



Daily Derivatives Report

Nifty Futures

	Value	Change
Most recent settlement	22,564	0.2%▲
Open Interest (OI)	1,99,86,675	0.5%▲
Change in OI (abs)	1,99,86,675	1,06,800▲
Premium / Discount (Abs)	66	11▲
Inference	Long Build Up	

Bank Nifty Futures

	Value	Change
Most recent settlement	48,000	0.7%▼
Open interest (OI)	45,05,160	6.2%▲
Change in OI (abs)	45,05,160	2,62,530▲
Premium / Discount (Abs)	146	47▲
Inference	Short Build Up	

Volatility Insights

	Value	Change
India VIX Index	14.07	0.1▲
Nifty ATM IV (%)	13.31	0.2▲
Bank Nifty ATM IV (%)	15.51	0.1▲
PCR (Nifty)	1.09	0.18▲
PCR (Bank Nifty)	0.94	0.01▲

The Long Ratio for the FII Index Futures **Jump** to 18.3%, against 18.2% recorded in the previous session.

Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
MFSL	59,20,000	22.5%	1089.95	4.6%
PHOENIXLTD	15,69,750	19.5%	1657.25	6.8%
PAYTM	2,35,08,550	8.6%	715.45	7.3%
SAIL	17,31,12,000	5.6%	108.59	0.9%
PRESTIGE	52,47,450	4.8%	1131.05	0.6%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
INDUSINDBK	7,10,68,500	40.0%	657.1	-27.1%
ASHOKLEY	5,63,90,000	10.9%	199.98	-3.2%
IIFL	73,08,250	10.5%	313.15	-0.6%
ESCORTS	14,19,300	7.8%	2902.3	-1.4%
RBLBANK	5,83,67,500	7.0%	156.31	-2.9%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
KALYANKJIL	1,55,75,950	-9.4%	420.15	3.6%
DIXON	10,97,050	-9.3%	13344	1.8%
KEI	14,18,400	-9.3%	3034.05	0.8%
MCX	18,57,600	-5.5%	4694.65	3.9%
LAURUSLABS	1,90,62,100	-5.1%	575.25	2.9%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
BSE	54,69,375	-9.4%	3819.4	-4.1%
APOLLOTYRE	1,03,13,900	-3.5%	404	-1.1%
POLYCAB	26,33,250	-3.3%	4923.85	-0.1%
LUPIN	57,45,150	-2.9%	1983.65	-1.2%
RAMCOCEM	42,01,550	-2.3%	856.25	-0.6%

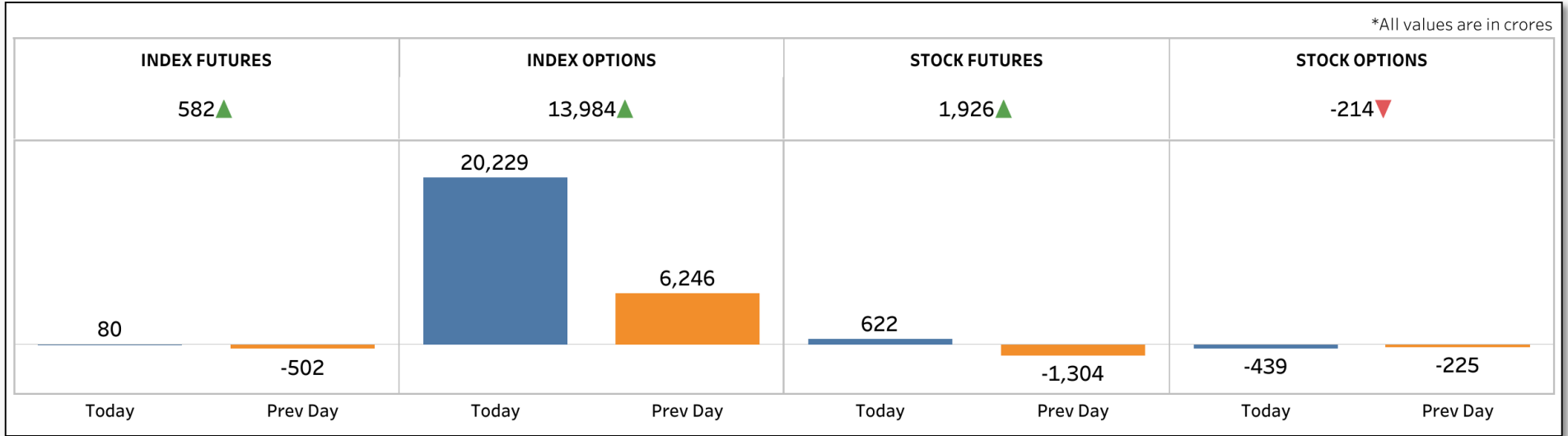
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

Open Interest Data by Participant

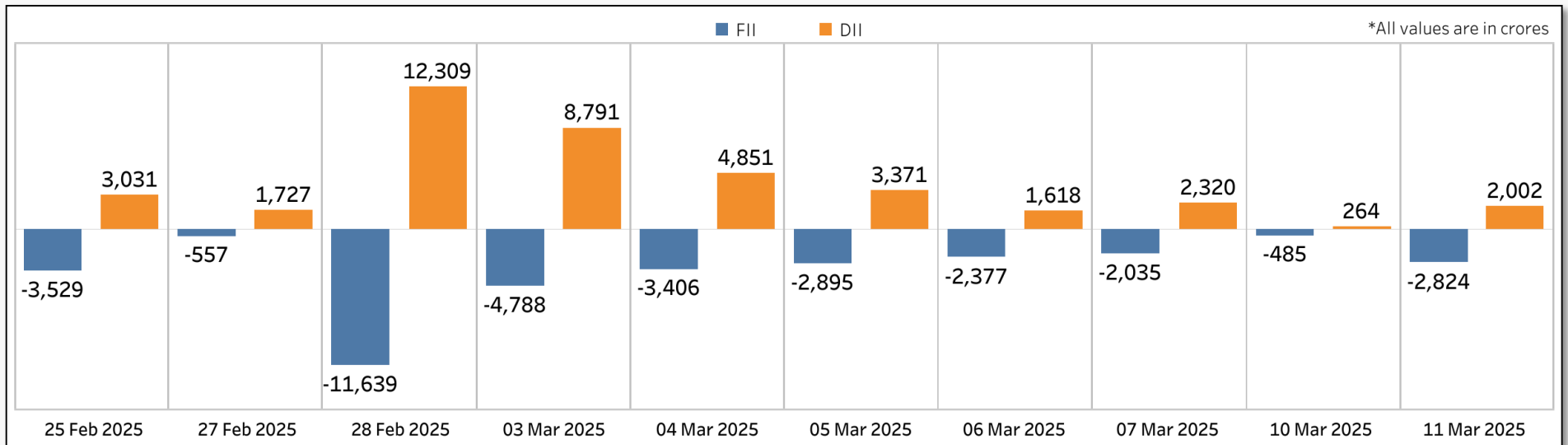
▲ and ▼ indicate positive and negative absolute changes, respectively

FII				DII			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
43,276 ▲	3,829 ▲	56,743 ▲	17,750 ▲	2,646 ▲	5,077 ▲	-2,007 ▼	-49,395 ▼
55,638	508	73,735			4,684	109	38,060
12,362		16,992				2,116	
	-3,321		-3,005	-49	-2,695	-393	
			-20,755				-11,335
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
151,305	-156,252	337,758	1,519,140	2,126	55,785	18,319	-3,938,799
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
-189,684 ▼	5,760 ▲	72,422 ▲	2,517 ▲	143,762 ▲	-14,666 ▼	-127,157 ▼	29,128 ▲
98,250	1,204	24,635		35,845		28,679	25,149
					8,270		
	-4,556		-10,809	-6,396			
		-47,787	-13,326				-3,979
-91,434				-107,917		-98,478	
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
-261,077	132,485	-258,055	2,029,116	107,646	-32,018	-98,023	390,543
Today	Prev Day	Today	Prev Day	Today	Prev Day	Today	Prev Day

Daily Net Open Interest Change

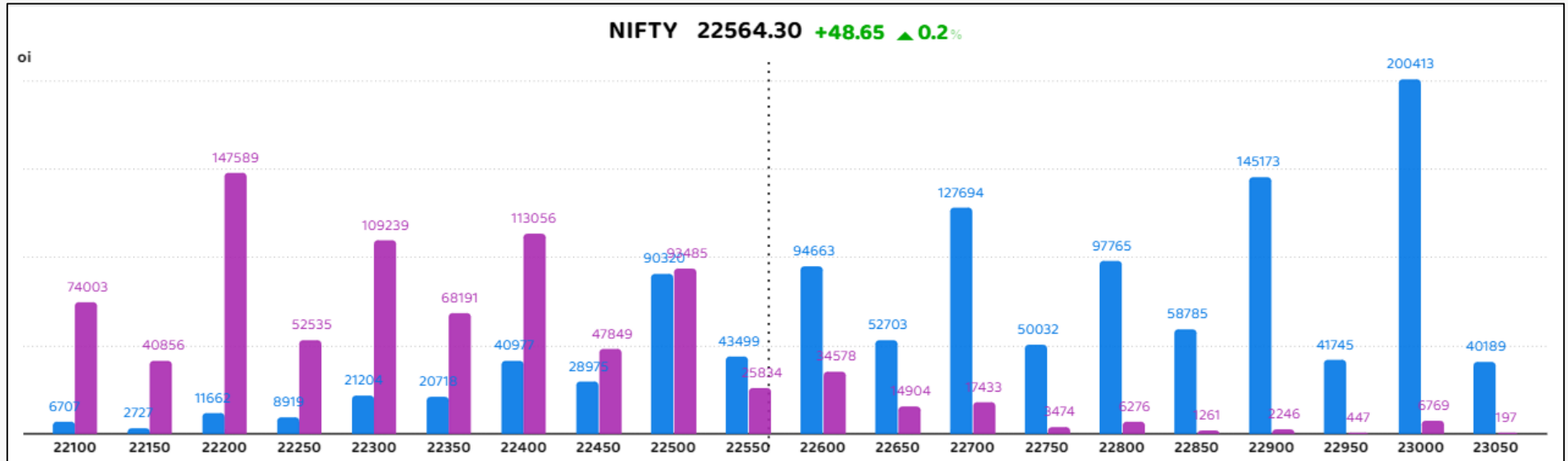


DII and FII Daily Cash Market Flows



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

Call ■ Put ■



For the Nifty, the 23000 Call and the 22200 Put had the highest call and put concentration (contracts). For the Bank Nifty, the 48500 Call and the 48000 Put saw the most amount of open interest.

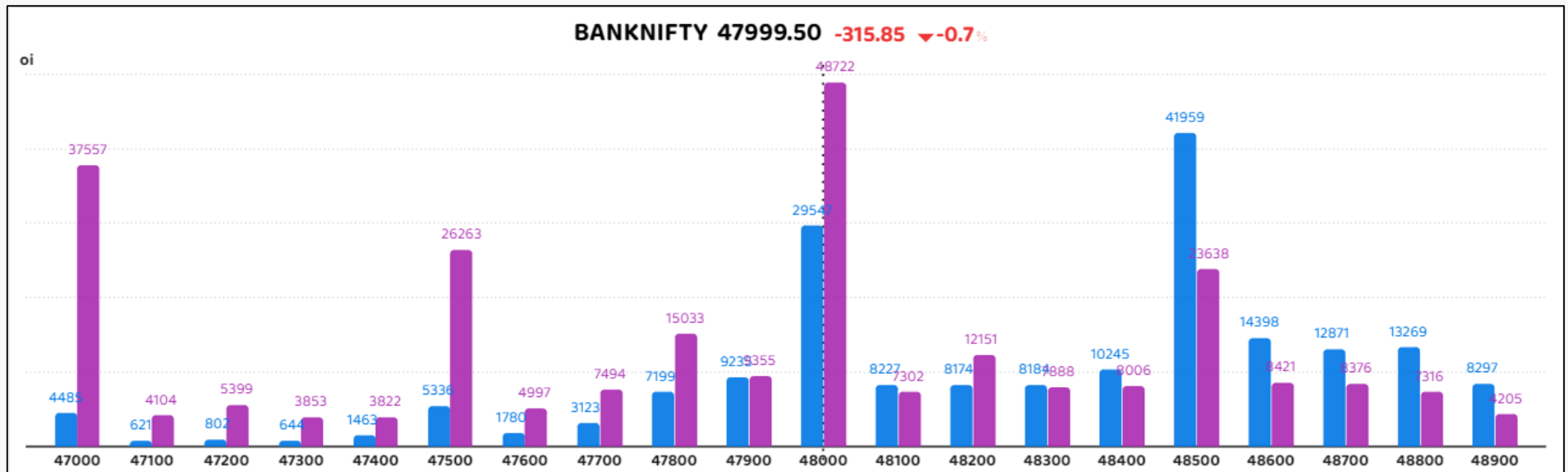
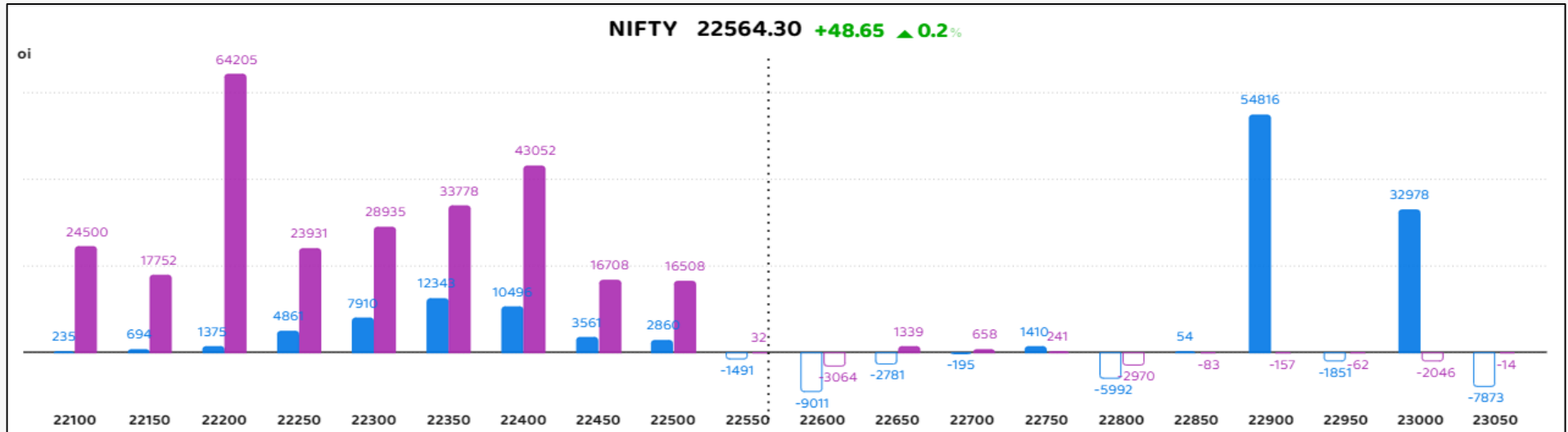


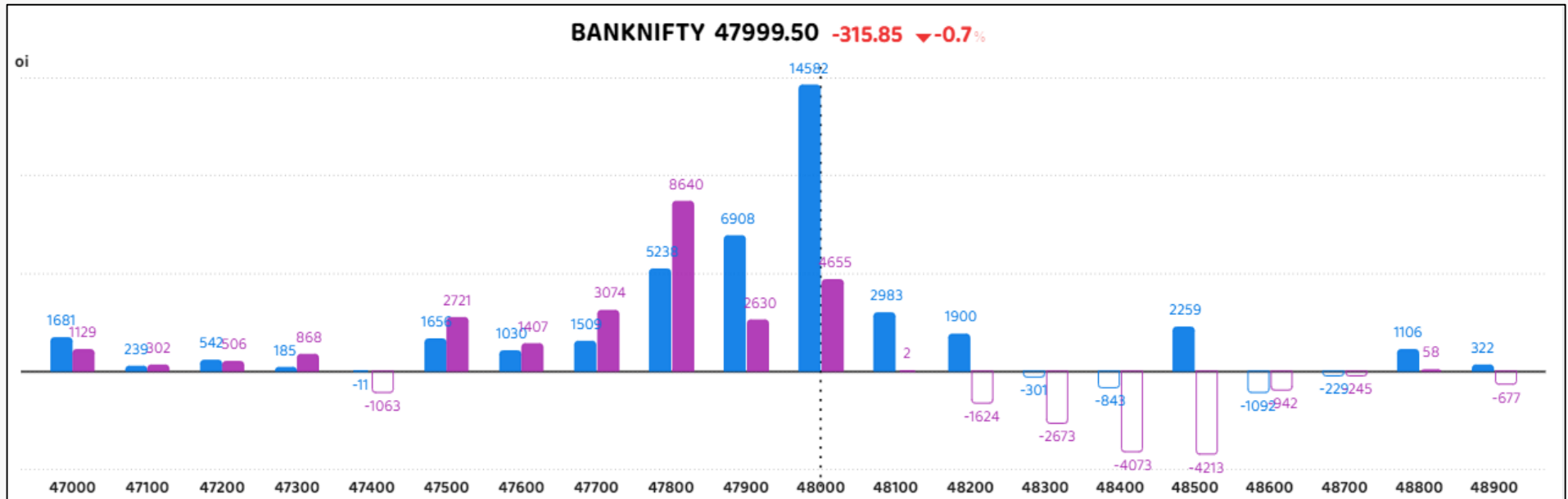
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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

Call ■ Put ■



The largest open interest changes (contracts) were seen at the 22900 Call and the 22200 Put



For the Bank Nifty, the biggest open interest changes were seen at the 48000 Call & the 47800 Put

Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
BSE LTD	3809.75	-4.7	64.4	64.4	37.1	100.0
ANGEL ONE LTD	1998.6	-2.2	67.1	67.1	22.1	100.0
CESC LTD	139.13	-0.2	46.5	46.5	31.2	100.0
HFCL LTD	80.26	0.0	61.5	61.5	33.2	100.0
UNION BANK INDIA	114.85	0.6	43.7	43.7	27.3	100.0

Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
TITAGARH RAIL SY	699.6	-1.3	45.3	58.2	45.3	0.0
INDIAN RENEWABLE	141.98	-1.4	56.9	63.1	56.9	0.0
NBCC INDIA LTD	78.87	0.3	43.9	65.4	43.9	0.0
GRASIM INDS LTD	2413.55	1.2	13.4	36.1	13.4	0.0
PATANJALI FOODS	1744.25	-0.4	35.4	65.0	34.2	3.8

Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
BSE LTD	3809.75	-4.7	64.4	64.4	37.1	100.0
ANGEL ONE LTD	1998.6	-2.2	67.1	67.1	22.1	100.0
CESC LTD	139.13	-0.2	46.5	46.5	31.2	100.0
HFCL LTD	80.26	0.0	61.5	61.5	33.2	100.0
UNION BANK INDIA	114.85	0.6	43.7	43.7	27.3	100.0

Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
TITAGARH RAIL SY	699.6	-1.3	45.3	58.2	45.3	0.0
INDIAN RENEWABLE	141.98	-1.4	56.9	63.1	56.9	0.0
NBCC INDIA LTD	78.87	0.3	43.9	65.4	43.9	0.0
GRASIM INDS LTD	2413.55	1.2	13.4	36.1	13.4	0.0
SYNGENE INTERNAT	681.8	0.6	19.1	38.8	17.8	0.7

Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
PHOENIX MILLS	1656.85	6.8	6478	944	6.9
PAGE INDUSTRIES	39761.35	-0.3	3787	1159	3.3
TATA COMMUNICATI	1492.35	8.7	79817	24945	3.2
YES BANK LTD	16.37	-0.9	5092	1852	2.8
TATA TECHNOLOGIE	646.8	-1.1	2262	823	2.8

Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
IIFL FINANCE LTD	311.95	-0.6	1456	2695	1.9
L&T TECHNOLOGY S	4642.75	-0.2	4845	8558	1.8
BALKRISHNA INDS	2531.8	-0.9	1456	2522	1.7
BANDHAN BANK LTD	140.11	-5.3	22472	28837	1.3
ASHOK LEYLAND	199.96	-3.3	25911	31846	1.2

Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Call OI Diff
IIFL FINANCE LTD	311.95	-0.6	2202	2202	100.0
TITAGARH RAIL SY	699.6	-1.3	3703	3703	100.0
TATA TECHNOLOGIE	646.8	-1.1	2859	2859	100.0
INDIAN RENEWABLE	141.98	-1.4	3998	4012	99.7
SOLAR INDUSTRIES	9765.3	-0.7	2796	2811	99.5

Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Put OI Diff
IIFL FINANCE LTD	311.95	-0.6	2036	2036	100.0
SOLAR INDUSTRIES	9765.3	-0.7	1664	1664	100.0
JINDAL STAINLESS	649.35	1.4	1570	1675	93.7
BSE LTD	3809.75	-4.7	34173	38796	88.1

Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	CV Diff
TUBE INVESTMENTS	2882.05	6.2	26794	26794	100.0
INDUSIND BANK	655.95	-27.2	680737	680737	100.0
PHOENIX MILLS	1656.85	6.8	6478	7290	88.9

Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	PV Diff
INDUSIND BANK	655.95	-27.2	330488	330488	100.0

Call Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
INDUSIND BANK	655.95	-27.2	156178	40408	3.9
TITAGARH RAIL SY	699.6	-1.3	3703	1829	2.0
BSE LTD	3809.75	-4.7	79824	45250	1.8
KEI INDUS LTD	3028.45	-0.1	12260	7018	1.7
IIFL FINANCE LTD	311.95	-0.6	2202	1399	1.6

Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
INDUSIND BANK	655.95	-27.2	60690	26233	2.3
TITAGARH RAIL SY	699.6	-1.3	1848	1015	1.8
TATA COMMUNICATI	1492.35	8.7	6316	3588	1.8
KEI INDUS LTD	3028.45	-0.1	6251	3604	1.7
SOLAR INDUSTRIES	9765.3	-0.7	1664	996	1.7

Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
PIDILITE INDS	2722.3	-0.4	9404	3280	2.9
SUN PHARMA INDU	1655.3	2.7	57666	25922	2.2
BHARAT PETROL	264.58	3.0	33591	16808	2.0
ICICI BANK LTD	1245.4	2.5	78335	47709	1.6
INFOSYS LTD	1661.6	-2.3	74699	45880	1.6

Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
PIDILITE INDS	2722.3	-0.4	3880	1883	2.1
TRENT LTD	4995.45	4.1	50187	47787	1.1
REC LTD	402.6	2.1	28573	27402	1.0
COAL INDIA LTD	379.05	1.0	21119	20383	1.0
HDFC LIFE INSURA	636.95	1.8	6980	7031	1.0

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	1256700	15.5%	2251	2600	2711100	15.5%	INFY	1700	1634000	2.3%	1662	1600	858800	-3.7%
ADANIPTS	1200	1091600	5.7%	1135	1100	896000	-3.1%	ITC	420	6443200	3.4%	406	400	3764800	-1.5%
APOLLOHOSP	6800	108250	10.8%	6135	6000	69875	-2.2%	JSWSTEEL	1040	843750	2.1%	1019	1000	799875	-1.8%
ASIANPAINT	2300	752200	0.6%	2287	2200	347000	-3.8%	KOTAKBANK	2000	1333200	3.3%	1935	1900	809200	-1.8%
AXISBANK	1050	2184375	2.4%	1026	1000	1846250	-2.5%	LT	3300	805500	3.3%	3195	3100	518250	-3.0%
BAJAJ-AUTO	8000	278025	6.7%	7500	7000	124875	-6.7%	LTIM	4800	157650	3.1%	4654	4500	100500	-3.3%
BAJAJFINSV	1900	1118500	5.2%	1805	1560	465000	-13.6%	M&M	3000	1480675	13.4%	2646	2500	681450	-5.5%
BAJFINANCE	9000	583625	7.9%	8340	8000	313500	-4.1%	MARUTI	13000	209150	11.6%	11647	11500	129050	-1.3%
BHARTIARTL	1700	1602650	2.2%	1663	1600	2011150	-3.8%	NESTLEIND	2260	210200	0.4%	2251	2100	260800	-6.7%
BPCL	270	1.5E+07	2.0%	265	260	2156400	-1.7%	NTPC	340	10072500	2.9%	330	300	2823000	-9.2%
BRITANNIA	4900	77900	2.9%	4762	4100	87900	-13.9%	ONGC	240	10516275	5.9%	227	230	2119425	1.4%
CIPLA	1600	700375	10.7%	1446	1240	591175	-14.2%	POWERGRID	280	6975000	4.8%	267	260	1868400	-2.7%
COALINDIA	395	4912950	4.2%	379	450	2723700	18.7%	RELIANCE	1300	7033500	4.2%	1247	1200	4535000	-3.8%
DIVISLAB	6000	172600	8.2%	5546	4700	94600	-15.3%	SBLIFE	1500	545625	5.8%	1417	1400	270750	-1.2%
DRREDDY	1200	2009375	7.5%	1117	1020	343125	-8.7%	SBIN	800	7643250	9.6%	730	700	5756250	-4.1%
EICHERMOT	5100	234850	2.3%	4986	4800	227850	-3.7%	SUNPHARMA	1680	2095100	1.5%	1655	1600	646450	-3.3%
GRASIM	2420	290000	0.3%	2414	2400	175750	-0.6%	TATACONSUM	1100	446424	14.6%	960	950	575928	-1.0%
HCLTECH	1600	724850	2.1%	1568	1360	698600	-13.3%	TATAMOTORS	700	7136800	8.0%	648	600	2735700	-7.4%
HDFCBANK	1700	4335100	0.9%	1686	1600	2471700	-5.1%	TATASTEEL	160	27901500	6.1%	151	140	14481500	-7.1%
HDFCLIFE	630	1348600	-1.1%	637	550	965800	-13.7%	TCS	4000	1277500	11.9%	3575	3500	634550	-2.1%
HEROMOTOCO	4000	495000	9.6%	3651	3200	175200	-12.3%	TECHM	1700	899400	14.9%	1479	1400	481800	-5.4%
HINDALCO	700	2690800	0.6%	696	620	2639000	-10.9%	TITAN	3200	582925	5.0%	3046	3000	350000	-1.5%
HINDUNILVR	2400	799200	8.3%	2217	2200	466500	-0.8%	ULTRACEMCO	11000	150500	5.4%	10439	10400	72850	-0.4%
ICICIBANK	1300	2456300	4.4%	1245	1200	3670800	-3.6%	UPL	640	1979655	4.1%	615	580	716795	-5.7%
INDUSINDBK	750	9402500	14.3%	656	600	2768500	-8.5%	WIPRO	300	7137000	8.0%	278	260	2679000	-6.4%

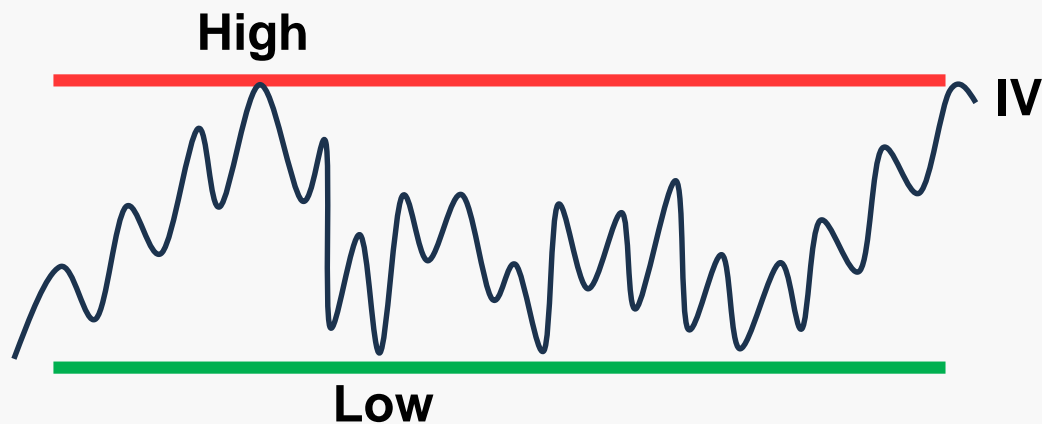
If distance to call strike from current market price < distance to put strike from current market price, then the %Away for the call strike will be colored green
 If distance to put strike from current market price < distance to call strike from current market price, then the %Away for the put strike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

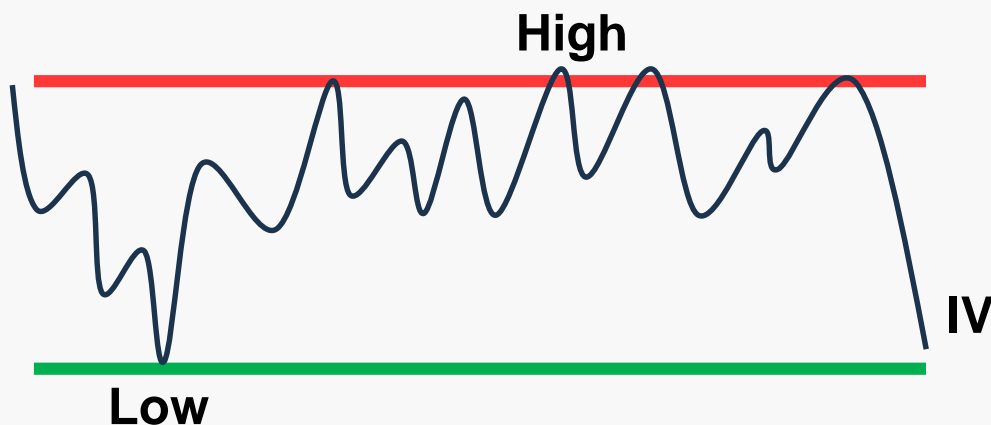
**ATM IV is the midpoint of the IV for the ATM call and put respectively*

- **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

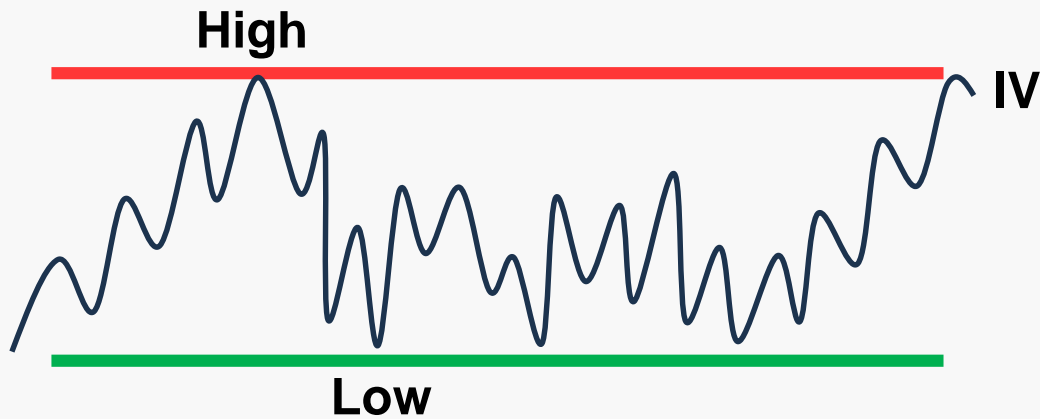


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.

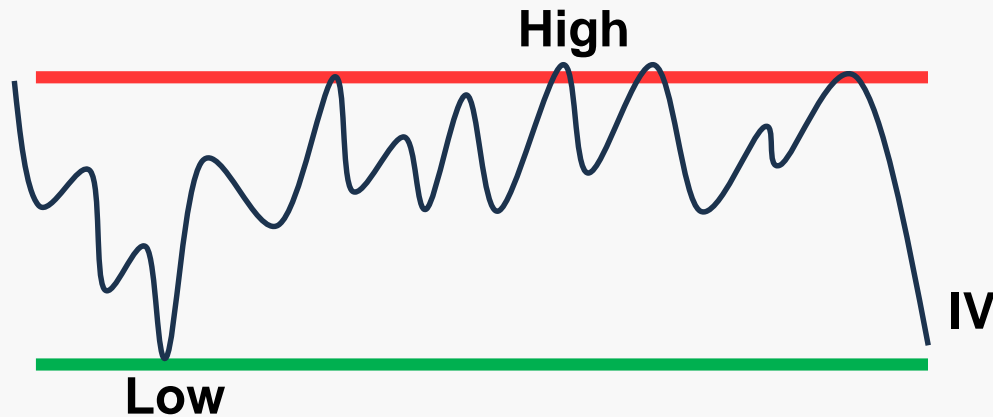


In this chart, notice that today's IV is close to the lowest low seen in the last 12 months. This means that IV for this option is cheap today compared to where it has traded over the last one year.

- **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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