

Daily Derivatives Report

Nifty Futures

	Value	Change
Most recent settlement	24,554	0.6%▲
Open Interest (OI)	1,53,81,975	4.4%▲
Change in OI (abs)	1,53,81,975	6,51,900▲
Premium / Discount (Abs)	93	39▲
Inference	Long Build Up	

Bank Nifty Futures

	Value	Change
Most recent settlement	55,081	0.2%▼
Open interest (OI)	24,37,505	2.6%▼
Change in OI (abs)	24,37,505	66,025▼
Premium / Discount (Abs)	161	67▲
Inference	Long Unwinding	

Volatility Insights

	Value	Change
India VIX Index	18.34	0.08▲
Nifty ATM IV (%)	15.94	0.1▲
Bank Nifty ATM IV (%)	17.53	0.1▼
PCR (Nifty)	0.97	0.06▲
PCR (Bank Nifty)	0.93	0.01▼

The Long Ratio for FII Index Futures **drop** at 48.5 %, **down** from 51.3 % in the **last session**..

Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
PNBHousing	59,21,500	12.2%	1063.3	0.7%
ATGL	33,64,625	11.6%	662.8	10.6%
INDIANB	60,85,150	10.5%	577.35	3.8%
GAIL	8,80,55,600	7.2%	192.52	1.4%
PATANJALI	36,16,500	6.5%	1882.8	0.5%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
MANAPPURAM	4,47,15,000	12.9%	230.29	-0.5%
DRREDDY	1,25,15,000	9.4%	1170.8	-1.1%
SBIN	7,86,13,500	8.3%	778.4	-2.0%
DMART	37,76,400	4.5%	4019.5	-1.1%
GODREJPROP	66,79,200	3.4%	2224.9	-1.3%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
POONAWALLA	1,74,73,850	-5.8%	389.2	2.8%
AUBANK	2,61,00,000	-5.5%	680.55	0.2%
ADANIENT	1,50,79,800	-5.2%	2465.4	7.1%
BANDHANBNK	9,69,87,200	-5.1%	165.23	1.7%
IGL	2,74,14,750	-4.5%	207.17	7.6%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
INDUSINDBK	3,67,13,700	-1.2%	845.4	-0.9%
ONGC	12,52,86,100	-1.0%	240.13	-1.5%
PIIND	16,78,675	-0.9%	3699	-0.3%
KOTAKBANK	2,67,90,800	-0.9%	2095.7	-4.2%
CAMS	17,24,475	-0.3%	3806	-0.1%

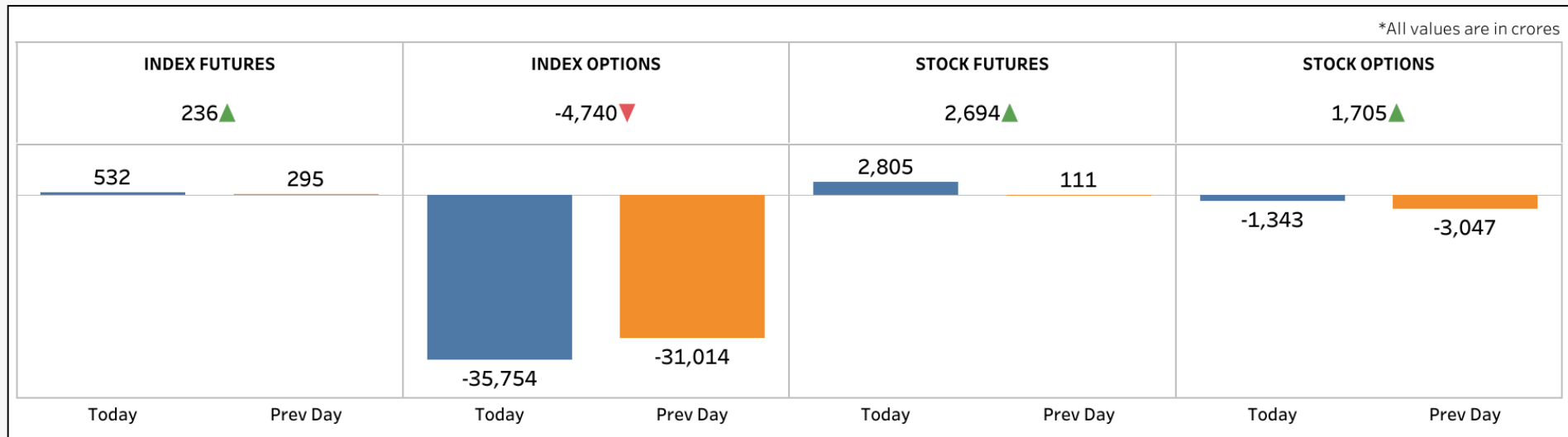
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

Open Interest Trends by Participant

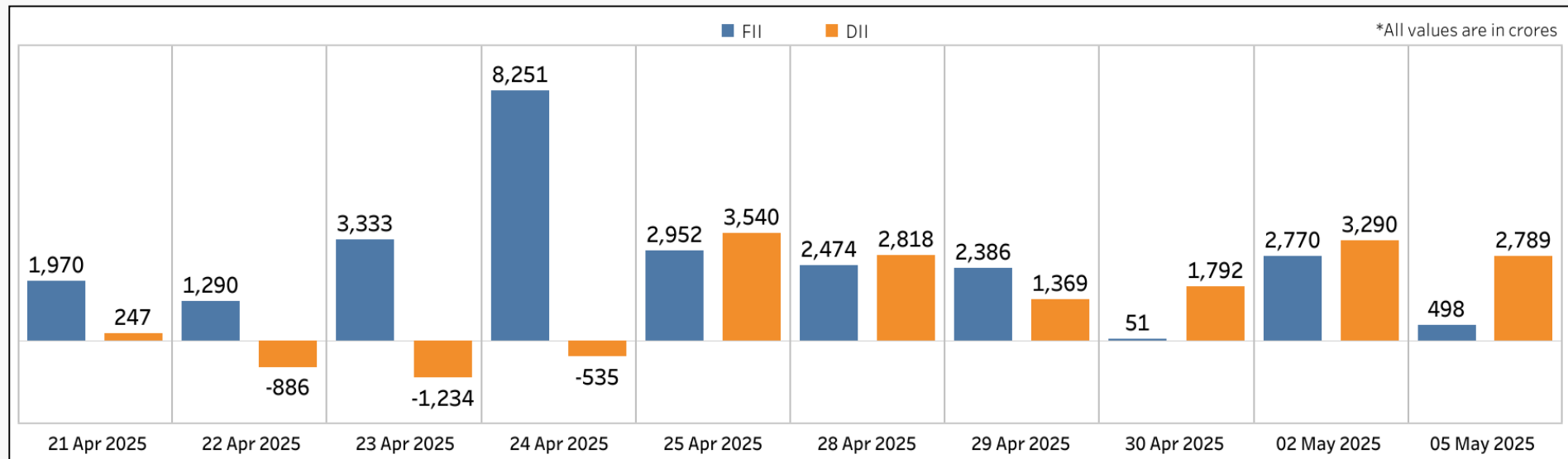
▲ and ▼ indicate positive and negative absolute changes, respectively

FII				DII			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
429,879 ▲	-17,893 ▼	107,226 ▲	3,587,487 ▲	-20 ▼	81,417 ▲	96,130 ▲	-7,362,387 ▼
116,535	11,512		1,816,336	70	40,242	46,215	-3,705,707
-313,344	-6,381	-33,199	-1,771,151	90	-41,175	-49,915	3,656,680
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
-314,083	9,953	-289,894	1,742,664	230	40,197	46,516	-3,674,074
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
-618,881 ▼	-62,485 ▼	-173,824 ▼	3,222,292 ▲	189,022 ▲	-1,039 ▼	-29,532 ▼	552,608 ▲
411,056	32,723	26,023	1,615,745	91,220	-4,099	-39,039	273,626
-207,825	-29,762	199,847	-1,606,547	-97,802	-3,060	-9,507	-278,982
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
194,187	-25,622	375,853	1,641,998	119,667	-24,528	-132,477	289,412
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

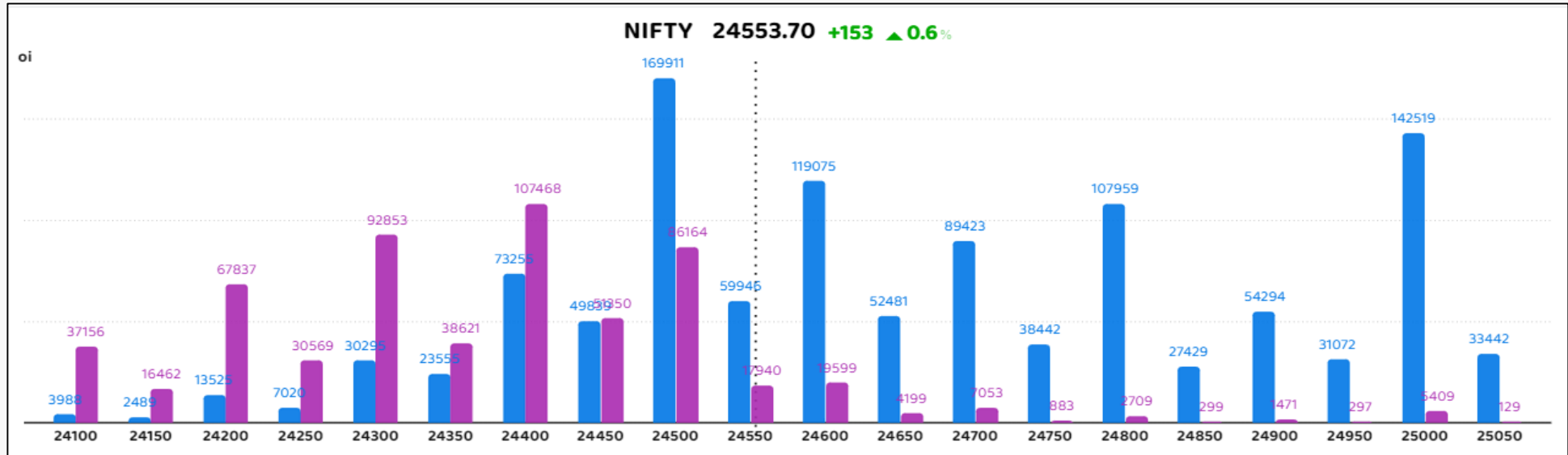


DII and FII Daily Cash Market Flows



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

Call  Put 



For the Nifty, the 24,500 Call and the 25,000 Put had the highest call and put concentration (contracts). For the Bank Nifty, the 55,500 Call and the 55,000 Put saw the most amount of open interest.

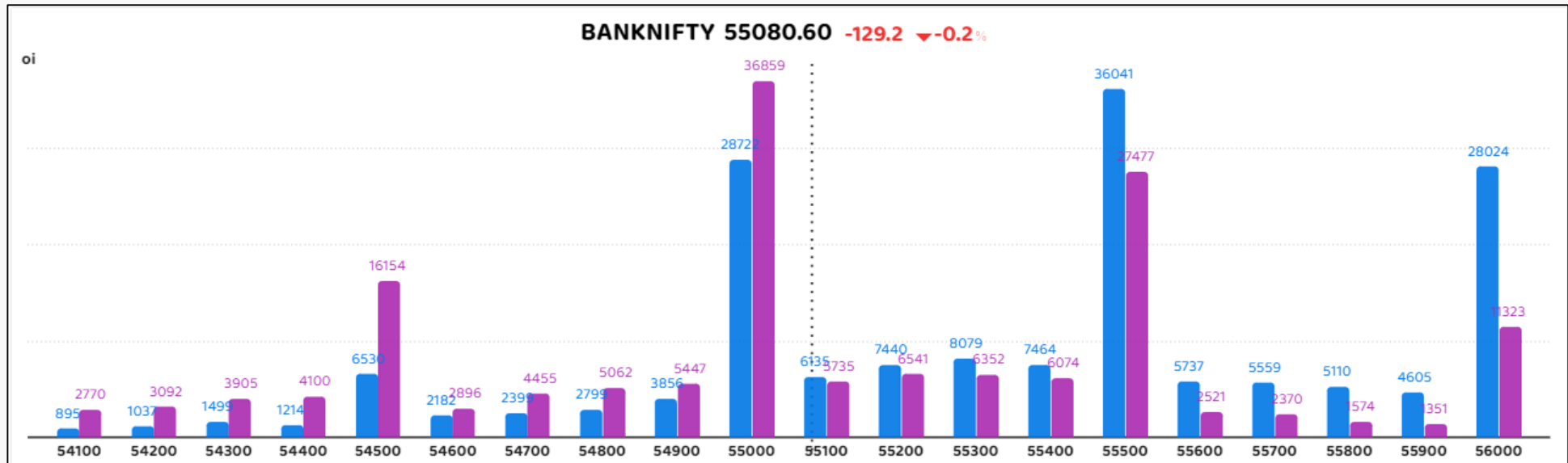
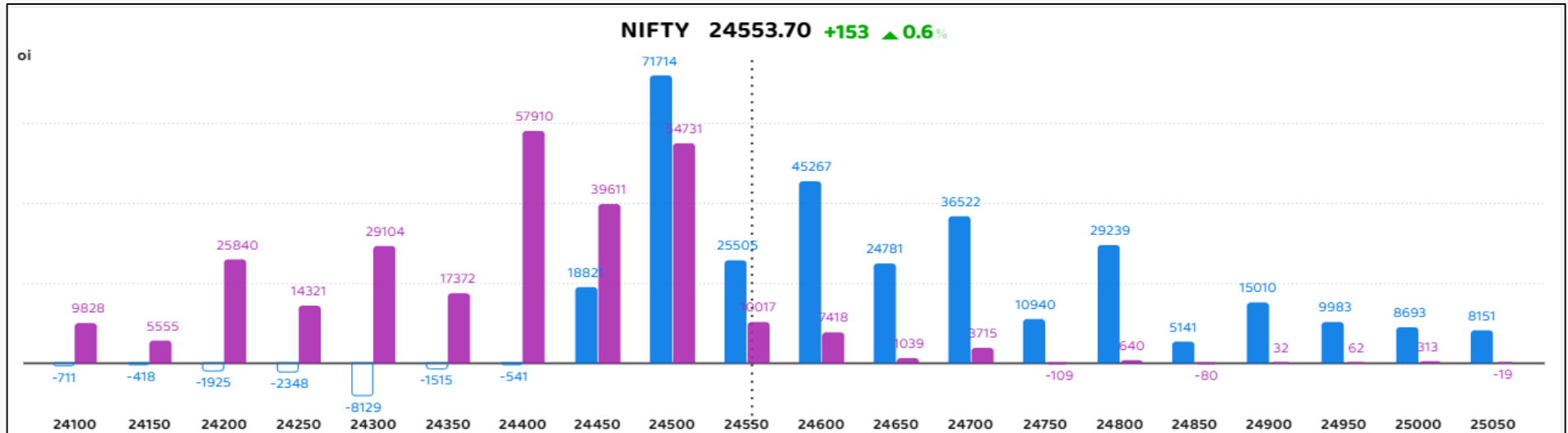


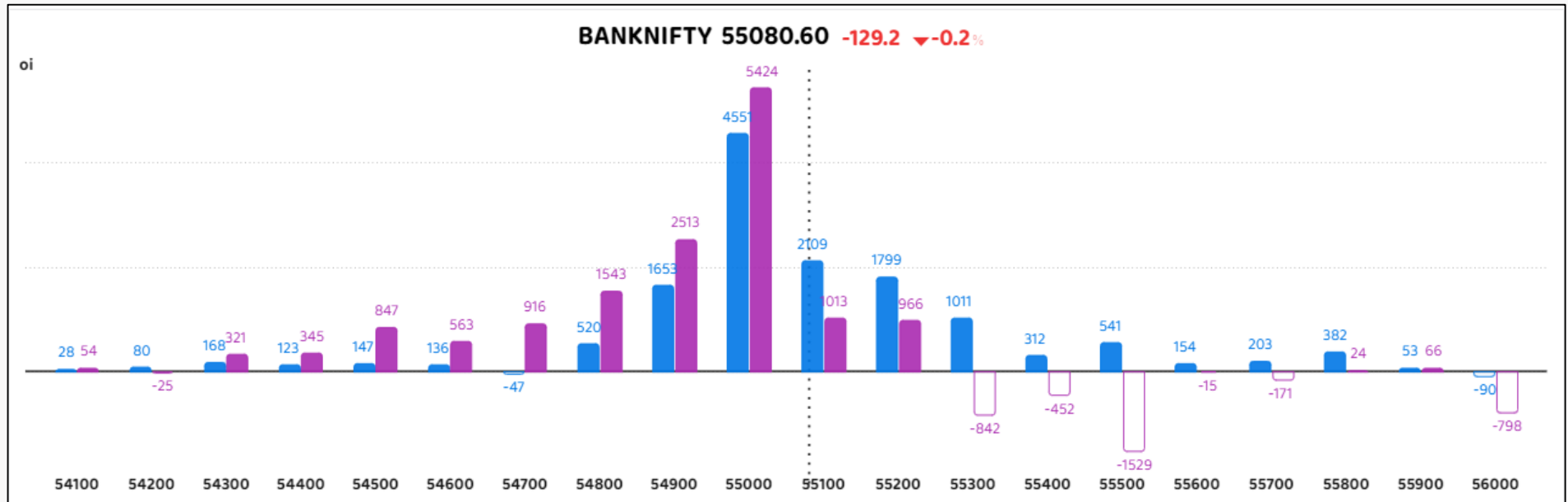
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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

Call ■ Put ■



The largest open interest changes (contracts) were seen at the 24,500 Call and the 24,400 Put



For the Bank Nifty, the biggest open interest changes were seen at the 55,000 Call & the 55,000 Put

Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
MRF LTD	136120	0.7	31.5	35.6	6.7	85.7
TITAN CO LTD	3321.8	-0.6	28.0	33.5	2.3	82.5
DIXON TECHNOLOGI	16710	2.2	43.7	53.0	1.8	81.8
HERO MOTOCORP LT	3767.6	0.7	32.5	40.4	2.8	79.0
BANK OF INDIA	116.36	0.8	44.5	49.1	27.4	78.8

Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
TATA TECHNOLOGIE	666.05	2.9	29.6	54.4	29.6	0.0
INDIAN RENEWABLE	168.75	1.8	42.9	69.2	42.9	0.0
ADANI GREEN ENER	965.7	6.7	45.8	74.3	45.8	0.0
HDFC LIFE INSURA	738.9	1.5	21.6	80.6	19.6	3.2
CENTRAL DEPOSITO	1313.5	-1.1	34.5	60.7	31.2	11.2

Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
MRF LTD	136120	0.7	31.5	35.6	6.7	98.7
ESCORTS KUBOTA L	3247.3	1.0	39.0	44.2	22.7	96.9
BANK OF INDIA	116.36	0.8	44.5	49.1	27.4	95.9
ASIAN PAINTS LTD	2436.9	1.1	29.0	34.6	15.5	95.5
DR REDDY'S LABS	1171.3	-1.0	31.1	39.7	14.4	95.2

Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
TATA TECHNOLOGIE	666.05	2.9	29.6	54.4	29.6	0.0
INDIAN RENEWABLE	168.75	1.8	42.9	69.2	42.9	0.0
ADANI GREEN ENER	965.7	6.7	45.8	74.3	45.8	0.0
MANAPPURAM FINAN	229.97	-0.5	16.0	64.2	2.7	3.3
HDFC LIFE INSURA	738.9	1.5	21.6	80.6	19.6	5.4

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	7.15	1.4	10941	1488	7.4
NATIONAL ALUMIN	160.86	0.7	8959	1624	5.5
ACC LTD	1882.3	1.0	26617	5854	4.6
ADANI ENERGY SOL	937.2	3.3	32924	8074	4.1
FSN E-COMMERCE V	196.27	1.4	4802	1358	3.5

Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
TATA COMMUNICATI	1591.1	2.0	3303	3889	1.2
MAX FINANCIAL SE	1283.2	-1.5	1085	1246	1.1
BANK OF BARODA	249.13	0.2	10309	9428	0.9
TECH MAHINDRA LT	1494.6	-0.1	4380	3910	0.9
INDUSIND BANK	846.75	-0.7	21744	18910	0.9

Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Relative to Highest Call OI
SYNGENE INTERNAT	629.2	0.2	14395	14395	100.0
MGFL IS	229.97	-0.5	11293	11426	98.8
PHOENIX MILLS	1555.4	1.2	2193	2231	98.3
TATA TECHNOLOGIE	666.05	2.9	12232	13547	90.3

Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Relative to Highest Put OI
HFCL LTD	80.59	3.1	4818	4818	100.0
VOLTAS LTD	1240.3	2.7	17445	18689	93.3
TATA TECHNOLOGIE	666.05	2.9	6465	6973	92.7
CENTRAL DEPOSITO	1313.5	-1.1	15097	16626	90.8
MANAPPURAM FINAN	229.97	-0.5	12028	13501	89.1

Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	Relative to Highest CV
ADANI TOTAL GAS	665.55	11.0	44493	44493	100.00

Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	Relative to Highest PV
ADANI TOTAL GAS	665.55	11.0	17023	17023	100.00
ADANI GREEN ENER	965.70	6.7	43747	45935	95.2

Call Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
SYNGENE INTERNAT	629.2	0.2	14395	5952	2.4
ACC LTD	1882.3	1.0	16199	7466	2.2
PHOENIX MILLS	1555.4	1.2	2193	1119	2.0
ADANI TOTAL GAS	665.55	11.0	4360	2329	1.9
TATA TECHNOLOGIE	666.05	2.9	12232	7024	1.7

Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
ADANI TOTAL GAS	665.55	11.0	2883	1677	1.7
SYNGENE INTERNAT	629.2	0.2	4991	2955	1.7
ACC LTD	1882.3	1.0	8273	5050	1.6
INDIAN BANK	576.5	3.3	2272	1428	1.6
TATA TECHNOLOGIE	666.05	2.9	6465	4098	1.6

Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
ADANI PORTS AND	1347.1	6.3	236407	49128	4.8
ADANI ENTERPRISE	2455.5	7.0	165360	39804	4.2
MARICO LTD	722.65	3.6	31499	10107	3.1
MAHINDRA & MAHIN	3021.5	3.3	168247	55777	3.0
KOTAK MAHINDRA	2084.9	-4.6	131267	48816	2.7

Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
ADANI PORTS AND	1347.1	6.3	87478	24531	3.6
KOTAK MAHINDRA	2084.9	-4.6	94854	31691	3.0
ADANI ENTERPRISE	2455.5	7.0	50144	17641	2.8
MAHINDRA & MAHIN	3021.5	3.3	82601	30853	2.7
HINDUSTAN PETRO	409.85	6.4	17597	7458	2.4

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	1957800	5.9%	2456	2600	2384400	5.9%	INFY	1500	1956400	-0.6%	1509	1200	1582400	-20.5%
ADANIPTS	1400	1473600	3.9%	1347	1200	1138800	-10.9%	ITC	450	5785600	3.0%	437	430	3177600	-1.6%
APOLLOHOSP	7200	103375	3.2%	6974	6150	91875	-11.8%	JSWSTEEL	1100	976050	15.1%	956	900	1266300	-5.8%
ASIANPAINT	2500	641200	2.6%	2437	2260	299400	-7.3%	KOTAKBANK	2300	1484400	10.3%	2085	2000	624400	-4.1%
AXISBANK	1200	2415625	2.3%	1173	1180	1436250	0.6%	LT	3500	619200	5.1%	3330	3300	448950	-0.9%
BAJAJ-AUTO	8500	140850	7.3%	7921	8000	87075	1.0%	M&M	3300	733600	9.2%	3022	2900	524125	-4.0%
BAJAJFINSV	2100	2083500	3.6%	2026	1800	551000	-11.2%	MARUTI	12000	331800	-3.7%	12458	12000	220100	-3.7%
BAJFINANCE	10000	857125	12.0%	8932	9000	436500	0.8%	NESTLEIND	2500	559200	7.4%	2328	2400	146000	3.1%
BEL	320	7968600	1.5%	315	310	4659750	-1.7%	NTPC	370	7996500	6.1%	349	380	2083500	9.0%
BHARTIARTL	1880	1736125	0.8%	1866	1700	964250	-8.9%	ONGC	250	7224525	4.5%	239	240	2094400	0.3%
BPCL	350	2844000	9.0%	321	290	1841400	-9.7%	POWERGRID	330	3042000	7.1%	308	320	1580400	3.8%
BRITANNIA	5500	90900	2.6%	5359	5300	48400	-1.1%	RELIANCE	1400	6445000	-2.2%	1431	1300	7176500	-9.2%
CIPLA	1760	676000	14.1%	1543	1300	427050	-15.7%	SBILIFE	1960	410250	10.7%	1770	1700	448875	-3.9%
COALINDIA	400	5158650	3.7%	386	450	2154600	16.7%	SBIN	800	9739500	1.3%	790	800	4769250	1.3%
DRREDDY	1200	1094375	2.5%	1171	1100	555000	-6.1%	SHRIRAMFIN	700	2960250	11.3%	629	600	820500	-4.6%
EICHERMOT	5700	188300	4.4%	5461	5300	150325	-2.9%	SUNPHARMA	1900	2575300	3.5%	1837	1800	527800	-2.0%
GRASIM	3120	321250	13.2%	2755	2340	120000	-15.1%	TATACONSUM	1300	813048	11.9%	1162	1100	408576	-5.3%
HCLTECH	1600	886550	2.0%	1569	1200	912100	-23.5%	TATAMOTORS	700	3847250	5.8%	662	650	3337400	-1.7%
HDFCBANK	2000	2983750	3.3%	1937	1900	2583900	-1.9%	TATASTEEL	150	17864000	5.6%	142	140	12122000	-1.5%
HDFCLIFE	800	1731400	8.3%	739	700	757900	-5.3%	TCS	3500	920500	1.3%	3454	3400	533050	-1.6%
HEROMOTOCO	4000	365850	6.2%	3768	3900	231450	3.5%	TECHM	1500	568800	0.4%	1495	1400	436800	-6.3%
HINDALCO	700	1684200	10.5%	633	600	1191400	-5.3%	TITAN	3400	362075	2.4%	3322	3000	208775	-9.7%
HINDUNILVR	2500	1435800	6.4%	2349	2400	505200	2.2%	TRENT	5700	438500	6.1%	5371	5200	428000	-3.2%
ICICIBANK	1500	2739100	4.9%	1429	1400	2326100	-2.1%	ULTRACEMCO	13000	295300	11.4%	11670	10000	87750	-14.3%
INDUSINDBK	900	1869500	6.3%	847	800	1711500	-5.5%	WIPRO	250	10998000	2.6%	244	240	3258000	-1.5%

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

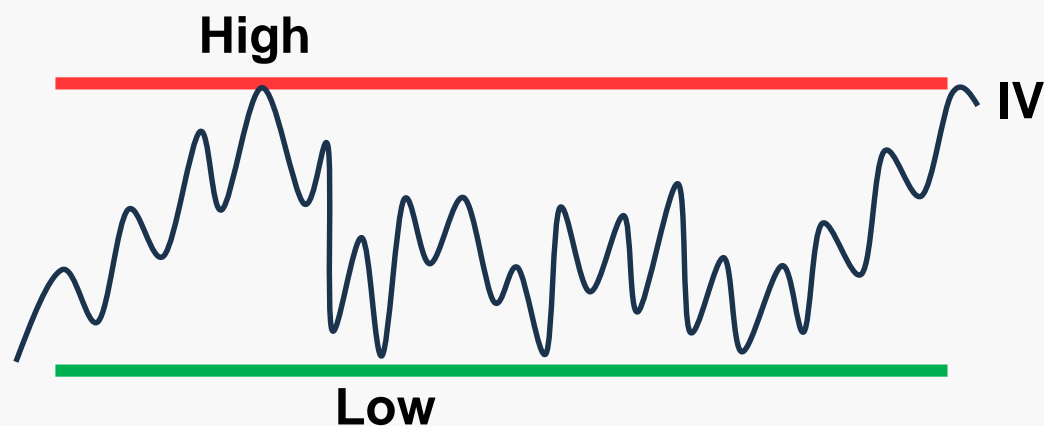
If distance to call strike from current market price = distance to put strike from current market price, then the %Away columns will be uncolored

- 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**

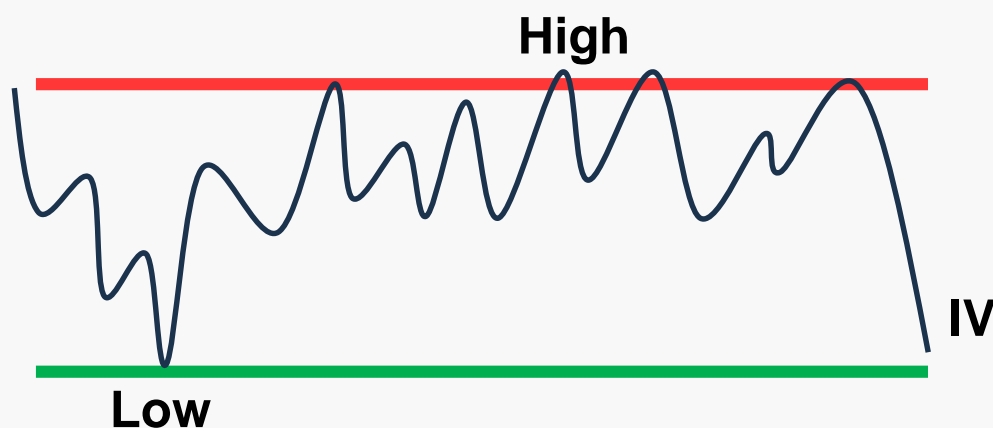
**ATM IV is the midpoint of the IV for the ATM call and put respectively*

- **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 (DII), 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

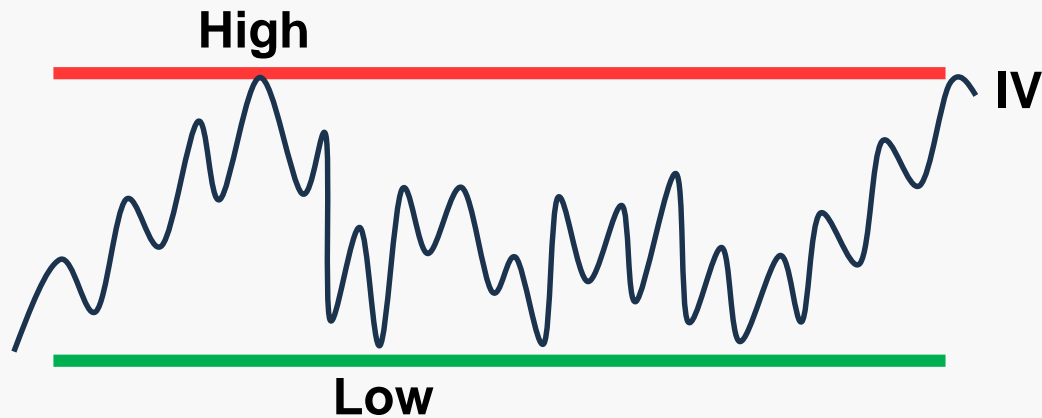


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.

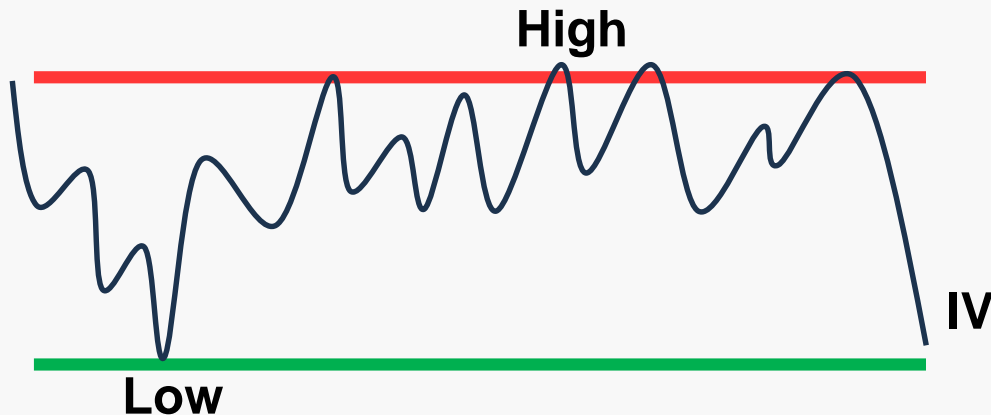


In this chart, notice that today's IV is close to the lowest low seen in the last 12 months. This means that IV for this option is cheap today compared to where it has traded over the last one year.

- **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.

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.

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. Rajiv Kejriwal**, Tel No. – 022-68555574, Email id – 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.

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