



Daily Derivatives Report

Nifty Futures

	Value	Change
Most recent settlement	22,895	0.3%▲
Open Interest (OI)	1,98,03,600	0.4%▲
Change in OI (abs)	1,98,03,600	86,250▲
Premium / Discount (Abs)	61	4▲
Inference	Long Build Up	

Bank Nifty Futures

	Value	Change
Most recent settlement	49,422	0.8%▲
Open interest (OI)	45,91,680	1.8%▲
Change in OI (abs)	45,91,680	83,940▲
Premium / Discount (Abs)	108	2▼
Inference	Long Build Up	

Volatility Insights

	Value	Change
India VIX Index	13.3	0.1▲
Nifty ATM IV (%)	12.37	0.1▲
Bank Nifty ATM IV (%)	13.42	0.4▼
PCR (Nifty)	1.20	0.09▼
PCR (Bank Nifty)	1.23	0.03▲

The Long Ratio for the FII Index Futures **jump** to 26.8%, against 24% recorded in the previous session.

Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
APOLLOTYRE	1,10,48,300	12.6%	425.8	3.5%
NBCC	3,30,48,400	10.4%	83.61	4.5%
ASHOKLEY	5,89,45,000	10.2%	205.2	0.3%
DELHIVERY	89,62,425	10.2%	261.96	3.8%
LTF	8,42,55,946	9.4%	146.11	2.4%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
PHOENIXLTD	18,85,800	20.2%	1561.55	-3.2%
NATIONALUM	5,14,83,750	11.3%	186.93	-1.2%
LTIM	25,38,900	7.2%	4379.6	-1.8%
DABUR	1,74,45,000	6.5%	496.85	-0.5%
ITC	8,60,91,200	6.3%	404.15	-1.6%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
POLICYBZR	71,10,350	-8.9%	1555.3	6.9%
JSWENERGY	1,71,05,250	-7.7%	570.4	4.0%
SAIL	14,91,68,000	-7.3%	113.22	4.0%
AUBANK	2,57,12,000	-7.1%	526.3	4.2%
FEDERALBNK	7,44,65,000	-6.8%	186.11	3.2%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
BERGEPAIN	89,57,520	-3.3%	501.95	-1.0%
KOTAKBANK	3,45,39,600	-1.6%	2027.05	-0.3%
PIIND	14,86,875	-0.9%	3406.6	-0.5%
EICHERMOT	41,28,425	-0.8%	5117.3	-0.4%
PERSISTENT	23,09,000	-0.7%	5265.8	-0.7%

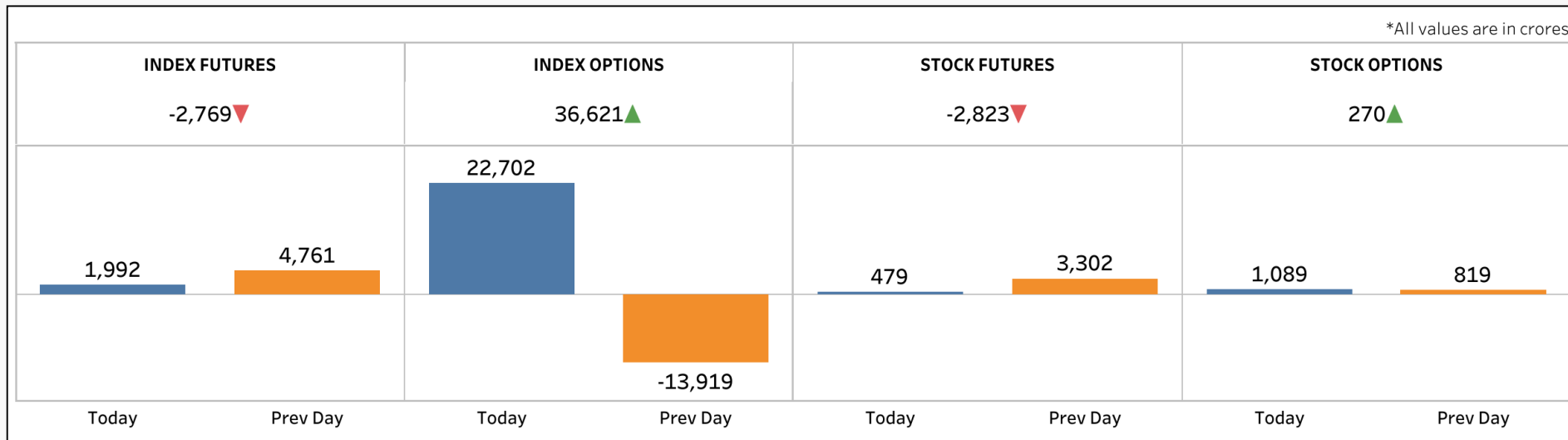
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

Open Interest Data by Participant

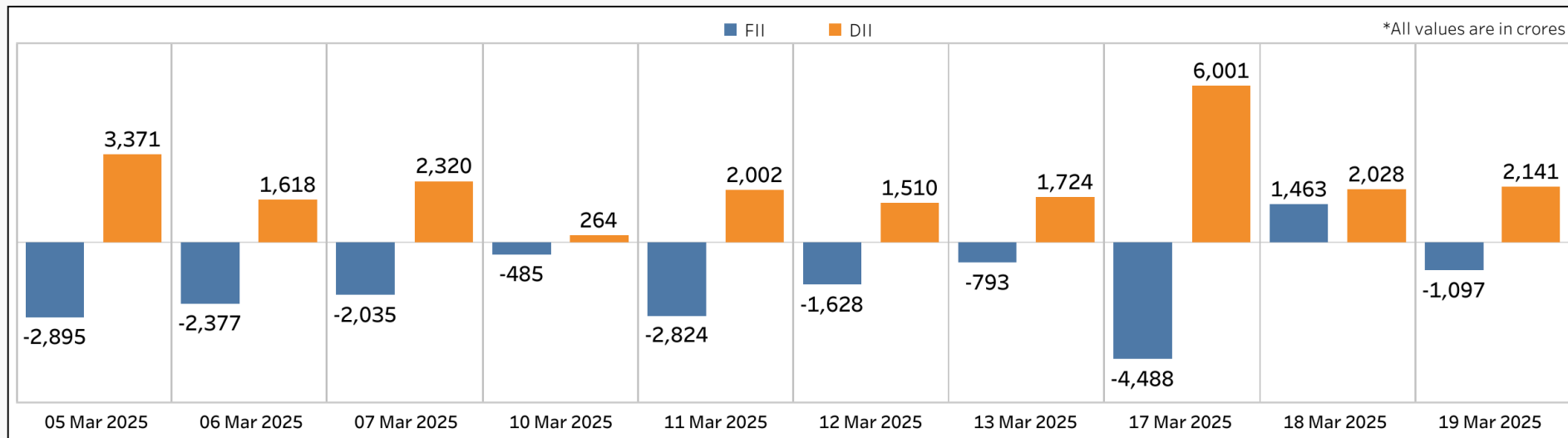
▲ and ▼ indicate positive and negative absolute changes, respectively

FII				DII			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
90,747 ▲	-18,052 ▼	107,763 ▲	-54,292 ▼	221 ▲	5,840 ▲	1,800 ▲	22,734 ▲
82,333	12,721	47,630	6,054	-115	6,673	5,800	35,061
-8,414				-336	833	4,000	12,327
	30,773		60,346				
		-60,133					
Net O/S 183,321	Net O/S -105,671	Net O/S 221,165	Net O/S 1,616,548	Net O/S 475	Net O/S 67,129	Net O/S 27,954	Net O/S -3,863,024
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
72,249 ▲	6,806 ▲	-290,312 ▼	18,519 ▲	-163,217 ▼	5,406 ▲	180,747 ▲	13,039 ▲
21,567				-103,785			
		285,938		59,432			
					-3,081	-8,487	
	-16,313	-4,374	-16,908		-49,056		-24,207
	-23,119		-35,427			-229,803	-37,246
Net O/S -345,332	Net O/S 89,780	Net O/S 51,275	Net O/S 1,977,439	Net O/S 161,536	Net O/S -51,238	Net O/S -300,395	Net O/S 269,037
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

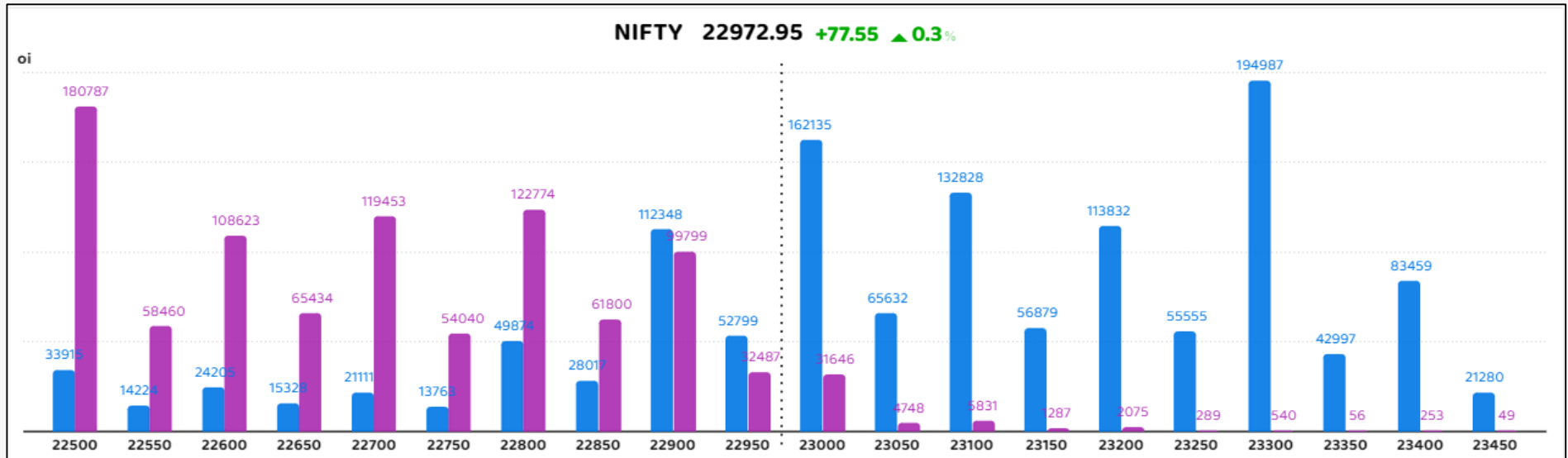


DII and FII Daily Cash Market Flows



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

Call ■ Put ■



For the Nifty, the 23300 Call and the 22500 Put had the highest call and put concentration (contracts). For the Bank Nifty, the 50000 Call and the 49000 Put saw the most amount of open interest.

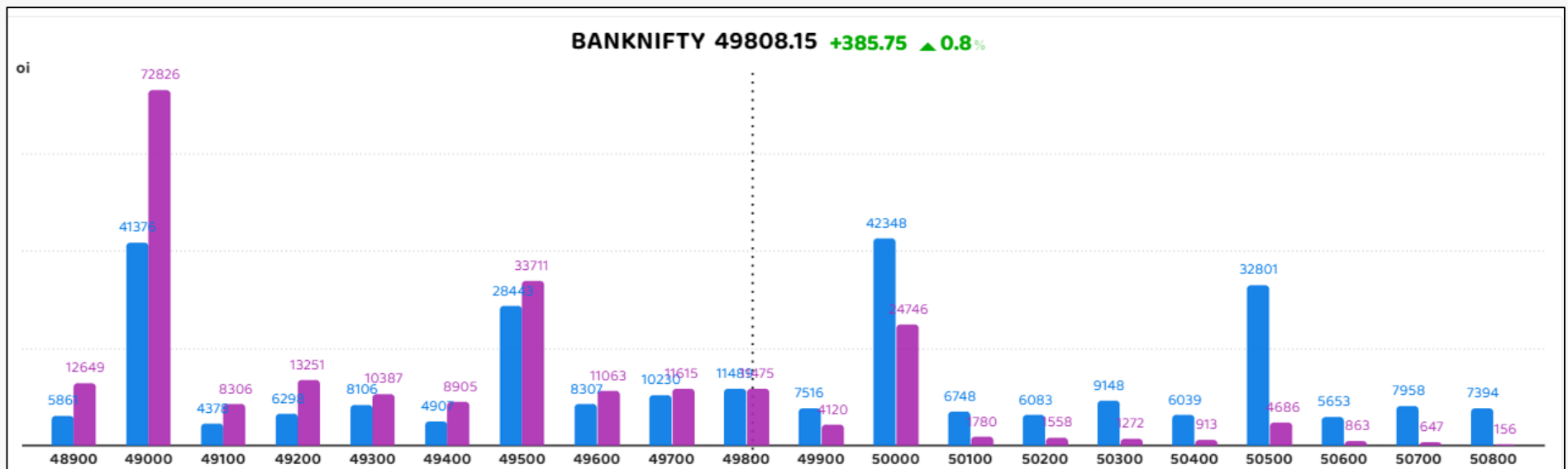
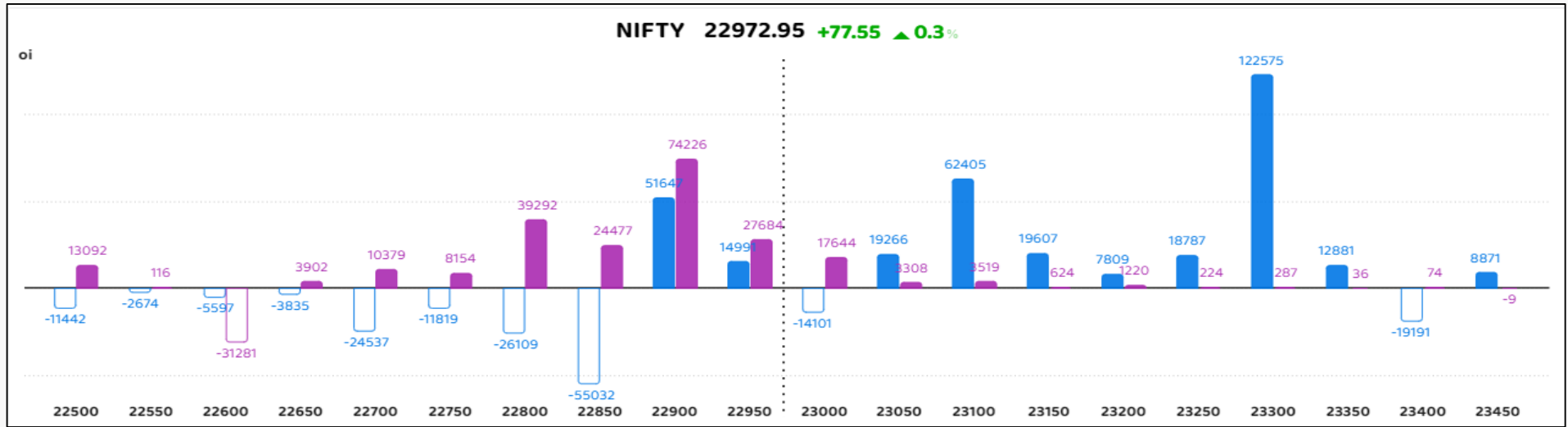


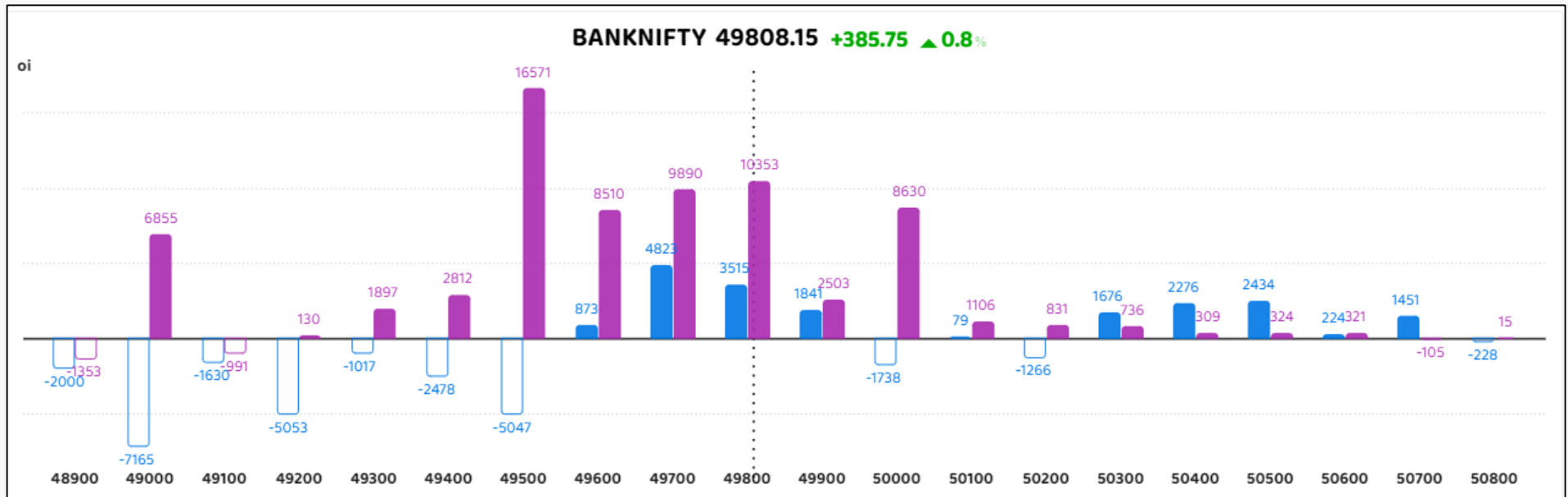
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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 22900 Put



For the Bank Nifty, the biggest open interest changes were seen at the 49000 Call & the 49500 Put

Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
LTIMINDTREE LTD	4365.45	-1.8	37.7	37.7	20.0	100.0
ANGEL ONE LTD	2215.35	5.9	72.7	72.7	22.1	100.0
MANAPPURAM FINAN	213.92	1.3	62.1	64.2	2.7	96.7
INDUSIND BANK	692.7	1.7	58.8	64.6	12.4	88.8
DIXON TECHNOLOGI	13875.6	3.0	43.2	51.5	1.8	83.3

Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
TORRENT PHARMA	3191.3	1.8	8.3	45.4	8.3	0.0
MRF LTD	109922.8	1.9	6.7	35.6	6.7	0.0
PATANJALI FOODS	1748	0.4	28.4	65.0	28.4	0.0
HDFC LIFE INSURA	664.55	3.7	25.6	80.6	19.6	9.8
BHARAT ELECTRON	290	1.6	31.5	81.6	25.5	10.7

Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
LTIMINDTREE LTD	4365.5	-1.8	37.7	37.7	20.0	100.0
ANGEL ONE LTD	2215.4	5.9	72.7	72.7	22.1	100.0
INDUSIND BANK	692.7	1.7	58.8	64.6	12.4	99.3
MANAPPURAM FINAN	213.9	1.3	62.1	64.2	2.7	98.9
TATA CONSULTANCY	3497.1	-1.6	26.8	57.2	1.3	97.2

Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
TORRENT PHARMA	3191.3	1.8	8.3	45.4	8.3	0.0
MRF LTD	109922.8	1.9	6.7	35.6	6.7	0.0
PATANJALI FOODS	1748	0.4	28.4	65.0	28.4	0.0
INDIAN RENEWABLE	151.87	4.1	53.8	63.1	51.8	12.9
GMR AIRPORTS LTD	76.68	2.3	31.1	69.5	25.4	13.9

Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
SONA BLW PRECISI	507.95	2.9	5424	1110	4.9
TITAGARH RAIL SY	752.6	5.9	26592	5650	4.7
SUPREME INDS LTD	3429.8	0.3	5724	1240	4.6
INDUSIND BANK	692.7	1.7	7496	1646	4.6
SYNGENE INTERNAT	706.05	3.4	7240	1662	4.4

Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
PHOENIX MILLS	1555.7	-3.2	4383	6699	1.5
PETRONET LNG LTD	297.5	3.8	8305	10359	1.2
SUN PHARMA INDU	1732.35	-0.9	17012	18973	1.1
UNITED SPIRITS	1347.3	-1.5	13896	14379	1.0
INDUS TOWERS LTD	339.3	0.7	15868	15810	1.0

Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Call OI Diff
IIFL FINANCE LTD	330.55	1.4	3057	3057	100.0
INDIAN RENEWABLE	151.87	4.1	6532	6532	100.0
SOLAR INDUSTRIES	10310.8	2.2	2875	2920	98.5
PATANJALI FOODS	1748	0.4	5031	5249	95.9
PRESTIGE ESTATES	1200.75	6.0	6001	6449	93.1

Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Put OI Diff
IIFL FINANCE LTD	330.55	1.4	2587	2587	100.0
TITAGARH RAIL SY	752.6	5.9	2298	2298	100.0
COMPUTER AGE MAN	3815.95	5.9	7700	7700	100.0
PRESTIGE ESTATES	1200.75	6.0	3691	3691	100.0
MUTHOOT FINANCE	2416.45	4.3	9423	9423	100.0

Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	CV Diff
TITAGARH RAIL SY	752.6	5.9	26592	26592	100.0
MAX HEALTHCARE I	1087.45	6.9	26512	26512	100.0
TATA TECHNOLOGIE	671.3	3.6	10790	10790	100.0
COMPUTER AGE MAN	3815.95	5.9	56162	56162	100.0
PB FINTECH LTD	1555.75	7.0	39124	39124	100.0

Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	PV Diff
COMPUTER AGE MAN	3815.95	5.9	21117	21117	100.0
PHOENIX MILLS	1555.65	-3.2	6699	6699	100.0
TATA TECHNOLOGIE	671.3	3.6	2484	2630	94.5
PB FINTECH LTD	1555.75	7.0	23801	25444	93.5
NBCC INDIA LTD	83.33	4.5	2031	2244	90.5

Call Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
INTERGLOBE AVIAT	4980.55	3.6	17951	10478	1.7
TITAGARH RAIL SY	752.6	5.9	4853	2848	1.7
IIFL FINANCE LTD	330.55	1.4	3057	1883	1.6
LTIMINDTREE LTD	4365.45	-1.8	14589	9059	1.6
INDUSIND BANK	692.7	1.7	97063	60524	1.6

Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
PHOENIX MILLS	1555.65	-3.2	1751	670	2.6
PB FINTECH LTD	1555.75	7.0	8471	3619	2.3
MUTHOOT FINANCE	2416.45	4.3	9423	4426	2.1
COMPUTER AGE MAN	3815.95	5.9	7700	4013	1.9
LTIMINDTREE LTD	4365.45	-1.8	8829	4807	1.8

Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
ESCORTS KUBOTA L	3188.85	5.6	45176	7449	6.1
INTERGLOBE AVIAT	4980.55	3.6	142625	29162	4.9
TATA COMMUNICATI	1561.1	3.6	55456	13199	4.2
ADITYA BIRLA FAS	251.25	3.3	12653	3786	3.3
MUTHOOT FINANCE	2416.45	4.3	39304	11811	3.3

Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
ESCORTS KUBOTA L	3188.85	5.6	15124	3351	4.5
TATA COMMUNICATI	1561.1	3.6	26020	6463	4.0
INTERGLOBE AVIAT	4980.55	3.6	58833	15970	3.7
UNITED SPIRITS	1347.3	-1.5	14379	4185	3.4
MUTHOOT FINANCE	2416.45	4.3	21935	7098	3.1

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	1145700	12.1%	2319	2600	2312700	12.1%	INFY	1700	2745600	7.2%	1587	1580	1306400	-0.4%
ADANIPTS	1200	1170000	2.3%	1174	1100	916400	-6.3%	ITC	410	7152000	1.7%	403	400	4772800	-0.8%
APOLLOHOSP	6500	111250	1.1%	6428	6200	76875	-3.5%	JSWSTEEL	1040	1011825	0.6%	1033	1000	811350	-3.2%
ASIANPAINT	2300	783600	0.8%	2281	2200	568800	-3.5%	KOTAKBANK	2040	1094800	0.9%	2022	1900	1235600	-6.0%
AXISBANK	1050	2212500	-0.2%	1052	1000	1533750	-4.9%	LT	3250	802350	-2.1%	3320	3100	546750	-6.6%
BAJAJ-AUTO	8000	248250	3.6%	7722	7500	113850	-2.9%	LTIM	4800	312600	10.0%	4365	4000	160050	-8.4%
BAJAJFINSV	1900	2057500	3.1%	1842	1800	655500	-2.3%	M&M	3000	1018675	7.6%	2789	2700	543900	-3.2%
BAJFINANCE	9000	528125	3.1%	8732	8500	409875	-2.7%	MARUTI	11800	279150	1.6%	11616	11500	126700	-1.0%
BHARTIARTL	1700	4261225	3.8%	1637	1600	2128000	-2.3%	NESTLEIND	2260	225200	3.5%	2184	2100	263800	-3.8%
BPCL	270	1.6E+07	1.8%	265	260	2403000	-2.0%	NTPC	340	11739000	-0.4%	341	330	3670500	-3.3%
BRITANNIA	5000	146100	6.2%	4707	4700	88400	-0.2%	ONGC	235	12951400	1.0%	233	220	4142600	-5.4%
CIPLA	1500	750100	0.1%	1499	1240	516100	-17.3%	POWERGRID	280	7272000	1.0%	277	280	1663200	1.0%
COALINDIA	395	4617900	-0.2%	396	450	2638650	13.7%	RELIANCE	1300	9745500	4.2%	1247	1200	4206500	-3.8%
DIVISLAB	6000	174900	3.1%	5818	4700	93300	-19.2%	SBLIFE	1500	764250	1.0%	1485	1400	448875	-5.7%
DRREDDY	1200	2175625	2.4%	1172	1100	699375	-6.2%	SBIN	800	6527250	7.4%	745	720	4531500	-3.4%
EICHERMOT	5100	222600	0.0%	5101	5000	245175	-2.0%	SUNPHARMA	1680	2051000	-3.0%	1732	1680	995750	-3.0%
GRASIM	2420	317000	-1.6%	2458	2400	237500	-2.4%	TATACONSUM	1000	641592	5.3%	950	950	532608	0.0%
HCLTECH	1600	625450	3.6%	1544	1400	764050	-9.4%	TATAMOTORS	700	7755000	2.6%	682	650	2673550	-4.7%
HDFCBANK	1760	5629250	0.9%	1744	1700	2497550	-2.5%	TATASTEEL	155	33434500	-2.3%	159	150	14256000	-5.4%
HDFCLIFE	700	1956900	5.3%	665	630	1153900	-5.2%	TCS	3800	1191400	8.7%	3497	3400	660800	-2.8%
HEROMOTOCO	4000	533400	13.1%	3537	3100	255750	-12.4%	TECHM	1500	930000	7.4%	1396	1340	692400	-4.0%
HINDALCO	700	3502800	0.2%	699	620	2759400	-11.2%	TITAN	3200	656775	4.0%	3076	3000	277375	-2.5%
HINDUNILVR	2300	947100	4.5%	2200	2200	497400	0.0%	ULTRACEMCO	10400	140750	-4.9%	10933	10400	82700	-4.9%
ICICIBANK	1320	2107700	0.5%	1313	1300	3214400	-1.0%	UPL	640	1987785	-1.0%	646	620	1562315	-4.1%
INDUSINDBK	750	4825000	8.3%	693	600	1293000	-13.4%	WIPRO	300	8724000	12.9%	266	260	4200000	-2.1%

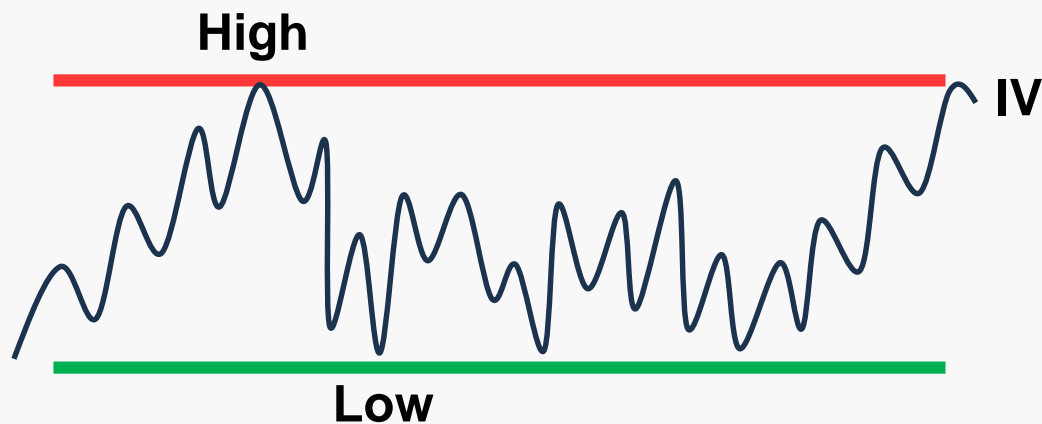
*If distance to call strike from current market price < distance to put strike from current market price, then the %Away for the call strike will be colored green
If distance to put strike from current market price < distance to call strike from current market price, then the %Away for the put strike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

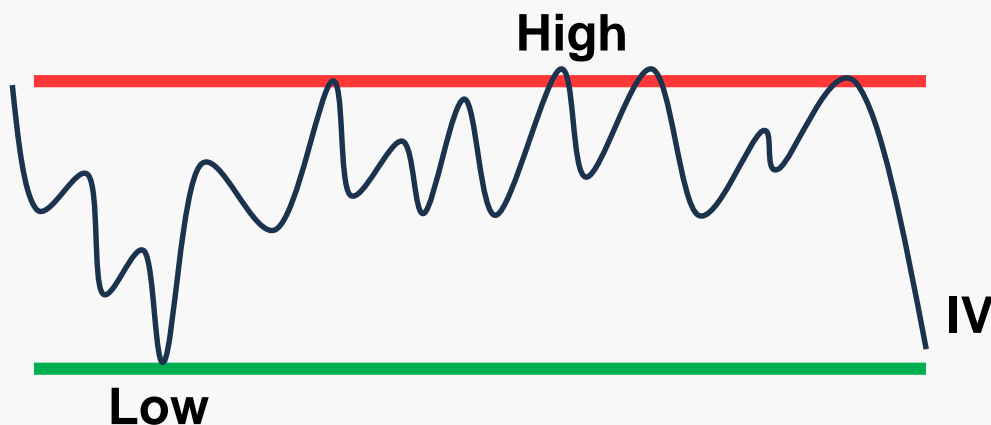
**ATM IV is the midpoint of the IV for the ATM call and put respectively*

- **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 (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

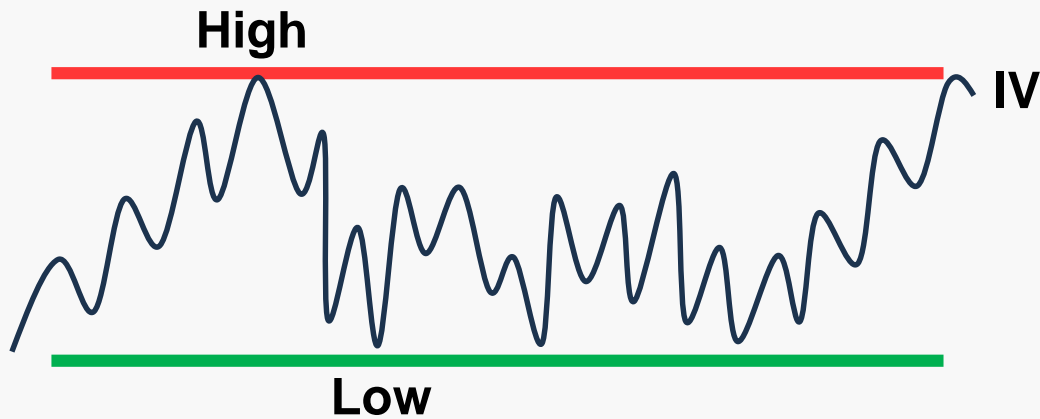


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.

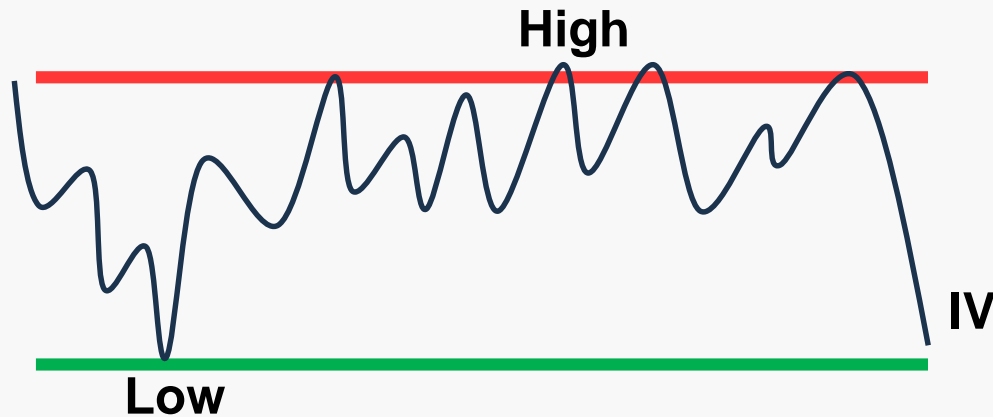


In this chart, notice that today's IV is close to the lowest low seen in the last 12 months. This means that IV for this option is cheap today compared to where it has traded over the last one year.

- **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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