



Daily Derivatives Report

Nifty Futures

	Value	Change
Most recent settlement	25,739	0.1%▲
Open Interest (OI)	1,76,85,070	0.1%▼
Change in OI (abs)	1,76,85,070	24,115▼
Premium / Discount (Abs)	14	20▼
Inference	Short Covering	

Bank Nifty Futures

	Value	Change
Most recent settlement	61,113	0.2%▲
Open interest (OI)	17,57,510	6.9%▲
Change in OI (abs)	17,57,510	1,13,820▲
Premium / Discount (Abs)	-61	81▼
Inference	Long Build Up	

Volatility Insights

	Value	Change
India VIX Index	12.67	0.66▼
Nifty ATM IV (%)	10.60	0.91▼
Bank Nifty ATM IV (%)	11.51	0.62▼
PCR (Nifty)	1.12	0.01▲
PCR (Bank Nifty)	1.34	0.14▲

The FII Long Ratio in Index Futures **jump** to 21 %, **up** from 20 % in the previous session.

Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
ONGC	11,99,81,250	12.6%	272.5	0.2%
PERSISTENT	34,85,100	10.5%	5614	0.7%
SHREECEM	4,19,100	10.3%	26260	0.4%
BANKINDIA	5,33,88,400	9.8%	170.67	2.8%
UNIONBANK	6,81,62,700	9.0%	188.72	2.8%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
WAAREENER	29,19,175	11.4%	3066.4	-2.0%
BSE	1,19,43,750	8.2%	2748.8	-2.2%
PREMIERENE	65,50,400	6.0%	762.1	-0.4%
HINDZINC	4,21,04,475	5.4%	582.25	-2.3%
ABB	23,51,625	5.1%	5830.5	-1.2%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
IRCTC	1,44,27,000	-9.6%	615.8	0.6%
PNBHOUSING	1,26,94,500	-6.7%	863.4	1.3%
ITC	18,73,40,800	-6.4%	325.1	2.2%
RBLBANK	7,41,01,325	-4.0%	321.85	2.4%
ADANIPORTS	2,10,49,625	-3.0%	1565.9	1.5%

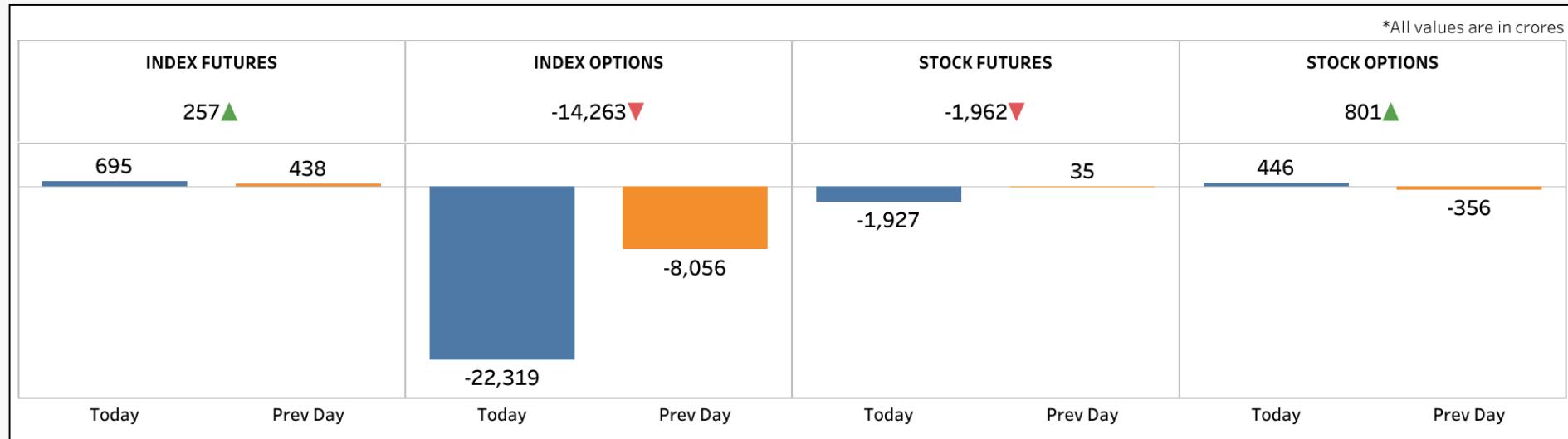
Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
SBILIFE	98,61,375	-1.8%	2040.3	-0.3%
FORTIS	1,20,54,350	-1.8%	907	-1.0%
AXISBANK	6,51,80,000	-1.7%	1355.8	-0.1%
JSWENERGY	3,35,32,000	-1.7%	486.9	-0.8%
APOLLOHOSP	34,32,250	-1.6%	7597.5	-0.2%

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

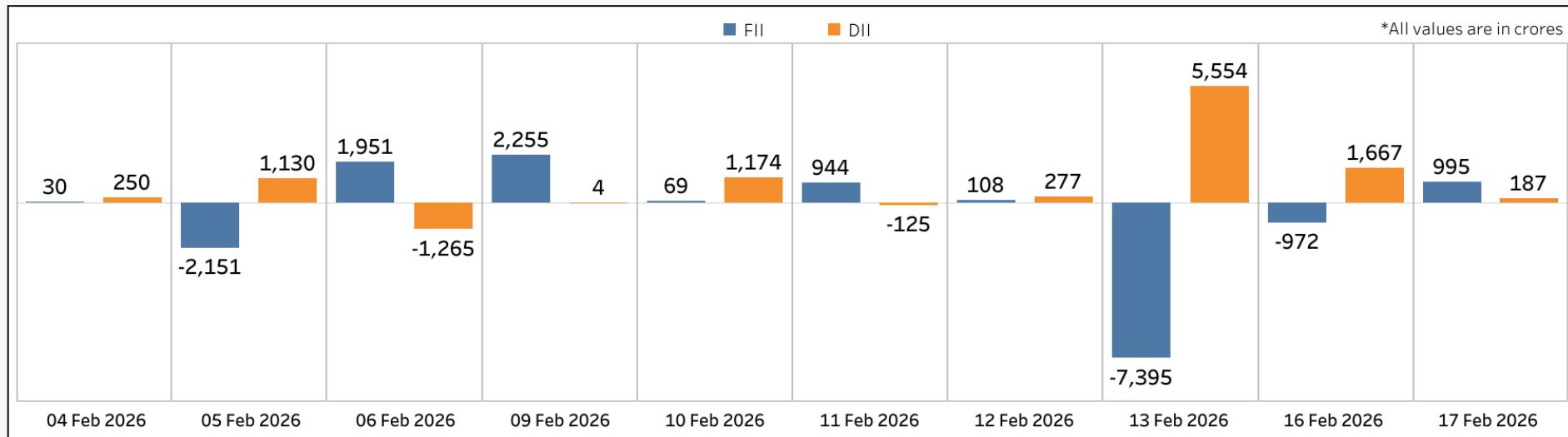
Open Interest Trends by Participant

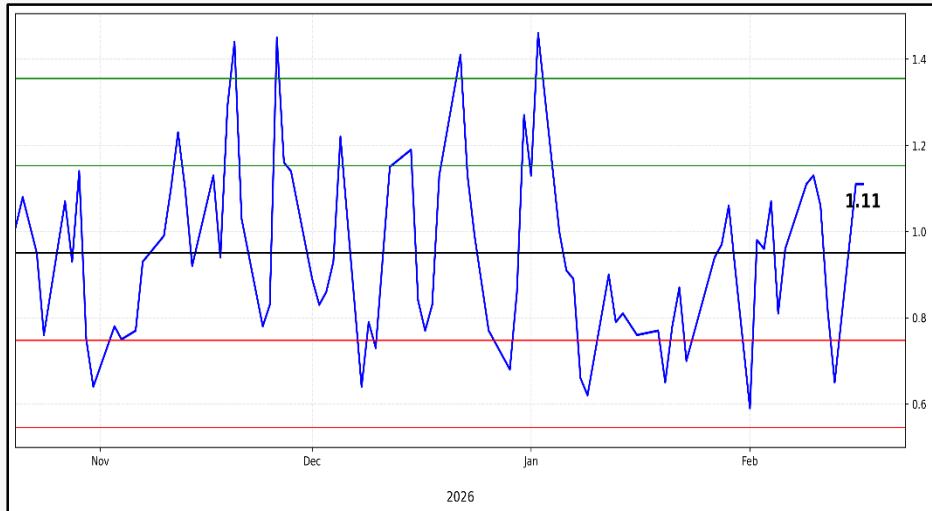
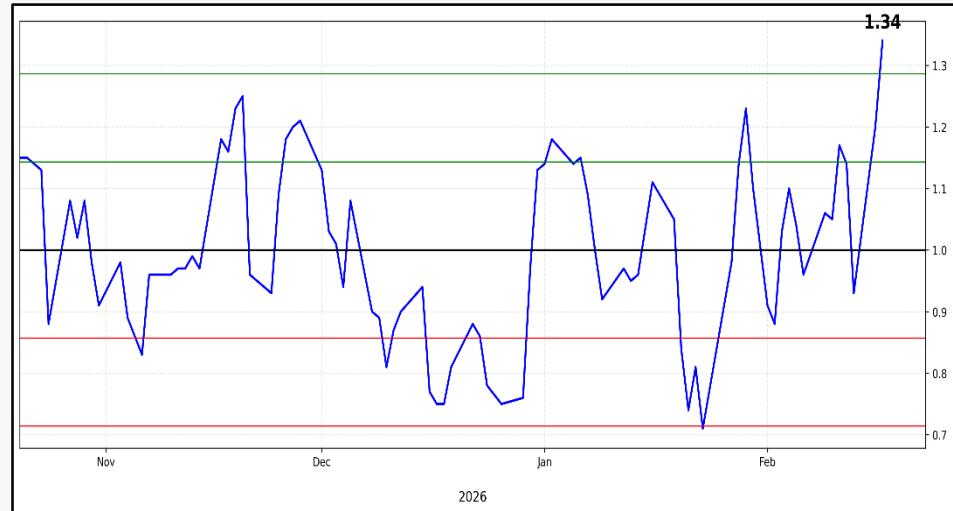
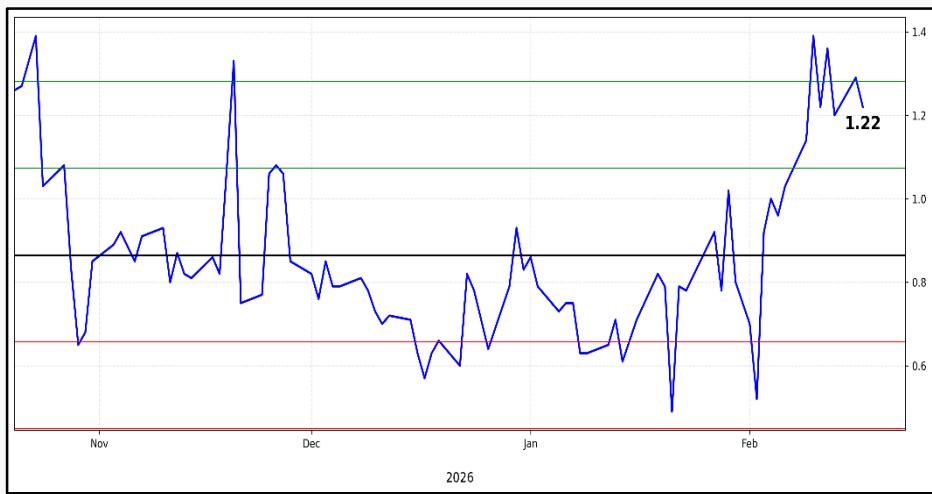
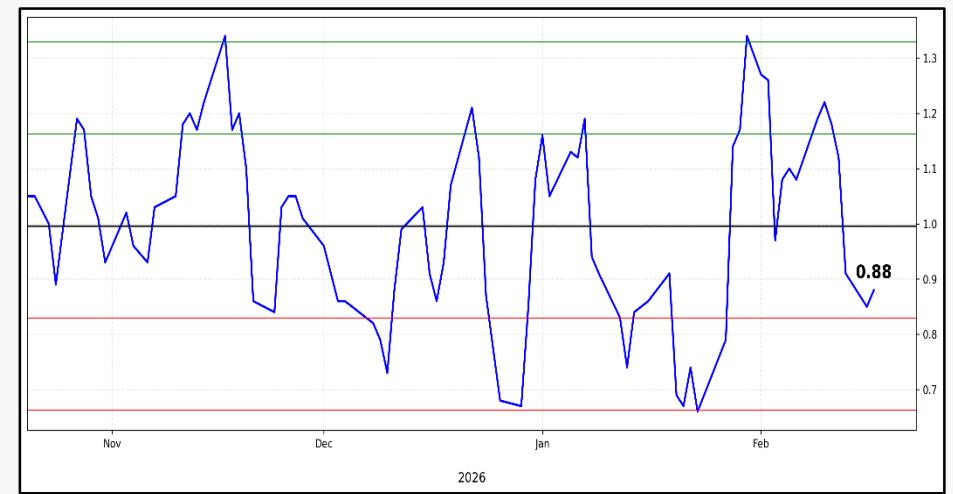
▲ and ▼ indicate positive and negative absolute changes, respectively

Daily Net Open Interest Change



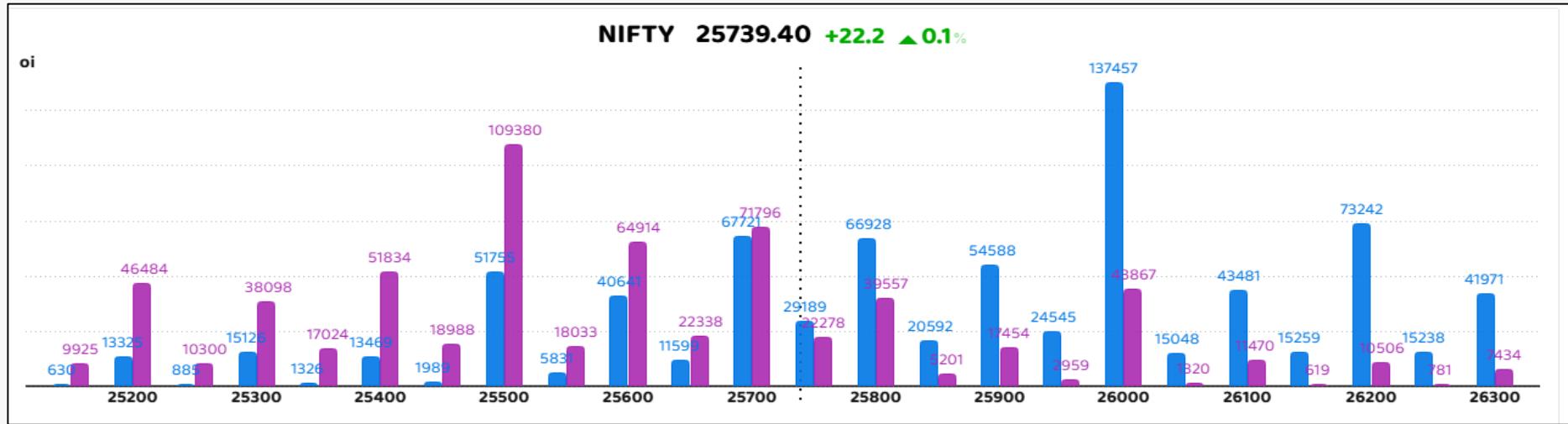
DII and FII Daily Cash Market Flows



Nifty

Bank Nifty

Fin Nifty

Midcap Select Nifty


On the day immediately post expiration, PCR values will differ due to the way open interest data for the expired series is treated for the PCR calculation

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

 Call  Put 


For Nifty, the 26,000 Call and 25,500 Put had the highest call and put concentration (contracts). For the Bank Nifty, the 60,000 Call and the 60,000 Put saw the most amount of open interest.

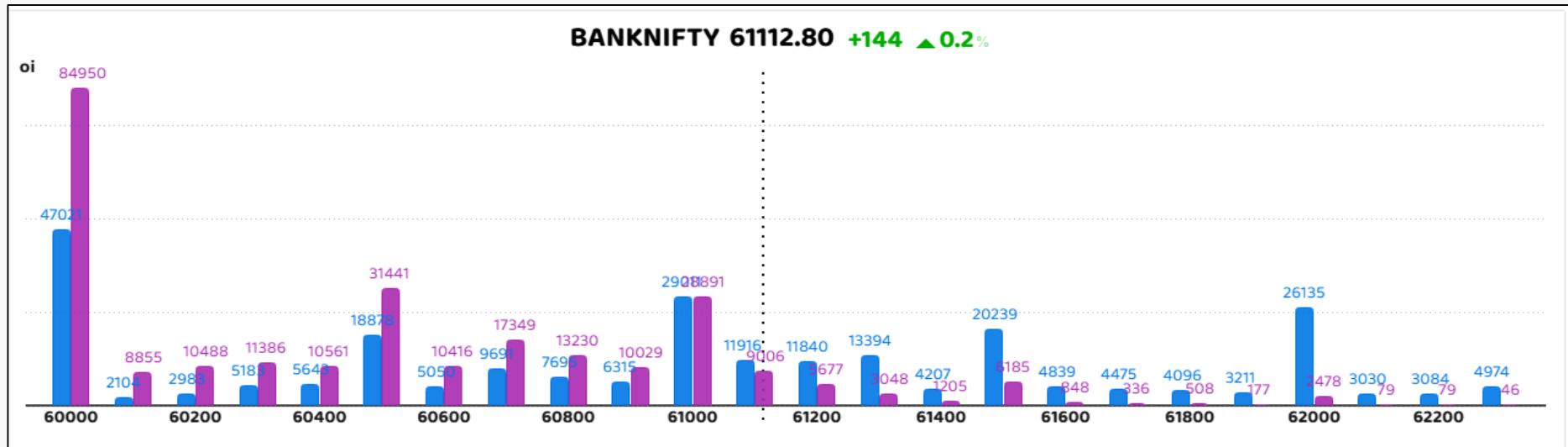
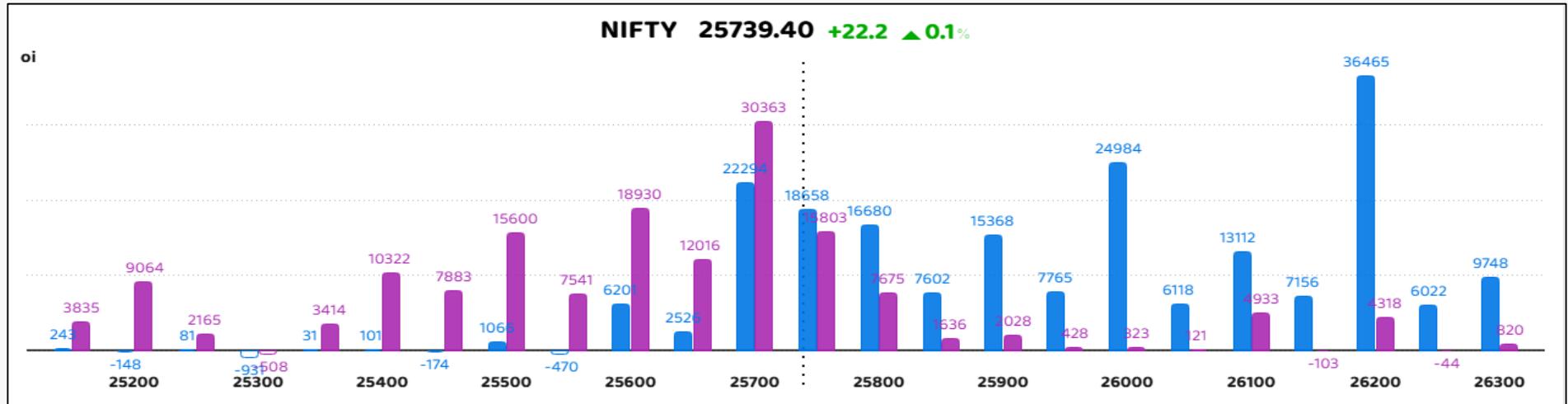
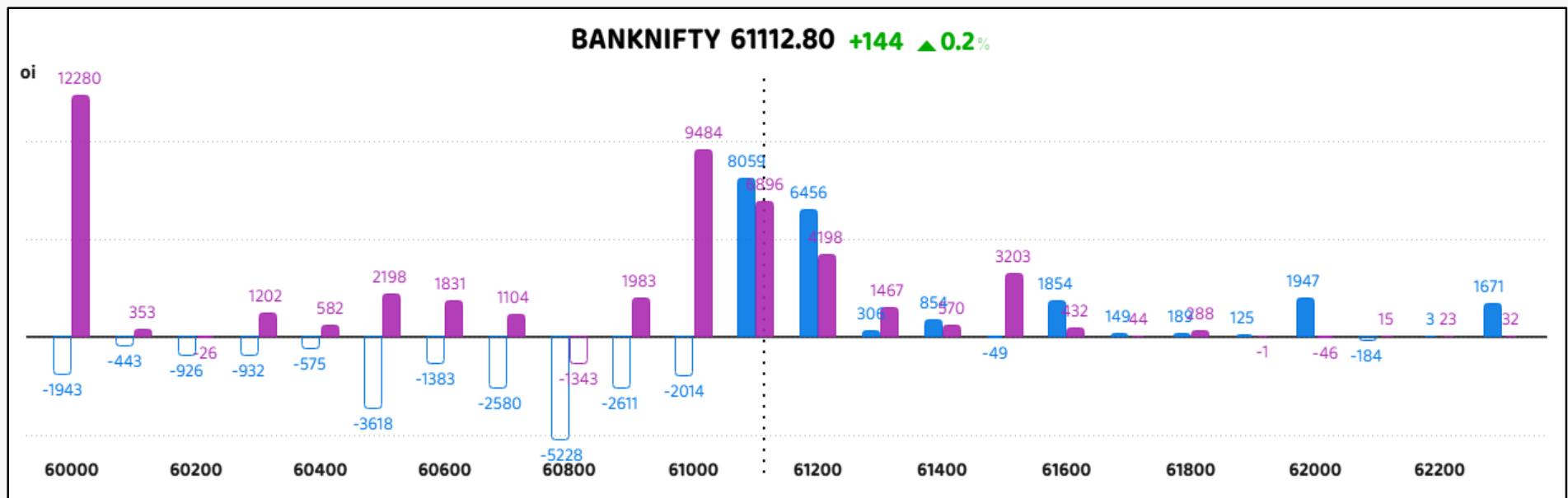


Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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

 Call  Put 


The largest open interest changes (contracts) were seen at the 26,200 Call and the 25,700 Put



For the Bank Nifty, the biggest open interest changes were seen at the 61,100 Call & the 60,000 Put

Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
SYNGENE INTERNAT	432.9	-0.5	35.7	38.7	15.7	86.8
MCX INDIA LTD	2,283.2	-2.4	51.7	56.4	26.3	84.3
HINDUSTAN UNILEV	2,312.3	-0.3	20.2	25.3	0.8	79.2
LTMINDTREE LTD	5,164.5	0.9	35.1	43.3	6.8	77.6
TATA CONSULTANCY	2,717.4	0.4	33.2	44.6	1.6	73.6

Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
GAIL INDIA LTD	165.8	0.6	22.5	91.4	19.4	4.3
NTPC LTD	368.4	-0.2	19.8	116.6	14.9	4.8
HDFC LIFE INSURA	705.8	0.3	19.4	68.4	16.6	5.3
ADANI PORTS AND	1,566.3	1.7	23.9	99.7	19.0	6.0
JSW STEEL LTD	1,244.6	-0.3	23.7	55.5	20.1	10.1

Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
TATA CONSULTANCY	2,717.4	0.4	33.2	44.6	1.6	98.5
MCX INDIA LTD	2,283.2	-2.4	51.7	56.4	26.3	97.1
INFOSYS LTD	1,391.2	1.9	37.4	60.8	1.7	96.6
PI INDUSTRIES	3,064.7	0.1	35.1	57.8	12.5	96.4
HCL TECH LTD	1,482.6	1.4	31.3	46.0	10.4	94.6

Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
GODREJ CONSUMER	1,214.8	0.9	19.9	37.4	14.2	2.9
STEEL AUTHORITY	157.3	-1.5	11.9	91.3	0.6	2.9
MAX HEALTHCARE I	1,076.2	0.0	25.0	68.8	23.8	3.2
PHOENIX MILLS	1,767.2	-0.4	23.6	64.3	15.0	4.6
YES BANK LTD	21.1	0.6	25.6	55.3	8.1	4.8

Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
MAZDOCK	2,367.8	0.4	16,056	2,597	6.2
RVNL	308.8	-0.3	27,175	5,010	5.4
IRFC	113.0	-0.2	16,092	3,208	5.0
IDEA	11.4	-0.4	12,880	2,736	4.7
BOSCHLTD	35,370.9	-0.3	6,210	1,324	4.7

Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
POWERINDIA	22,976.4	0.7	4,936	10,056	2.0
SRF	2,742.9	-3.7	25,755	33,580	1.3
MANKIND	2,062.9	-1.0	5,352	6,137	1.1
LODHA	1,097.0	-0.1	5,600	6,283	1.1
MFSL	1,858.0	0.5	6,633	7,110	1.1

Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Relative to Highest Call OI
ABB	5,836.0	-0.9	12,437	12,128	100.0
ADANIPORTS	1,566.3	1.7	20,837	20,743	100.0
ANGELONE	2,570.2	-0.1	11,379	11,137	100.0
APLAPOLLO	2,224.6	0.3	5,841	5,425	100.0
HCLTECH	1,482.6	1.4	42,357	39,535	100.0

Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Relative to Highest Put OI
360ONE	1,124.6	0.5	3,563	3,250	100.0
ABB	5,836.0	-0.9	8,392	8,106	100.0
ABCAPITAL	349.0	1.1	4,471	4,312	100.0
ADANIENSOL	1,030.2	2.7	5,299	5,213	100.0
ADANIENT	2,242.8	2.7	28,142	26,505	100.0

Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	Relative to Highest CV
ADANIENT	2,242.8	2.7	82,165	53,318	100.0
ADANIENSOL	1,030.2	2.7	10,160	6,016	100.0
ADANIPORTS	1,566.3	1.7	35,254	28,733	100.0
BANKINDIA	170.2	2.8	19,461	9,410	100.0
BEL	446.8	2.0	1,51,978	1,14,007	100.0

Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	Relative to Highest PV
360ONE	1,124.6	0.5	7,299	4,239	100.0
ABB	5,836.0	-0.9	8,587	6,837	100.0
ADANIGREEN	1,016.8	2.6	26,828	23,387	100.0
BANKINDIA	170.2	2.8	5,408	3,988	100.0
BAJAJHLDNG	11,217.0	0.8	2,349	1,759	100.0

Call Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
MUTHOOTFIN	3,495.9	-0.1	44,821	23,062	1.9
KFINTECH	1,020.6	2.0	6,186	3,235	1.9
BSE	2,742.3	-2.2	45,556	25,632	1.8
ALKEM	5,456.4	-0.4	4,925	2,943	1.7
TORNTPHARM	4,258.4	-0.1	5,496	3,617	1.5

Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
TORNTPHARM	4,258.4	-0.1	3,487	1,948	1.8
MUTHOOTFIN	3,495.9	-0.1	15,426	9,641	1.6
ALKEM	5,456.4	-0.4	3,340	2,142	1.6
360ONE	1,124.6	0.5	3,563	2,289	1.6
SRF	2,742.9	-3.7	6,355	4,161	1.5

Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
UNIONBANK	188.9	3.2	64,833	13,935	4.7
BANKBARODA	303.2	3.7	72,084	15,998	4.5
BANKINDIA	170.2	2.8	19,461	4,360	4.5
KFINTECH	1,020.6	2.0	49,779	11,423	4.4
DELHIVERY	434.8	4.0	17,823	4,320	4.1

Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
SRF	2,742.9	-3.7	33,580	3,711	9.0
MANKIND	2,062.9	-1.0	6,137	1,088	5.6
UNIONBANK	188.9	3.2	22,158	4,488	4.9
PNB	124.8	3.5	34,665	7,303	4.7
BANKBARODA	303.2	3.7	32,553	7,671	4.2

Call and put volume refers to the number of contracts that have been traded in the most recently concluded session
 Only looks at stocks with volumes more than 1000 contracts

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	2200	866127	-1.9%	2243	2200	953883	-1.9%	JIOFIN	270	7050000	2.9%	262	260	5510750	-0.9%
ADANIPORTS	1600	994650	2.2%	1566	1500	1231675	-4.2%	JSWSTEEL	1400	812025	12.5%	1245	1200	1255500	-3.6%
APOLLOHOSP	7600	288625	0.0%	7602	7000	120000	-7.9%	KOTAKBANK	420	4980000	-1.0%	424	410	4830000	-3.4%
ASIANPAINT	2500	864250	2.6%	2437	2100	487000	-13.8%	LT	4100	1749650	-4.2%	4280	4100	1055950	-4.2%
AXISBANK	1380	3550625	1.7%	1357	1350	1488750	-0.5%	M&M	3700	1712800	6.0%	3489	3500	476200	0.3%
BAJAJ-AUTO	10000	184725	1.8%	9827	9700	83550	-1.3%	MARUTI	16000	309400	5.4%	15179	15000	137350	-1.2%
BAJAJFINSV	2060	861250	0.8%	2044	2000	675250	-2.2%	MAXHEALTH	1120	360150	4.1%	1076	1000	490875	-7.1%
BAJFINANCE	1000	2541000	-1.4%	1014	950	2103750	-6.3%	NESTLEIND	1360	589500	5.8%	1285	1200	195000	-6.6%
BEL	450	14312700	0.7%	447	420	3863175	-6.0%	NTPC	370	31639500	0.4%	368	350	4437000	-5.0%
BHARTIARTL	2100	2390200	3.9%	2020	2000	883025	-1.0%	ONGC	270	16485750	-0.7%	272	270	5373000	-0.7%
CIPLA	1400	1113000	4.2%	1344	1300	485625	-3.3%	POWERGRID	300	15034700	-0.2%	301	290	4026100	-3.6%
COALINDIA	460	4904550	9.1%	422	420	2947050	-0.4%	RELIANCE	1500	7861000	5.4%	1423	1400	3985000	-1.6%
DRREDDY	1280	2141250	-0.4%	1285	1280	428125	-0.4%	SBILIFE	2040	1260000	0.0%	2040	2040	341625	0.0%
EICHERMOT	8500	193100	5.8%	8035	7500	238500	-6.7%	SBIN	1300	4676250	7.1%	1213	1100	6560250	-9.3%
ETERNAL	300	18277225	6.6%	282	260	5468375	-7.6%	SHIRIRAMFIN	1100	1442925	2.3%	1075	1000	1123650	-7.0%
GRASIM	3200	291000	10.3%	2900	2800	277750	-3.5%	SUNPHARMA	1720	2353400	0.2%	1717	1700	1196650	-1.0%
HCLTECH	1600	2629200	7.9%	1483	1440	610750	-2.9%	TATACONSUM	1200	591800	4.5%	1149	1120	520850	-2.5%
HDFCBANK	950	8582200	2.6%	926	930	3100350	0.5%	TMPV	390	4667200	1.9%	383	360	2363200	-6.0%
HDFCLIFE	740	2851200	4.8%	706	650	927300	-7.9%	TATASTEEL	210	22797500	3.4%	203	190	8519500	-6.4%
HINDALCO	1000	2082500	12.3%	890	900	1345400	1.1%	TCS	3000	3164700	10.4%	2717	2600	1076250	-4.3%
HINDUNILVR	2500	1376700	8.1%	2312	2300	739800	-0.5%	TECHM	1600	1137000	5.0%	1524	1460	654600	-4.2%
ICICIBANK	1410	6848800	0.2%	1408	1400	3457300	-0.5%	TITAN	4300	1022525	1.5%	4236	4000	398300	-5.6%
INDIGO	5000	469050	0.5%	4977	4700	355950	-5.6%	TRENT	4500	726800	7.9%	4172	4000	331000	-4.1%
INFY	1500	6425600	7.8%	1391	1300	2834000	-6.6%	ULTRACEMCO	13000	142450	0.1%	12984	12900	52000	-0.6%
ITC	330	17990400	1.4%	325	293.5	4265600	-9.8%	WIPRO	250	14304000	15.9%	216	210	5223000	-2.6%

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

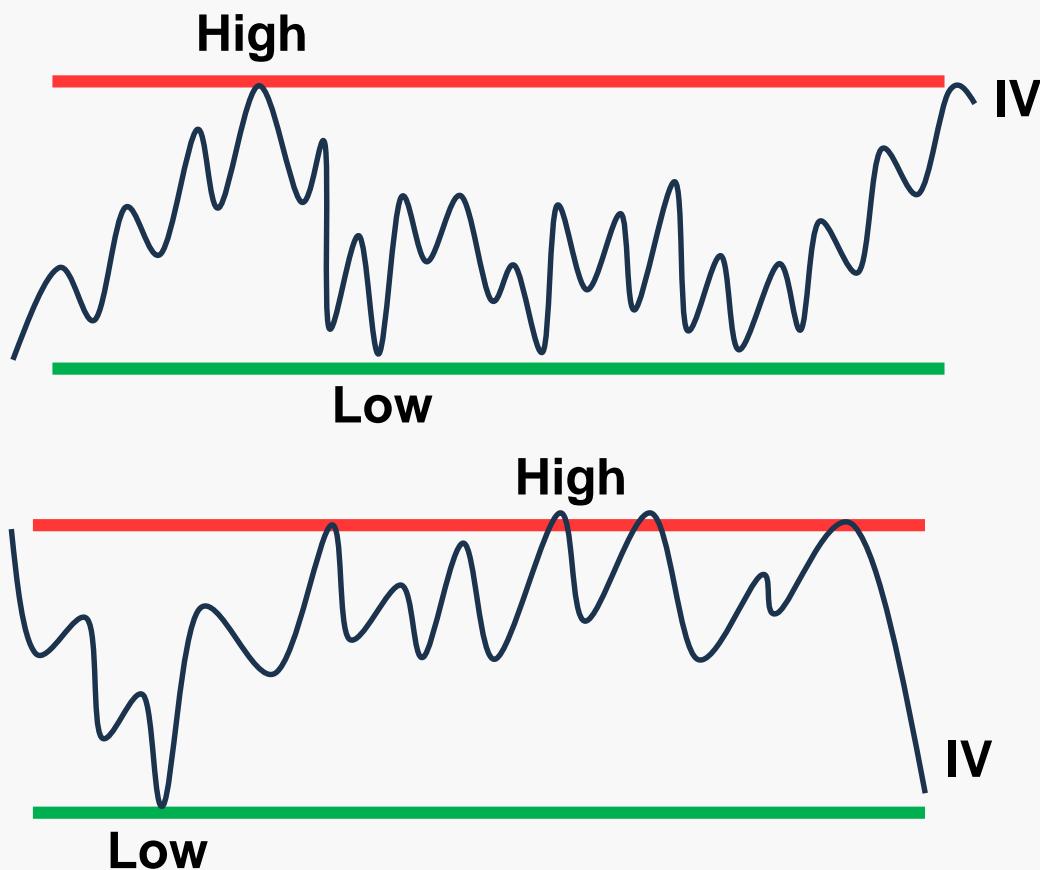
If distance to call strike from current market price = distance to put strike from current market price, then the %Away columns will be uncolored

- 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

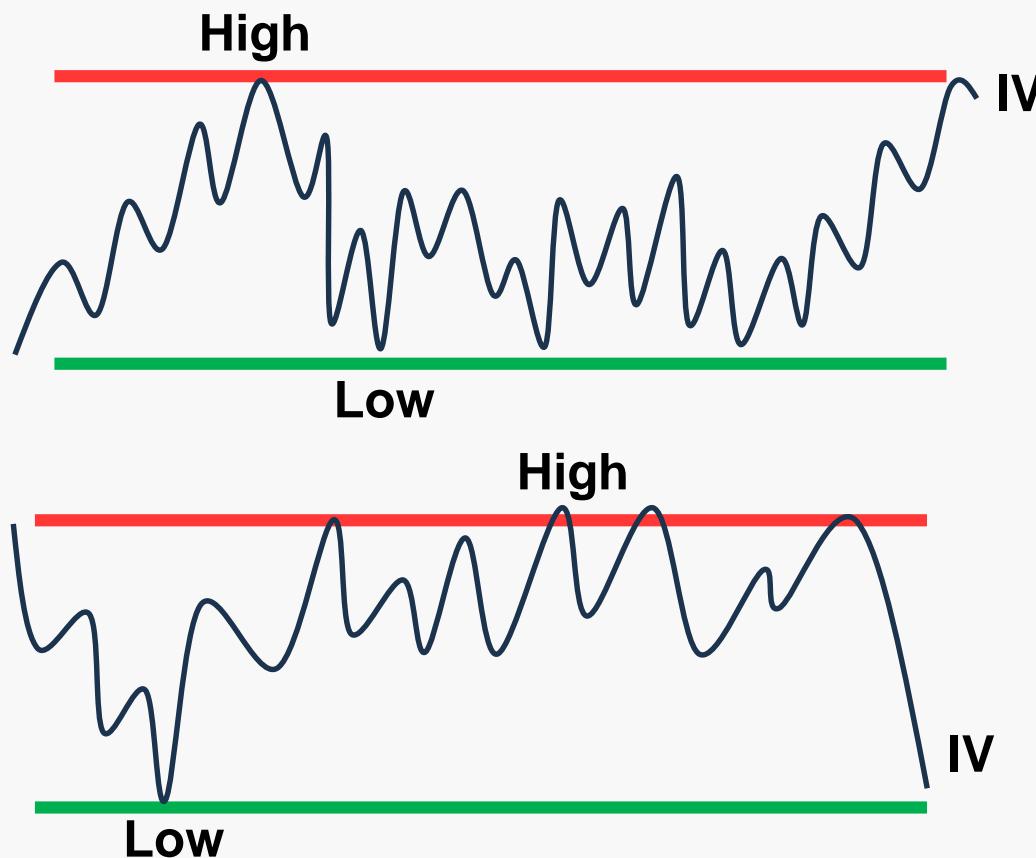
- **Strike concentration:** Visual representation of how many calls and puts are outstanding at each strike in the vicinity of the current underlying price. The strike with the highest call open interest is considered as resistance, while the put strike with the highest number of outstanding positions 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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