3430925	0.2%	1636	1580	845025	-3.4%	NESTLEIND	2300	333200	4.6%	2199	1940	247800	-11.8%
BPCL	280	1E+07	3.2%	271	270	3270600	-0.5%	NTPC	340	13609500	5.1%	324	320	2413500	-1.1%
BRITANNIA	4850	253900	-3.2%	5013	4700	575800	-6.2%	ONGC	264	16025625	0.4%	263	250	3938550	-5.0%
CIPLA	1540	724100	6.1%	1451	1320	256425	-9.0%	POWERGRID	320	3409200	8.7%	294	300	2095200	1.9%
COALINDIA	390	5037900	1.1%	386	380	1944600	-1.5%	RELIANCE	1300	11298000	2.9%	1264	1200	4138500	-5.0%
DIVISLAB	6000	155800	2.5%	5851	5800	127600	-0.9%	SBLIFE	1600	1496625	10.4%	1450	1460	340875	0.7%
DRREDDY	1400	1796250	8.6%	1289	1280	604375	-0.7%	SBIN	800	11436750	7.3%	746	700	4863000	-6.2%
EICHERMOT	5000	409675	-2.3%	5116	5000	191800	-2.3%	SUNPHARMA	1920	1338050	4.7%	1834	1800	730100	-1.8%
GRASIM	2500	325250	1.6%	2461	2400	191250	-2.5%	TATACONSUM	1000	675336	1.6%	984	900	478800	-8.5%
HCLTECH	2000	2604700	10.7%	1807	1600	685300	-11.5%	TATAMOTORS	800	8232950	6.3%	753	750	3737800	-0.3%
HDFCBANK	1800	6799650	8.1%	1665	1560	2469500	-6.3%	TATASTEEL	140	24524500	7.4%	130	130	11484000	-0.3%
HDFCLIFE	640	2800600	3.1%	621	600	1377200	-3.4%	TCS	4300	1334375	3.7%	4145	4000	697025	-3.5%
HEROMOTOCO	4300	462750	4.9%	4100	4000	162600	-2.4%	TECHM	1760	1795800	2.7%	1713	1660	529200	-3.1%
HINDALCO	600	3256400	-1.4%	608	600	2732800	-1.4%	TITAN	3600	587475	5.9%	3399	3200	294000	-5.8%
HINDUNILVR	2400	1258800	3.4%	2322	2300	741000	-0.9%	ULTRACEMCO	12000	286700	5.1%	11421	11000	212400	-3.7%
ICICIBANK	1300	4239200	8.2%	1202	1200	2202200	-0.1%	UPL	550	2094830	-1.4%	558	550	856360	-1.4%
INDUSINDBK	1000	4615500	3.0%	971	960	1028000	-1.1%	WIPRO	320	6171000	0.7%	318	300	7701000	-5.6%

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

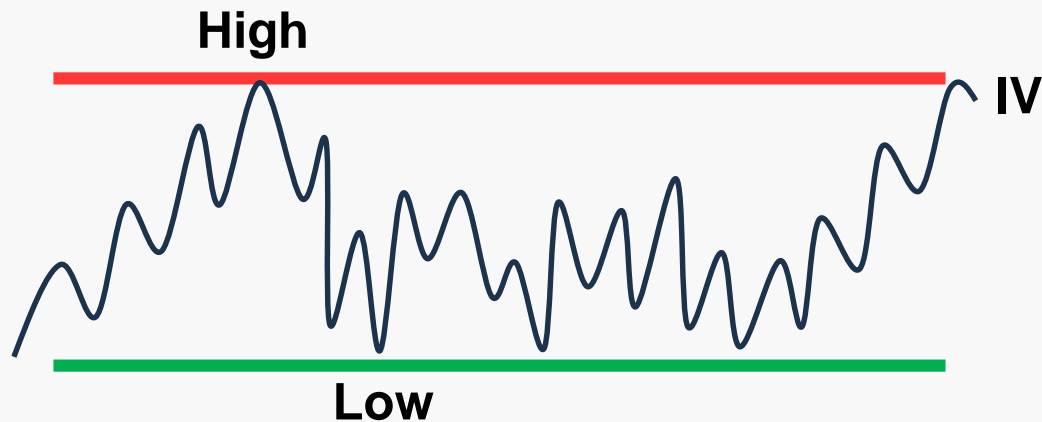
- Open interest **goes up** when **both** the buyer and the seller are **opening a new position**
- Open interest remains the **same** when one party is **opening a new position** and the other is **liquidating an existing position**
- Open interest **falls** when both the buyer and the seller are **liquidating 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*

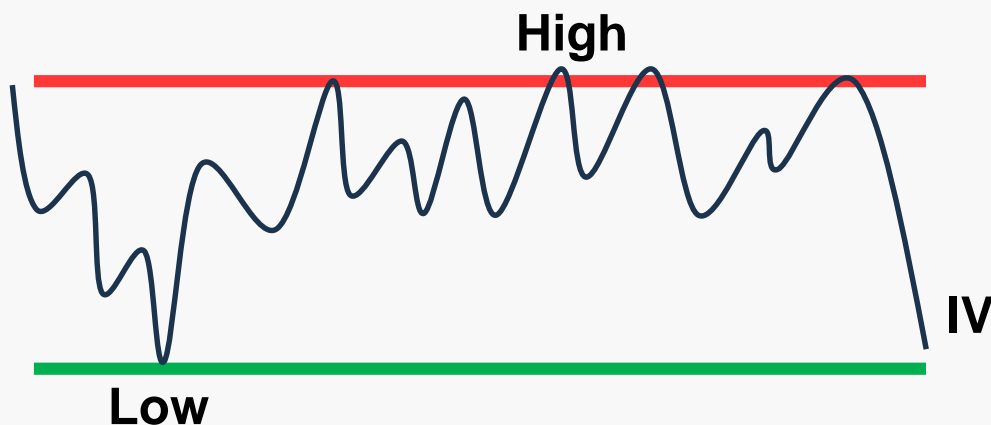
- **Volume:** Number of contracts traded for the day. If A bought 10 calls & B sold 10 calls, the volume for the day is 10 contracts
- **Open Interest:** The number of derivatives contracts that are open (have not been closed out). If A bought 10 calls, B bought another 10 calls and C sold 20 calls, 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](http://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

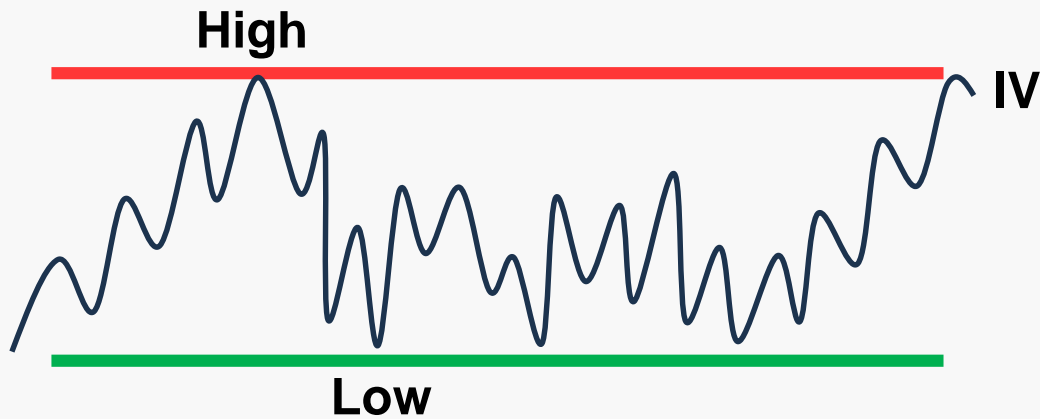


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.

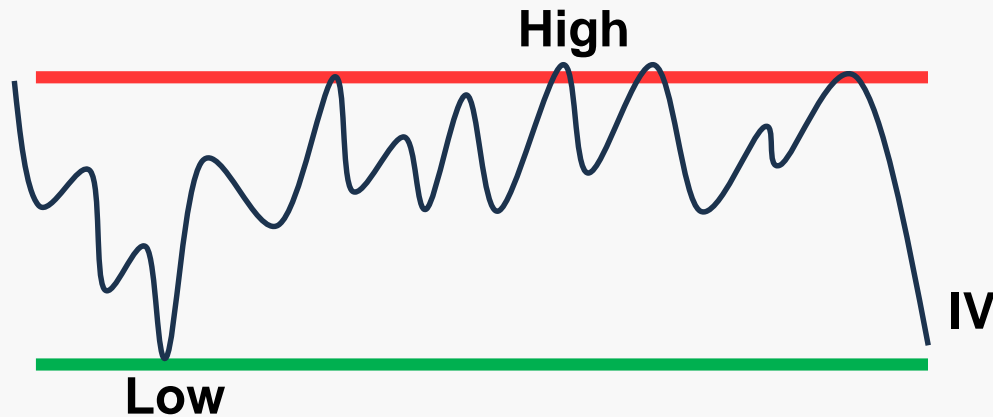


In this chart, notice that today's IV is close to the lowest low seen in the last 12 months. This means that IV for this option is cheap today compared to where it has traded over the last one year.

- **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.

Axis Securities Limited is a subsidiary company of Axis Bank Ltd. Axis Bank Ltd. is a listed public company and one of India's largest private sector banks and has its various subsidiaries engaged in businesses of Asset management, NBFC, Merchant Banking, Trusteeship, Venture Capital, Stock Broking, the details in respect of which are available on [www.axisbank.com](http://www.axisbank.com).

Axis Securities Limited, is registered as a Stock Broker, Depository Participant, Portfolio Manager, Investment Adviser and Research Analyst with Securities and Exchange Board of India Corporate Agent with Insurance Regulatory and Development Authority of India Point of Presence with Pension Fund Regulatory and Development Authority Distributor for Mutual Funds with AMFI

#### Registration Details:

SEBI Single Reg. No.- NSE, BSE, MSEI, MCX & NCDEX – INZ000161633 | SEBI Depository Participant Reg. No. IN-DP-403-2019 | Portfolio Manager Reg. No.- INP000000654 | Investment Advisor Reg No. INA000000615 | SEBI-Research Analyst Reg. No. INH000000297 | IRDA Corporate Agent (Composite) Reg. No. CA0073| PFRDA – POP Reg. No. POP387122023 | Mutual Fund Distributor ARN- 64610.

Compliance Officer Details: Name – Mr. Maneesh Mathew, Tel No. – 022-68555574, Email id – [compliance.officer@axisdirect.in](mailto: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](mailto:helpdesk@axisdirect.in).

We hereby declare that our activities were neither suspended nor we have defaulted with any stock exchange authority with whom we are registered in last five years. However, SEBI, Exchanges, Clearing Corporations and Depositories etc. have conducted the routine inspection and based on their observations have issued advise/warning/show cause notices/deficiency letters/ or levied penalty or imposed charges for certain deviations observed in inspections or in normal course of business, as a Stock Broker / Depository Participant/Portfolio Manager. We have not been debarred from doing business by any Stock Exchange / SEBI or any other authorities; nor has our certificate of registration been cancelled by SEBI at any point of time.

Investments in securities market are subject to market risks. Read all the related documents carefully before investing.

By referring to any particular sector, Axis Securities does not provide any promise or assurance of favourable view for a particular industry or sector or business group in any manner.

Registration granted by SEBI, membership of BASL (in case of IAs) and certification from NISM in no way guarantee performance of the intermediary or provide any assurance of returns to investors. None of the research recommendations promise or guarantee any assured, minimum or risk-free return to the investors. Our research should not be considered as an advertisement or advice, professional or otherwise. This research report and its respective content by Axis Securities made available on this page or otherwise do not constitute an offer to sell or purchase or subscribe for any securities or solicitation of any investments or investment services for the residents of Canada and / or USA or any jurisdiction where such an offer or solicitation would be illegal.

Subject company(ies) may have been client during twelve months preceding the date of distribution of the research report. Derivatives are a sophisticated investment device. The investor is requested to take into consideration all the risk factors before actually trading in derivative contracts.

Past performance should not be taken as an indication or guarantee of future performance, and no representation or warranty, express or implied, is made regarding future performance. Information, opinions and estimates contained in this report reflect a judgment of its original date of publication by ASL and are subject to change without notice. The price, value of and income from any of the securities or financial instruments mentioned in this report can fall as well as rise. The value of securities and financial instruments is subject to exchange rate fluctuation that may have a positive or adverse effect on the price or income of such securities or financial instruments.

The information and opinions in this report have been prepared by Axis Securities and are subject to change without any notice. The report and information contained herein is strictly confidential and meant solely for the selected recipient and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent of Axis Securities. The report must not be used as a singular basis of any investment decision. The views herein are of a general nature and do not consider the risk appetite, investment objective or the particular circumstances of an individual investor. The investor is requested to take into consideration all the risk factors including their financial condition, suitability to risk return profile and the like and take professional advice before investing.

While we would endeavour to update the information herein on a reasonable basis, Axis Securities is under no obligation to update or keep the information current. Also, there may be regulatory, compliance or other reasons that may prevent Axis Securities from doing so. Non-rated securities indicate that rating on a particular security has been suspended temporarily and such suspension is in compliance with applicable regulations and/or Axis Securities policies, in circumstances where Axis Securities might be acting in an advisory capacity to this company, or in certain other circumstances.

**Disclaimer & Disclosures :**

This report is based on information obtained in good faith from public sources and sources believed to be reliable, but no independent verification has been made nor is its accuracy or completeness guaranteed. This report and information herein is solely for informational purpose and shall not be used or considered as an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments. Though disseminated to all the customers simultaneously, not all customers may receive this report at the same time. Axis Securities will not treat recipients as customers by virtue of their receiving this report. Nothing in this report constitutes investment, legal, accounting and tax advice or a representation that any investment or strategy is suitable or appropriate to your specific circumstances. The securities discussed and opinions expressed in this report may not be suitable for all investors, who must make their own investment decisions, based on their own investment objectives, financial positions and needs of specific recipient. This may not be taken in substitution for the exercise of independent judgment by any recipient. The recipient should independently evaluate the investment risks. The value and return on investment may vary because of changes in interest rates, foreign exchange rates or any other reason. Axis Securities accepts no liabilities whatsoever for any loss or damage of any kind arising out of the use of this report. Past performance is not necessarily a guide to future performance. Investors are advised to see Risk Disclosure Document to understand the risks associated before investing in the securities markets. Actual results may differ materially from those set forth in projections. Forward-looking statements are not predictions and may be subject to change without notice. Axis Securities or its associates might have managed or co-managed public offering of securities for the subject company or might have been mandated by the subject company for any other assignment in the past twelve months. Axis Securities or its associates might have received any compensation from the companies mentioned in the report during the period preceding twelve months from the date of this report for services in respect of managing or co-managing public offerings, corporate finance, investment banking or merchant banking, brokerage services or other advisory service in a merger or specific transaction. Axis Securities or its associates might have received any compensation for products or services other than investment banking or merchant banking or brokerage services from the companies mentioned in the report in the past twelve months. Axis Securities encourages independence in research report preparation and strives to minimize conflict in preparation of research report. Axis Securities or its associates or its analysts did not receive any compensation or other benefits from the companies mentioned in the report or third party in connection with preparation of the research report. Accordingly, neither Axis Securities nor Research Analysts and / or their relatives have any material conflict of interest at the time of publication of this report. Please note that Axis Securities has a proprietary trading desk. This desk maintains an arm's length distance with the Research team and all its activities are segregated from Research activities. The proprietary desk operates independently, potentially leading to investment decisions that may deviate from research views.

Compensation of our Research Analysts is not based on any specific merchant banking, investment banking or brokerage service transactions.

Research Analyst may have served as an officer, director or employee of subject company(ies). Axis Securities or Research Analysts or their relatives do not own 1% or more of the equity securities of the Company mentioned in the report as of the last day of the month preceding the publication of the research report. Since associates of Axis Securities and Axis Securities as an entity are engaged in various financial service businesses, they might have financial interests or actual/beneficial ownership of one percent or more or other material conflict of interest in various companies including the subject company/companies mentioned in this report. Axis Securities may have issued other reports that are inconsistent with and reach different conclusion from the information presented in this report. Certain transactions -including those involving futures, options and other derivatives as well as non-investment grade securities - involve substantial risk and are not suitable for all investors. Reports based on technical analysis centres on studying charts of a stock's price movement and trading volume, as opposed to focusing on a company's fundamentals and as such, may not match with a report on a company's fundamentals.

We and our affiliates/associates, officers, directors, and employees, Research Analyst(including relatives) worldwide may: (a) from time to time, have long or short positions in, and buy or sell the securities thereof, of company (ies) mentioned herein or (b) be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the subject company/company (ies) discussed herein or act as advisor or lender / borrower to such company (ies) or have other potential/material conflict of interest with respect to any recommendation and related information and opinions at the time of publication of Research Report or at the time of public appearance. Axis Securities may have proprietary long/short position in the above mentioned scrip(s) and therefore may be considered as interested. This should not be construed as invitation or solicitation to do business with Axis Securities. Axis Securities is also a Portfolio Manager. Portfolio Management Team (PMS) takes its investment decisions independent of the PCG research and accordingly PMS may have positions contrary to the PCG research recommendation.

**Disclaimer & Disclosures:**

Axis Securities or its associates or its analysts did not receive any compensation or other benefits from the companies mentioned in the report or third party in connection with preparation of the research report. Accordingly, neither Axis Securities nor Research Analysts and / or their relatives have any material conflict of interest at the time of publication of this report. Please note that Axis Securities has a proprietary trading desk. This desk maintains an arm's length distance with the Research team and all its activities are segregated from Research activities. The proprietary desk operates independently, potentially leading to investment decisions that may deviate from research views.

Compensation of our Research Analysts is not based on any specific merchant banking, investment banking or brokerage service transactions.

Research Analyst may have served as an officer, director or employee of subject company(ies). Axis Securities or Research Analysts or their relatives do not own 1% or more of the equity securities of the Company mentioned in the report as of the last day of the month preceding the publication of the research report. Since associates of Axis Securities and Axis Securities as an entity are engaged in various financial service businesses, they might have financial interests or actual/beneficial ownership of one percent or more or other material conflict of interest in various companies including the subject company/companies mentioned in this report. Axis Securities may have issued other reports that are inconsistent with and reach different conclusion from the information presented in this report. Certain transactions -including those involving futures, options and other derivatives as well as non-investment grade securities - involve substantial risk and are not suitable for all investors. Reports based on technical analysis centres on studying charts of a stock's price movement and trading volume, as opposed to focusing on a company's fundamentals and as such, may not match with a report on a company's fundamentals.

We and our affiliates/associates, officers, directors, and employees, Research Analyst(including relatives) worldwide may: (a) from time to time, have long or short positions in, and buy or sell the securities thereof, of company (ies) mentioned herein or (b) be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the subject company/company (ies) discussed herein or act as advisor or lender / borrower to such company (ies) or have other potential/material conflict of interest with respect to any recommendation and related information and opinions at the time of publication of Research Report or at the time of public appearance. Axis Securities may have proprietary long/short position in the above mentioned scrip(s) and therefore may be considered as interested. This should not be construed as invitation or solicitation to do business with Axis Securities. Axis Securities is also a Portfolio Manager. Portfolio Management Team (PMS) takes its investment decisions independent of the PCG research and accordingly PMS may have positions contrary to the PCG research recommendation.

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