



Daily Derivatives Report

Nifty Futures

	Value	Change
Most recent settlement	23,778	0.4%▲
Open Interest (OI)	1,40,73,750	22.8%▲
Change in OI (abs)	1,40,73,750	26,16,675▲
Premium / Discount (Abs)	35	151▲
Inference	Long Build Up	

Bank Nifty Futures

	Value	Change
Most recent settlement	51,908	0.6%▲
Open interest (OI)	35,32,380	16.4%▲
Change in OI (abs)	35,32,380	4,99,140▲
Premium / Discount (Abs)	64	267▲
Inference	Long Build Up	

Volatility Insights

	Value	Change
India VIX Index	13.3	0.2▼
Nifty ATM IV (%)	12.72	2.8▼
Bank Nifty ATM IV (%)	14.20	6.3▼
PCR (Nifty)	1.01	0.09▲
PCR (Bank Nifty)	1.00	0.12▲

The Long Ratio for FII Index Futures has risen to **39.8%**, up from **35.5 %** in the previous session.

Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
NBCC	3,18,24,600	9.3%	83.51	2.1%
OIL	1,48,70,475	6.9%	389.55	1.4%
FEDERALBNK	7,68,35,000	5.6%	196.29	1.9%
APLAPOLLO	41,34,550	4.6%	1543.15	2.5%
IRB	11,17,45,500	2.1%	46.4	1.9%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
DRREDDY	1,33,13,750	14.2%	1144.5	-1.5%
CGPOWER	1,07,61,175	2.7%	639.5	-0.3%
INDHOTEL	1,93,54,000	2.2%	796.45	-2.3%
IDFCFIRSTB	46,30,27,500	2.2%	57.42	-0.1%
NATIONALUM	6,06,00,000	-0.2%	180.25	-0.1%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
DMART	31,82,250	-39.8%	4068.95	3.0%
PHOENIXLTD	14,34,300	-31.7%	1671.6	1.3%
SHREECEM	2,62,650	-27.7%	30359.25	1.9%
KEI	18,05,250	-27.0%	2904.3	2.3%
BAJAJFINSV	1,58,34,500	-23.9%	2016.65	3.3%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
HCLTECH	1,14,18,050	-36.7%	1627.25	-0.1%
DEEPAKNTR	12,91,200	-22.1%	2004.2	-0.2%
BHARATFORG	1,28,89,500	-21.9%	1146.75	-2.8%
OFSS	7,46,150	-20.7%	7923.5	-0.1%
GMRAIRPORT	19,29,48,750	-12.4%	76.55	-0.3%

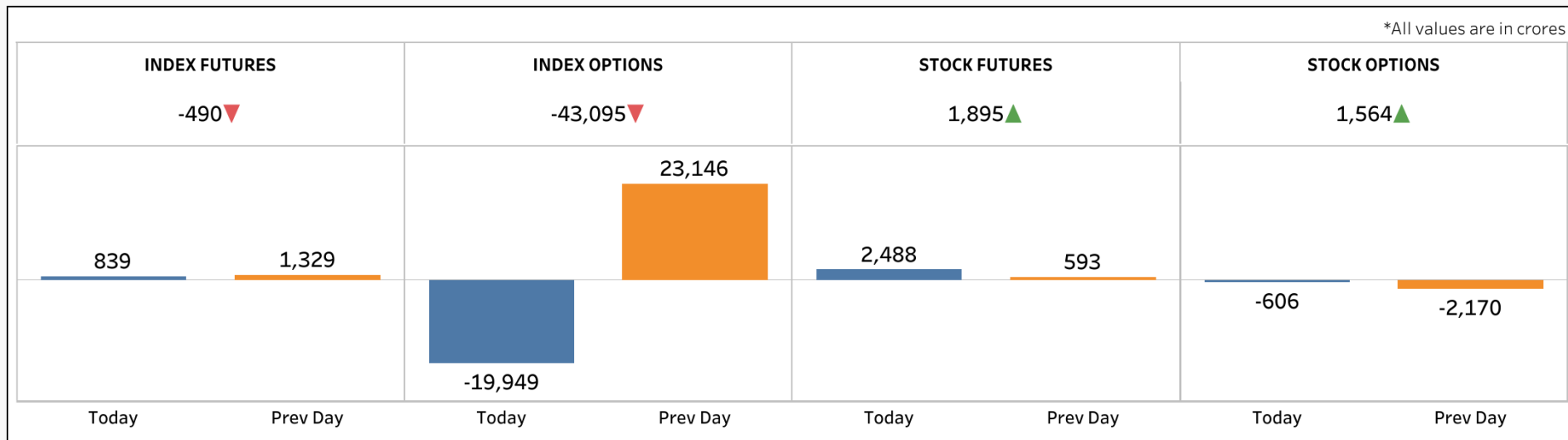
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

Open Interest Trends by Participant

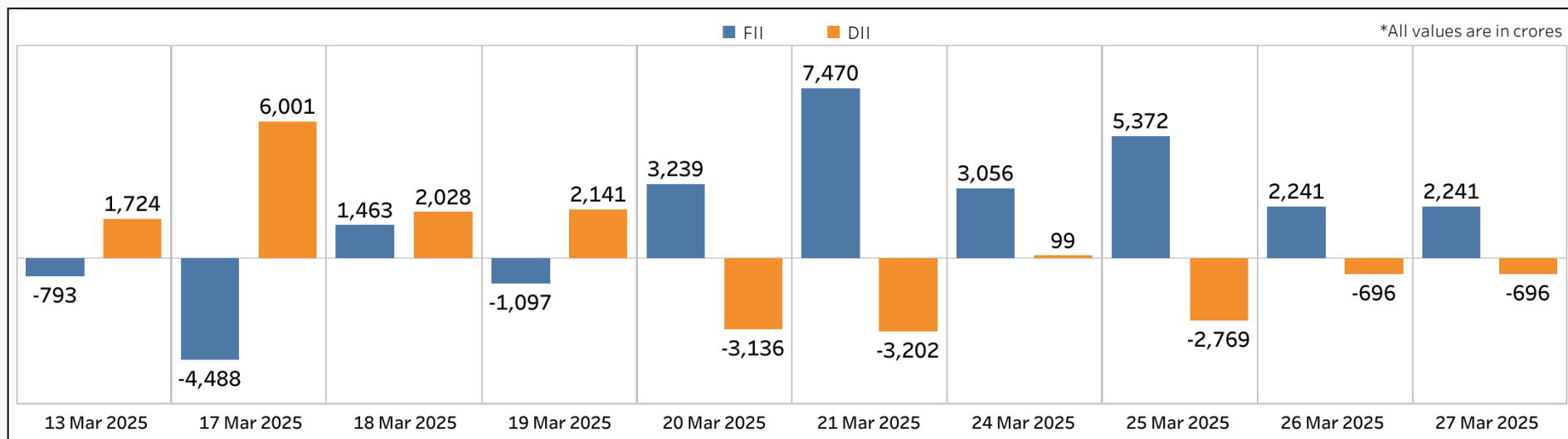
▲ and ▼ indicate positive and negative absolute changes, respectively

FII				DII			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
-150,097 ▼	46,307 ▲	-152,891 ▼	-175,121 ▼	5 ▲	-7,891 ▼	10,503 ▲	-8,216 ▼
76,179	53,178	83,100	10,274		1,854	12,917	2,414
-73,918	6,871	-69,791	-164,847	-31	-6,037		-5,119
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
52,710	-7,836	127,012	1,575,635	70	54,847	73,035	-3,757,468
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
-23,016 ▼	-35,553 ▼	27,435 ▲	-54,150 ▼	173,107 ▲	-2,863 ▼	114,952 ▲	237,487 ▲
	2,846		-6,195				238,527
-70,314	-32,707	-70,421	-60,345	144,263		127,295	12,343
	-47,298	-97,856			-28,844		
					-14,434	-11,571	
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
-143,163	3,956	-109,516	1,760,332	90,383	-50,967	-90,532	421,501
Today	Prev Day	Today	Prev Day	Today	Prev Day	Today	Prev Day

Daily Net Open Interest Change

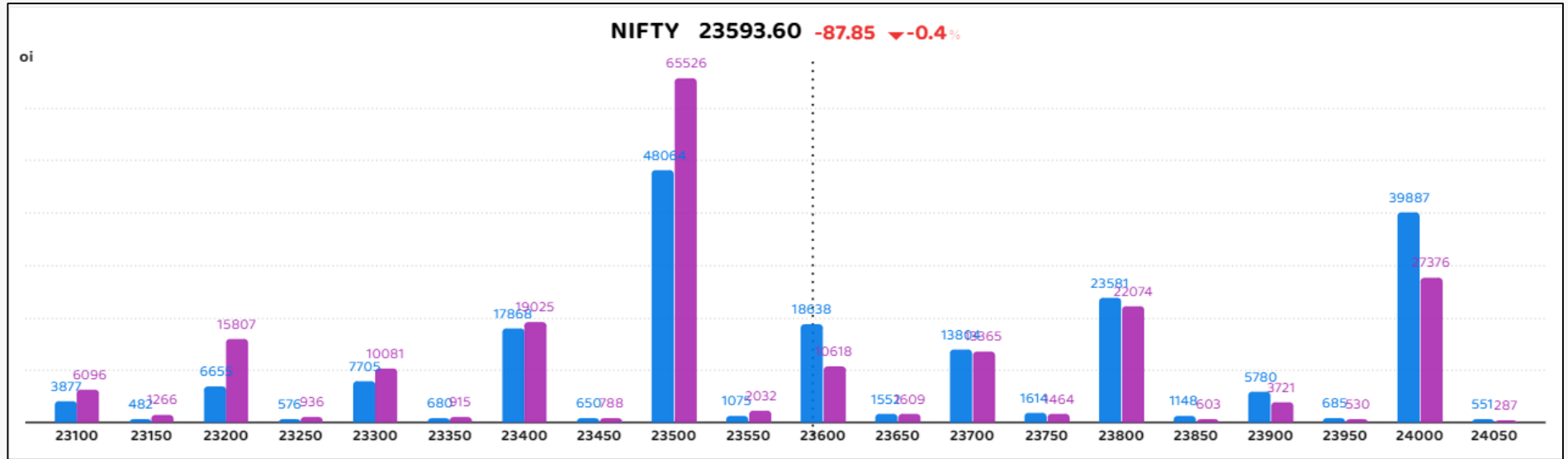


DII and FII Daily Cash Market Flows



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.

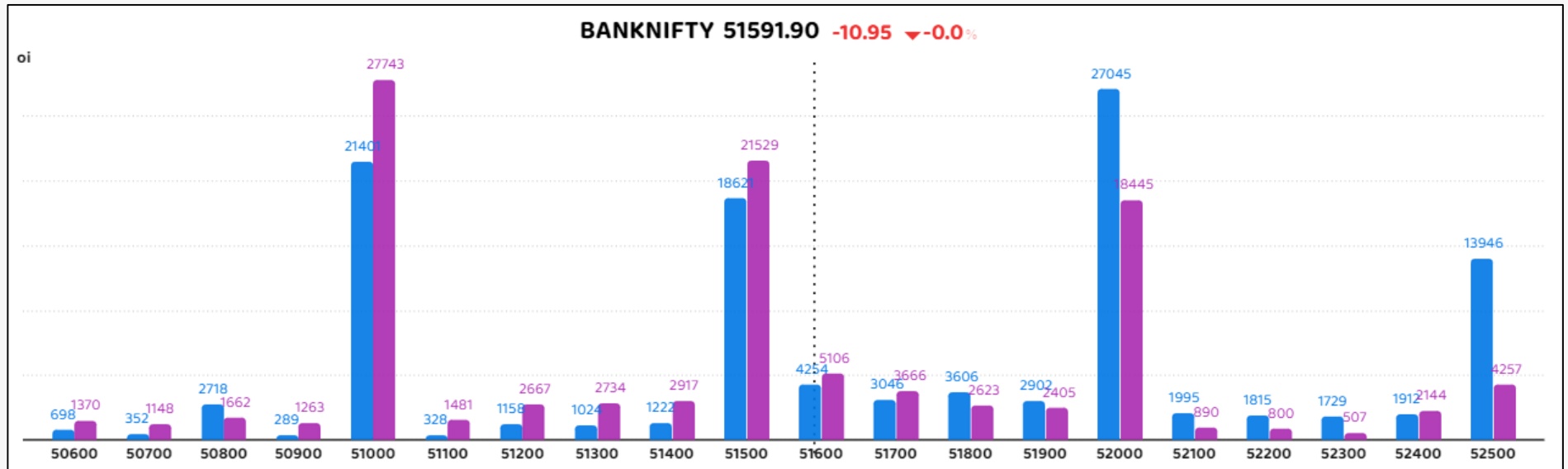
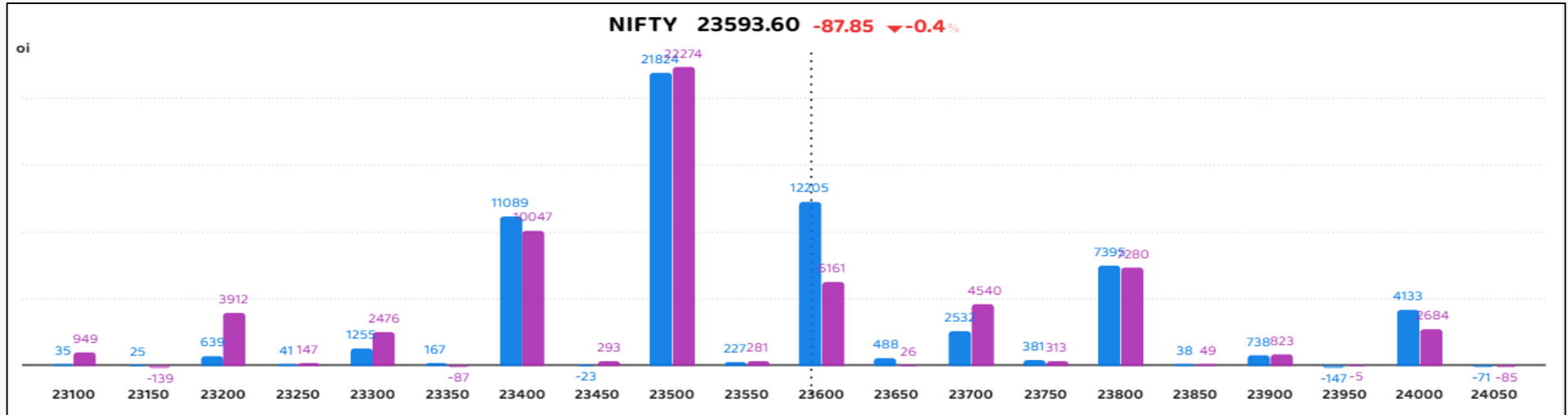


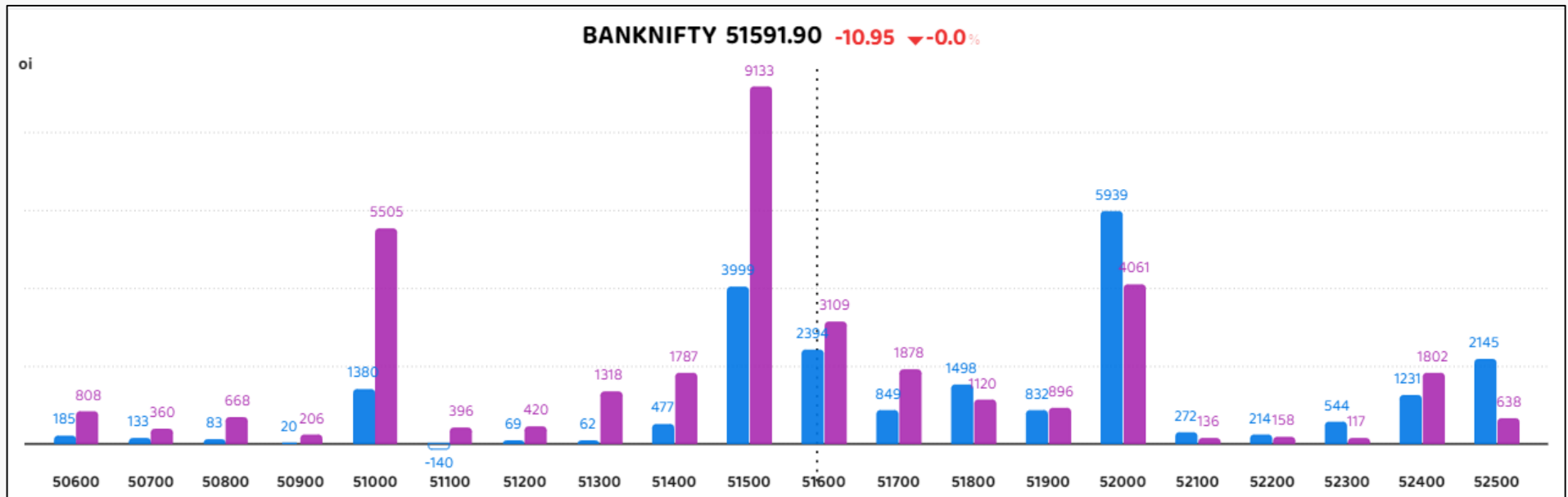
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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

Call ■ Put ■



The largest open interest changes (contracts) were seen at the 23500 Call and the 23500 Put



For the Bank Nifty, the biggest open interest changes were seen at the 520d00 Call & the 51500 Put

Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
TATA ELXSI LTD	5570.95	-2.7	51.9	51.9	23.8	100.0
JK CEMENTS LTD	4754.75	3.7	41.3	42.0	5.9	98.1
NCC LTD	211.63	0.1	52.7	53.4	32.4	96.6
LAURUS LABS LTD	612.05	0.5	43.6	44.8	16.1	95.7
PAGE INDUSTRIES	42279.9	3.9	39.9	41.8	13.0	93.5

Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
SIEMENS LTD	5358	-1.9	20.5	47.6	20.5	0.0
ADANI PORTS AND	1186	1.3	33.4	99.7	23.2	13.3
BANK OF BARODA	228.79	4.8	30.0	66.9	24.3	13.5
HDFC LIFE INSURA	676.5	2.0	27.9	80.6	19.6	13.6
FED BANK LTD	194.2	2.7	24.5	130.9	7.0	14.1

Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
TATA ELXSI LTD	5570.95	-2.7	51.9	51.9	23.8	100.0
PAGE INDUSTRIES	42279.9	3.9	39.9	41.8	13.0	99.8
WIPRO LTD	271.45	1.8	39.8	63.9	16.2	99.6
DR REDDY'S LABS	1152.75	-0.2	33.5	35.3	14.4	99.4
HINDUSTAN COPPER	222.25	-0.9	70.1	83.2	16.3	99.0

Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
SIEMENS LTD	5358	-1.9	20.5	47.6	20.5	0.0
FED BANK LTD	194.2	2.7	24.5	130.9	7.0	10.8
MANAPPURAM FINAN	233.31	0.3	32.9	64.2	2.7	12.0
COMPUTER AGE MAN	3695.45	0.1	35.5	54.3	30.0	26.2
GMR AIRPORTS LTD	76.27	-0.4	33.5	69.5	25.4	26.5

Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
MARICO LTD	643.95	1.5	4604	717	6.4
ADANI ENERGY SOL	816.3	8.7	14367	2312	6.2
ANGEL ONE LTD	2330.25	-0.3	10765	1873	5.8
TITAGARH RAIL SY	802.4	1.5	4255	817	5.2
CUMMINS INDIA	3003.65	0.0	4459	875	5.1

Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
TUBE INVESTMENTS	2761.9	1.9	575	1450	2.5
PIRAMAL ENTERPRI	993.5	1.5	675	1680	2.5
GRANULES INDIA	490.4	-0.4	2067	4130	2.0
EICHER MOTORS	5345.75	-1.1	3022	5844	1.9
BALKRISHNA INDS	2550.25	-1.2	1149	1638	1.4

Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Relative to Highest Call OI
NO STOCK OPTION MET THE CONDITION MENTIONED IN THE FOOTNOTE					

Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Relative to Highest Put OI
NO STOCK OPTION MET THE CONDITION MENTIONED IN THE FOOTNOTE					

Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	Relative to Highest CV
NO STOCK OPTION MET THE CONDITION MENTIONED IN THE FOOTNOTE					

Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	Relative to Highest PV
NO STOCK OPTION MET THE CONDITION MENTIONED IN THE FOOTNOTE					

Call Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
SIEMENS LTD	5358	-1.9	21712	12531	1.7
JK CEMENTS LTD	4754.75	3.7	1332	979	1.4
L&T TECHNOLOGY S	4509.35	-1.6	5531	4837	1.1
INDIAN RENEWABLE	165.92	-0.8	5269	6073	0.9
MANAPPURAM FINAN	233.31	0.3	4577	5397	0.8

Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
SIEMENS LTD	5358	-1.9	21862	7958	1.5
JK CEMENTS LTD	4754.75	3.7	1115	788	1.4
L&T TECHNOLOGY S	4509.35	-1.6	3289	3050	1.1
MANAPPURAM FINAN	233.31	0.3	9097	5262	0.9
VODAFONE IDEA LT	6.99	-1.7	14625	10972	0.9

Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
MAX FINANCIAL SE	1133.45	2.7	5007	3513	1.4
SAMVARDHANA MOTH	132.17	-2.2	14714	10567	1.4
ASHOK LEYLAND	212.25	-3.0	25704	18580	1.4
BANK OF BARODA	228.79	4.8	19574	15220	1.3
HERO MOTOCORP LT	3742	3.5	40392	32732	1.2

Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
SAMVARDHANA MOTH	132.17	-2.2	9712	5336	1.8
VODAFONE IDEA LT	6.99	-1.7	8190	5912	1.4
ASHOK LEYLAND	212.25	-3.0	16345	12406	1.3
TATA MOTORS LTD	671.85	-5.6	91557	72809	1.3
AU SMALL FINANCE	561	-3.4	14011	11251	1.2

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	2600	1569000	10.0%	2363	2600	2437500	10.0%	INFY	1700	1640400	6.0%	1604	1500	1062400	-6.5%
ADANIPTS	1200	1036800	0.3%	1197	1200	857200	0.3%	ITC	410	7177600	0.1%	409	410	2518400	0.1%
APOLLOHOSP	6700	27500	3.2%	6492	6600	24250	1.7%	JSWSTEEL	1100	471150	3.8%	1060	1000	400275	-5.6%
ASIANPAINT	2400	408200	2.6%	2338	2300	241200	-1.6%	KOTAKBANK	2200	668000	3.4%	2129	2000	894800	-6.0%
AXISBANK	1200	917500	9.3%	1098	1100	1099375	0.2%	LT	3600	331200	2.8%	3502	3500	278700	0.0%
BAJAJ-AUTO	8500	168600	6.6%	7974	8000	72375	0.3%	LTIM	5000	94200	7.4%	4656	4000	118650	-14.1%
BAJAJFINSV	2000	739500	-0.3%	2006	1800	474500	-10.3%	M&M	2800	358575	2.5%	2733	2700	211050	-1.2%
BAJFINANCE	9000	232000	0.0%	9004	8500	267250	-5.6%	MARUTI	12000	90300	2.4%	11722	11500	45800	-1.9%
BHARTIARTL	1800	1025050	4.4%	1725	1700	608950	-1.4%	NESTLEIND	2300	164600	2.6%	2242	2200	55600	-1.9%
BPCL	280	1699200	1.4%	276	270	1078200	-2.2%	NTPC	400	3691500	10.9%	361	380	2034000	5.4%
BRITANNIA	4900	86100	1.2%	4841	4800	61600	-0.9%	ONGC	250	2167550	3.2%	242	240	1491875	-0.9%
CIPLA	1500	234975	1.2%	1483	1500	155350	1.2%	POWERGRID	300	2511000	1.5%	296	320	1420200	8.3%
COALINDIA	420	2703750	5.8%	397	450	2455950	13.4%	RELIANCE	1300	7318500	1.7%	1278	1300	2756500	1.7%
DIVISLAB	6000	46200	2.2%	5873	5800	31700	-1.2%	SBLIFE	1600	146625	3.6%	1545	1500	67500	-2.9%
DRREDDY	1200	808125	3.3%	1162	1150	280000	-1.0%	SBIN	800	5316750	3.6%	772	800	4488000	3.6%
EICHERMOT	6000	77175	12.2%	5346	5000	141925	-6.5%	SUNPHARMA	1800	351400	4.0%	1731	1700	284200	-1.8%
GRASIM	2600	150750	-0.7%	2619	2500	82000	-4.5%	TATACONSUM	1000	399456	2.7%	974	1000	129960	2.7%
HCLTECH	1640	362250	0.6%	1630	1400	351050	-14.1%	TATAMOTORS	700	4671700	4.7%	669	670	2007500	0.2%
HDFCBANK	1900	1786950	4.1%	1825	1800	2068550	-1.4%	TATASTEEL	160	9784500	2.9%	155	150	9482000	-3.5%
HDFCLIFE	680	883300	-0.3%	682	680	282700	-0.3%	TCS	3700	547750	1.3%	3651	3600	318850	-1.4%
HEROMOTOCO	3800	251850	0.7%	3772	3600	144000	-4.6%	TECHM	1500	582600	5.3%	1424	1400	332400	-1.7%
HINDALCO	700	1334200	1.0%	693	700	1040200	1.0%	TITAN	3100	497700	0.4%	3088	3100	375200	0.4%
HINDUNILVR	2300	641400	2.5%	2245	2200	340800	-2.0%	ULTRACEMCO	12000	73150	3.5%	11600	11000	74100	-5.2%
ICICIBANK	1400	1152900	4.7%	1337	1300	1598800	-2.7%	UPL	700	811645	6.6%	656	600	521675	-8.6%
INDUSINDBK	700	1743500	3.9%	674	600	910000	-10.9%	WIPRO	300	3144000	10.2%	272	270	1797000	-0.8%

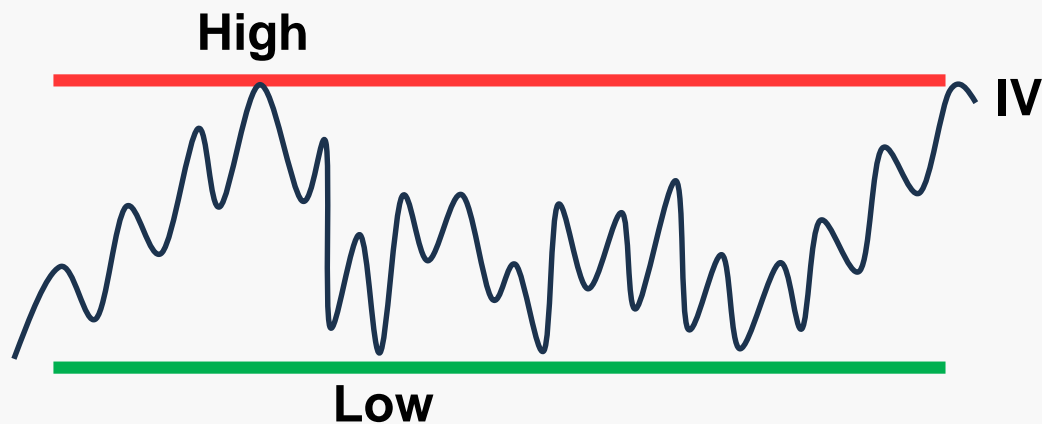
If distance to call strike from current market price < distance to put strike from current market price, then the %Away for the call strike will be colored green
 If distance to put strike from current market price < distance to call strike from current market price, then the %Away for the put strike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

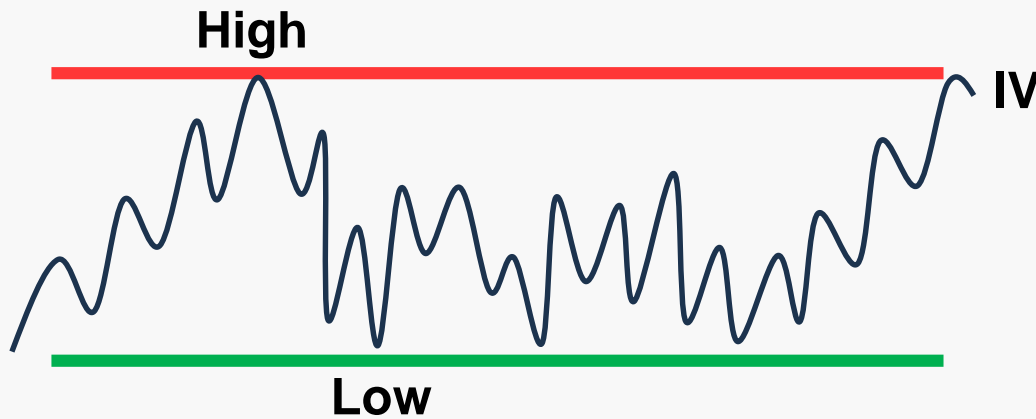


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.



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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