



Daily Derivatives Report

Nifty Futures

	Value	Change
Most recent settlement	23,705	0.0%▲
Open Interest (OI)	1,98,11,025	4.2%▲
Change in OI (abs)	1,98,11,025	7,98,525▲
Premium / Discount (Abs)	37	4▼
Inference	Long Build Up	

Bank Nifty Futures

	Value	Change
Most recent settlement	51,665	0.2%▼
Open interest (OI)	43,53,870	0.4%▲
Change in OI (abs)	43,53,870	15,180▲
Premium / Discount (Abs)	57	8▲
Inference	Short Build Up	

Volatility Insights

	Value	Change
India VIX Index	13.63	0.1▼
Nifty ATM IV (%)	15.47	0.5▼
Bank Nifty ATM IV (%)	17.12	1.3▼
PCR (Nifty)	1.04	0.18▼
PCR (Bank Nifty)	1.03	0.21▼

The Long Ratio for FII Index Futures has risen to **32.9%**, up from **32.1 %** in the previous session.

Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
HINDPETRO	6,14,42,550	13.3%	361.8	0.2%
SHREECEM	3,65,100	6.8%	29589.7	0.3%
BRITANNIA	30,81,100	3.8%	4846.4	0.8%
GRASIM	1,20,12,250	3.0%	2571.65	2.2%
AMBUJACEM	3,30,48,900	3.0%	521.2	0.5%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
DIXON	14,80,850	12.8%	13655.75	-6.5%
DRREDDY	1,11,62,500	11.6%	1171.75	-2.8%
IREDA	4,41,69,900	9.8%	162.23	-1.8%
BHARATFORG	1,60,40,500	9.3%	1184.4	-1.3%
CDSL	1,22,15,350	8.8%	1207.35	-2.1%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
JKCEMENT	1,56,500	-37.8%	4741.3	0.1%
LTTS	3,25,900	-11.8%	4628.8	0.8%
POLYCAB	24,45,375	-9.2%	5168.45	2.5%
MPHASIS	43,79,925	-7.1%	2529.9	1.8%
PERSISTENT	22,03,100	-5.5%	5564.85	2.5%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
LTF	7,19,89,908	-12.8%	154.21	-2.8%
PAGEIND	2,05,485	-11.4%	42939.2	-0.6%
IRFC	7,25,02,200	-10.3%	129.48	-2.4%
POONAWALLA	1,84,36,750	-9.2%	346.2	-0.2%
CHAMBLFERT	93,67,000	-8.5%	614.8	-0.5%

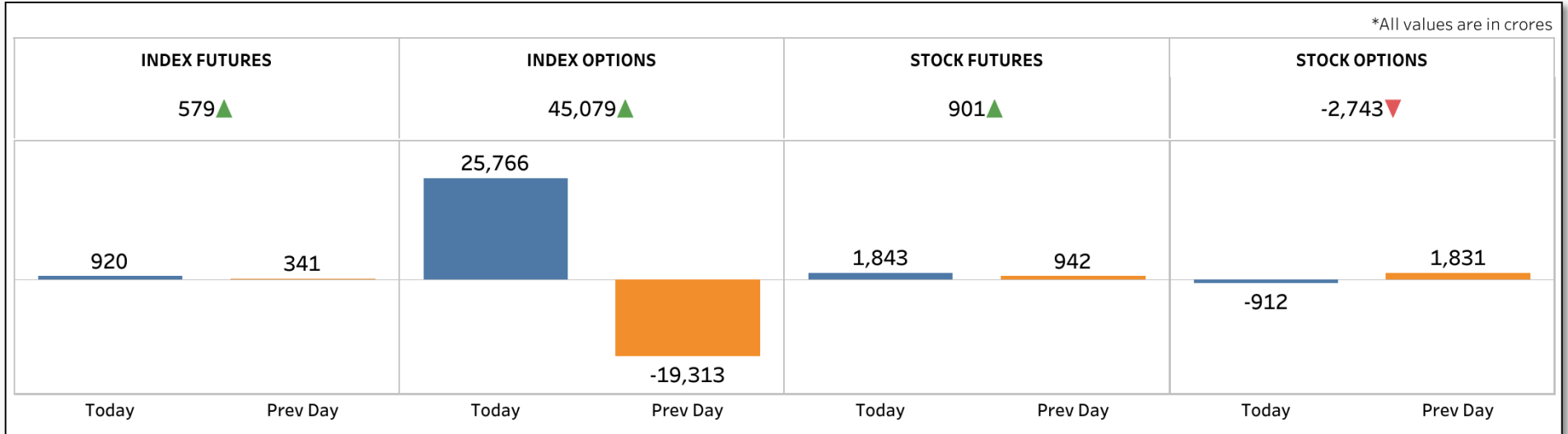
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

Open Interest Trends by Participant

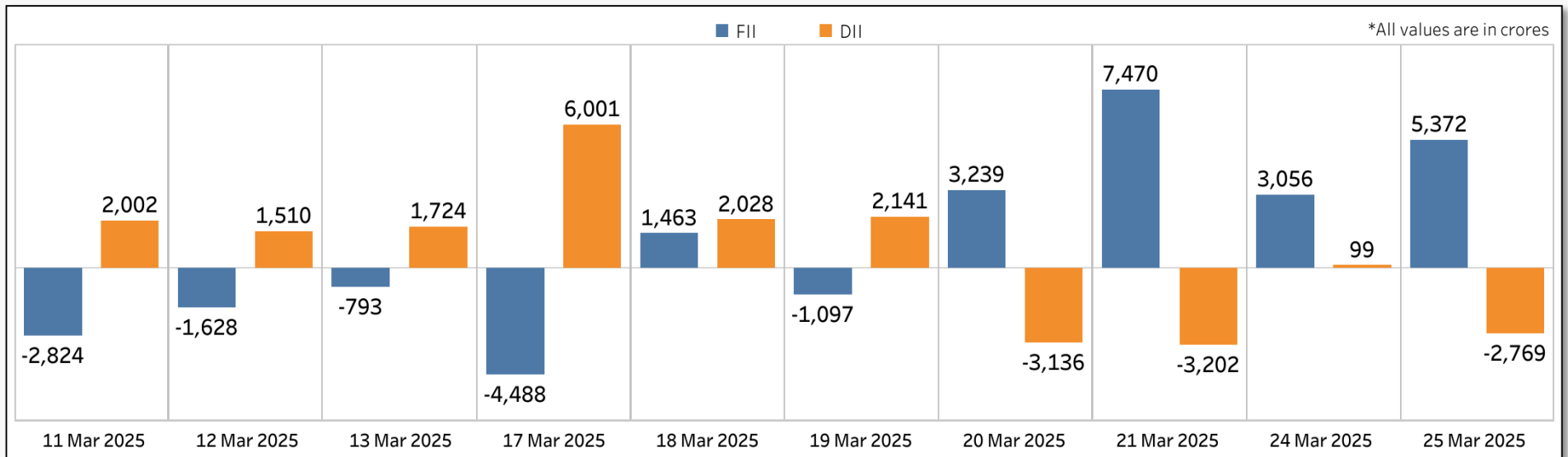
▲ and ▼ indicate positive and negative absolute changes, respectively

FII				DII			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
89,851 ▲	3,673 ▲	165,921 ▲	10,806 ▲	-104 ▼	-3,546 ▼	23,098 ▲	-7,220 ▼
35,275	4,892	106,750	24,301	-144	-8,117	25,924	17,322
-54,576	1,219	-59,171	13,495	-40	-4,571	2,826	24,542
Net O/S 50,449	Net O/S -67,885	Net O/S 113,703	Net O/S 1,730,208	Net O/S 137	Net O/S 59,030	Net O/S 57,704	Net O/S -3,739,014
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
78,946 ▲	4,165 ▲	-162,800 ▼	4,609 ▲	-168,694 ▼	-4,292 ▼	-26,218 ▼	-8,195 ▼
163,530	-4,354	-99,870	-22,053	-198,662	7,579	-32,804	-19,570
84,584	-8,519	62,930	-26,662	-29,968	11,871	-6,586	-11,375
Net O/S -25,551	Net O/S 33,817	Net O/S 58,761	Net O/S 1,826,872	Net O/S -25,036	Net O/S -24,962	Net O/S -230,170	Net O/S 181,934
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

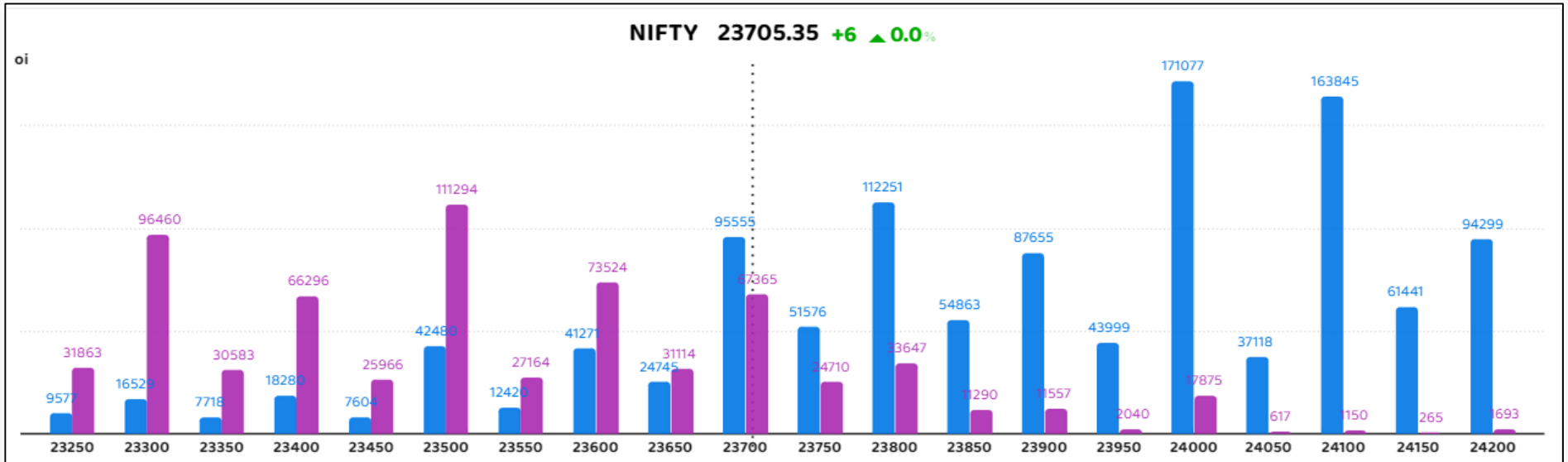


DII and FII Daily Cash Market Flows



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

Call ■ Put ■



For the Nifty, the 24000 Call and the 23500 Put had the highest call and put concentration (contracts). For the Bank Nifty, the 52000 Call and the 51000 Put saw the most amount of open interest.

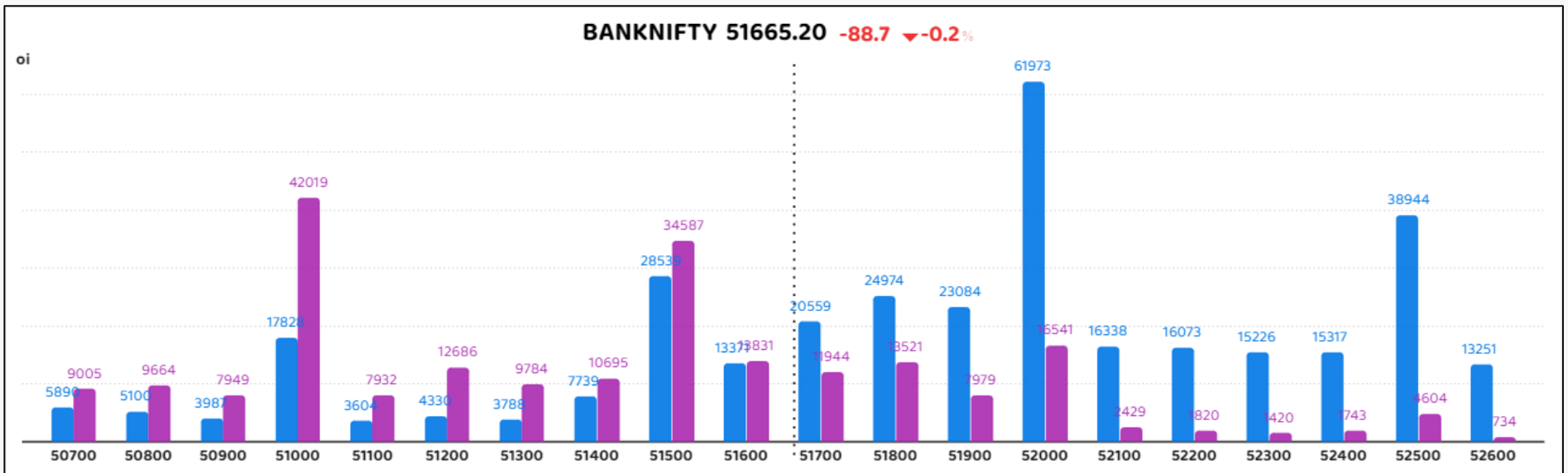
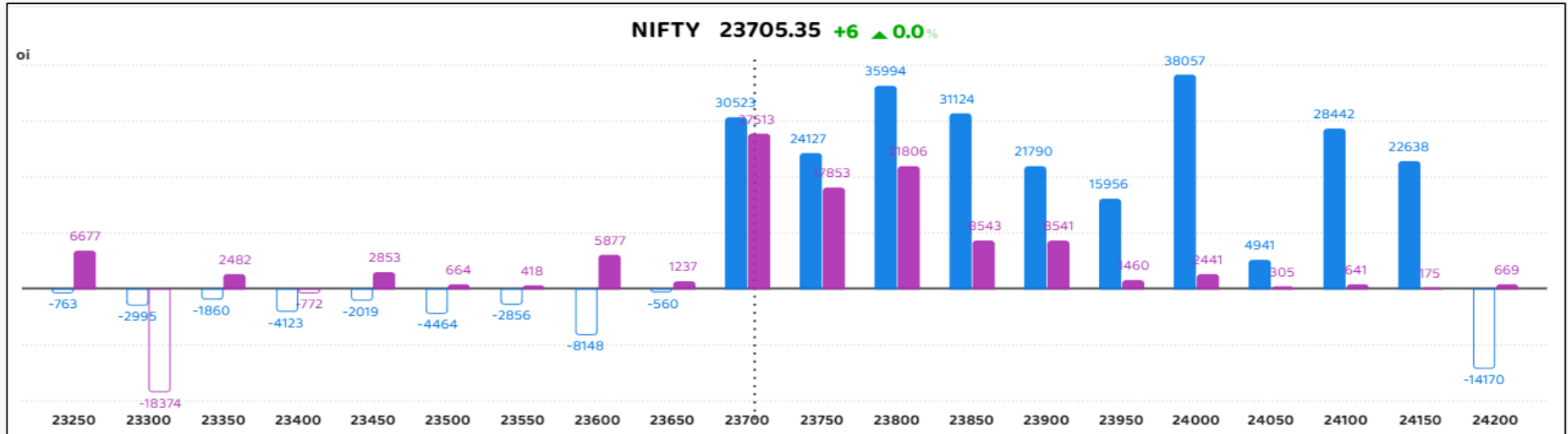


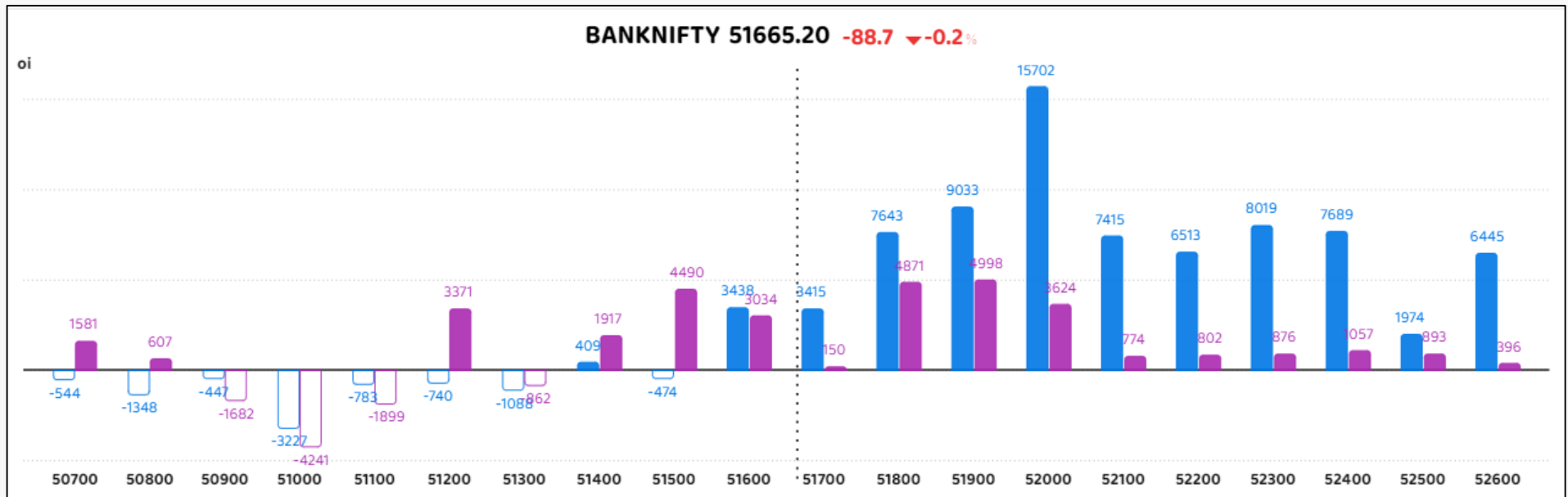
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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 23700 Put



For the Bank Nifty, the biggest open interest changes were seen at the 52000 Call & the 51000 Put

Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
BSE LTD	4651.65	-0.1	66.7	66.7	37.1	100.0
DIXON TECHNOLOGI	13624.5	-6.7	50.5	51.5	1.8	98.0
PERSISTENT SYS	5558.3	2.5	44.2	45.0	26.9	95.4
JSW ENERGY LTD	555.35	-3.5	48.7	52.1	28.3	85.7
NHPC LTD	81.31	-2.8	42.8	45.7	26.1	85.1

Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
HDFC LIFE INSURA	673.1	-1.0	27.4	80.6	19.6	12.8
ADANI PORTS AND	1182.45	-1.5	33.2	99.7	23.2	13.0
TATA CONSULTANCY	3657.75	0.8	10.3	57.2	1.3	16.1
INDIAN RAILWAY F	129.41	-2.6	38.5	93.6	25.9	18.5
GMR AIRPORTS LTD	75.68	-2.9	33.8	69.5	25.4	19.2

Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
BSE LTD	4651.65	-0.1	66.7	66.7	37.1	100.0
IREDA IS	169.95	-0.1	69.2	69.2	51.8	100.0
LTIM IS	4606.4	-0.3	37.9	37.9	20.0	100.0
DELHIVER IS	257.2	-1.0	48.8	48.8	29.4	100.0
ADANIGR IS	923.4	-3.1	74.3	74.3	46.9	100.0

Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
TATA CONSULTANCY	3657.8	0.8	10.3	57.2	1.3	1.1
LTF IS	155.0	-2.2	26.9	67.0	5.4	5.4
PAGE INDUSTRIES	42925.6	-0.5	20.8	41.8	13.0	13.3
INDIAN RAILWAY F	129.4	-2.6	38.5	93.6	25.9	17.9
IIFL FINANCE LTD	328.3	-2.6	45.1	62.1	37.2	18.1

Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
TATA TECHNOLOGIE	698.3	-0.1	25324	6898	3.7
IRB INFRASTRUCTU	46.23	-1.8	4023	1166	3.5
YES BANK LTD	17.03	-2.3	4000	1222	3.3
INFO EDGE	7145.7	0.6	81412	28399	2.9
PAGE INDUSTRIES	42925.6	-0.5	9595	3568	2.7

Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
INDIAN BANK	543.05	-0.9	1078	2091	0.5
MCX INDIA LTD	5156.15	-4.4	43934	52615	0.8
SOLAR INDUSTRIES	10772.7	-0.9	901	962	0.9
DIXON TECHNOLOGI	13624.5	-6.7	156231	152143	1.0
ADANI PORTS AND	1182.45	-1.5	25463	23706	1.1

Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Relative to Highest Call OI
JINDAL STAINLESS	588.15	-0.5	4466	4466	100.0
MAX HEALTHCARE I	1172.75	2.3	5701	5701	100.0
TATA TECHNOLOGIE	698.3	-0.1	5604	5604	100.0
COMPUTER AGE MAN	3657.75	-4.1	12240	13970	87.6
SOLAR INDUSTRIES	10772.7	-0.9	2518	2920	86.2

Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Relative to Highest Put OI
TATA TECHNOLOGIE	698.3	-0.1	3134	3134	100.0
HINDUSTAN AERONA	4012.45	-2.8	37336	37349	100.0
MAX HEALTHCARE I	1172.75	2.3	5260	5493	95.8
COMPUTER AGE MAN	3657.75	-4.1	7457	7789	95.7
INTERGLOBE AVIAT	5006.7	0.7	19214	20109	95.6

Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	Relative to Highest CV
TATA TECHNOLOGIE	698.3	-0.1	25324	26993	93.8

Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	Relative to Highest PV
TATA TECHNOLOGIE	698.3	-0.1	6898	6898	100.0

Call Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
COMPUTER AGE MAN	3657.75	-4.1	12240	6044	2.0
JINDAL STAINLESS	588.15	-0.5	4466	2212	2.0
TATA TECHNOLOGIE	698.3	-0.1	5604	3056	1.8
INTERGLOBE AVIAT	5006.7	0.7	21818	12834	1.7
MAX HEALTHCARE I	1172.75	2.3	5701	3363	1.7

Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
MAX HEALTHCARE I	1172.75	2.3	5260	2430	2.2
TITAGARH RAIL SY	812.5	-1.0	4224	2076	2.0
TATA TECHNOLOGIE	698.3	-0.1	3134	1802	1.7
JINDAL STAINLESS	588.15	-0.5	2661	1553	1.7
BAJAJ FINSERV LT	1945.05	2.7	18104	10637	1.7

Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
ULTRATECH CEMENT	11421.2	3.3	237132	49578	4.8
INFO EDGE	7145.7	0.6	81412	19803	4.1
BAJAJ FINSERV LT	1945.05	2.7	109514	38596	2.8
COFORGE LTD	7958.2	2.4	167387	66152	2.5
PERSISTENT SYS	5558.3	2.5	81324	33601	2.4

Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
ULTRATECH CEMENT	11421.2	3.3	96355	27793	3.5
DIXON TECHNOLOGI	13624.5	-6.7	152143	57632	2.6
INFO EDGE	7145.7	0.6	28399	11716	2.4
HINDUSTAN AERONA	4012.45	-2.8	128867	53637	2.4
MCX INDIA LTD	5156.15	-4.4	52615	22446	2.3

Nifty 50 Constituents Open Interest (OI) Dashboard – Support / Resistance

Distance of Strike With Highest Open Interest From Current Market Price (%)

Stock Name	CE STRIKE	CE OI	%Away	CMP	PE Strike	PE OI	%Away	Stock Name	CE STRIKE	CE OI	%Away	CMP	PE Strike	PE OI	%Away
ADANIENT	2600	766500	12.1%	2320	2600	773400	12.1%	INFY	1700	1966000	4.4%	1628	1560	1329600	-4.2%
ADANIPTS	1200	970000	1.5%	1182	1200	841200	1.5%	ITC	420	6080000	2.5%	410	400	6088000	-2.4%
APOLLOHOSP	6700	88125	0.8%	6645	6500	77000	-2.2%	JSWSTEEL	1120	644625	5.5%	1062	1000	564300	-5.8%
ASIANPAINT	2400	596800	3.0%	2331	2200	412400	-5.6%	KOTAKBANK	2200	1309600	1.4%	2170	1900	1012000	-12.4%
AXISBANK	1140	1430625	1.9%	1119	1100	1840625	-1.7%	LT	3250	723300	-6.3%	3470	3100	484800	-10.7%
BAJAJ-AUTO	8200	122550	2.4%	8006	7500	167400	-6.3%	LTIM	4800	255150	4.2%	4606	4400	151500	-4.5%
BAJAJFINSV	2000	1205500	2.8%	1945	1900	996000	-2.3%	M&M	2800	758625	2.3%	2736	2700	426475	-1.3%
BAJFINANCE	9600	460875	5.9%	9067	8500	389500	-6.3%	MARUTI	11800	242200	-0.6%	11869	11500	114800	-3.1%
BHARTIARTL	1720	2741225	-0.6%	1731	1700	2151275	-1.8%	NESTLEIND	2260	189400	0.2%	2255	2100	227400	-6.9%
BPCL	270	1.4E+07	-3.3%	279	270	6897600	-3.3%	NTPC	340	10954500	-7.3%	367	340	5592000	-7.3%
BRITANNIA	4900	113700	1.1%	4845	4700	82900	-3.0%	ONGC	235	10346875	-3.0%	242	235	5534375	-3.0%
CIPLA	1580	1055600	4.6%	1511	1240	482950	-17.9%	POWERGRID	280	6269400	-3.8%	291	280	3236400	-3.8%
COALINDIA	395	4452000	-0.8%	398	390	2272200	-2.1%	RELIANCE	1300	4796500	1.1%	1285	1260	2052000	-2.0%
DIVISLAB	6000	108300	2.7%	5841	4700	84900	-19.5%	SBLIFE	1500	515250	-3.7%	1557	1400	481875	-10.1%
DRREDDY	1200	1956250	1.9%	1178	1100	534375	-6.6%	SBIN	800	4539000	3.5%	773	700	3399000	-9.4%
EICHERMOT	5100	168700	-6.1%	5431	5000	239750	-7.9%	SUNPHARMA	1680	2035250	-4.8%	1765	1680	1013250	-4.8%
GRASIM	2420	255250	-5.8%	2569	2400	175000	-6.6%	TATACONSUM	1000	609216	3.0%	971	900	317376	-7.3%
HCLTECH	1640	625100	0.9%	1625	1400	727650	-13.8%	TATAMOTORS	720	3532650	1.4%	710	680	2014650	-4.3%
HDFCBANK	1760	4051300	-3.4%	1821	1800	1988250	-1.2%	TATASTEEL	159	16698000	1.4%	157	150	11808500	-4.3%
HDFCLIFE	710	1278200	5.5%	673	640	1790800	-4.9%	TCS	3700	834225	1.2%	3658	3500	681625	-4.3%
HEROMOTOCO	4000	568350	10.3%	3628	3500	191100	-3.5%	TECHM	1500	937800	3.1%	1456	1400	721200	-3.8%
HINDALCO	720	4534600	3.8%	693	650	1261400	-6.3%	TITAN	3200	839650	4.8%	3054	3000	269675	-1.8%
HINDUNILVR	2300	742200	1.3%	2271	2200	446700	-3.1%	ULTRACEMCO	10400	137200	-8.9%	11421	10400	78100	-8.9%
ICICIBANK	1350	1760500	0.5%	1344	1300	2300900	-3.3%	UPL	640	1624645	-2.0%	653	640	898365	-2.0%
INDUSINDBK	750	3344500	17.7%	637	600	1177000	-5.8%	WIPRO	300	6885000	10.7%	271	260	3501000	-4.1%

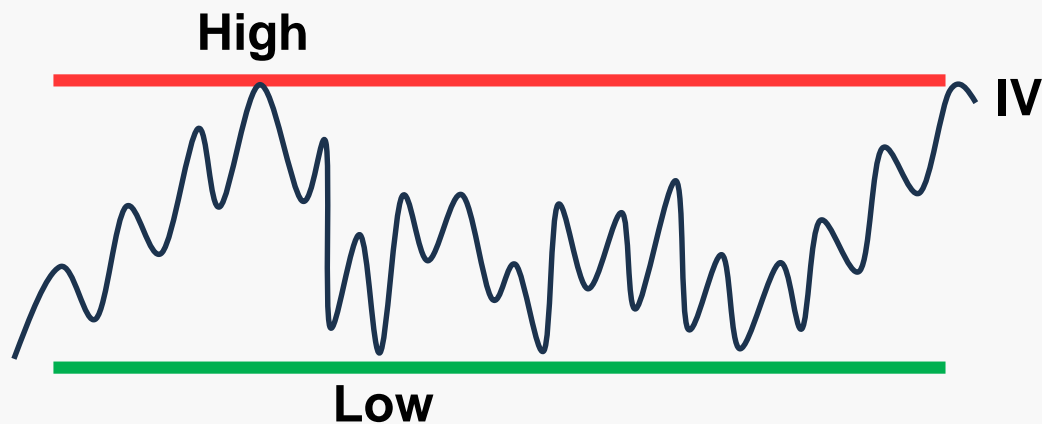
If distance to call strike from current market price < distance to put strike from current market price, then the %Away for the call strike will be colored green
 If distance to put strike from current market price < distance to call strike from current market price, then the %Away for the put strike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

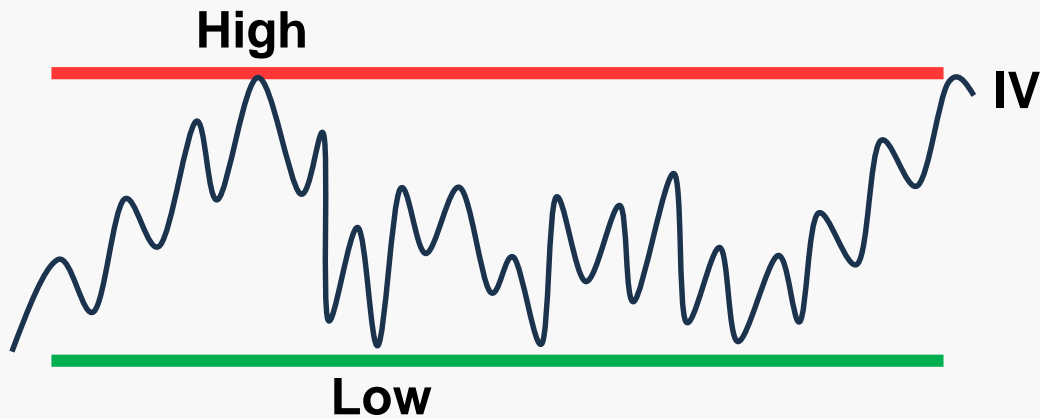


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.



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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