



Daily Derivatives Report

Nifty Futures

	Value	Change
Most recent settlement	23,378	0.5%▲
Open Interest (OI)	1,71,93,100	1.9%▲
Change in OI (abs)	1,71,93,100	3,27,775▲
Premium / Discount (Abs)	66	13▲
Inference	Long Build Up	

Bank Nifty Futures

	Value	Change
Most recent settlement	49,444	1.1%▲
Open interest (OI)	32,73,585	1.5%▲
Change in OI (abs)	32,73,585	47,055▲
Premium / Discount (Abs)	165	24▲
Inference	Long Build Up	

Volatility Insights

	Value	Change
India VIX Index	15.46	0.2▲
Nifty ATM IV (%)	14.63	3.0▲
Bank Nifty ATM IV (%)	17.09	0.1▼
PCR (Nifty)	1.01	0.19▲
PCR (Bank Nifty)	0.61	0.02▲

*The Long Ratio for the FII Index Futures closed **lower** at 16.8%, against 17.2% recorded in the previous session.

Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
LTTTS	7,21,300	17.0%	5233.95	8.0%
KEI	5,79,750	13.3%	4073.95	0.9%
MFSL	42,73,600	11.3%	1065.3	3.4%
APOLLOTYRE	1,51,99,700	6.8%	457.15	0.3%
APLAPOLLO	46,38,200	6.6%	1554.55	2.3%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
CESC	1,85,76,675	16.5%	151.42	-2.0%
KPITTECH	19,06,800	7.6%	1325.15	-1.3%
BRITANNIA	30,64,000	6.9%	4828.5	-0.7%
BPCL	6,85,27,800	6.8%	267.95	-0.1%
DRREDDY	1,35,45,625	6.2%	1301.15	-2.5%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
PAYTM	1,76,46,850	-7.4%	898.4	4.2%
INDIANB	38,85,500	-6.3%	525.75	4.2%
AARTIIND	1,87,72,000	-5.4%	439.55	2.1%
ICICIPRULI	1,24,01,250	-4.6%	652.15	2.6%
HFCL	3,87,98,350	-4.3%	102.82	5.3%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
OFSS	9,05,000	-8.4%	10223.6	-2.4%
KALYANKJIL	1,67,37,675	-6.0%	540.15	-2.4%
EICHERMOT	38,04,325	-5.6%	5053.35	-0.7%
INFY	4,17,73,600	-4.5%	1927.65	-1.5%
HINDUNILVR	1,47,15,600	-2.3%	2354.05	-0.8%

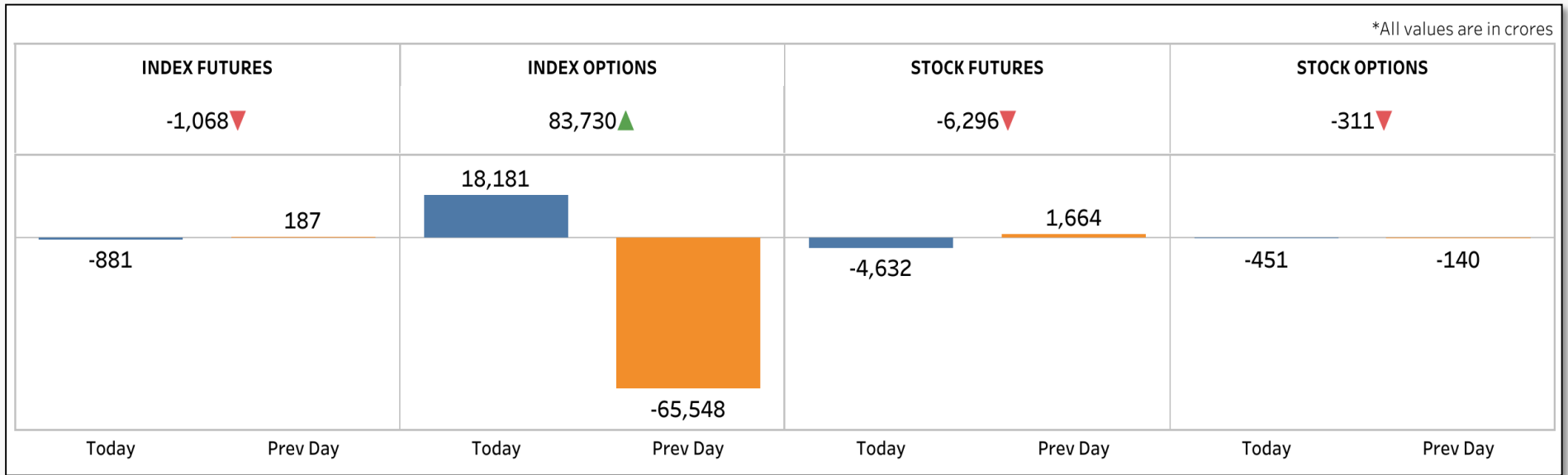
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

Open Interest Data by Participant

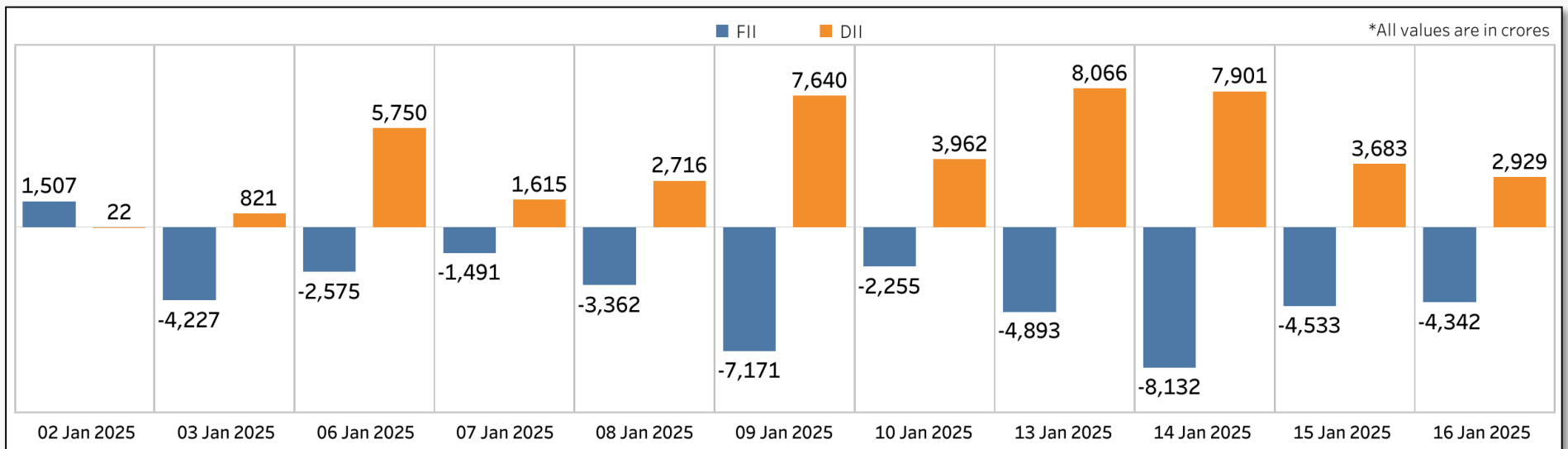
▲ and ▼ indicate positive and negative absolute changes, respectively

FII								DII							
INDEX CALL		INDEX FUT		INDEX PUT		STK FUT		INDEX CALL		INDEX FUT		INDEX PUT		STK FUT	
359,928 ▲		-11,925 ▼		354,084 ▲		-98,381 ▼		0		15,798 ▲		-156 ▼		498 ▲	
181,173		4,633		170,169		29,665				15,881				14,862	
-178,755		-7,292		-183,915		-68,716		0		83		0		14,364	
Net O/S 108,417		Net O/S -274,777		Net O/S 444,003		Net O/S 1,199,647		Net O/S 70		Net O/S 12,973		Net O/S 165,275		Net O/S -3,849,899	
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	
-465,985 ▼		940 ▲		-381,464 ▼		39,529 ▲		106,057 ▲		-4,813 ▼		27,538 ▲		58,354 ▲	
147,080				198,534		41,021		137,732						12,833	
-318,905		-5,731		-182,930		1,492		31,675		1,955		12,918		-45,521	
		-6,671						-2,858				-14,620			
Net O/S 175,183		Net O/S 302,262		Net O/S -560,243		Net O/S 2,235,218		Net O/S -283,670		Net O/S -40,458		Net O/S -49,037		Net O/S 415,034	
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

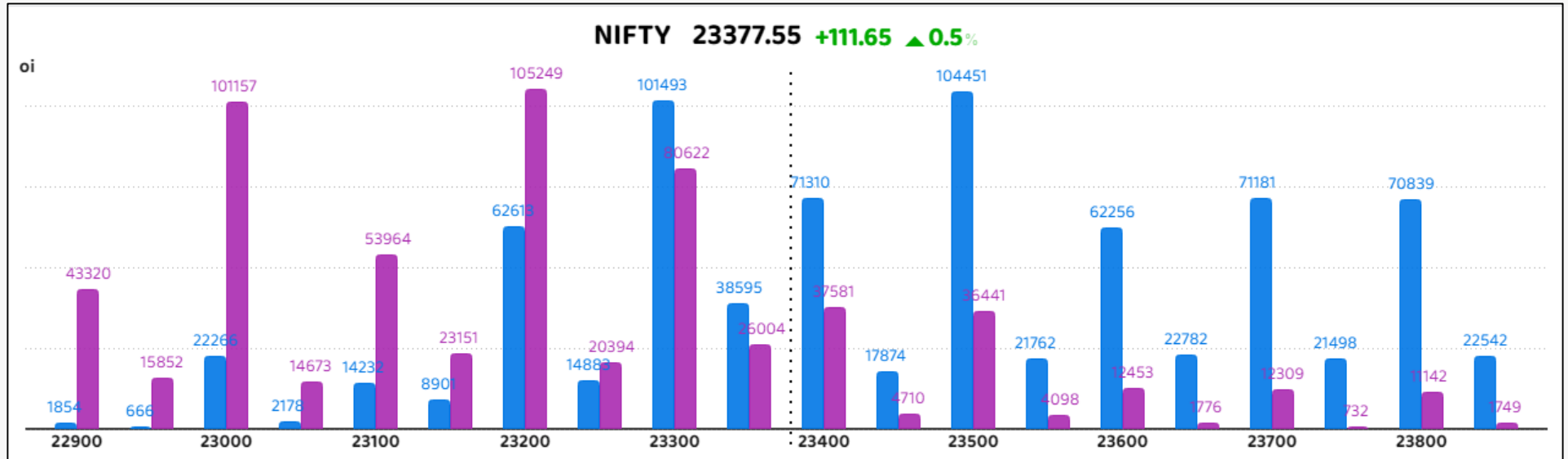


DII and FII Daily Cash Market Flows



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

Call ■ Put ■



For the Nifty, the 23500 Call and the 23000 Put had the highest call and put concentration (contracts). For the Bank Nifty, the 50000 Call and the 49000 Put saw the most amount of open interest.

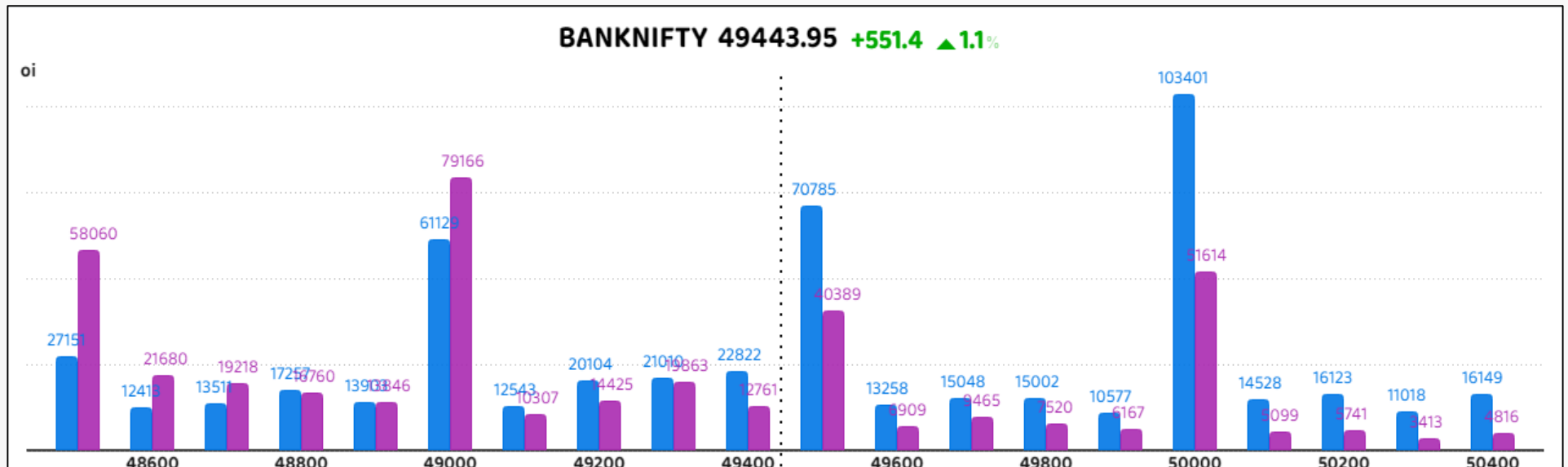
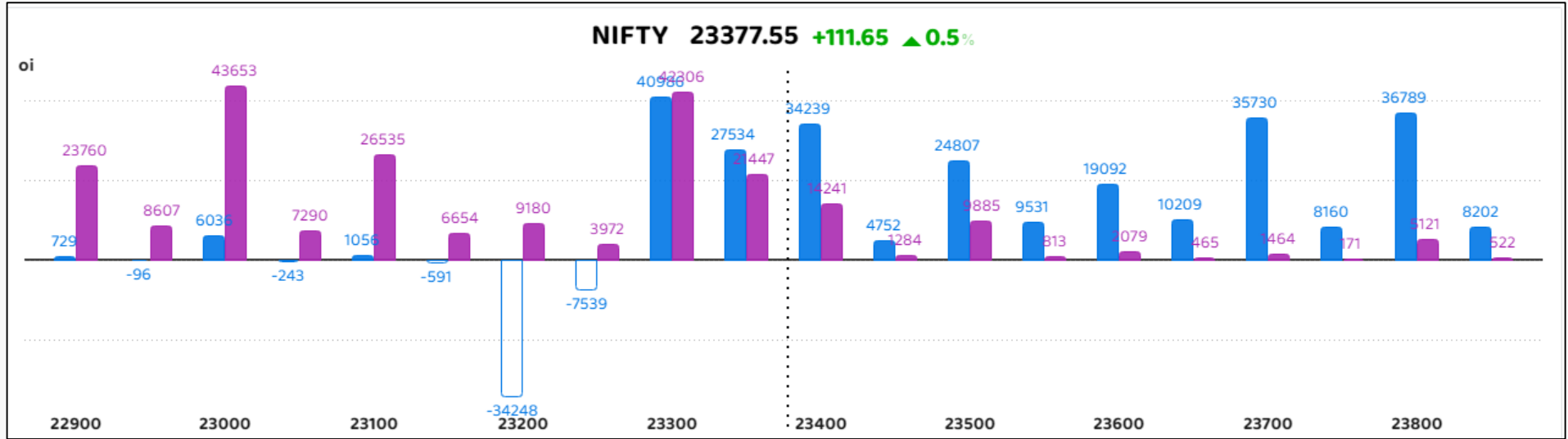


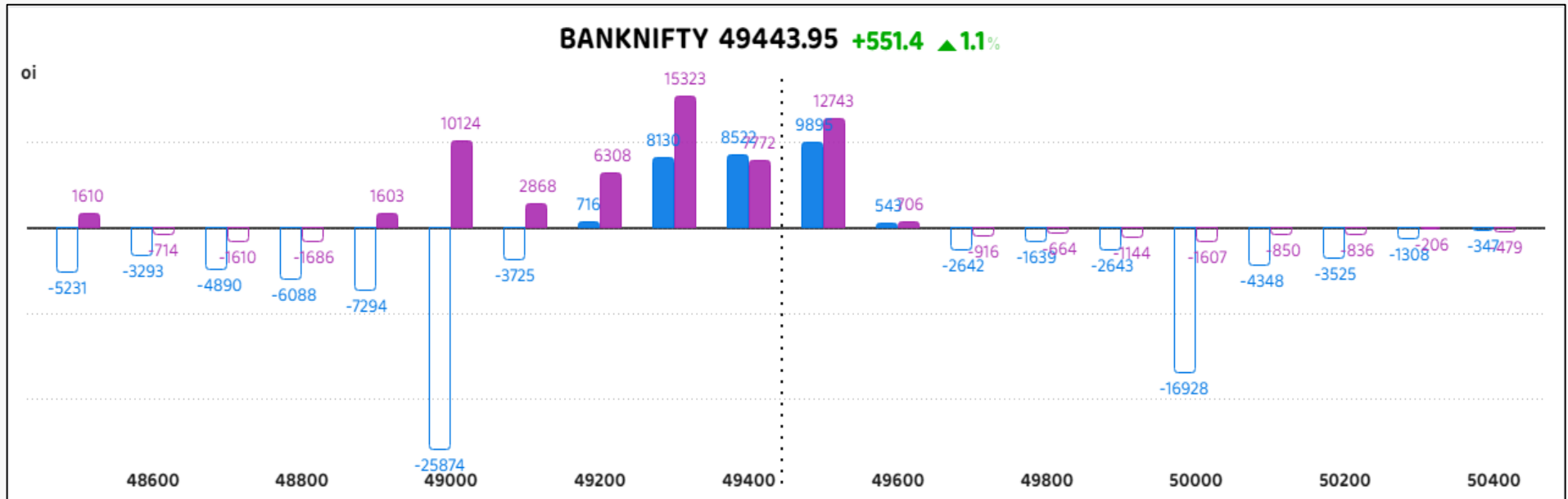
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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 49000 Call & the 49300 Put

Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
MANAPPURAM FINAN	183.19	1.8	63.2	64.2	2.7	98.5
WIPRO LTD	288.05	-1.6	36.3	38.9	16.2	88.7
KOTAK MAHINDRA	1805.55	0.9	25.4	28.7	1.9	87.8
DIXON TECHNOLOGI	16938.9	0.1	44.8	51.3	1.8	86.8
ICICI PRUDENTIAL	651.4	2.9	35.6	41.4	15.3	77.7

Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
L&T FINANCE LTD	142.33	1.6	16.9	67.0	16.9	0.0
PI INDUSTRIES	3480.45	0.6	21.3	46.7	18.7	9.4
HDFC LIFE INSURA	641.4	7.9	25.7	80.6	19.6	10.0
ADANI PORTS AND	1150.75	1.9	33.8	97.8	23.2	14.2
BHARAT ELECTRON	276.15	3.1	34.7	81.6	25.5	16.5

Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
MANAPPURAM FINAN	183.19	1.8	63.2	64.2	2.7	99.8
WIPRO LTD	288.05	-1.6	36.3	38.9	16.2	97.6
INFOSYS LTD	1928.45	-1.1	31.6	45.6	4.9	96.8
ICICI PRUDENTIAL	651.4	2.9	35.6	41.4	15.3	96.4
INDIAN HOTELS CO	811.45	0.0	35.0	42.5	20.7	93.7

Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
L&T FINANCE LTD	142.33	1.6	16.9	67.0	16.9	0.0
PI INDUSTRIES	3480.45	0.6	21.3	46.7	18.7	1.5
GODREJ CONSUMER	1149.6	1.8	18.9	40.6	14.3	3.5
AARTI INDUS LTD	438.75	2.1	27.3	55.8	15.5	5.2
UNITED BREWERIES	1929.7	-1.0	19.8	47.4	13.6	7.4

Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
VODAFONE IDEA LT	8.93	1.9	32833	7582	4.3
SIEMENS LTD	6010.05	3.5	46284	11143	4.2
JK CEMENTS LTD	4544.9	2.0	3061	801	3.8
COROMANDEL INTER	1875.4	2.8	8049	2249	3.6
ABB INDIA LTD	6308.25	1.8	18424	5415	3.4

Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
TORRENT PHARMA	3178.6	-1	1196	1745	1.5
ASIAN PAINTS LTD	2215.6	-1	29009	29853	1.0
ORACLE FINANCIAL	10189.85	-3	158853	159147	1.0
BRITANNIA INDS	4844.55	-1	29185	29076	1.0
TATA CONSUMER PR	937.7	-2	20678	20064	1.0

Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Call OI Diff
CUMMINS INDIA	2924.95	1.3	14561	14561	100.0
INDIAN HOTELS CO	811.45	0.0	14337	14749	97.2
DIXON TECHNOLOGI	16938.9	0.1	44845	48247	93.0
PVR INOX LTD	1083.2	-0.1	13846	15156	91.4
HCL TECH LTD	1774.290606	-1.8	56306	62424	90.2

Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Put OI Diff
HAVELLS INDIA	1558.25	2.0	10373	10373	100.0
ICICI LOMBARD GE	1907.9	0.7	5767	5767	100.0
ORACLE FINANCIAL	10189.85	-3.4	15687	15687	100.0
L&T TECHNOLOGY S	5244.4	8.1	13420	13420	100.0
INDUS TOWERS LTD	354.55	0.8	13495	13630	99.0

Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	CV Diff
HDFC LIFE INSURA	641.4	7.9	173135	173135	100.0
L&T TECHNOLOGY S	5244.4	8.1	105165	105165	100.0
ORACLE FINANCIAL	10189.85	-3.4	158853	187231	84.8

Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	PV Diff
ORACLE FINANCIAL	10189.85	-3.4	159147	159147	100.0
HDFC LIFE INSURA	641.4	7.9	98496	98496	100.0
L&T TECHNOLOGY S	5244.4	8.1	74159	74159	100.0

Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
HDFC LIFE INSURA	641.4	7.9	173135	19914	8.7
ORACLE FINANCIAL	10189.85	-3.4	158853	24571	6.5
L&T TECHNOLOGY S	5244.4	8.1	105165	16967	6.2
MAX FINANCIAL SE	1063.15	2.8	14884	2494	6.0
ICICI LOMBARD GE	1907.9	0.7	36759	8286	4.4

Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
ORACLE FINANCIAL	10189.85	-3.4	159147	18213	8.7
HDFC LIFE INSURA	641.4	7.9	98496	11729	8.4
L&T TECHNOLOGY S	5244.4	8.1	74159	12036	6.2
MAX FINANCIAL SE	1063.15	2.8	7638	1721	4.4
ICICI LOMBARD GE	1907.9	0.7	15063	4833	3.1

Call Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
ORACLE FINANCIAL	10189.85	-3.4	24029	8813	2.7
HAVELLS INDIA	1558.25	2.0	10174	3921	2.6
HCL TECH LTD	1792.25	-1.8	56306	23690	2.4
MRF LTD	114463.6	0.2	10904	5096	2.1
ICICI LOMBARD GE	1907.9	0.7	7578	3602	2.1

Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
L&T TECHNOLOGY S	5244.4	8.1	13420	4532	3.0
HAVELLS INDIA	1558.25	2.0	10373	3531	2.9
ORACLE FINANCIAL	10189.85	-3.4	15687	5790	2.7
SRF LTD	2583.8	3.7	14591	6354	2.3
NAVIN FLUORINE I	3767.6	1.4	6079	2807	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	2800	1509000	15.3%	2428	2800	2731500	15.3%	INFY	2000	7257200	3.7%	1928	1800	2025200	-6.7%
ADANIPTS	1200	1615600	4.3%	1151	1200	877600	4.3%	ITC	460	6812800	6.3%	433	440	2080000	1.7%
APOLLOHOSP	7500	195875	10.5%	6790	7200	66750	6.0%	JSWSTEEL	1000	842400	10.3%	907	900	721575	-0.7%
ASIANPAINT	2500	1065600	12.8%	2216	2200	842800	-0.7%	KOTAKBANK	1860	1720400	3.0%	1806	1800	1150800	-0.3%
AXISBANK	1100	3933750	6.0%	1038	1000	2413125	-3.7%	LT	3700	826350	5.5%	3508	3500	631800	-0.2%
BAJAJ-AUTO	10000	236925	16.5%	8582	7600	145650	-11.4%	LTIM	6500	184050	8.7%	5979	5500	145950	-8.0%
BAJAJFINSV	1700	1881000	0.2%	1697	1700	721500	0.2%	M&M	3200	799750	7.4%	2981	2900	399175	-2.7%
BAJFINANCE	7500	653500	3.3%	7260	7200	349125	-0.8%	MARUTI	12000	633100	-0.8%	12092	12000	229950	-0.8%
BHARTIARTL	1640	2954025	0.6%	1630	1600	1140950	-1.9%	NESTLEIND	2300	442400	6.0%	2169	1940	247800	-10.6%
BPCL	300	6832800	12.4%	267	265	2685600	-0.7%	NTPC	340	8820000	4.5%	326	300	3210000	-7.8%
BRITANNIA	5000	263100	3.2%	4845	4700	405400	-3.0%	ONGC	264	14818650	0.3%	263	250	4217675	-5.0%
CIPLA	1540	705250	6.7%	1444	1320	266825	-8.6%	POWERGRID	310	3717000	4.1%	298	290	2109600	-2.6%
COALINDIA	400	4017300	5.6%	379	370	1591800	-2.3%	RELIANCE	1300	13166500	2.6%	1266	1200	5733500	-5.2%
DIVISLAB	6000	128500	1.4%	5916	5800	129200	-2.0%	SBLIFE	1440	546750	-4.9%	1514	1440	228000	-4.9%
DRREDDY	1400	1709375	7.5%	1303	1300	525625	-0.2%	SBIN	800	9347250	4.4%	766	700	4869000	-8.7%
EICHERMOT	5000	337925	-0.9%	5048	5000	173425	-0.9%	SUNPHARMA	1900	1384950	7.8%	1763	1700	261100	-3.6%
GRASIM	2600	387750	10.6%	2351	2500	190000	6.4%	TATACONSUM	1000	938448	6.6%	938	900	625176	-4.0%
HCLTECH	2000	3763200	11.6%	1792	1600	819000	-10.7%	TATAMOTORS	800	7684600	3.3%	774	750	3417150	-3.1%
HDFCBANK	1800	6883250	9.0%	1652	1560	2353450	-5.6%	TATASTEEL	140	29012500	9.5%	128	135	9806500	5.6%
HDFCLIFE	660	4141500	2.9%	641	600	2222000	-6.5%	TCS	4300	1601600	2.2%	4206	4000	919275	-4.9%
HEROMOTOCO	4300	461850	5.5%	4074	4000	142500	-1.8%	TECHM	1760	1744200	4.3%	1688	1600	475200	-5.2%
HINDALCO	600	4030600	-0.4%	603	600	2074800	-0.4%	TITAN	3400	624225	2.5%	3317	3200	284025	-3.5%
HINDUNILVR	2500	1037100	6.6%	2345	2300	451500	-1.9%	ULTRACEMCO	12000	123400	12.8%	10636	11500	38600	8.1%
ICICIBANK	1300	3152100	4.1%	1249	1200	1672300	-3.9%	UPL	550	1957975	0.7%	546	500	857715	-8.5%
INDUSINDBK	1000	5420500	2.5%	975	960	1061500	-1.6%	WIPRO	310	6222000	7.6%	288	280	4788000	-2.8%

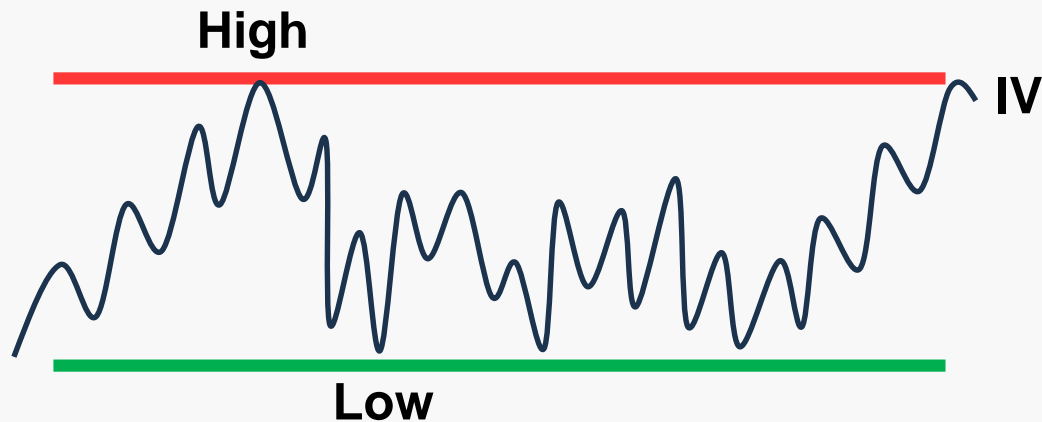
If distance to call strike from current market price < distance to put strike from current market price, then the %Away for the call strike will be colored green
 If distance to put strike from current market price < distance to call strike from current market price, then the %Away for the put strike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

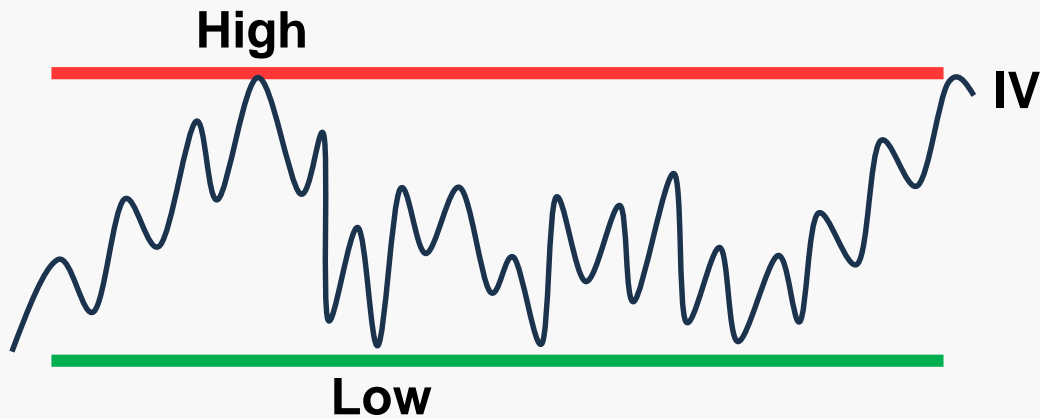


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.



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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