



Daily Derivatives Report

Nifty Futures

	Value	Change
Most recent settlement	22,918	2.0%▲
Open Interest (OI)	1,56,96,000	0.9%▼
Change in OI (abs)	1,56,96,000	1,36,125▼
Premium / Discount (Abs)	89	9▲
Inference	Short Covering	

Bank Nifty Futures

	Value	Change
Most recent settlement	51,162	1.4%▲
Open interest (OI)	28,15,590	1.8%▲
Change in OI (abs)	28,15,590	48,420▲
Premium / Discount (Abs)	160	69▼
Inference	Long Build Up	

Volatility Insights

	Value	Change
India VIX Index	20.11	1.3▼
Nifty ATM IV (%)	19.56	3.2▼
Bank Nifty ATM IV (%)	21.01	2.7▼
PCR (Nifty)	0.96	0.03▲
PCR (Bank Nifty)	0.89	0.11▲

The Long Ratio for FII Index Futures **jump** to 25.3%, **up** from 21.6 % in the **last session**..

Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
PIIND	19,33,000	26.9%	3618.35	9.6%
CAMS	20,42,125	21.6%	3708.2	3.3%
INOXWIND	75,72,300	18.1%	151.25	7.1%
DEEPAKNTR	15,33,900	12.9%	1925.5	6.8%
PAGEIND	2,01,840	8.1%	44111.05	3.3%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
COFORGE	41,79,525	14.3%	6339.15	-0.1%
MUTHOOTFIN	53,26,200	13.1%	2020.2	-5.8%
ICICIGI	67,73,250	6.0%	1717.1	-4.1%
AUBANK	2,62,88,000	3.8%	554.05	0.0%
GODREJPROP	62,36,550	3.5%	1953.3	-1.4%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
APOLLOTYRE	79,15,200	-9.8%	427.4	4.6%
MCX	18,12,000	-7.8%	5443.7	4.2%
PNBHousing	23,49,750	-7.8%	980.1	5.8%
MRF	66,930	-5.3%	117500	3.5%
ADANIENSOL	1,13,30,000	-5.2%	845.2	0.8%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
GODREJCP	1,35,98,000	-2.0%	1227.35	-1.3%
APOLLOHOSP	20,46,875	-1.8%	6802	-0.5%
BERGEPAINT	62,55,480	-1.8%	530.7	-1.3%
IIFL	93,06,200	-1.7%	324.2	-0.3%
RAMCOCEM	52,55,550	-1.6%	938.65	-0.6%

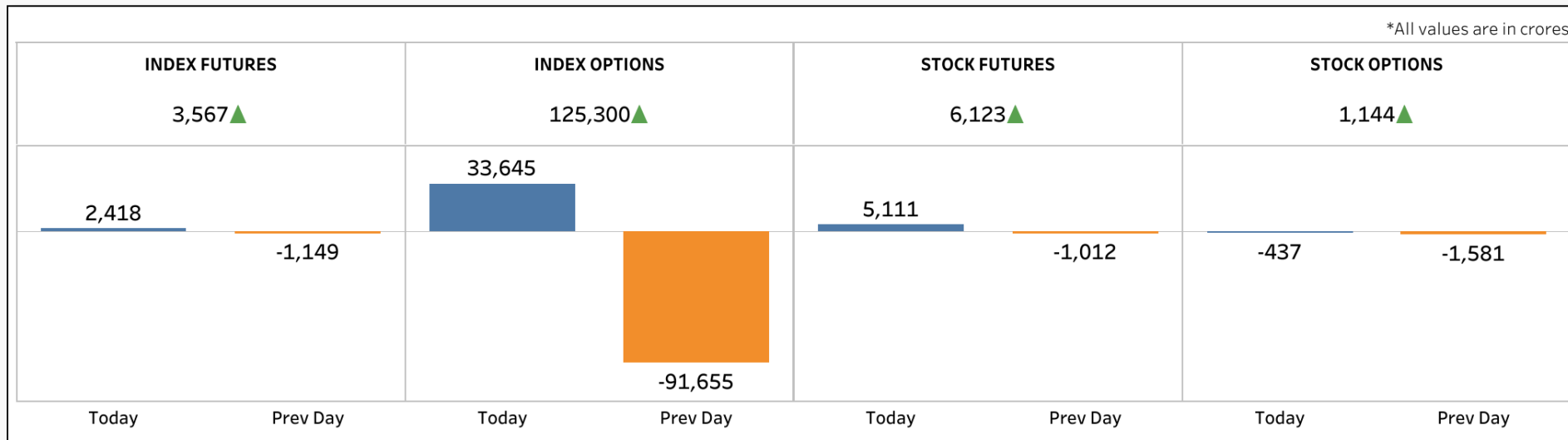
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

Open Interest Trends by Participant

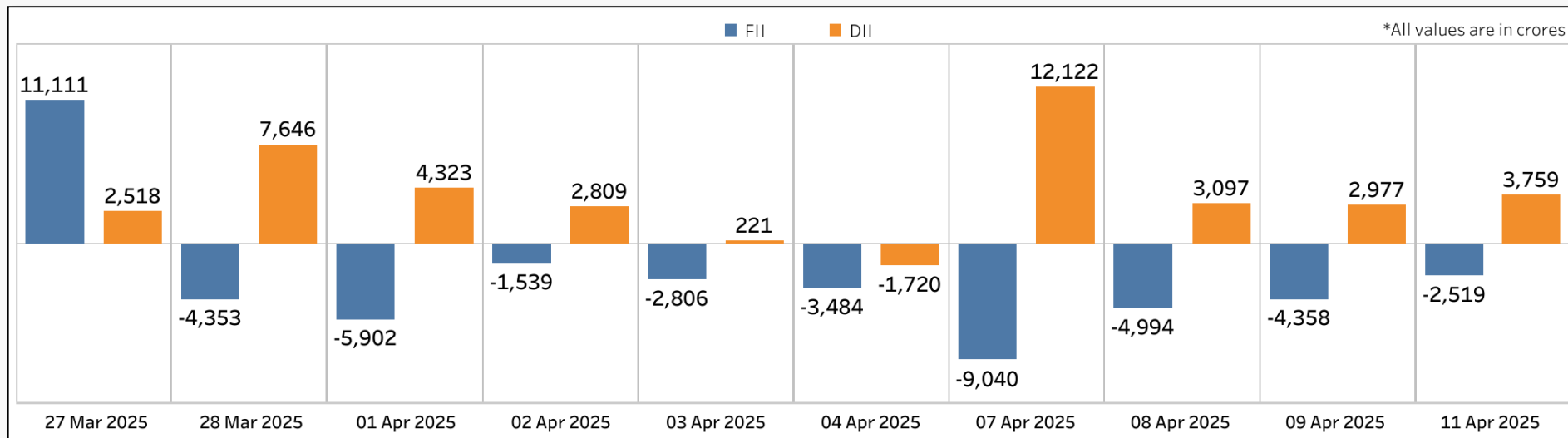
▲ and ▼ indicate positive and negative absolute changes, respectively

FII				DII			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
312,965 ▲	21,307 ▲	257,857 ▲	101,380 ▲	75 ▲	-192 ▼	1,294 ▲	-50,578 ▼
107,671	14,601	86,079	79,610	165	90		10,230
-205,294	-6,706	-171,778	-21,770	-672	-480	-7,127	-40,348
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
332,815	-78,515	451,705	1,594,750	475	74,777	44,350	-3,819,796
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
-356,548 ▼	-13,475 ▼	-181,197 ▼	-3,817 ▼	43,506 ▲	-7,640 ▼	-77,954 ▼	-46,985 ▼
190,122	7,900	148,481	14,002	58,589	15,083	31,718	
-166,426	-5,575	-32,716	17,819	-8,354	-714	-46,236	-6,279
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
-338,989	32,505	-391,638	1,856,013	5,699	-28,767	-104,418	369,033
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

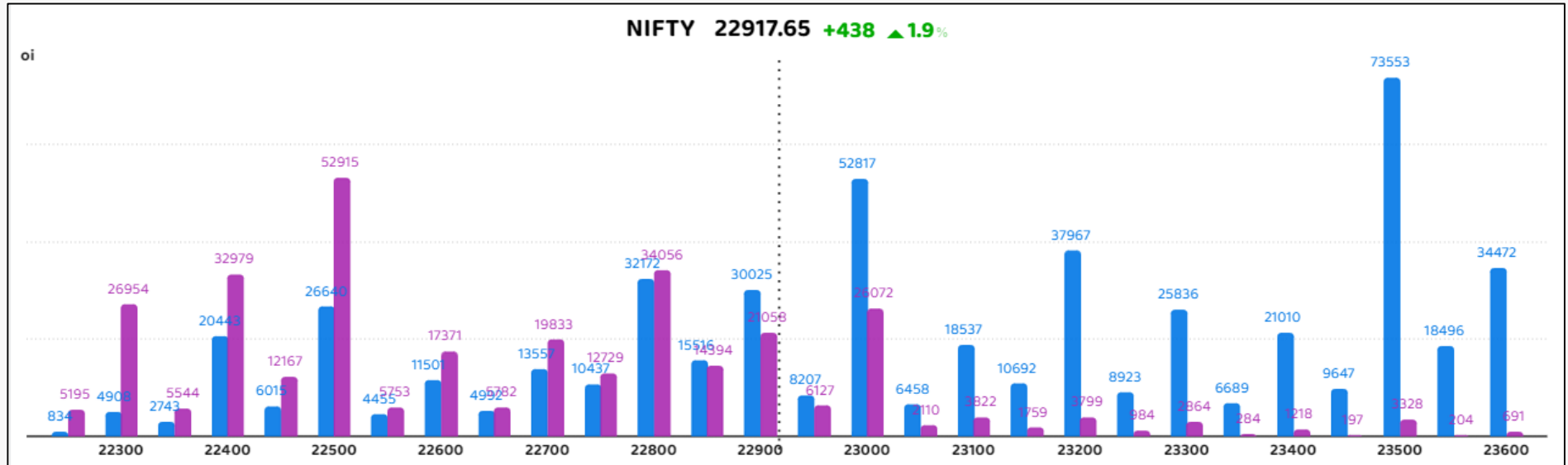


DII and FII Daily Cash Market Flows



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

Call  Put 



For the Nifty, the 23500 Call and the 22500 Put had the highest call and put concentration (contracts). For the Bank Nifty, the 52000 Call and the 50000 Put saw the most amount of open interest.

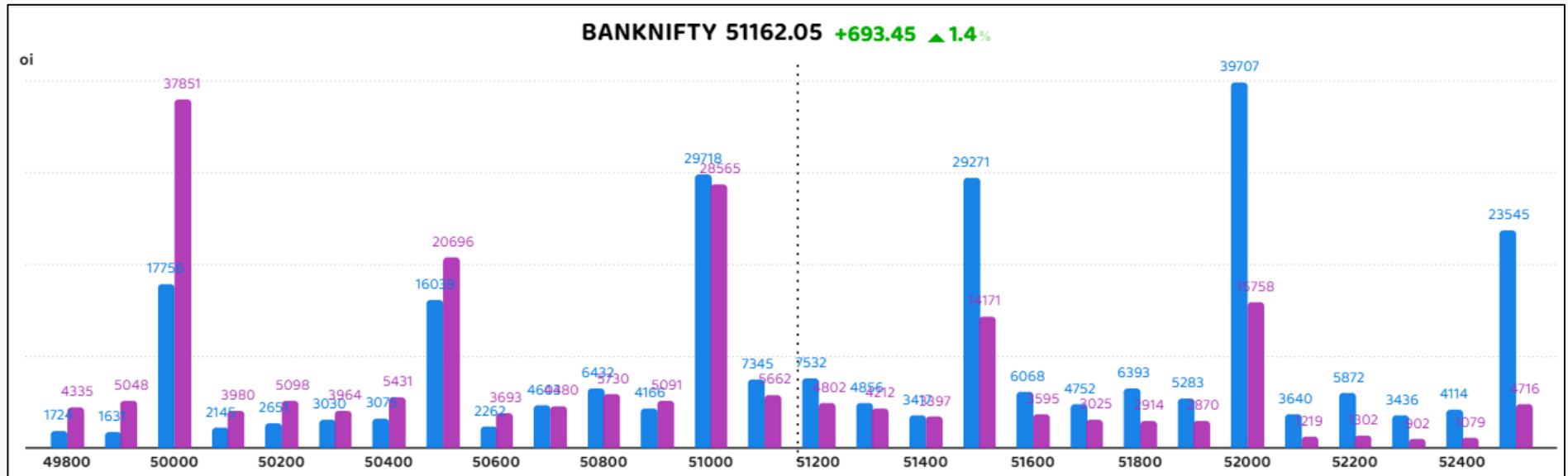
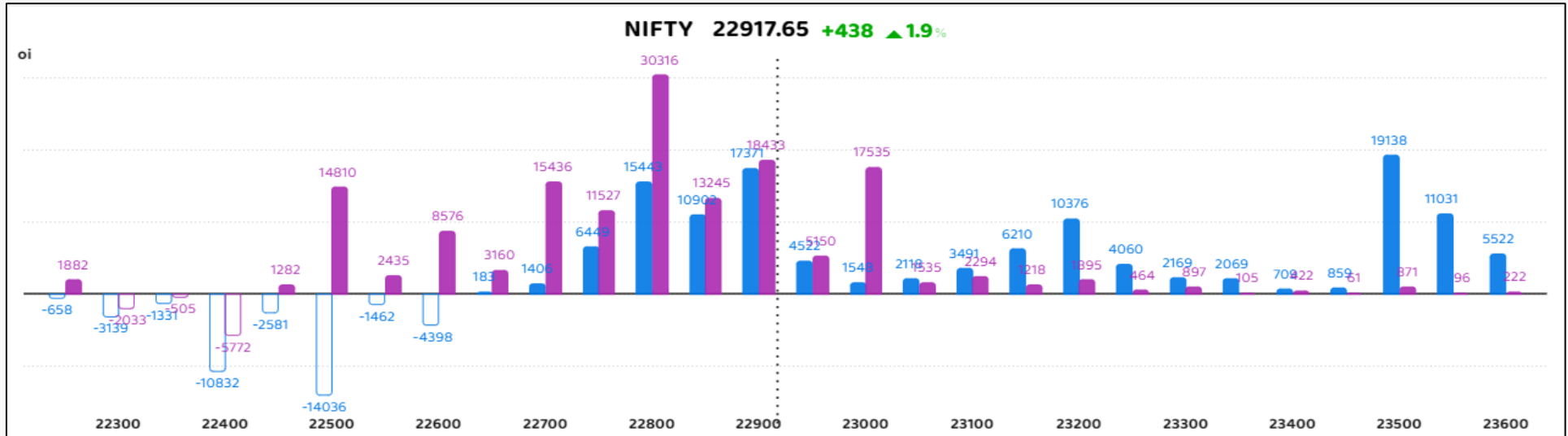


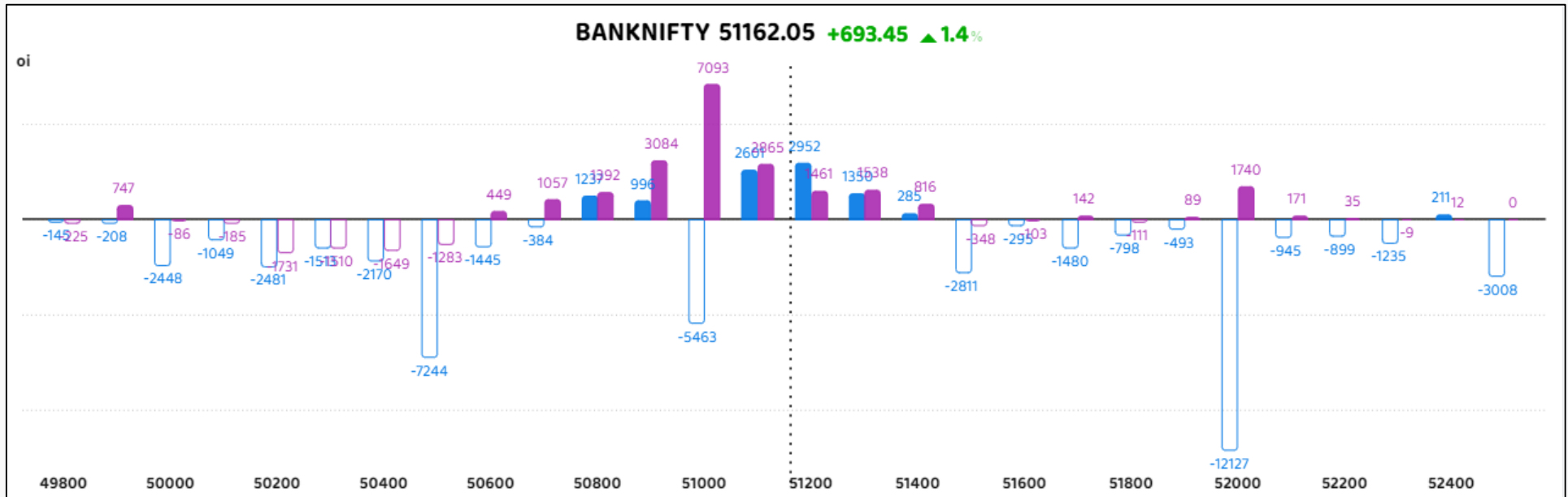
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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 22800 Put



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

Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
JINDAL STAINLESS	542.05	5.7	59.2	59.2	25.3	100.0
TITAGARH RAIL SY	746.95	1.4	63.9	63.9	45.3	100.0
LTIMINDTREE LTD	4240.8	3.2	43.3	43.3	20.0	100.0
ICICI LOMBARD GE	1718.55	-3.8	38.2	38.2	9.9	100.0
ICICI PRUDENTIAL	552.95	-2.8	41.4	41.4	15.3	100.0

Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
BIRLASOFT LTD	359.75	0.9	17.2	53.7	10.8	0.7
MARICO LTD	709.95	2.4	19.5	38.6	14.2	3.9
GRASIM INDS LTD	2651.25	3.7	19.7	36.1	13.4	5.6
NESTLE INDIA LTD	2361.4	0.7	17.8	29.0	14.2	21.9
PAGE INDUSTRIES	44481.4	4.1	22.2	41.8	13.0	24.0

Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
INDRAPRASTHA GAS	174.88	-2.9	63.7	63.7	22.8	100.0
IIFL FINANCE LTD	325.1	-2.5	73.1	73.1	37.2	100.0
TITAGARH RAIL SY	736.35	-2.9	62.5	62.5	45.3	100.0
INFO EDGE	6406.75	-3.6	54.0	54.0	23.7	100.0
LAURUS LABS LTD	564.25	-2.6	53.2	53.2	16.1	100.0

Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
APOLLO HOSPITALS	6834.1	1.2	12.9	40.3	12.9	0.0
BIRLASOFT LTD	356.7	0.1	20.4	53.7	10.8	0.7
SOLAR INDUSTRIES	10873.55	-0.5	32.5	53.0	28.1	7.3
HINDUSTAN COPPER	196.24	1.9	31.4	83.2	16.3	7.6
MAX FINANCIAL SE	1164.55	2.8	29.5	49.3	18.6	17.9

Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
RAMCO CEMENT/THE	936.85	-0.5	5093	1209	4.2
KEI INDUS LTD	2607.35	0.3	12949	3296	3.9
VOLTAS LTD	1284.9	0.6	28950	7458	3.9
DEEPAK NITRITE	1932.85	6.9	17810	5083	3.5
MAX FINANCIAL SE	1163.3	-0.1	8275	2446	3.4

Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
AUROBINDO PHARMA	1058	2.3	20237	28502	1.4
CONTAINER CORP	685.2	-0.1	8698	9689	1.1
SHREE CEMENT	30370.25	-0.9	2266	2508	1.1
TORRENT PHARMA	3126.8	0.1	5596	5420	1.0
ICICI BANK LTD	1300.8	0.8	39414	37132	0.9

Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Relative to Highest Call OI
COFORGE LTD	6323.65	-0.1	44823	44823	100.0
TITAGARH RAIL SY	736.35	1.4	7866	7866	100.0
MAX HEALTHCARE I	1123.15	-3.0	5819	5819	100.0
TATA TECHNOLOGIE	613.15	3.1	6143	6143	100.0
DELHIVERY LTD	243.35	1.5	12230	12230	100.0

Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Relative to Highest Put OI
TATA TECHNOLOGIE	632.05	3.1	3378	3378	100.0
MUTHOOT FINANCE	2017	-5.7	10279	10279	100.0
AUROBINDO PHARMA	1082.45	2.3	12119	12119	100.0
DELHIVERY LTD	246.95	1.5	4690	4779	98.1
SONA BLW PRECISI	430.1	5.6	2716	2802	96.9

Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	Relative to Highest CV
PI INDUSTRIES	3607.5	9.5	75853	88456	85.8
PATANJALI FOODS	1886.4	4.1	11463	13588	84.4
JIO FINANCIAL SE	230.0	4.1	48239	59305	81.3

Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	Relative to Highest PV
NO STOCK 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
KPIT TECHNOLOGIE	1118.95	3.8	11085	3757	3.0
DELHIVERY LTD	246.95	1.5	12230	5293	2.3
INDRAPRASTHA GAS	174.76	-0.1	12419	5491	2.3
AUROBINDO PHARMA	1082.45	2.3	16620	7494	2.2
MUTHOOT FINANCE	2017	-5.7	16717	7560	2.2

Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
AUROBINDO PHARMA	1082.45	2.3	12119	5705	2.1
MARICO LTD	709.95	2.4	5695	3050	1.9
ICICI LOMBARD GE	1718.55	-3.8	4285	2370	1.8
TORRENT PHARMA	3129	0.1	1977	1100	1.8
DELHIVERY LTD	246.95	1.5	4690	2613	1.8

Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
PI INDUSTRIES	3607.45	9.5	75853	8118	9.3
MUTHOOT FINANCE	2017	-5.7	60927	17664	3.4
ICICI LOMBARD GE	1718.55	-3.8	18336	5678	3.2
DEEPAK NITRITE	1932.85	6.9	17810	5637	3.2
CIPLA LTD	1463.05	3.4	64784	25308	2.6

Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
PI INDUSTRIES	3607.45	9.5	26733	4354	6.1
ICICI LOMBARD GE	1718.55	-3.8	17179	3596	4.8
MUTHOOT FINANCE	2017	-5.7	50427	14176	3.6
TATA CONSULTANCY	3231.5	-0.5	200757	71841	2.8
TORRENT PHARMA	3129	0.1	5420	1984	2.7

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	1329900	12.0%	2321	2600	2450700	12.0%	INFY	1600	2530000	13.5%	1409	1480	2924000	5.0%
ADANIPTS	1200	1894400	3.0%	1165	1200	1041600	3.0%	ITC	410	10524800	-2.7%	422	410	4307200	-2.7%
APOLLOHOSP	6700	438250	-1.2%	6781	6700	165500	-1.2%	JSWSTEEL	1100	893025	11.1%	990	900	967275	-9.1%
ASIANPAINT	2400	950000	0.3%	2394	2300	370200	-3.9%	KOTAKBANK	2200	1020000	4.2%	2111	2100	832400	-0.5%
AXISBANK	1100	3942500	2.9%	1069	1050	1292500	-1.8%	LT	3500	1360650	12.3%	3116	3500	351750	12.3%
BAJAJ-AUTO	8500	242925	9.4%	7769	6800	62325	-12.5%	M&M	2800	863975	8.5%	2580	2500	429975	-3.1%
BAJAJFINSV	2000	1362000	2.8%	1946	1900	586500	-2.4%	MARUTI	12000	321450	3.5%	11599	11000	96550	-5.2%
BAJFINANCE	9000	483625	0.9%	8921	8000	337500	-10.3%	NESTLEIND	2300	290000	-2.6%	2361	2300	245200	-2.6%
BEL	300	1E+07	5.3%	285	280	4548600	-1.8%	NTPC	360	13693500	0.0%	360	350	3865500	-2.8%
BHARTIARTL	1780	4015175	1.3%	1757	1700	1436875	-3.2%	ONGC	260	16272025	12.9%	230	220	2577575	-4.5%
BPCL	290	4131000	-1.1%	293	280	1956600	-4.5%	POWERGRID	310	3826800	1.9%	304	290	2727000	-4.6%
BRITANNIA	5500	86300	2.8%	5350	5000	116000	-6.5%	RELIANCE	1300	12854000	6.6%	1219	1200	2779500	-1.6%
CIPLA	1500	1326325	2.5%	1463	1300	646425	-11.1%	SBILIFE	1600	1645875	5.1%	1522	1500	290625	-1.4%
COALINDIA	400	3643500	2.0%	392	450	2432850	14.8%	SBIN	800	8980500	6.1%	754	800	4161000	6.1%
DRREDDY	1200	2044375	8.2%	1110	1000	1140000	-9.9%	SHRIRAMFIN	700	1485750	9.6%	639	600	900000	-6.1%
EICHERMOT	5500	204400	2.8%	5351	5000	171850	-6.6%	SUNPHARMA	1800	1376200	6.7%	1688	1600	745150	-5.2%
GRASIM	2920	144000	10.1%	2651	2500	263750	-5.7%	TATACONSUM	1100	538080	0.2%	1098	1050	518928	-4.4%
HCLTECH	1600	863450	15.1%	1391	1200	417900	-13.7%	TATAMOTORS	700	10886150	17.6%	595	500	3199350	-16.0%
HDFCBANK	1840	6470200	1.8%	1807	1800	3139400	-0.4%	TATASTEEL	160	29606500	19.9%	133	120	10681000	-10.1%
HDFCLIFE	700	5032500	2.1%	686	680	770000	-0.8%	TCS	3700	1419075	14.5%	3232	3000	763700	-7.2%
HEROMOTOCO	4000	510450	9.1%	3666	3600	189900	-1.8%	TECHM	1500	936000	17.0%	1282	1200	518400	-6.4%
HINDALCO	700	4135600	16.6%	600	600	1681400	0.0%	TITAN	3200	357350	-1.1%	3235	3000	448175	-7.3%
HINDUNILVR	2300	3384600	-2.8%	2366	2300	1362300	-2.8%	TRENT	6000	533100	25.5%	4781	4000	217600	-16.3%
ICICIBANK	1400	2030000	6.7%	1312	1300	2377200	-0.9%	ULTRACEMCO	12500	104300	8.7%	11503	11000	53000	-4.4%
INDUSINDBK	700	2737500	1.5%	690	500	1408500	-27.5%	WIPRO	270	6300000	12.6%	240	240	2817000	0.1%

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

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

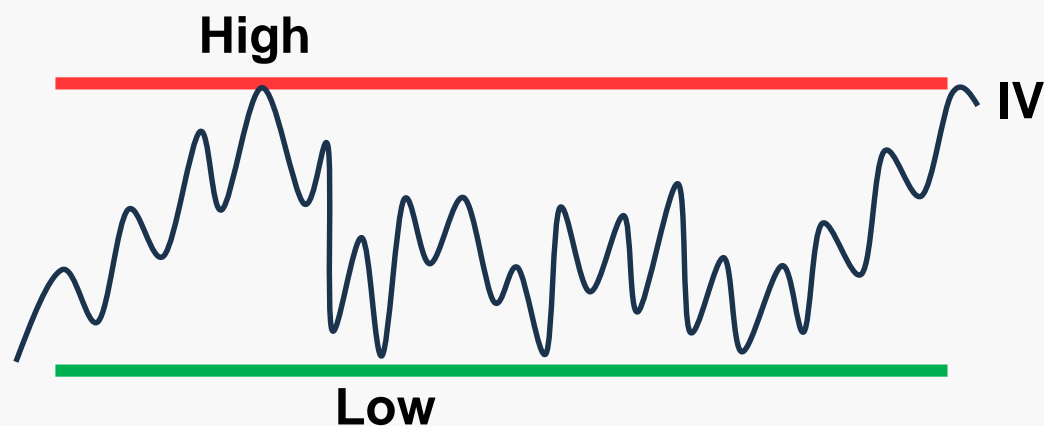
If distance to call strike from current market price = distance to put strike from current market price, then the %Away columns will be uncolored

- Open interest **goes up** when **both** the buyer and the seller are **opening a new position**
- Open interest remains the **same** when one party is **opening a new position** and the other is **liquidating an existing position**
- Open interest **falls** when both the buyer and the seller are **liquidating existing positions**
- **Long build up:** Prices increase with a rise in open interest and is considered **bullish**
- **Long liquidation:** Existing longs liquidate their positions and open interest also falls; **moderately bearish**
- **Short build up:** Prices drop with a rise in open interest, and this is considered **bearish**
- **Short covering:** Existing shorts cover their positions, and open interest drop; this is **moderately bullish**
- PCR goes up when 1) both put and call open interest go up, but puts rise faster, or 2) both put and call open interest go down, but calls fall faster or, 3) when puts go up and calls go down
- Generally, a **rising PCR is bearish**, but when it reaches an extremely **high** reading, it means people are likely to take contrarian bets, i.e., they are likely to turn **bullish**
- PCR goes down when 1) both put and call open interest go up, but calls rise faster, or 2) both put and call open interest go down, but puts fall faster or, 3) when puts go down and calls go up
- Typically, a **falling PCR is bullish**, but when it reaches an extremely **low** reading, it means people are likely to take contrarian bets, i.e., they are likely to turn **bearish**

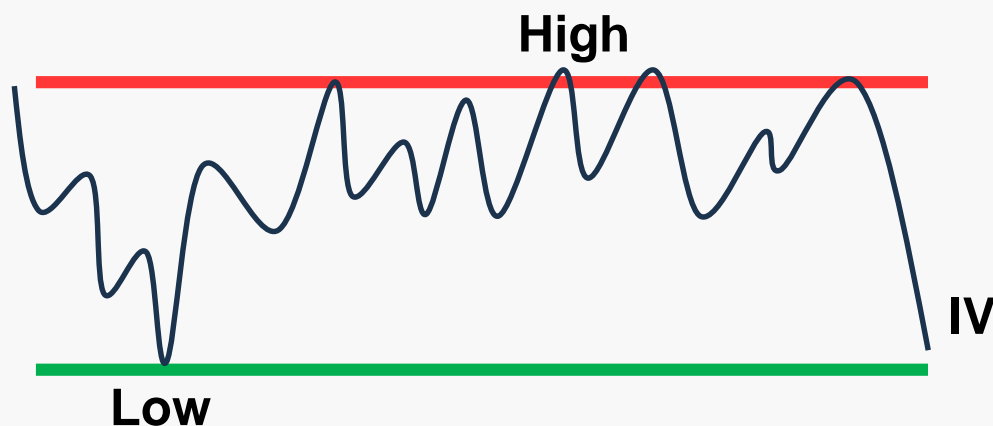
**ATM IV is the midpoint of the IV for the ATM call and put respectively*

- **Volume:** Number of contracts traded for the day. If A bought 10 calls & B sold 10 calls, the volume for the day is 10 contracts
- **Open Interest:** The number of derivatives contracts that are open (have not been closed out). If A bought 10 calls, B bought another 10 calls and C sold 20 calls, then the open interest for the day is 20 contracts
- **Total open interest:** Total of all open positions for all available expirations. It is the sum of all outstanding long positions OR short positions. This is because the total number of long positions must equal the total number of short positions
- **Premium:** When the front-month futures are more expensive than the cash market price. For instance, if Nifty futures (first month contract) are at 25,500 when the cash Nifty is at 25,450, the premium is 50 points
- **Discount:** When the front-month futures are cheaper than the cash market price. For instance, if Tata Steel futures (first month contract) are at 160 when the stock is trading at 162 in the cash market, the discount is 2 points
- **At-the-Money (ATM):** When the strike price of an option is the same as the spot price, the option is called an ATM option
- **Implied Volatility (IV):** Measure of how much a stock is expected to move in the future (in either direction)
- **Put-Call Ratio (PCR):** Ratio of total number of outstanding puts to total number of calls outstanding. If this ratio is more (less) than one, it means more puts (calls) are open relative to calls (puts)
- **Derivatives market participants:** Foreign Institutional Investors (FIIs), Domestic Institutional Investors (DII)s, 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

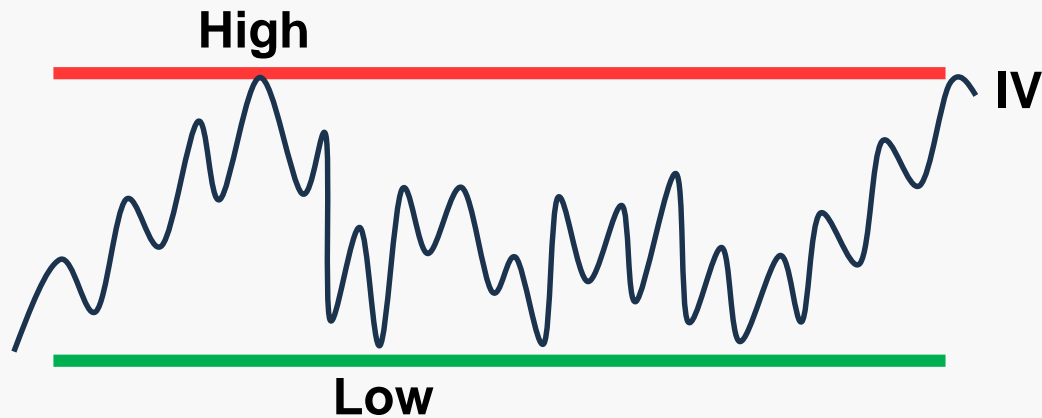


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.

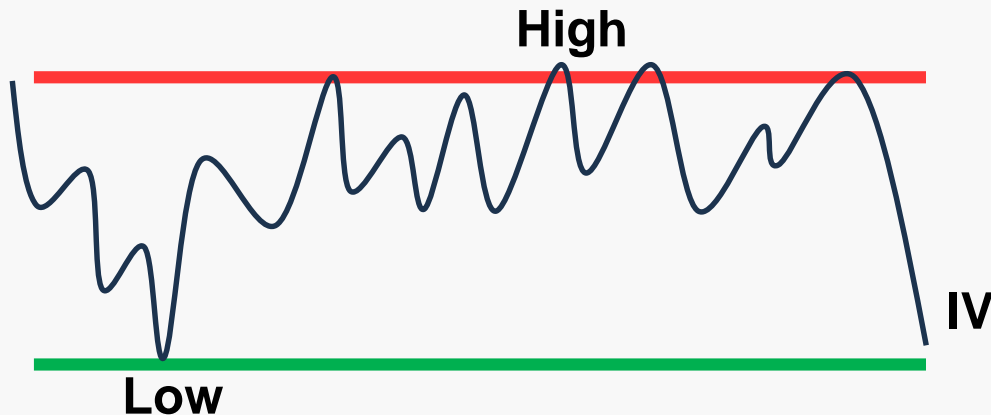


In this chart, notice that today's IV is close to the lowest low seen in the last 12 months. This means that IV for this option is cheap today compared to where it has traded over the last one year.

- **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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