



Daily Derivatives Report

Nifty Futures

	Value	Change
Most recent settlement	23,648	0.6% ▼
Open Interest (OI)	1,54,17,200	6.7% ▲
Change in OI (abs)	1,45,17,200	9,62,700 ▲
Premium / Discount (Abs)	122	29 ▲
Inference	Short Build Up	

Bank Nifty Futures

	Value	Change
Most recent settlement	49,787	0.6% ▼
Open interest (OI)	31,09,830	5.7% ▲
Change in OI (abs)	31,09,830	166710 ▲
Premium / Discount (Abs)	284	23 ▲
Inference	Short Build Up	

Volatility Insights

	Value	Change
India VIX Index	14.66	0.2 ▲
Nifty ATM IV (%)	13.92	0.2 ▲
Bank Nifty ATM IV (%)	17.20	0.2 ▲
PCR (Nifty)	0.92	0.09 ▲
PCR (Bank Nifty)	0.66	0.03 ▼

*The Long Ratio for the FII Index Futures **steep decline** to close at 16.2%, against 19.2% recorded in the previous session.

Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
ITC	3,54,08,000	30.6%	452.55	0.1%
NAVINFLUOR	18,04,950	26.5%	3845.6	9.8%
MGL	67,77,200	8.7%	1274.3	1.3%
KOTAKBANK	4,03,71,200	7.1%	1799.7	1.4%
AUBANK	3,45,54,000	5.9%	564.5	0.9%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
CHAMBLFERT	94,88,600	12.2%	494.55	-1.4%
CESC	1,06,76,250	9.0%	169.98	-2.2%
LICI	63,47,425	8.4%	846.45	-3.0%
KALYANKJIL	1,54,86,825	7.3%	662.9	-5.2%
HDFCBANK	13,75,51,150	6.7%	1676.75	-1.6%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
COLPAL	43,03,600	-7.9%	2897.35	3.6%
ATUL	6,19,600	-4.0%	6943.4	1.0%
HINDALCO	4,64,21,200	-4.0%	592.1	0.7%
CROMPTON	2,40,87,600	-3.1%	371.1	0.2%
LALPATHLAB	9,32,700	-2.5%	3013.5	0.3%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
KPITTECH	15,33,600	-11.7%	1427.8	-0.6%
MANAPPURAM	6,32,70,000	-10.2%	180.02	-0.6%
LTTS	6,21,000	-8.3%	4884.4	-0.8%
OBEROIRLTY	49,12,250	-7.6%	2238.35	-1.6%
POLYCAB	16,30,625	-5.3%	6777.55	-2.3%

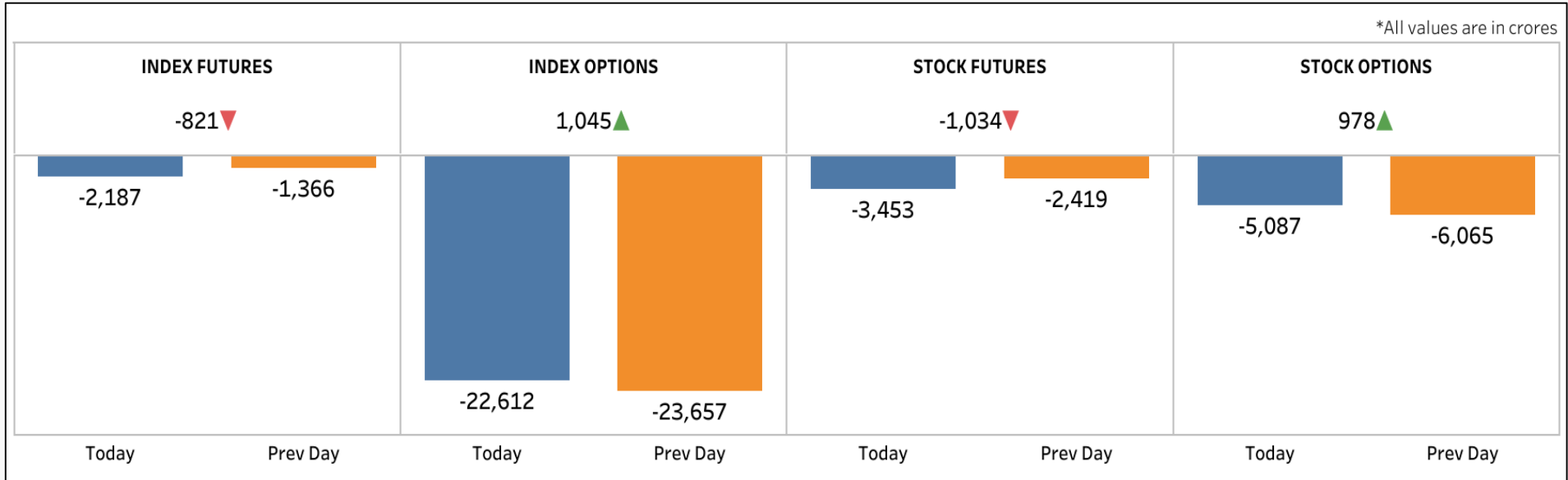
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

Open Interest Data by Participant

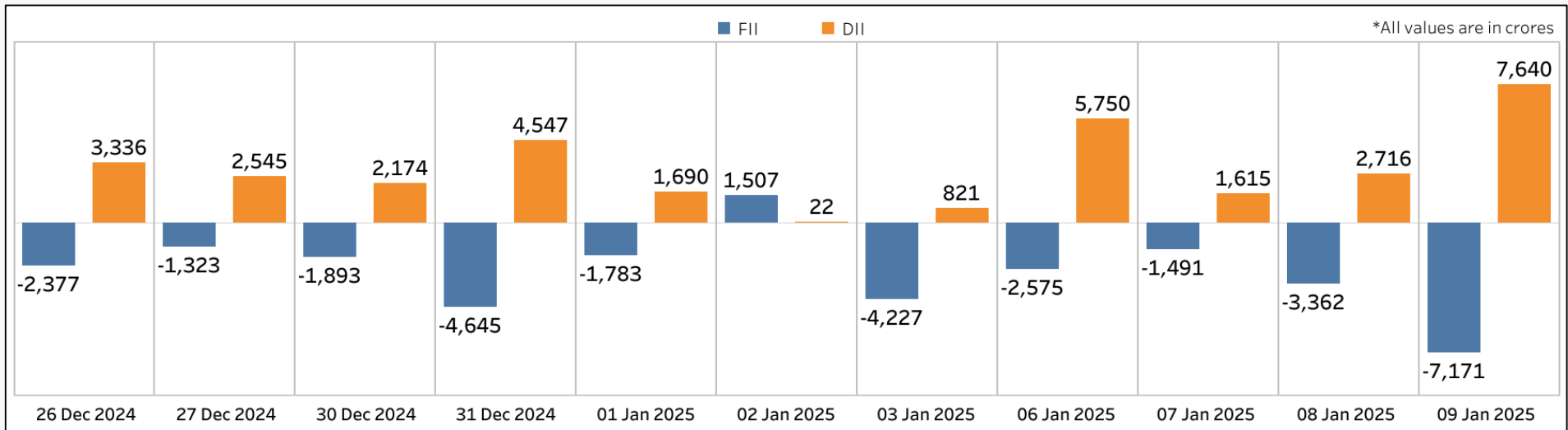
▲ and ▼ indicate positive and negative absolute changes, respectively

FII				DII			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
64,535 ▲	-12,204 ▼	26,987 ▲	-22,058 ▼	0	63 ▲	-758 ▼	-11,573 ▼
-4,129	-29,508	-2,559	-59,646	0	-905	-5,758	-14,452
-68,664	-17,304	-29,546	-37,588	0	-968	-5,000	-2,879
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
-102,653	-245,110	222,810	1,070,443	70	-6,865	169,199	-3,815,464
Today	Today	Today	Today	Today	Today	Today	Today
Prev Day	Prev Day	Prev Day	Prev Day	Prev Day	Prev Day	Prev Day	Prev Day
Clients				Pro			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
-238,287 ▼	-5,568 ▼	-113,517 ▼	13,167 ▲	173,752 ▲	17,709 ▲	87,285 ▲	20,464 ▲
177,256	23,370	-50,458	30,671	65,160	7,043	58,773	43,427
-61,031	28,938	63,059	17,504	-108,592	-10,666	-28,512	22,963
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
354,502	283,623	-561,397	2,297,774	-251,919	-31,648	169,385	447,247
Today	Today	Today	Today	Today	Today	Today	Today
Prev Day	Prev Day	Prev Day	Prev Day	Prev Day	Prev Day	Prev Day	Prev Day

Daily Net Open Interest Change

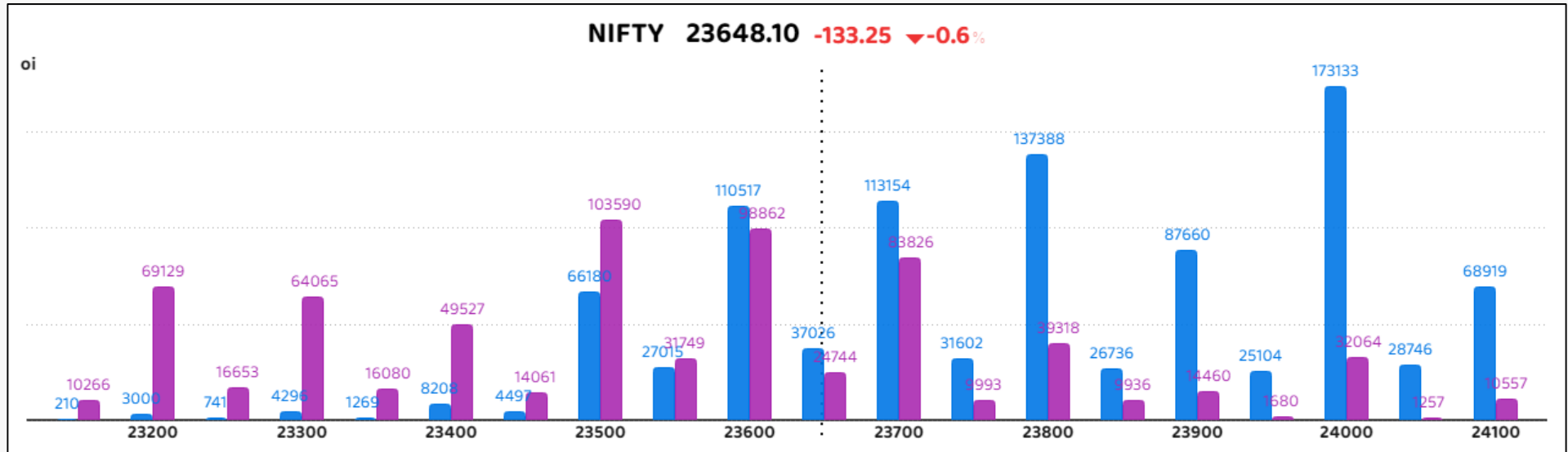


DII and FII Daily Cash Market Flows



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

Call ■ Put ■



For the Nifty, the 24000 Call and the 23500 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.

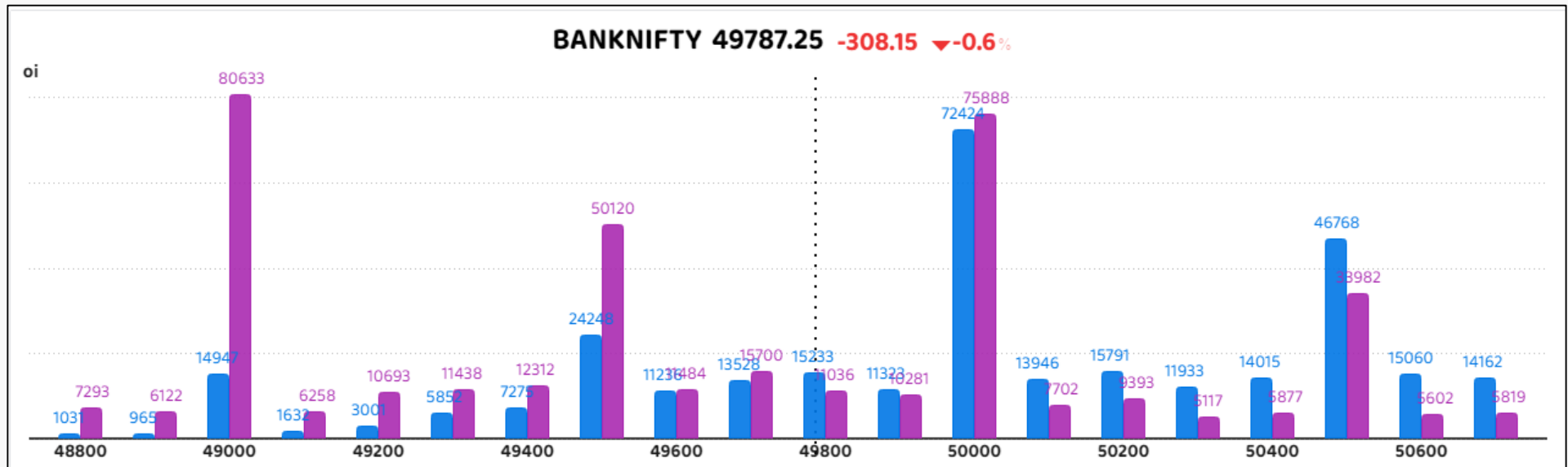
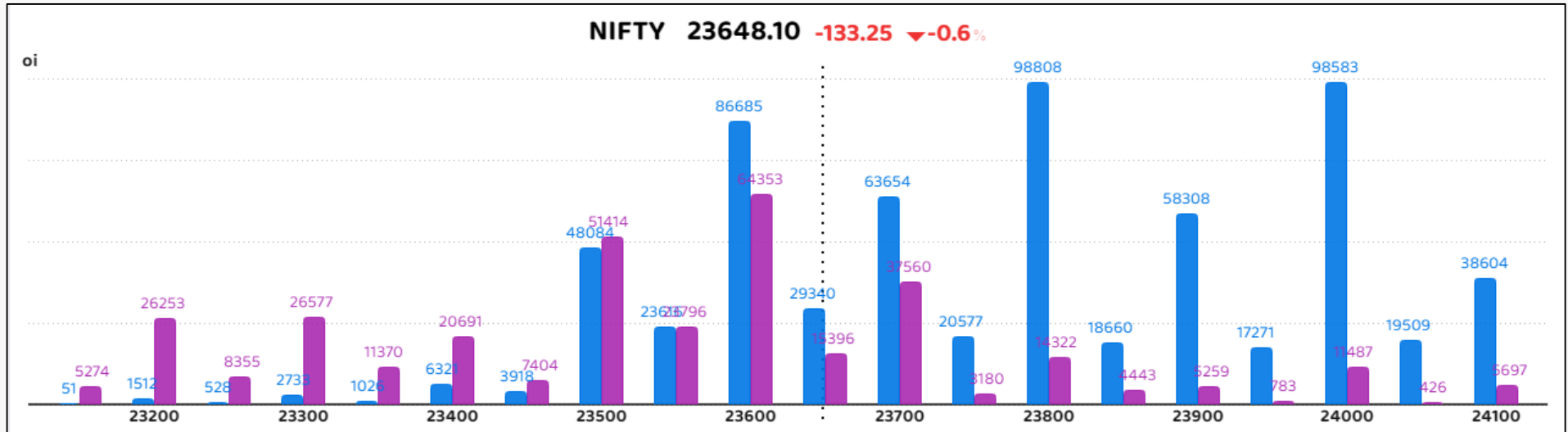


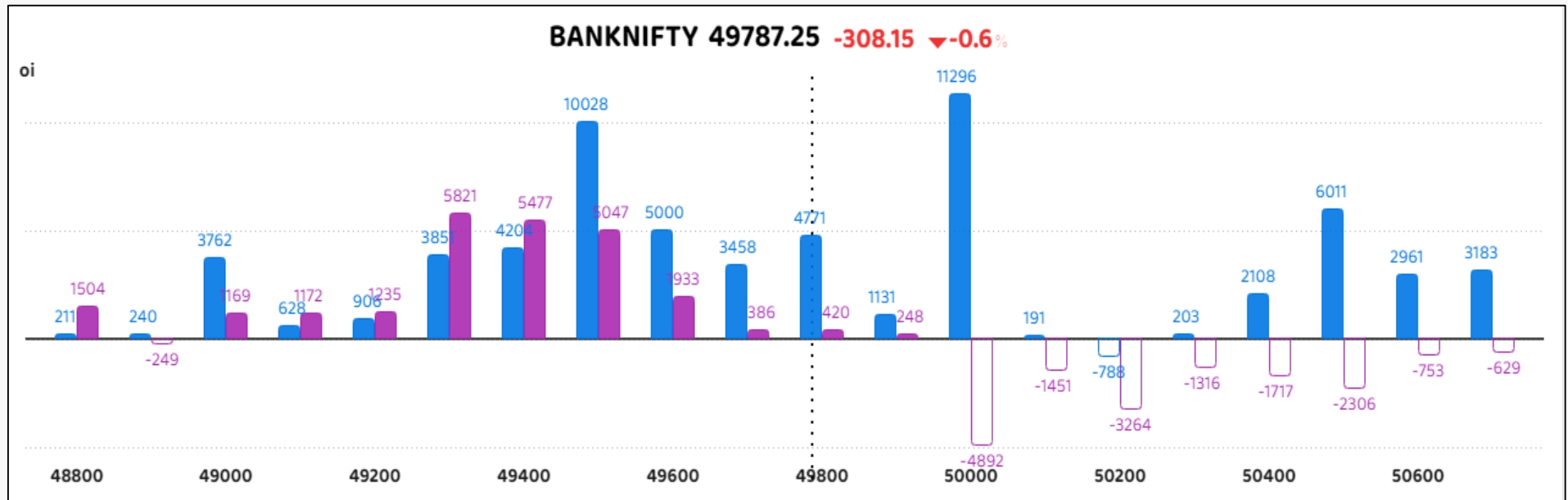
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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

Call ■ Put ■



The largest open interest changes (contracts) were seen at the 24000 Call and the 23600 Put



For the Bank Nifty, the biggest open interest changes were seen at the 50000 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	179	-0.5	51.6	64.2	2.7	93.9
INDUSIND BANK	980.9	0.0	33.6	60.4	12.4	91.9
COLGATE PALMOLIV	2890.6	3.6	27.2	31.7	9.5	90.8
SRF LTD	2673.9	13.7	32.6	40.8	21.4	90.1
KOTAK MAHINDRA	1790.2	1.2	24.2	28.7	1.9	89.3

Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
ITC LTD	481.6	-1.5	1.0	66.4	1.0	0.0
INDIAN RAILWAY C	796.3	0.2	23.3	59.6	21.9	3.7
BANK OF BARODA	241.64	0.2	26.5	66.9	24.3	5.3
BHARAT PETROL	296.4	-0.2	27.3	69.0	24.9	5.6
INDIAN OIL CORP	138.14	0.1	25.3	51.9	23.7	5.7

Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
MANAPPURAM FINAN	179	-0.5	51.6	64.2	2.7	93.9
INDUSIND BANK	980.9	0.0	33.6	60.4	12.4	91.9
COLGATE PALMOLIV	2890.6	3.6	27.2	31.7	9.5	90.8
SRF LTD	2673.9	13.7	32.6	40.8	21.4	90.1
KOTAK MAHINDRA	1790.2	1.2	24.2	28.7	1.9	89.3

Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
AMBUJA CEMENTS	525.25	-2.4	19.5	70.4	2.3	0.8
PAGE INDUSTRIES	47544.7	-1.1	16.8	41.8	13.9	3.7
HDFC BANK LTD	1667.8	-1.6	15.4	32.7	11.1	3.8
L&T FINANCE LTD	142.7	-0.5	28.5	66.4	22.6	7.6
ALKEM LABORATORI	5453.95	-1.9	22.4	48.8	14.7	9.4

Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
PIDILITE INDS	2958.25	1.7	8292	1836	4.5
SAMVARDHANA MOTH	148.72	-1.8	8383	3298	2.5
BAJAJ AUTO LTD	8835.85	2.2	77607	31586	2.5
ZYDUS LIFESCIENC	1010.5	3.0	38005	15645	2.4
TATA POWER CO	367.15	-1.8	32606	13595	2.4

Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
ULTRATECH CEMENT	11259.8	-1.3	20644	27139	1.3
CAN FIN HOMES	693.1	-1.7	1802	2091	1.2
ACC LTD	1973.8	-1.7	7613	8736	1.1
COFORGE LTD	9283	-2.9	17387	16879	1.0
MUTHOOT FINANCE	2135.1	-2.0	4424	4292	1.0

Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Call OI Diff
DIXON TECHNOLOGI	16852.7	-0.3	48247	48247	100.0
CUMMINS INDIA	3108.5	-1.8	10405	12151	85.6
PVR INOX LTD	1161.6	-1.4	12913	15156	85.2

Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Put OI Diff
ASTRAL LTD	1550.85	-0.2	5318	6340	83.9
CHOLAMANDALAM IN	1288.2	1.0	5534	6713	82.4
CUMMINS INDIA	3108.5	-1.8	6034	7359	82.0
CAN FIN HOMES	693.1	-1.7	3813	4732	80.6

Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	CV Diff
INDRAPRASTHA GAS	419.5	3.0	125995	125995	100.0
NAVIN FLUORINE I	3824.55	9.5	58517	72331	80.9

Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	PV Diff
SRF LTD	2673.9	13.7	85468	85468	100.0
NAVIN FLUORINE I	3824.55	9.5	29710	32965	90.1
INDRAPRASTHA GAS	419.5	3.0	49271	57270	86.0
COLGATE PALMOLIV	2890.6	3.6	22286	26190	85.1

Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
NAVIN FLUORINE I	3824.55	9.5	58517	7100	8.2
SRF LTD	2673.9	13.7	100534	13114	7.7
AARTI INDUS LTD	413.4	3.9	46175	8640	5.3
INDRAPRASTHA GAS	419.5	3.0	125995	29242	4.3
DEEPAK NITRITE	2458.5	0.9	27588	6546	4.2

Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
SRF LTD	2673.9	13.7	85468	8114	10.5
NAVIN FLUORINE I	3824.55	9.5	29710	3419	8.7
INDRAPRASTHA GAS	419.5	3.0	49271	12719	3.9
COLGATE PALMOLIV	2890.6	3.6	22286	5757	3.9
ZYDUS LIFESCIENC	1010.5	3.0	15645	4615	3.4

Call Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
SRF LTD	2673.9	13.7	9857	3914	2.5
MRF LTD	118885.6	-0.8	7964	3433	2.3
TATA CONSULTANCY	4038.85	-1.7	83056	39445	2.1
INFO EDGE	7949.3	-3.5	14279	7280	2.0
NAVIN FLUORINE I	3824.55	9.5	5476	2962	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	2673.9	13.7	14424	3437	4.2
NAVIN FLUORINE I	3824.55	9.5	4923	2102	2.3
UNITED BREWERIES	2023.45	1.1	2468	1252	2.0
TATA CONSULTANCY	4038.85	-1.7	51178	26580	1.9
HAVELLS INDIA	1630.2	-0.8	4328	2537	1.7

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	1362600	13.0%	2478	2800	2754900	13.0%	INFY	2000	6228400	4.3%	1917	1900	1556000	-0.9%
ADANIPTS	1200	1513200	6.0%	1132	1200	1018000	6.0%	ITC	460	7142400	2.2%	450	440	2345600	-2.2%
APOLLOHOSP	7500	179250	5.8%	7092	7200	80875	1.5%	JSWSTEEL	1000	977400	12.2%	891	900	654750	1.0%
ASIANPAINT	2500	989400	6.4%	2350	2200	698400	-6.4%	KOTAKBANK	1860	1715600	3.9%	1790	1800	1182000	0.5%
AXISBANK	1200	2708125	13.0%	1062	1100	1541875	3.6%	LT	3700	720150	4.9%	3528	3500	561750	-0.8%
BAJAJ-AUTO	10000	251550	13.2%	8836	7600	119775	-14.0%	LTIM	7000	195600	19.8%	5841	5700	109200	-2.4%
BAJAJFINSV	1700	1877500	0.6%	1690	1600	761500	-5.3%	M&M	3500	543725	11.9%	3127	3000	409325	-4.0%
BAJFINANCE	7500	607250	3.1%	7277	7200	361125	-1.1%	MARUTI	12000	594950	2.2%	11741	11000	204000	-6.3%
BHARTIARTL	1640	2906050	2.1%	1607	1600	737200	-0.4%	NESTLEIND	2300	421000	1.9%	2256	2200	287000	-2.5%
BPCL	300	6460200	7.1%	280	260	2338200	-7.1%	NTPC	340	8827500	6.1%	320	300	1830000	-6.4%
BRITANNIA	4850	235000	-1.5%	4926	4700	425000	-4.6%	ONGC	275	11324775	4.5%	263	250	3545850	-5.0%
CIPLA	1540	675350	3.5%	1488	1360	325975	-8.6%	POWERGRID	330	4087800	8.1%	305	300	2538000	-1.7%
COALINDIA	400	3899700	7.5%	372	400	1746150	7.5%	RELIANCE	1300	10525000	3.6%	1255	1200	4676500	-4.4%
DIVISLAB	6100	117100	4.7%	5825	5700	66700	-2.1%	SBLIFE	1440	538125	-1.9%	1468	1420	210375	-3.3%
DRREDDY	1400	1641875	2.1%	1372	1350	403125	-1.6%	SBIN	800	10133250	5.2%	760	800	4441500	5.2%
EICHERMOT	5000	247100	-2.7%	5140	4800	183750	-6.6%	SUNPHARMA	1920	1461600	5.1%	1826	1820	332500	-0.3%
GRASIM	2600	303500	7.9%	2410	2500	207500	3.7%	TATACONSUM	1000	655728	3.1%	970	900	672144	-7.2%
HCLTECH	2000	1744050	3.4%	1935	1900	732200	-1.8%	TATAMOTORS	800	8625650	2.6%	780	750	3714150	-3.9%
HDFCBANK	1800	7015250	7.9%	1668	1700	2448600	1.9%	TATASTEEL	140	28165500	7.8%	130	135	14074500	3.9%
HDFCLIFE	640	2343000	4.5%	612	600	964700	-2.0%	TCS	4200	2128175	4.0%	4039	4000	1227625	-1.0%
HEROMOTOCO	4300	421200	3.8%	4141	4200	151350	1.4%	TECHM	1760	1648200	7.1%	1643	1600	436200	-2.6%
HINDALCO	600	2784600	1.8%	589	600	1794800	1.8%	TITAN	3600	554925	3.2%	3487	3400	259875	-2.5%
HINDUNILVR	2400	811200	-1.5%	2435	2400	469800	-1.5%	ULTRACEMCO	12000	107750	6.6%	11260	11000	126600	-2.3%
ICICIBANK	1300	3273900	3.0%	1262	1300	1726900	3.0%	UPL	600	1826540	10.0%	545	500	808935	-8.3%
INDUSINDBK	1000	4456000	1.9%	981	960	1078500	-2.1%	WIPRO	300	6150000	2.6%	292	280	3681000	-4.2%

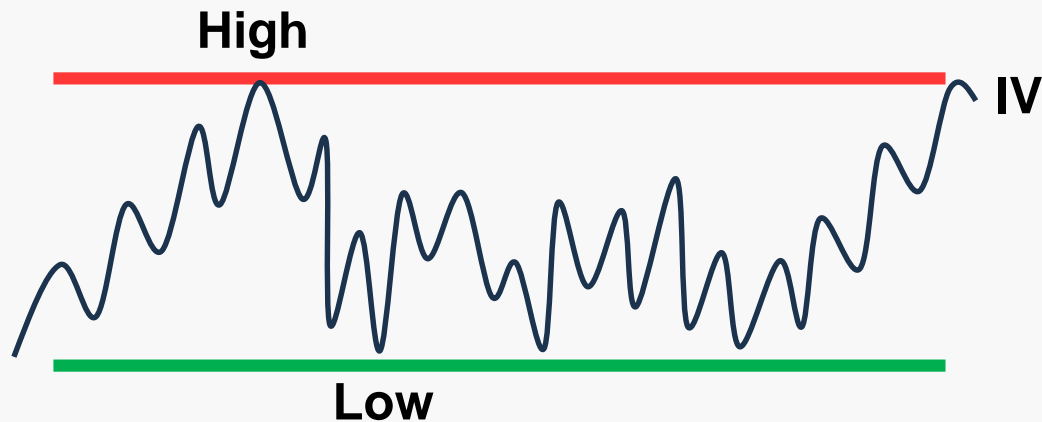
*If distance to call strike from current market price < distance to put strike from current market price, then the %Away for the call strike will be colored green
If distance to put strike from current market price < distance to call strike from current market price, then the %Away for the put strike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

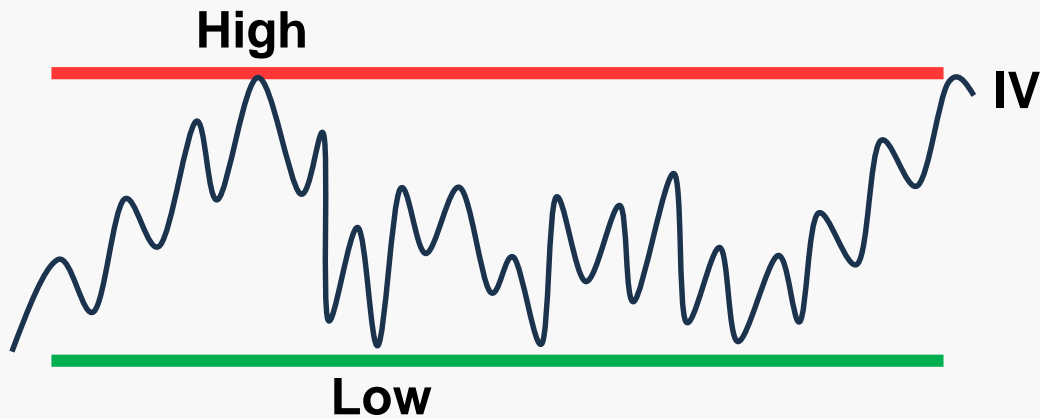


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.



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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