



## Daily Derivatives Report

## Nifty Futures

	Value	Change
Most recent settlement	25,253	0.6% ▼
Open Interest (OI)	1,87,96,125	3.1% ▲
Change in OI (abs)	1,87,96,125	5,75,625 ▲
Premium / Discount (Abs)	33	0 ▲
<b>Inference</b>	<b>Short Build Up</b>	

## Bank Nifty Futures

	Value	Change
Most recent settlement	57,236	0.2% ▼
Open interest (OI)	24,78,980	3.7% ▼
Change in OI (abs)	24,78,980	92,715 ▼
Premium / Discount (Abs)	25	26 ▲
<b>Inference</b>	<b>Long Unwinding</b>	

## Volatility Insights

	Value	Change
India VIX Index	10.72	0.20 ▲
Nifty ATM IV (%)	8.91	0.2 ▲
Bank Nifty ATM IV (%)	10.20	0.1 ▲
PCR (Nifty)	0.90	0.24 ▼
PCR (Bank Nifty)	0.90	0.10 ▼

The FII Long Ratio in Index Futures **drop** to 14.8 %, **down** from 15.2% in the previous session.

## Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
INDIANB	73,11,000	9.7%	654.05	4.4%
MANKIND	15,85,800	9.0%	2596.6	0.0%
AMBER	3,60,600	8.3%	7396	0.8%
PAGEIND	3,25,860	5.3%	46485	0.1%
PGEL	66,73,800	4.1%	803	1.3%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
COFORGE	1,57,63,500	16.7%	1676.8	-9.6%
360ONE	49,82,000	14.6%	1122.7	-0.5%
PERSISTENT	36,14,200	14.2%	5180	-7.9%
CGPOWER	1,98,78,100	7.9%	681.2	-0.3%
NESTLEIND	1,06,77,500	7.1%	2323.6	-5.5%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
OFSS	11,00,700	-10.6%	8943	1.6%
IRFC	5,32,22,750	-7.1%	136.1	0.6%
BANDHANBNK	9,60,26,400	-6.6%	184.32	1.4%
AARTIIND	1,09,03,425	-5.2%	433.95	1.4%
MAZDOCK	34,76,725	-4.8%	2967.4	1.3%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
IEX	4,02,18,750	-14.6%	133.64	-28.9%
M&MFIN	1,91,86,592	-7.3%	259.2	0.0%
ACC	31,82,100	-6.5%	1890.2	-3.1%
DABUR	1,72,66,250	-5.7%	512.25	-0.4%
CHAMBLFERT	96,09,250	-4.7%	555.1	-1.0%

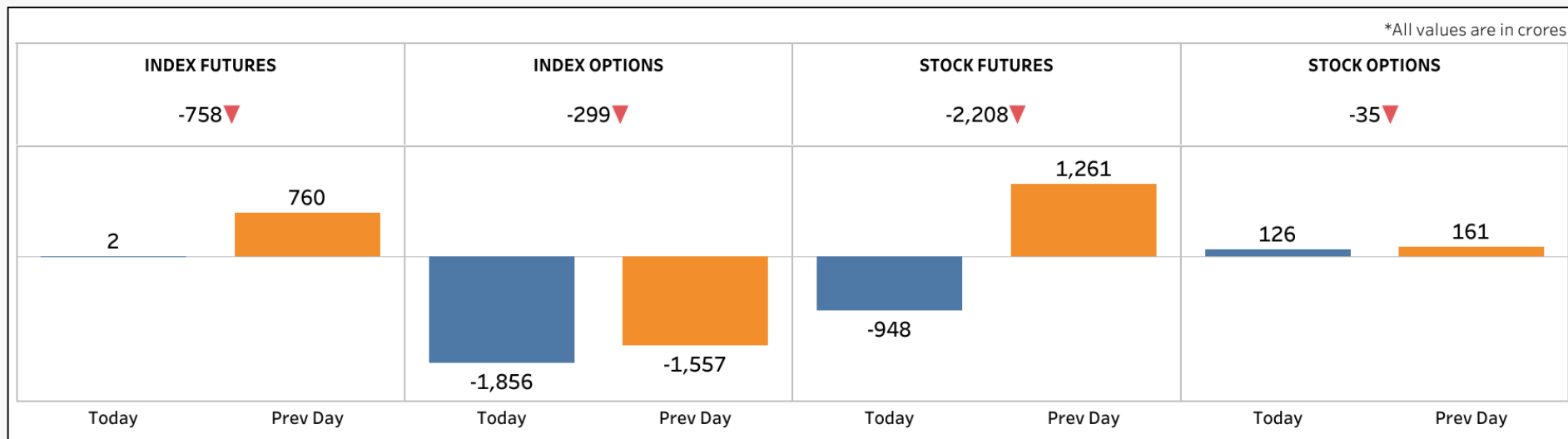
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

## Open Interest Trends by Participant

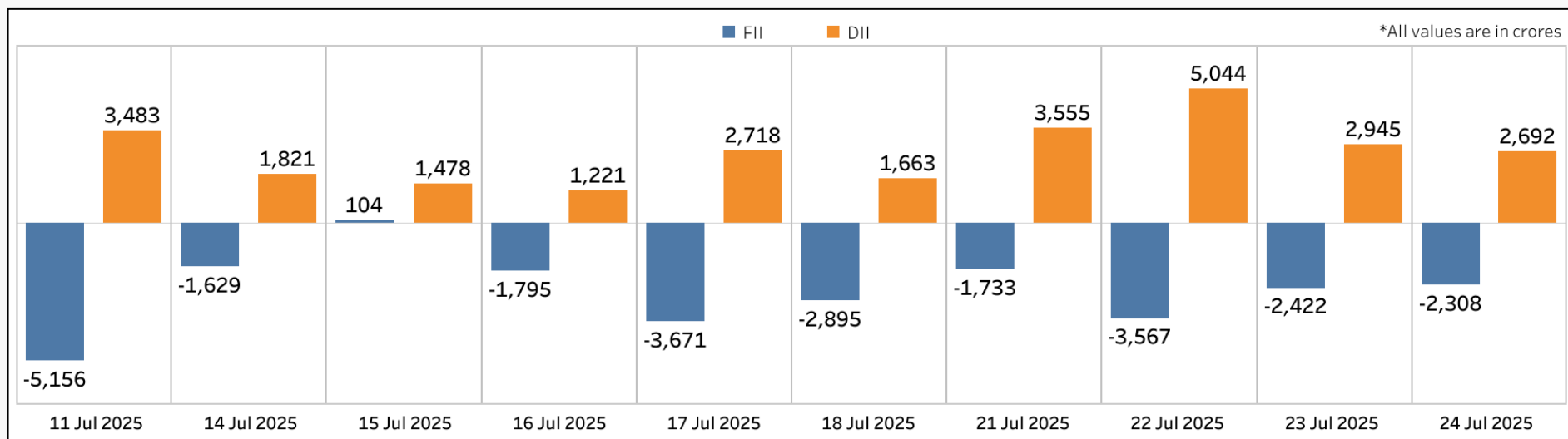
▲ and ▼ indicate positive and negative absolute changes, respectively

FII				DII			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
-25,558 ▼	-3,878 ▼	99,518 ▲	-38,137 ▼	-4,341 ▼	-3,057 ▼	680 ▲	24,106 ▲
10,634	36,192	57,197	20,155	0	680	0	8,609
19	3,897	-42,321	-17,982	-4,341	-5,541	-2,484	-15,497
Net O/S 26,794 Today Prev Day	Net O/S -145,538 Today Prev Day	Net O/S 192,704 Today Prev Day	Net O/S 1,311,106 Today Prev Day	Net O/S 1,570 Today Prev Day	Net O/S 28,255 Today Prev Day	Net O/S 14,963 Today Prev Day	Net O/S -3,983,064 Today Prev Day
Clients				Pro			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
402,876 ▲	3,687 ▲	-205,968 ▼	14,995 ▲	-372,974 ▼	3,248 ▲	105,769 ▲	-964 ▼
206,461	7,263	123,761	16,768	160,222	24,330	-81,439	-7,395
-196,415	3,576	-82,207	1,773	-212,752	-1,741	-4,989	-6,431
Net O/S -13,124 Today Prev Day	Net O/S 108,784 Today Prev Day	Net O/S -366,951 Today Prev Day	Net O/S 2,245,292 Today Prev Day	Net O/S -15,239 Today Prev Day	Net O/S 8,499 Today Prev Day	Net O/S 159,285 Today Prev Day	Net O/S 426,666 Today Prev Day

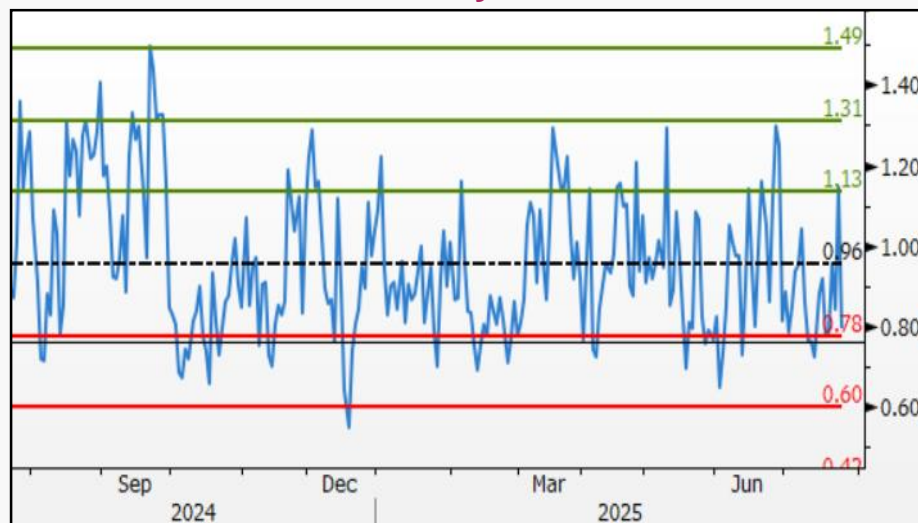
## Daily Net Open Interest Change



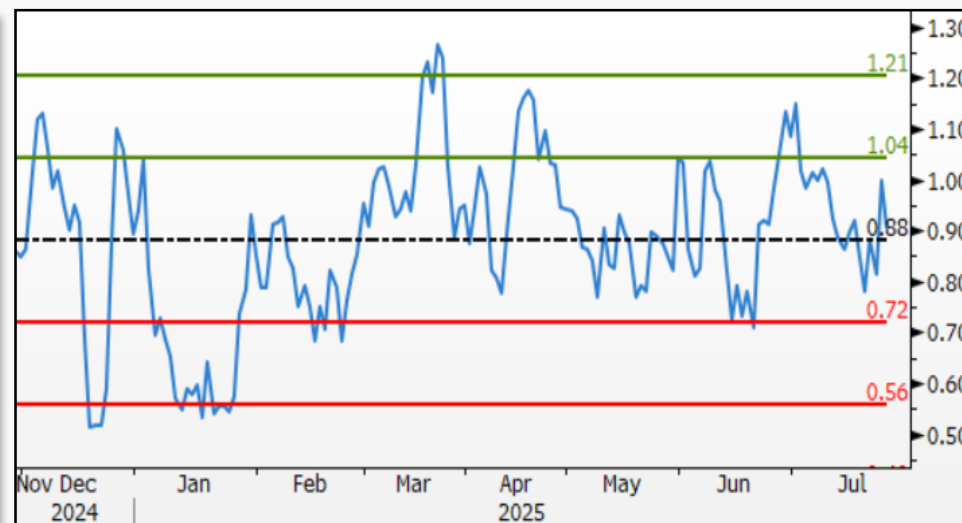
## DII and FII Daily Cash Market Flows



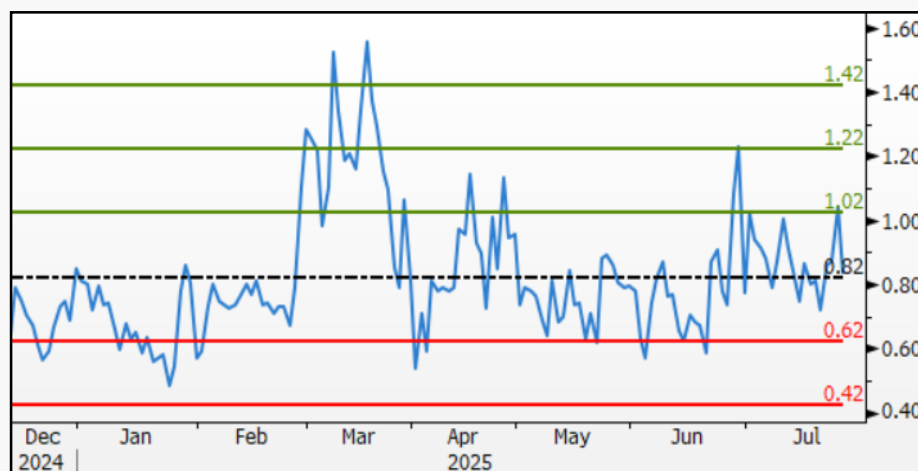
## Nifty



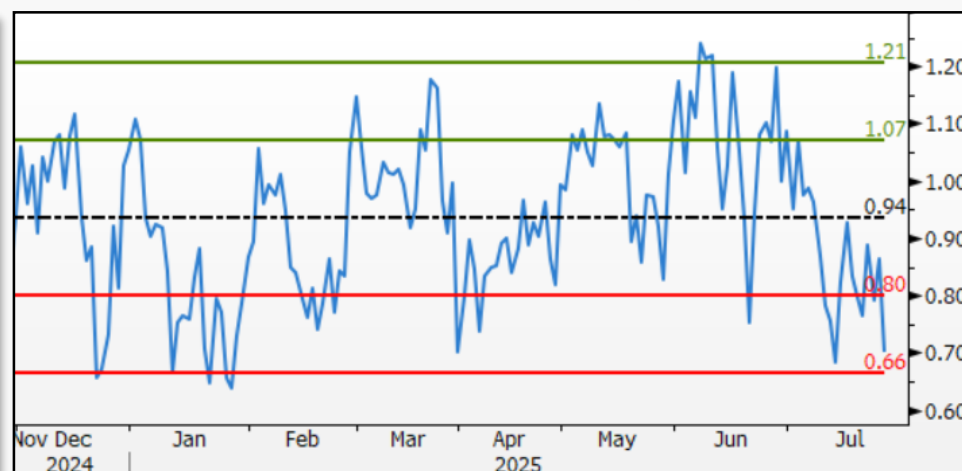
## Bank Nifty



## Fin Nifty

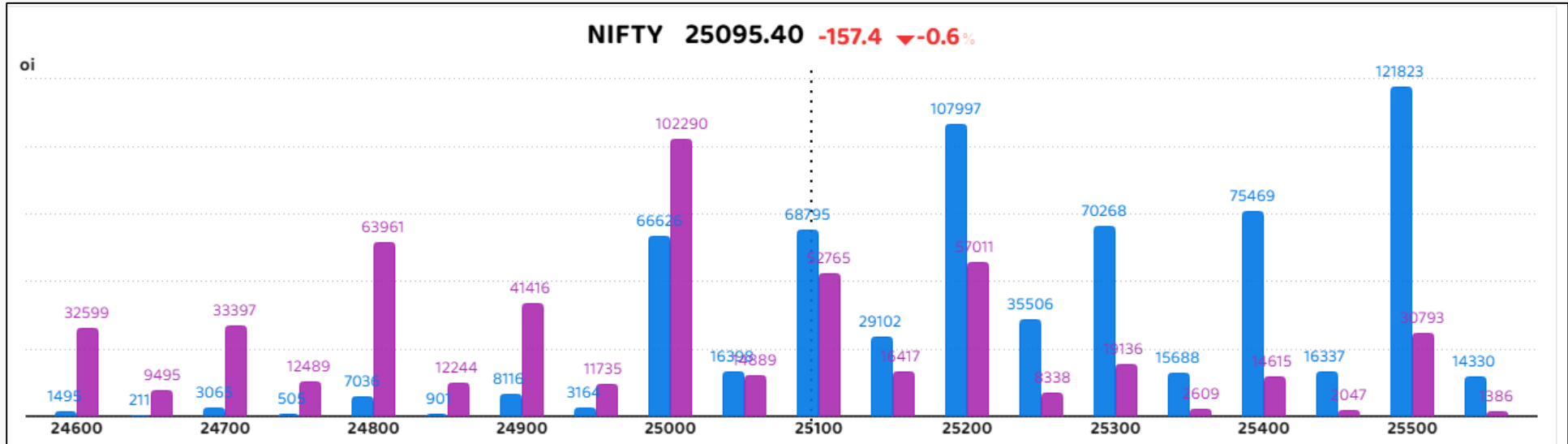


## Midcap Select Nifty



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

Call  Put 



For the Nifty, the 25,500 Call and the 25,000 Put had the highest call and put concentration (contracts). For the Bank Nifty, the 57,000 Call and the 57,000 Put saw the most amount of open interest.

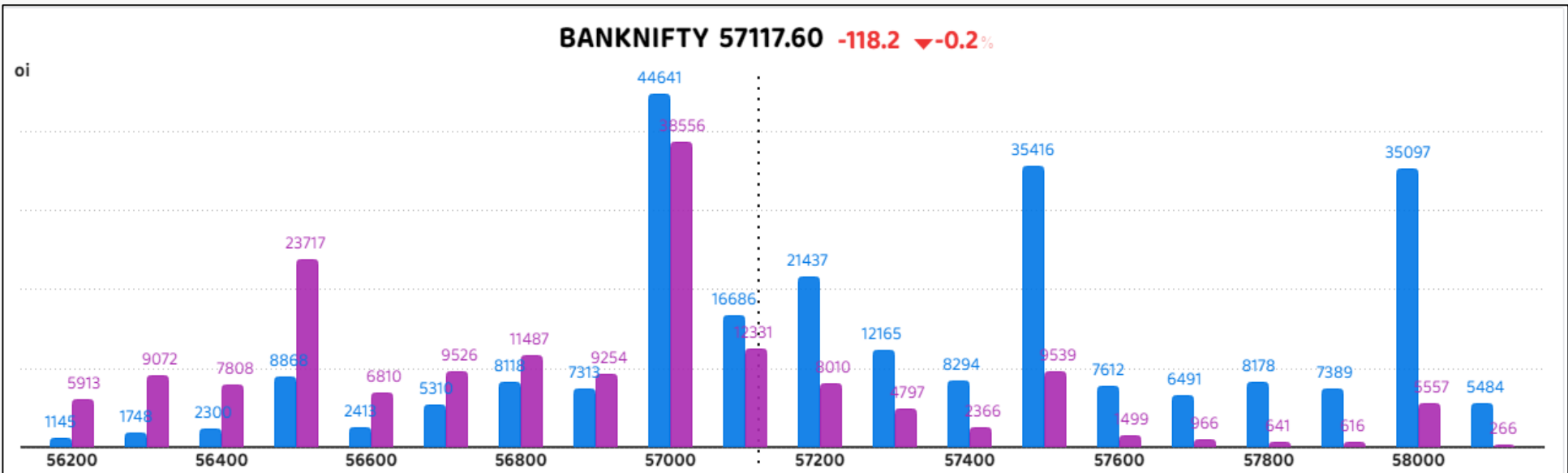
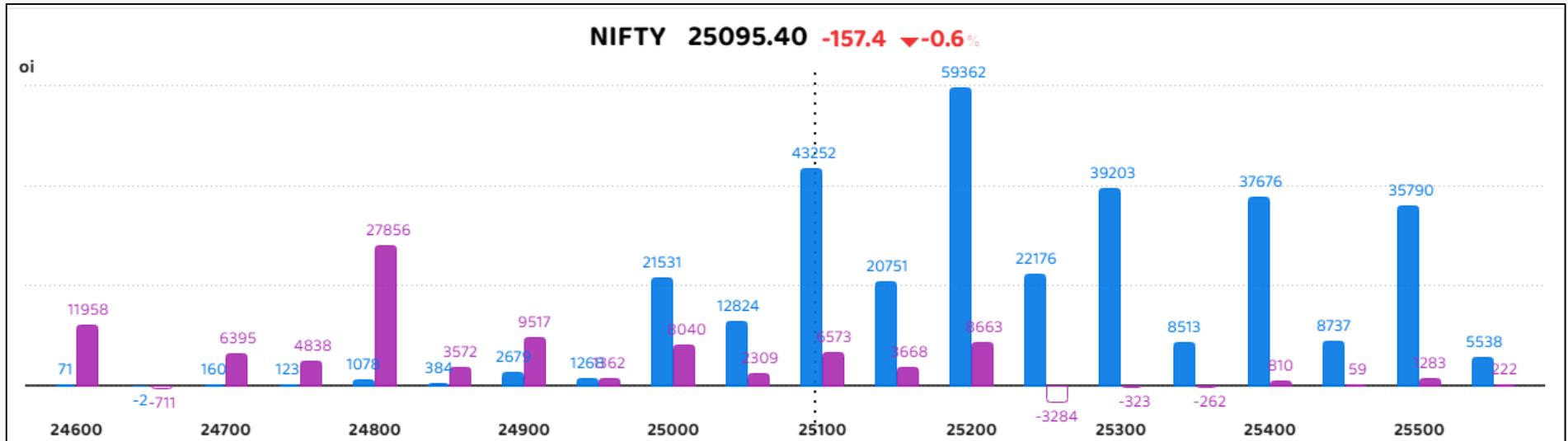


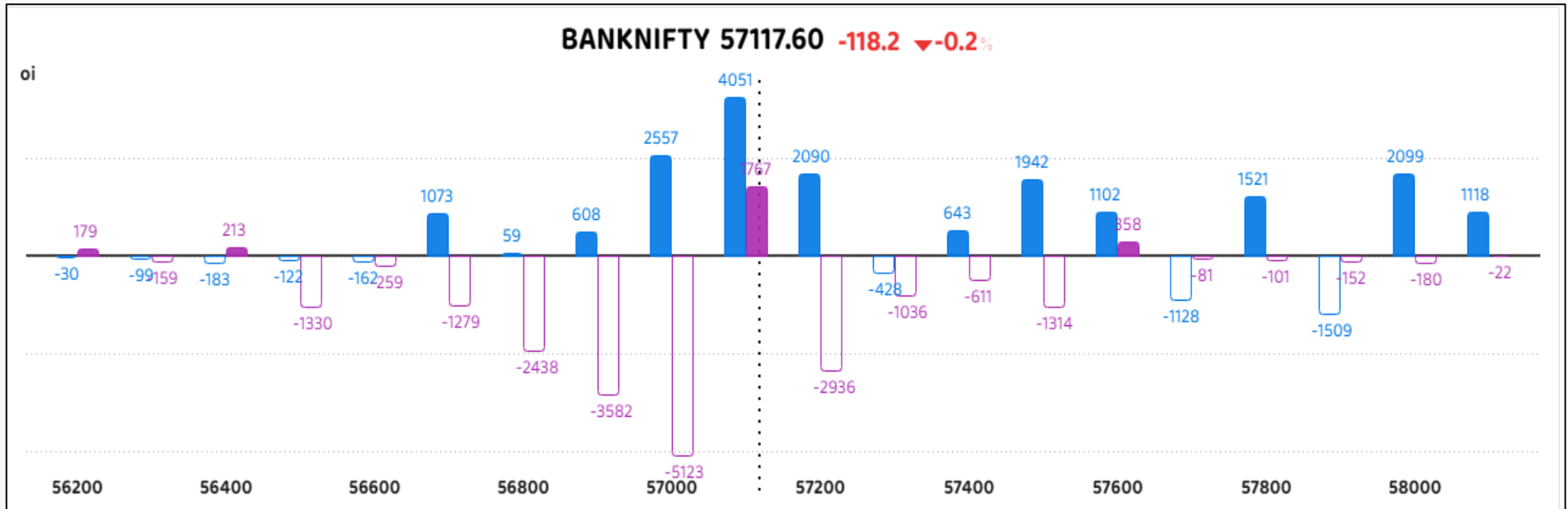
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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

Call ■ Put ■



The largest open interest changes (contracts) were seen at the 25,200 Call and the 24,800 Put



For the Bank Nifty, the biggest open interest changes were seen at the 57,100 Call & the 57,000 Put

## Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
IEX	132.32	-29.6	76.3	76.3	25.8	100.0
BOSCH LTD	37910	-0.2	30.9	34.9	3.3	87.2
SHREE CEMENT	31745	-1.2	27.0	31.9	7.9	79.8
RBL BANK LTD	256.4	-1.0	60.3	76.5	10.6	75.4
MARUTI SUZUKI IN	12557	-0.6	21.5	29.9	0.4	71.6

## Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
HINDUSTAN ZINC	446.1	-0.2	24.6	54.2	24.6	0.0
OIL INDIA LTD	446.95	-1.4	30.3	60.4	30.3	0.0
PI INDUSTRIES	4113.9	1.0	14.3	40.3	14.3	0.0
PNB HOUSING FINANCE	1050.2	-1.3	28.8	58.3	28.8	0.0
TATA TECHNOLOGIES	718.15	0.3	26.4	54.4	26.2	0.5



## Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
IEX	132.32	-29.6	76.3	76.3	25.8	100.0
RBL BANK LTD	256.4	-1.0	60.3	76.5	10.6	95.8
BOSCH LTD	37910	-0.2	30.9	34.9	3.3	95.6
MANKIND PHARMA	2589.5	-0.4	35.3	39.5	25.0	88.9
SONA BLW PRECISION	490.8	0.4	45.6	57.8	18.5	88.8

## Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
HINDUSTAN ZINC	446.1	-0.2	24.6	54.2	24.6	0.0
OIL INDIA LTD	446.95	-1.4	30.3	60.4	30.3	0.0
PI INDUSTRIES	4113.9	1.0	14.3	40.3	14.3	0.0
PNB HOUSING FINANCE	1050.2	-1.3	28.8	58.3	28.8	0.0
INDIAN HOTELS	754	-0.1	23.2	46.4	22.6	0.8

### Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
AARTI INDUS LTD	433.7	1.6	10005	1807	5.5
BANK OF INDIA	114.69	1.3	5259	1226	4.3
EXIDE INDUS LTD	391.2	-0.1	6925	1647	4.2
CHAMBAL FERTILISERS	554.45	-0.8	9742	2377	4.1
BOSCH LTD	37910	-0.2	15077	4287	3.5

### Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
IEX	132.32	-29.6	3527	8578	2.4
YES BANK LTD	20.01	0.6	6891	8874	1.3
MPHASIS LTD	2653.5	-3.0	8564	10956	1.3
CYIENT LTD	1241.6	-3.0	6111	7220	1.2
L&T FINANCE LTD	210.1	-1.6	10062	11683	1.2

### Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Relative to Highest Call OI
PERSISTENT SYSTEMS	5174	-7.7	40550	40550	100.0
PNB HOUSING FINANCE	1050.2	-1.3	5783	5783	100.0
TECH MAHINDRA	1498.6	-3.1	26147	26180	99.9
BANK OF INDIA	114.69	1.3	7405	7459	99.3
PIRAMAL PHARMA	203.19	-0.9	3571	3658	97.6

### Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Relative to Highest Put OI
ETERNAL LTD	313.15	3.7	46758	46758	100.0
TORRENT PHARMA	3519.9	-1.0	2864	2864	100.0
PERSISTENT SYSTEMS	5174	-7.7	16299	16299	100.0
PNB HOUSING FINANCE	1050.2	-1.3	3284	3284	100.0
PHOENIX MILLS	1448.1	-0.4	2322	2335	99.4

### Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	Relative to Highest CV
PERSISTENT SYSTEMS	5174	-7.7	225744	233101	96.8
TATA CONSUMER	1072.8	1.0	108717	122695	88.6

### Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	Relative to Highest PV
NO STOCK OPTION MET THE CONDITIONS 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
PERSISTENT SYSTEMS	5174	-7.7	40550	11803	3.4
COFORGE LTD	1676	-9.4	43339	15601	2.8
ETERNAL LTD	313.15	3.7	40290	18823	2.1
NESTLE INDIA LTD	2322.1	-5.3	16662	8139	2.0
COLGATE PALMOLIVE	2259.5	-1.1	12731	6262	2.0

### Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
ETERNAL LTD	313.15	3.7	46758	15703	3.0
IEX	132.32	-29.6	25124	9498	2.6
PERSISTENT SYSTEMS	5174	-7.7	16299	6435	2.5
SUPREME INDS LTD	4242.7	2.6	3039	1423	2.1
COFORGE LTD	1676	-9.4	16177	7759	2.1

### Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
COFORGE LTD	1676	-9.4	198796	21700	9.2
PERSISTENT SYSTEMS	5174	-7.7	225744	24764	9.1
TATA CONSUMER	1072.8	1.0	108717	13330	8.2
DR REDDY'S LABS	1265.5	1.5	96716	13492	7.2
SUPREME INDS LTD	4242.7	2.6	26159	3818	6.9

### Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
PERSISTENT SYSTEMS	5174	-7.7	174506	15056	11.6
COFORGE LTD	1676	-9.4	107502	10155	10.6
SUPREME INDS LTD	4242.7	2.6	18914	1855	10.2
NESTLE INDIA LTD	2322.1	-5.3	70834	8337	8.5
CANARA BANK	113.51	5.3	85821	11784	7.3

## 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	1712400	-0.3%	2608	2700	1586100	3.5%	ITC	420	10537600	2.5%	410	420	4123200	2.5%
ADANIPTS	1500	1315275	6.3%	1412	1400	1108175	-0.8%	JIOFIN	330	11223600	4.3%	316	300	5106550	-5.2%
APOLLOHOSP	8000	287625	8.6%	7364	7000	148625	-4.9%	JSWSTEEL	1180	1313550	14.1%	1034	1000	792450	-3.3%
ASIANPAINT	2500	1553250	6.3%	2352	2300	446000	-2.2%	KOTAKBANK	2200	1034400	2.7%	2142	2100	826000	-2.0%
AXISBANK	1200	7221250	9.6%	1095	1100	2023125	0.4%	LT	3700	2499875	6.4%	3478	3500	574525	0.6%
BAJAJ-AUTO	8400	261375	1.3%	8289	8000	123375	-3.5%	M&M	3300	1120200	1.2%	3261	3200	516600	-1.9%
BAJAJFINSV	2100	1316000	3.3%	2032	2000	600000	-1.6%	MARUTI	12800	602000	1.9%	12557	12300	77300	-2.0%
BAJFINANCE	1000	2958750	4.3%	959	900	2555250	-6.1%	NESTLEIND	2500	551750	7.7%	2322	2300	290500	-1.0%
BEL	420	10151700	5.5%	398	400	5657250	0.4%	NTPC	345	34039500	1.8%	339	345	4327500	1.8%
BHARTIARTL	2000	2963525	3.3%	1936	1900	836475	-1.9%	ONGC	250	19188000	2.1%	245	245	2286000	0.1%
CIPLA	1600	843750	7.5%	1488	1340	391125	-9.9%	POWERGRID	300	6874200	0.2%	299	300	1915200	0.2%
COALINDIA	400	7578900	3.7%	386	395	3075300	2.5%	RELIANCE	1500	11825000	6.9%	1403	1400	2964000	-0.2%
DRREDDY	1300	2106875	2.7%	1266	1100	778750	-13.1%	SBILIFE	1860	1504500	3.7%	1794	1800	355875	0.4%
EICHERMOT	5800	256550	6.1%	5469	5800	115325	6.1%	SBIN	820	20343750	0.5%	816	820	7881750	0.5%
ETERNAL	320	8475375	2.2%	313	300	14746425	-4.2%	SHRIRAMFIN	700	2795925	10.5%	634	600	693000	-5.3%
GRASIM	2800	297250	2.3%	2736	2600	129750	-5.0%	SUNPHARMA	1720	2644600	1.7%	1692	1500	393750	-11.3%
HCLTECH	1600	1639750	6.2%	1507	1600	554050	6.2%	TATACONSUM	1100	1488850	2.5%	1073	980	513150	-8.7%
HDFCBANK	2020	6048900	0.3%	2014	1960	2643300	-2.7%	TATAMOTORS	700	5573600	-0.1%	701	680	3565600	-2.9%
HDFCLIFE	820	3205400	8.3%	757	740	1118700	-2.3%	TATASTEEL	170	21400500	4.0%	163	160	9278500	-2.1%
HEROMOTOCO	4500	885750	4.6%	4302	4300	209100	0.0%	TCS	3500	2941225	11.2%	3148	3200	938000	1.7%
HINDALCO	700	2322600	0.6%	696	670	1120000	-3.7%	TECHM	1600	2670000	6.8%	1499	1500	367800	0.1%
HINDUNILVR	2560	1122000	5.0%	2438	2300	591300	-5.7%	TITAN	3500	717500	0.4%	3484	3500	240100	0.4%
ICICIBANK	1490	2802800	0.4%	1483	1440	2111900	-2.9%	TRENT	5500	943400	6.7%	5154	5000	298500	-3.0%
INDUSINDBK	900	3735200	6.1%	848	850	1022700	0.2%	ULTRACEMCO	13000	316950	5.7%	12304	12000	82650	-2.5%
INFY	1600	5274400	3.1%	1553	1600	1680000	3.1%	WIPRO	270	13323000	3.1%	262	260	4716000	-0.7%

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

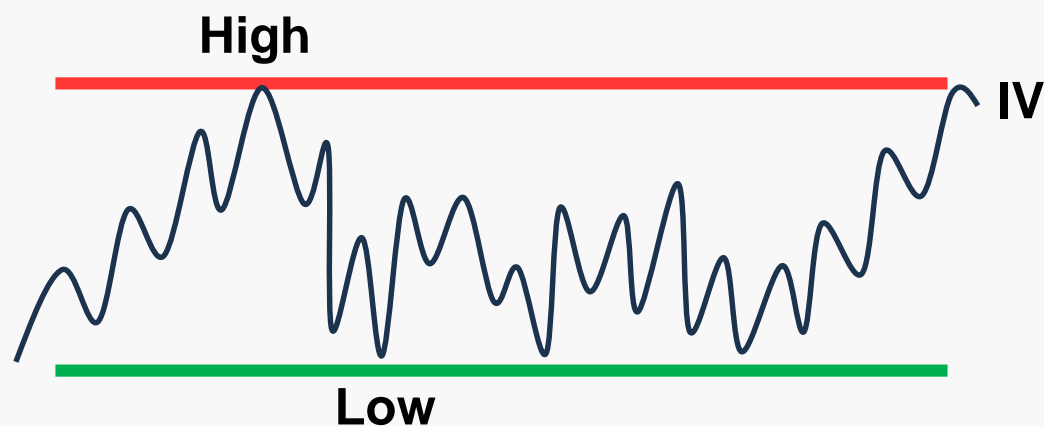
- Open interest **goes up** when **both** the buyer and the seller are **opening a new position**
- Open interest remains the **same** when one party is **opening a new position** and the other is **liquidating an existing position**
- Open interest **falls** when both the buyer and the seller are **liquidating 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*

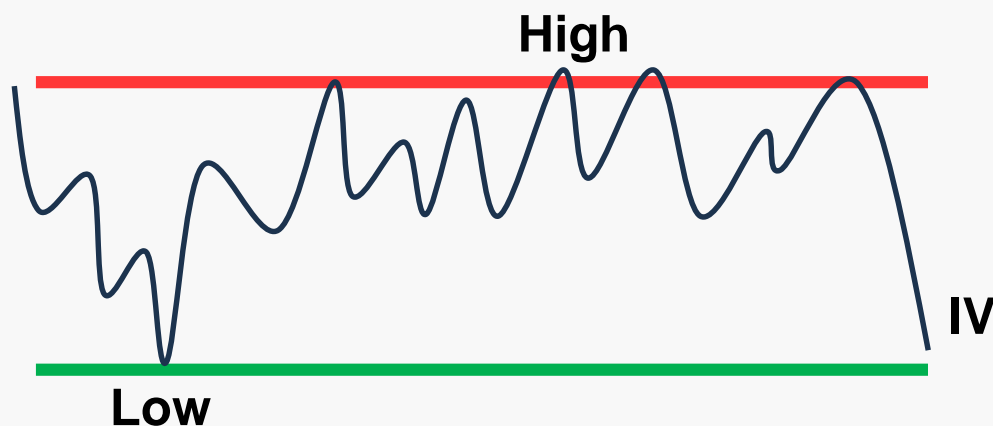


- **Volume:** Number of contracts traded for the day. If A bought 10 calls & B sold 10 calls, the volume for the day is 10 contracts
- **Open Interest:** The number of derivatives contracts that are open (have not been closed out). If A bought 10 calls, B bought another 10 calls and C sold 20 calls, 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](http://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

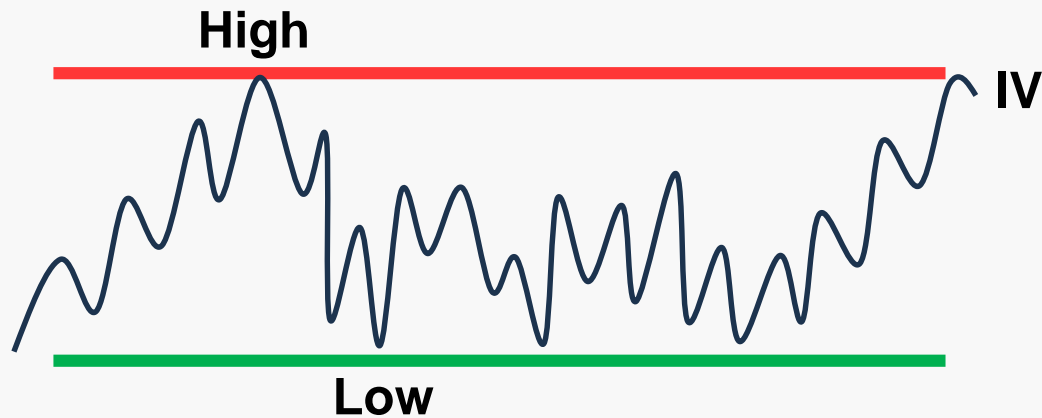


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.

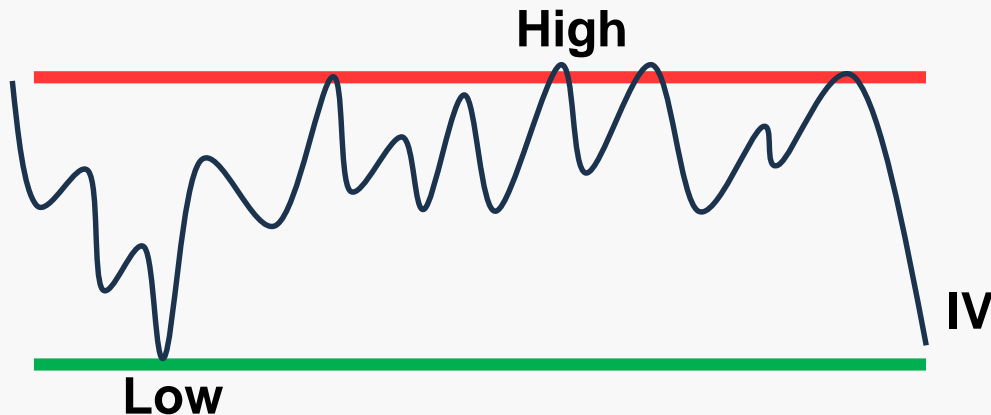


In this chart, notice that today's IV is close to the lowest low seen in the last 12 months. This means that IV for this option is cheap today compared to where it has traded over the last one year.

- **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](http://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](mailto: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](mailto: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