



## Daily Derivatives Report

## Nifty Futures

	Value	Change
Most recent settlement	23,341	1.9%▲
Open Interest (OI)	1,52,64,375	2.8%▼
Change in OI (abs)	1,52,64,375	4,31,625▼
Premium / Discount (Abs)	12	77▼
<b>Inference</b>	<b>Short Covering</b>	

## Bank Nifty Futures

	Value	Change
Most recent settlement	52,384	2.4%▲
Open interest (OI)	28,54,080	1.4%▲
Change in OI (abs)	28,54,080	38,490▲
Premium / Discount (Abs)	160	156▼
<b>Inference</b>	<b>Long Build Up</b>	

## Volatility Insights

	Value	Change
India VIX Index	16.13	4.0▼
Nifty ATM IV (%)	14.60	5.0▼
Bank Nifty ATM IV (%)	17.38	3.6▼
PCR (Nifty)	0.93	0.03▼
PCR (Bank Nifty)	1.02	0.13▲

The Long Ratio for FII Index Futures **jump** to 28.1%, **up** from 25.3 % in the **last session**..

## Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
IREDA	5,78,11,500	19.0%	159.05	4.6%
HINDZINC	34,20,200	15.7%	435.35	5.5%
CHOLAFIN	1,29,16,875	10.3%	1540.4	5.2%
POONAWALLA	2,06,37,850	7.7%	381.4	4.9%
MARUTI	30,10,200	7.3%	11819	2.0%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
PNBHOUSING	25,25,900	7.5%	973.85	-0.6%
MAXHEALTH	1,10,84,850	3.2%	1077	-1.4%
ITC	10,40,43,200	1.0%	420.55	-0.3%
BERGEPAIN	62,21,160	-0.6%	528.1	-0.5%
GODREJCP	1,34,59,000	-1.0%	1219.6	-0.6%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
MARICO	1,94,24,400	-6.8%	712.05	0.2%
PAYTM	1,69,74,100	-4.6%	842.55	0.2%
BHARATFORG	1,25,04,000	-4.4%	1076.3	7.2%
HCLTECH	1,48,85,850	-4.2%	1426.1	2.2%
BSOFT	1,32,39,000	-3.6%	374.1	3.6%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
HINDUNILVR	1,56,40,500	-1.3%	2360.5	-0.3%
HINDPETRO	5,31,44,100	-1.2%	379.2	-0.8%
PIIND	19,12,000	-1.1%	3599.3	-0.5%
GODREJCP	1,34,59,000	-1.0%	1219.6	-0.6%
BERGEPAIN	62,21,160	-0.6%	528.1	-0.5%

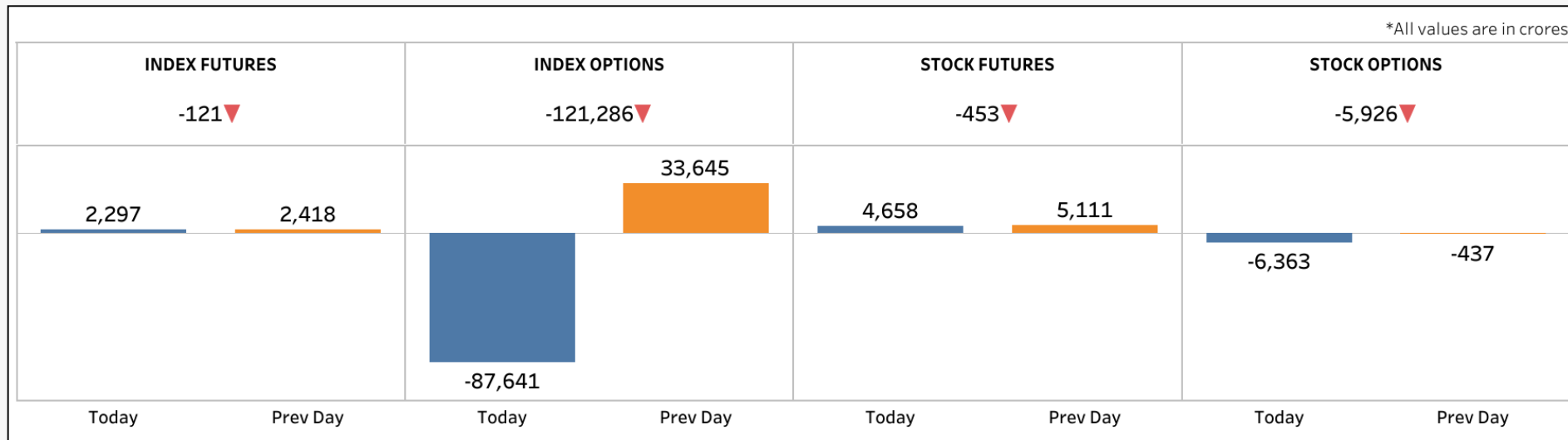
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

## Open Interest Trends by Participant

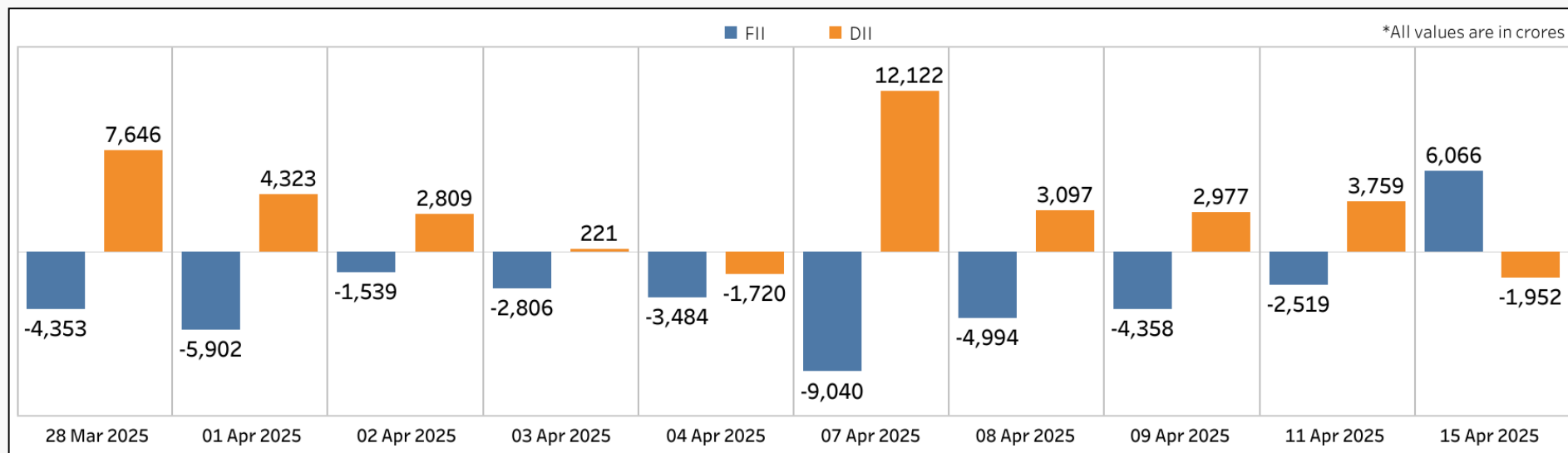
▲ and ▼ indicate positive and negative absolute changes, respectively

FII				DII			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
-341,157 ▼	-714 ▼	-370,431 ▼	-5,691 ▼	-165 ▼	1,712 ▲	9,445 ▲	76,954 ▲
107,671	13,887	86,079	73,919	0	1,040	2,318	36,606
-233,486	14,601	-284,352	79,610	165	-672	-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
99,329	-64,628	167,353	1,668,669	475	75,817	46,668	-3,783,190
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
338,466 ▲	978 ▲	339,778 ▲	-69,048 ▼	2,857 ▲	-1,976 ▼	21,208 ▲	-2,215 ▼
172,040	-4,597	307,062	14,002	61,446	-10,330	-25,028	-55,479
-166,426	-5,575	-32,716	-55,046	58,589	-8,354	-46,236	-53,264
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
-166,949	27,908	-84,576	1,800,967	67,145	-39,097	-129,446	313,554
Today	Prev Day	Today	Prev Day	Today	Prev Day	Today	Prev Day

## Daily Net Open Interest Change

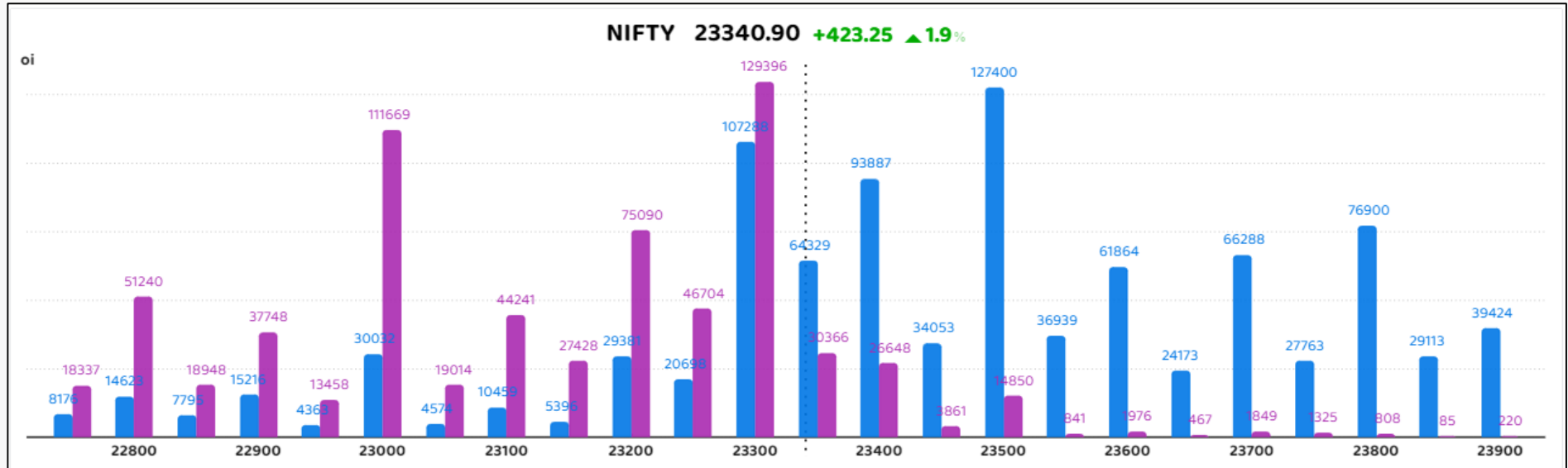


## DII and FII Daily Cash Market Flows



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

Call ■ Put ■



For the Nifty, the 23500 Call and the 23300 Put had the highest call and put concentration (contracts). For the Bank Nifty, the 53000 Call and the 52000 Put saw the most amount of open interest.

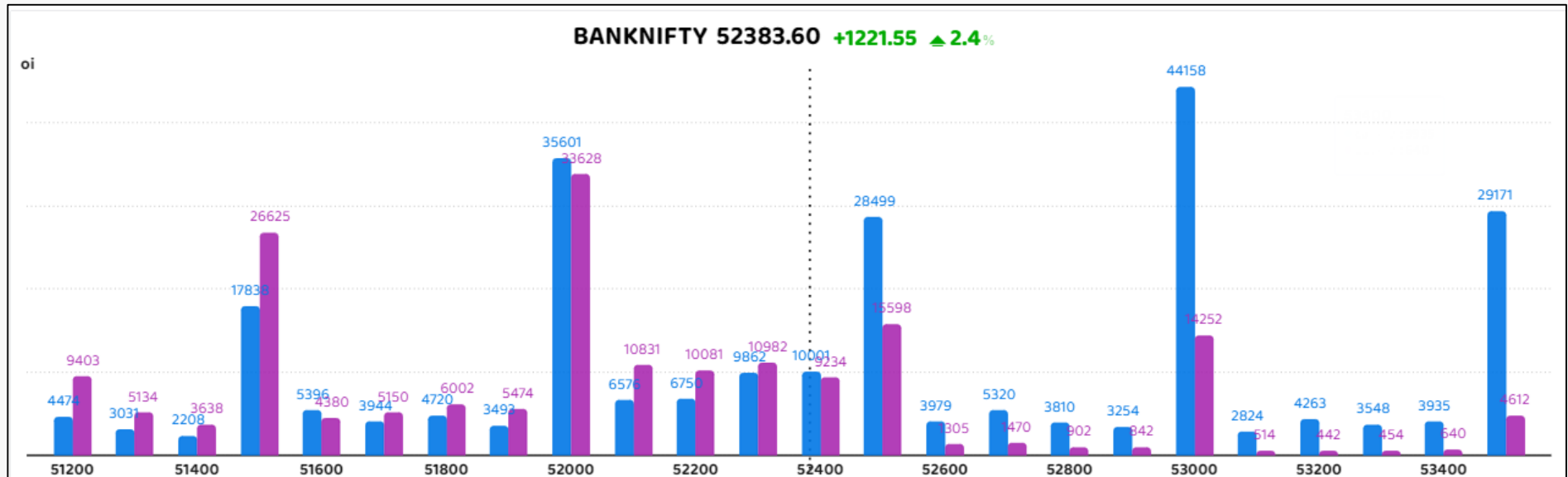
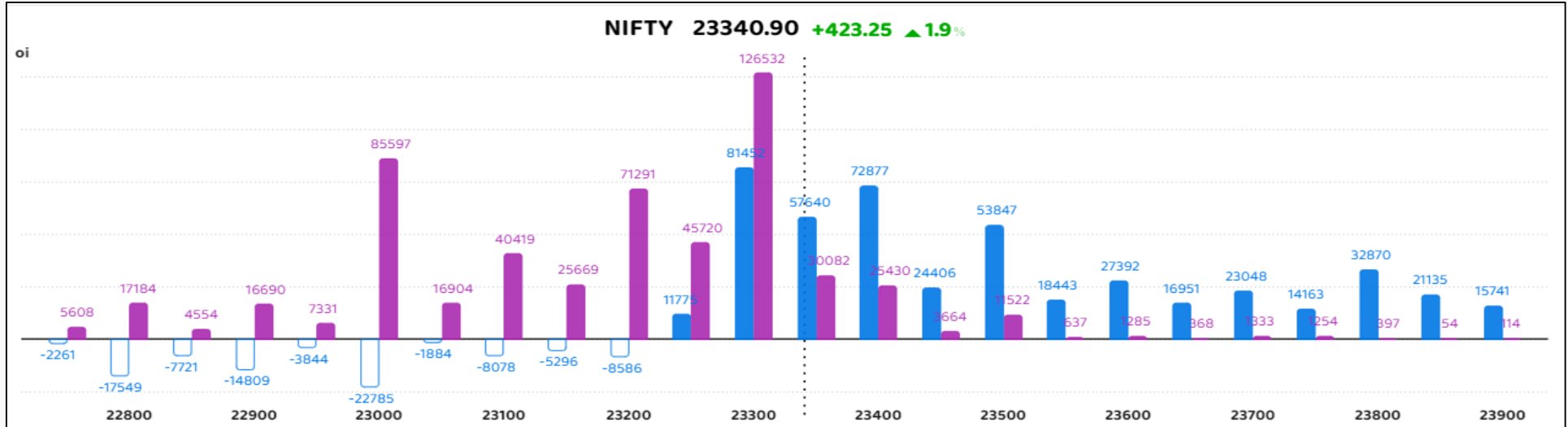


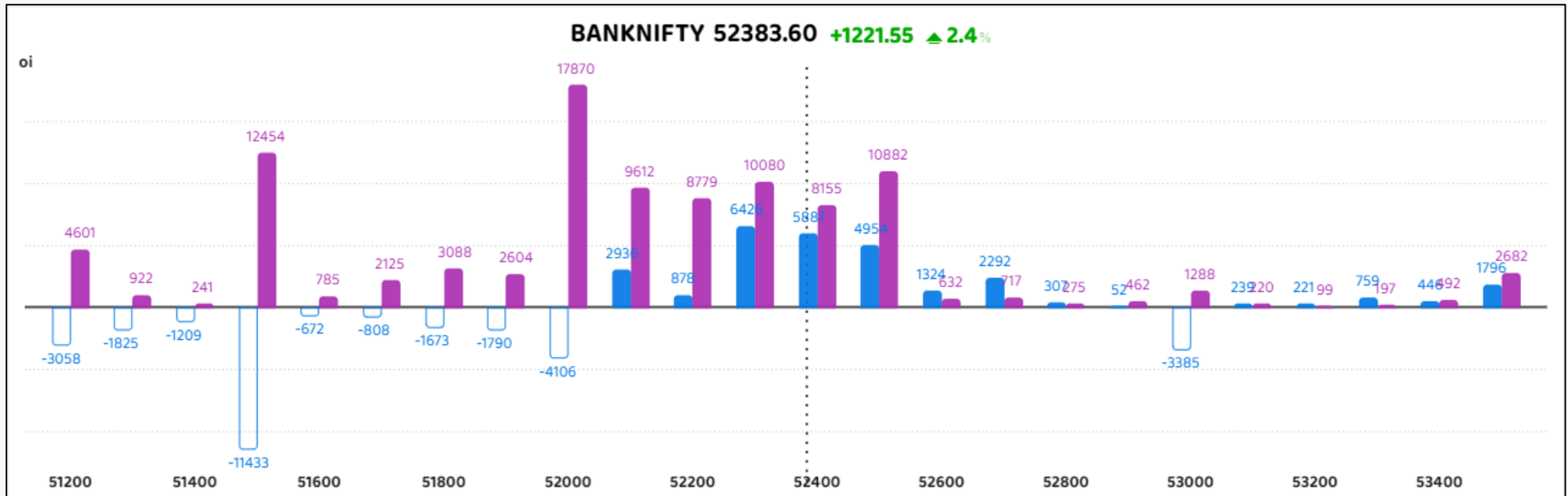
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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

Call ■ Put ■



The largest open interest changes (contracts) were seen at the 23300 Call and the 23300 Put



For the Bank Nifty, the biggest open interest changes were seen at the 51500 Call & the 52000 Put

## Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
INDIAN BANK	541.25	1.0	49.1	49.1	22.0	100.0
TATA STEEL LTD	136.41	2.2	97.0	97.0	8.8	100.0
LTIMINDTREE LTD	4317.6	1.8	42.7	43.3	20.0	97.3
ICICI PRUDENTIAL	567.15	2.6	40.0	41.4	15.3	94.6
CYIENT LTD	1186.9	3.7	49.3	51.8	13.2	93.6

## Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
TITAGARH RAIL SY	790.15	5.8	44.0	63.9	44.0	0.0
HDFC ASSET MANAG	4133.1	3.7	20.6	53.2	20.6	0.0
BIRLASOFT LTD	372.05	3.4	14.7	53.7	10.8	9.1
BHARAT ELECTRON	293.7	3.1	31.4	81.6	25.5	10.6
ADANI GREEN ENER	936.65	4.8	49.9	74.3	46.9	10.9

## Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
INDIAN BANK	541.25	1.0	49.1	49.1	22.0	100.0
TATA STEEL LTD	136.41	2.2	97.0	97.0	8.8	100.0
LTIMINDTREE LTD	4317.6	1.8	42.7	43.3	20.0	99.9
ICICI PRUDENTIAL	567.15	2.6	40.0	41.4	15.3	99.9
COFORGE LTD	6466	2.4	49.5	60.2	26.0	99.4

## Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
TITAGARH RAIL SY	790.15	5.8	44.0	63.9	44.0	0.0
HDFC ASSET MANAG	4133.1	3.7	20.6	53.2	20.6	0.0
BIRLASOFT LTD	372.05	3.4	14.7	53.7	10.8	0.7
BOSCH LTD	27090	2.8	15.6	39.2	3.3	0.8
MPHASIS LTD	2269.7	5.1	26.3	59.4	20.4	1.2



### Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
KEI INDUS LTD	2736.4	4.9	24153	4403	5.5
VOLTAS LTD	1289.3	0.3	41456	9883	4.2
ADANI TOTAL GAS	610.65	3.1	4320	1076	4.0
SHREE CEMENT	31125	3.4	7569	1934	3.9
IIFL FINANCE LTD	332.4	2.7	5549	1434	3.9

### Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
OIL INDIA LTD	365.95	2.0	2590	3965	1.5
BERGER PAINTS	526.4	-0.8	3550	4063	1.1
L&T FINANCE LTD	158.64	2.0	3127	3520	1.1
LAURUS LABS LTD	625.15	3.2	8398	8857	1.1
MAX HEALTHCARE I	1074.1	-1.4	11851	12228	1.0

## Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Relative to Highest Call OI
COFORGE LTD	6466	2.4	46150	46150	100.0
IIFL FINANCE LTD	332.4	2.7	5461	5461	100.0
MAX HEALTHCARE I	1074.1	-1.4	6528	6528	100.0
TATA TECHNOLOGIE	650.45	2.9	6299	6299	100.0
VOLTAS LTD	1289.3	0.3	41508	41508	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	650.45	2.9	3422	3422	100.0
ICICI LOMBARD GE	1822.6	6.1	8496	8496	100.0
SONA BLW PRECISI	462.55	7.5	2822	2822	100.0
MUTHOOT FINANCE	2051	1.7	10119	10279	98.4
INDIAN RENEWABLE	166.98	8.3	5859	6111	95.9

## Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	Relative to Highest CV
SONA BLW PRECISI	462.55	7.5	18182	18182	100.0
JIO FINANCIAL SE	238.57	3.7	57247	59305	96.5

## 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
ICICI PRUDENTIAL	567.15	2.6	8108	3281	2.5
ICICI LOMBARD GE	1822.6	6.1	7439	3067	2.4
KPIT TECHNOLOGIE	1151.8	2.9	9644	4159	2.3
INDRAPRASTHA GAS	178.97	2.4	13780	6033	2.3
MUTHOOT FINANCE	2051	1.7	17283	8308	2.1

### Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
ICICI LOMBARD GE	1822.6	6.1	8496	2704	3.1
ICICI PRUDENTIAL	567.15	2.6	6218	2559	2.4
INDRAPRASTHA GAS	178.97	2.4	7330	4111	1.8
AUROBINDO PHARMA	1134.7	4.8	10950	6172	1.8
MARICO LTD	711.85	0.3	5456	3159	1.7

### Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
ICICI LOMBARD GE	1822.6	6.1	32676	7197	4.5
ICICI PRUDENTIAL	567.15	2.6	28579	6337	4.5
INDUSIND BANK	735.9	6.7	120922	37247	3.2
TORRENT PHARMA	3221.8	3.0	10948	3720	2.9
MRF LTD	122905	4.6	9308	3248	2.9

### Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
ICICI LOMBARD GE	1822.6	6.1	24930	4775	5.2
ICICI PRUDENTIAL	567.15	2.6	17599	3833	4.6
MRF LTD	122905	4.6	3935	1263	3.1
INDUSIND BANK	735.9	6.7	58650	21291	2.8
SAMVARDHANA MOTH	127.63	8.0	16803	6936	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	1139700	7.5%	2418	2600	2167800	7.5%	INFY	1600	2444800	12.2%	1426	1480	2923600	3.8%
ADANIPTS	1200	1665600	-0.9%	1211	1200	1082000	-0.9%	ITC	420	11104000	-0.1%	420	410	4172800	-2.5%
APOLLOHOSP	6700	437375	-3.0%	6905	6700	177125	-3.0%	JSWSTEEL	1100	1119150	9.1%	1008	900	990900	-10.7%
ASIANPAINT	2400	995800	-0.6%	2416	2300	371200	-4.8%	KOTAKBANK	2200	1460000	3.8%	2120	2100	971600	-1.0%
AXISBANK	1100	3265625	-1.2%	1113	1100	1610000	-1.2%	LT	3500	1247700	7.4%	3258	3500	343200	7.4%
BAJAJ-AUTO	8500	277950	6.3%	7996	8000	73575	0.1%	M&M	2700	937125	2.0%	2646	2500	430150	-5.5%
BAJAJFINSV	2000	1463500	1.6%	1968	1800	741000	-8.5%	MARUTI	12000	349150	1.2%	11855	11000	106650	-7.2%
BAJFINANCE	9000	427250	-1.5%	9141	8500	353250	-7.0%	NESTLEIND	2400	469200	1.4%	2368	2300	290600	-2.9%
BEL	300	1.2E+07	2.1%	294	280	4155300	-4.7%	NTPC	360	13527000	-0.7%	363	350	4602000	-3.4%
BHARTIARTL	1800	4397550	0.1%	1799	1700	1633525	-5.5%	ONGC	260	16460675	11.7%	233	230	2766225	-1.2%
BPCL	290	4208400	-1.5%	294	290	1854000	-1.5%	POWERGRID	310	4273200	1.8%	305	290	2644200	-4.8%
BRITANNIA	5500	107700	2.0%	5391	5000	137900	-7.3%	RELIANCE	1300	11645500	4.8%	1240	1200	2765500	-3.2%
CIPLA	1500	1393600	1.2%	1482	1300	549250	-12.3%	SBILIFE	1600	1684875	2.4%	1563	1500	326625	-4.0%
COALINDIA	410	3919650	3.7%	395	450	2398200	13.9%	SBIN	800	9025500	4.8%	764	800	3506250	4.8%
DRREDDY	1200	1796875	3.9%	1155	1000	969375	-13.4%	SHRIRAMFIN	700	1261500	4.2%	672	600	662250	-10.7%
EICHERMOT	5500	226975	-0.5%	5529	5000	169225	-9.6%	SUNPHARMA	1800	1453550	5.6%	1705	1600	761950	-6.2%
GRASIM	2700	221000	-0.7%	2719	2500	280750	-8.0%	TATACONSUM	1100	608304	-0.3%	1103	1050	515736	-4.8%
HCLTECH	1600	749350	12.2%	1427	1200	463050	-15.9%	TATAMOTORS	700	11746350	12.5%	622	600	3593150	-3.6%
HDFCBANK	1840	6124250	-1.3%	1865	1800	4307600	-3.5%	TATASTEEL	160	29320500	17.3%	136	130	10730500	-4.7%
HDFCLIFE	700	4937900	-0.7%	705	700	1492700	-0.7%	TCS	3500	1433775	7.8%	3248	3200	757225	-1.5%
HEROMOTOCO	4000	470250	5.2%	3804	3600	220050	-5.4%	TECHM	1500	811800	15.2%	1302	1200	543000	-7.8%
HINDALCO	700	4338600	13.3%	618	600	1923600	-2.8%	TITAN	3400	302750	3.9%	3273	3000	537600	-8.4%
HINDUNILVR	2300	3358200	-2.6%	2362	2300	1364700	-2.6%	TRENT	5000	559100	2.5%	4877	4700	222000	-3.6%
ICICIBANK	1350	2445800	0.0%	1350	1300	2356200	-3.7%	ULTRACEMCO	12500	109550	6.7%	11719	11000	59700	-6.1%
INDUSINDBK	750	2535500	1.9%	736	500	1394500	-32.1%	WIPRO	270	6474000	10.7%	244	240	4242000	-1.6%

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

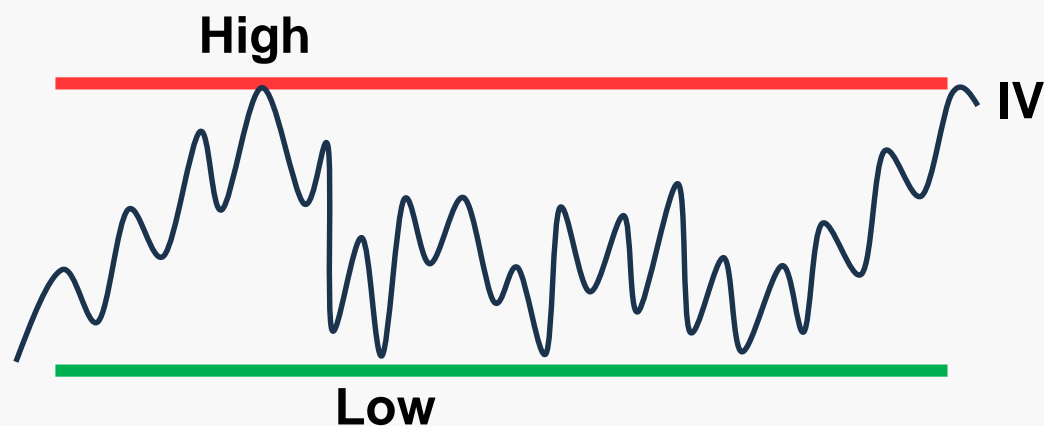
- Open interest **goes up** when **both** the buyer and the seller are **opening a new position**
- Open interest remains the **same** when one party is **opening a new position** and the other is **liquidating an existing position**
- Open interest **falls** when both the buyer and the seller are **liquidating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

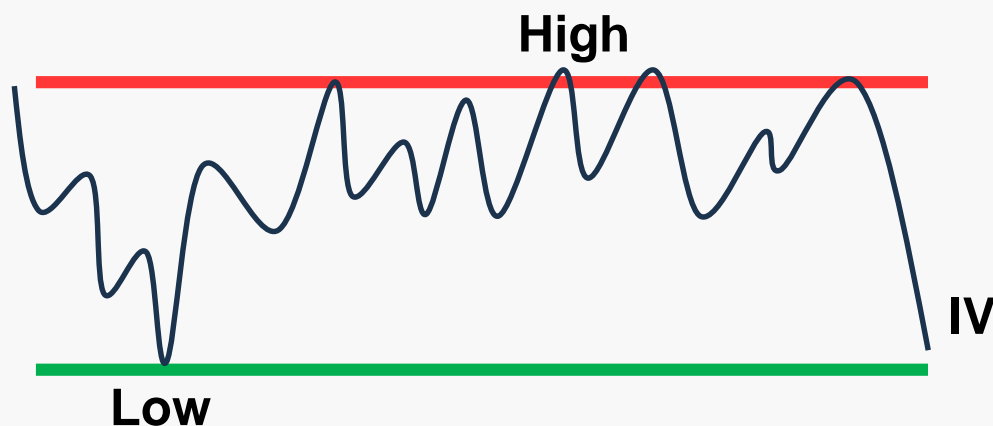
- **Volume:** Number of contracts traded for the day. If A bought 10 calls & B sold 10 calls, the volume for the day is 10 contracts
- **Open Interest:** The number of derivatives contracts that are open (have not been closed out). If A bought 10 calls, B bought another 10 calls and C sold 20 calls,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

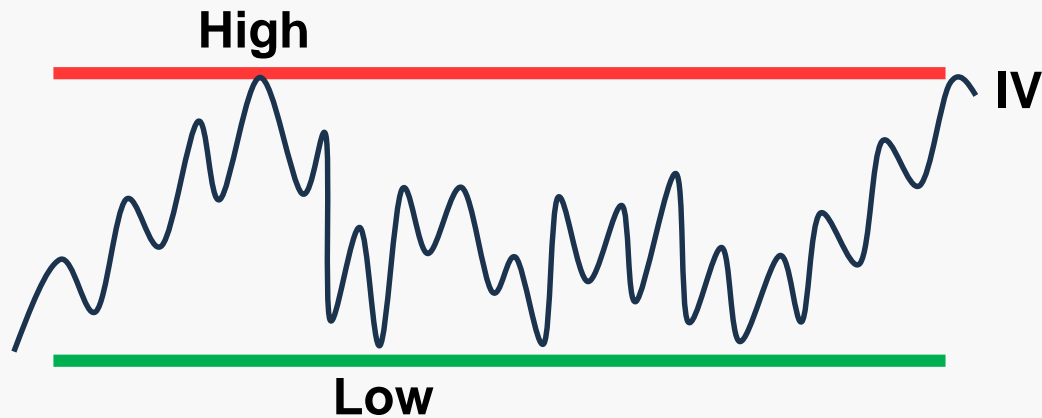


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.

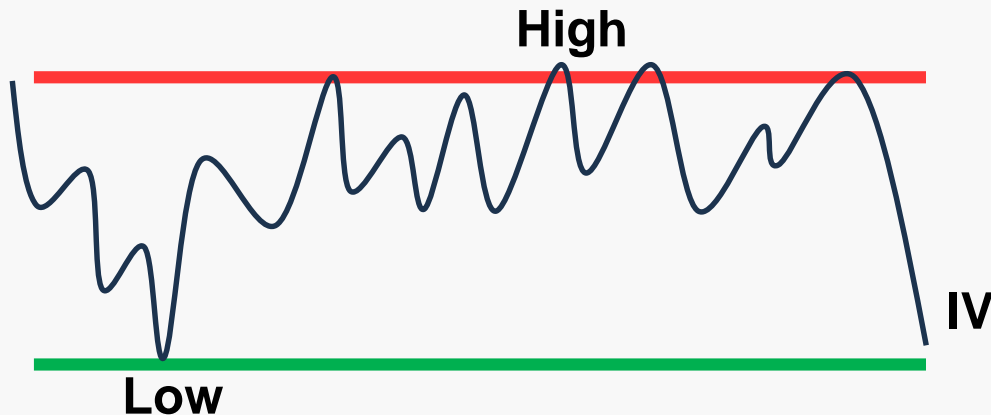


In this chart, notice that today's IV is close to the lowest low seen in the last 12 months. This means that IV for this option is cheap today compared to where it has traded over the last one year.

- **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.

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