



Daily Derivatives Report

Nifty Futures

	Value	Change
Most recent settlement	24,066	0.9% ▼
Open Interest (OI)	1,49,73,075	0.2% ▲
Change in OI (abs)	1,49,73,075	33,075 ▲
Premium / Discount (Abs)	58	59 ▲
Inference	Short Build Up	

Bank Nifty Futures

	Value	Change
Most recent settlement	53,732	1.0% ▼
Open interest (OI)	20,70,890	4.9% ▼
Change in OI (abs)	20,70,890	1,05,715 ▼
Premium / Discount (Abs)	137	214 ▲
Inference	Long Unwinding	

Volatility Insights

	Value	Change
India VIX Index	21.63	0.62 ▲
Nifty ATM IV (%)	19.08	1.0 ▲
Bank Nifty ATM IV (%)	20.06	0.7 ▲
PCR (Nifty)	0.94	0.14 ▼
PCR (Bank Nifty)	0.77	0.07 ▼

The Long Ratio for FII Index Futures **drop** at 47.7 %, **down** from 52.1 % in the **last session..**

Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
LUPIN	84,06,075	7.0%	2042.8	1.1%
AARTIIND	1,51,97,575	2.7%	453.5	1.0%
DRREDDY	1,45,25,000	2.6%	1156.8	1.1%
MUTHOOTFIN	35,97,000	1.9%	2231.9	0.1%
HAL	78,25,500	1.6%	4510.3	1.8%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
M&MFIN	2,58,08,000	7.3%	245.5	-3.8%
DLF	3,85,50,600	7.0%	633.2	-3.6%
INDHOTEL	2,35,13,000	6.1%	721.95	-3.6%
APOLLOTYRE	78,16,600	5.9%	465.3	-4.1%
SHREECEM	2,69,575	5.4%	29215	-0.4%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
CHAMBLFERT	80,75,000	-13.4%	692.2	2.9%
BANKBARODA	9,19,62,000	-9.0%	220.42	1.3%
ASIANPAINT	1,23,50,750	-7.2%	2306.8	0.3%
OIL	1,30,05,900	-5.0%	404.2	1.3%
IIFL	1,25,22,300	-4.7%	373.5	3.4%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
MCX	17,44,750	-8.9%	5691.5	-5.3%
IGL	2,19,58,750	-8.1%	199.91	-0.3%
MGL	28,77,600	-5.4%	1363.3	-0.5%
COFORGE	30,99,675	-3.5%	7695.5	-0.6%
MARUTI	31,30,700	-3.1%	12259	-0.8%

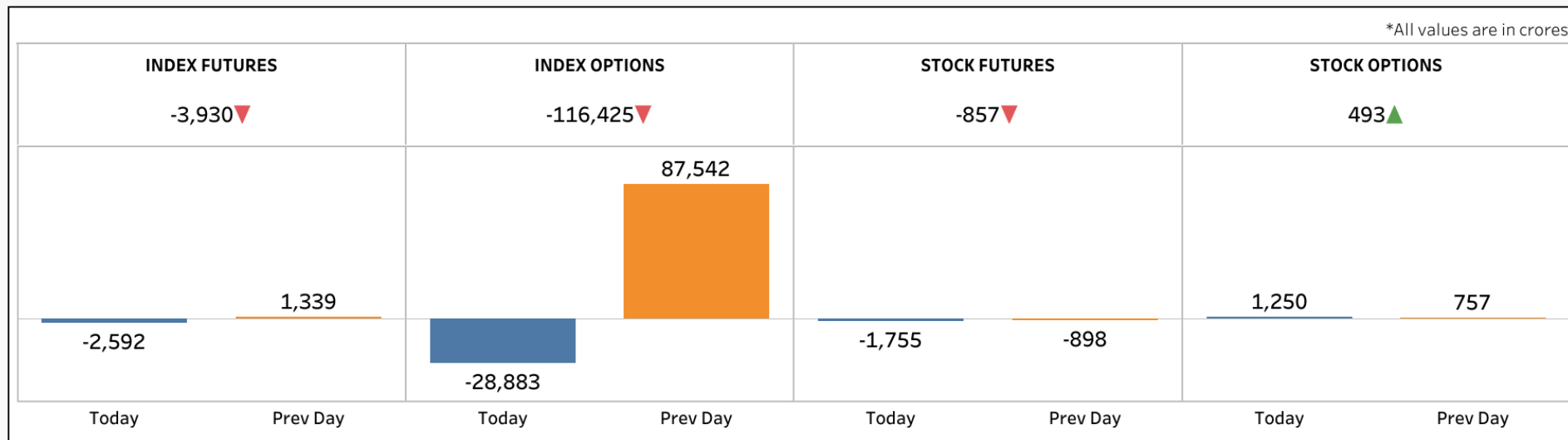
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

Open Interest Trends by Participant

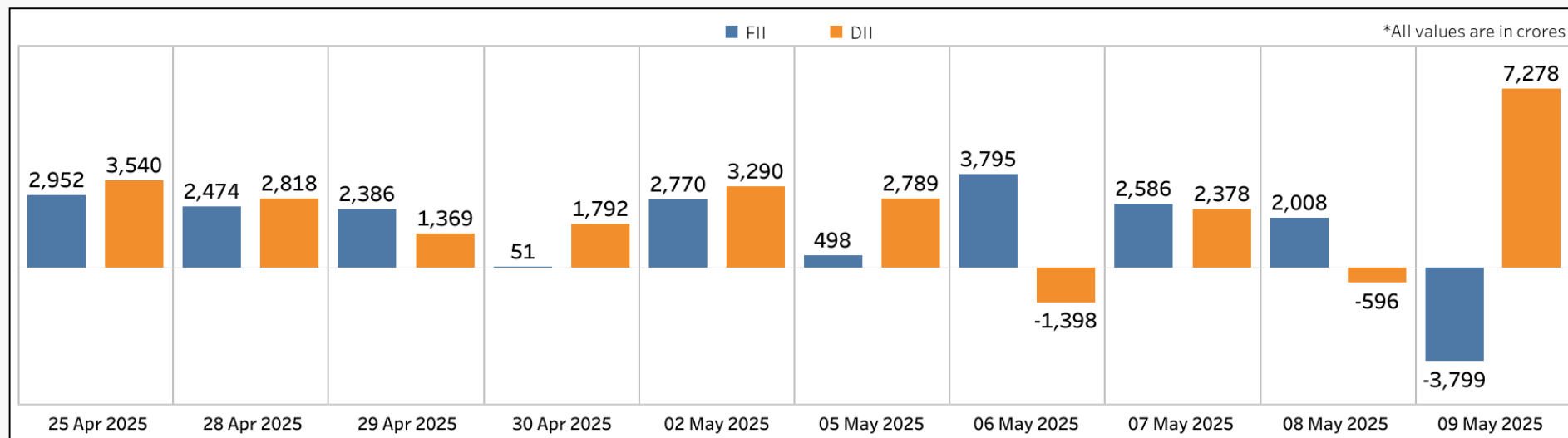
▲ and ▼ indicate positive and negative absolute changes, respectively

FII				DII			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
-338,939 ▼	-21,890 ▼	-354,464 ▼	5,576 ▲	0	9,083 ▲	-4,415 ▼	-70,149 ▼
243,265		278,517			16,731		39,547
	7,006			0	7,648	400	
-95,674	-14,884	-75,947	-15,602 -21,178				-30,602
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
-133,271	7,402	-15,713	1,747,095	70	58,874	62,498	-3,678,737
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
241,435 ▲	26,873 ▲	352,191 ▲	13,430 ▲	97,505 ▲	-14,066 ▼	6,689 ▲	51,143 ▲
74,247		103,352		21,428			44,727
	14,092		1,477		-15,939	-1,873	
-167,188	-12,781	-248,839	-11,953	-76,077		-27,804 -34,493	-6,416
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
8,958	-19,238	101,709	1,608,543	124,245	-47,038	-148,495	323,099
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

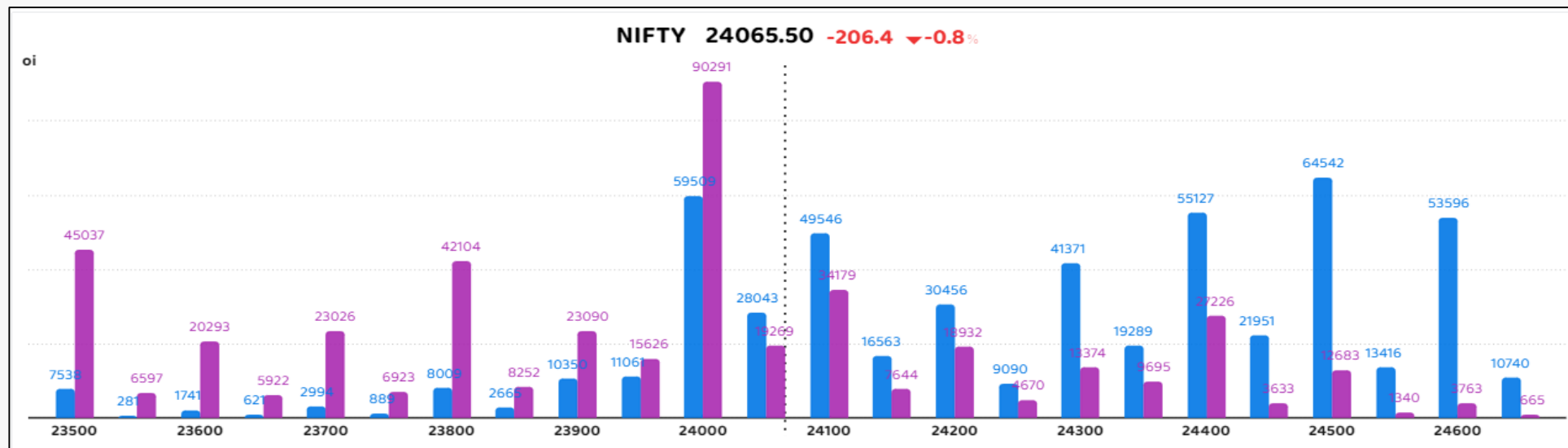


DII and FII Daily Cash Market Flows



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

Call  Put 



For the Nifty, the 24,500 Call and the 24,000 Put had the highest call and put concentration (contracts). For the Bank Nifty, the 54,000 Call and the 54,000 Put saw the most amount of open interest.

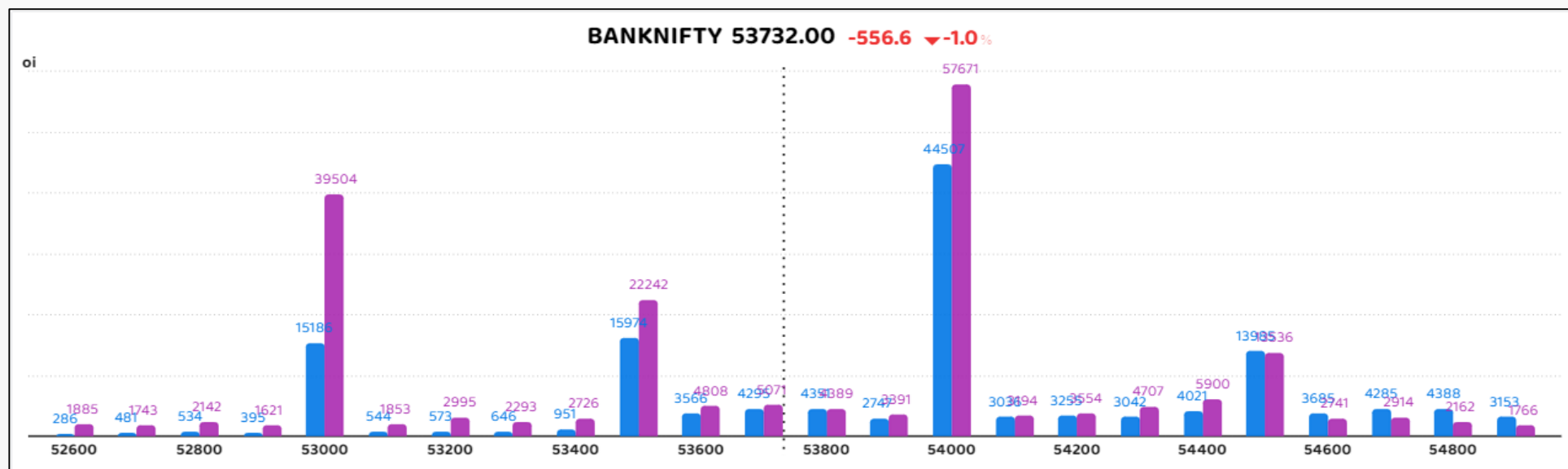
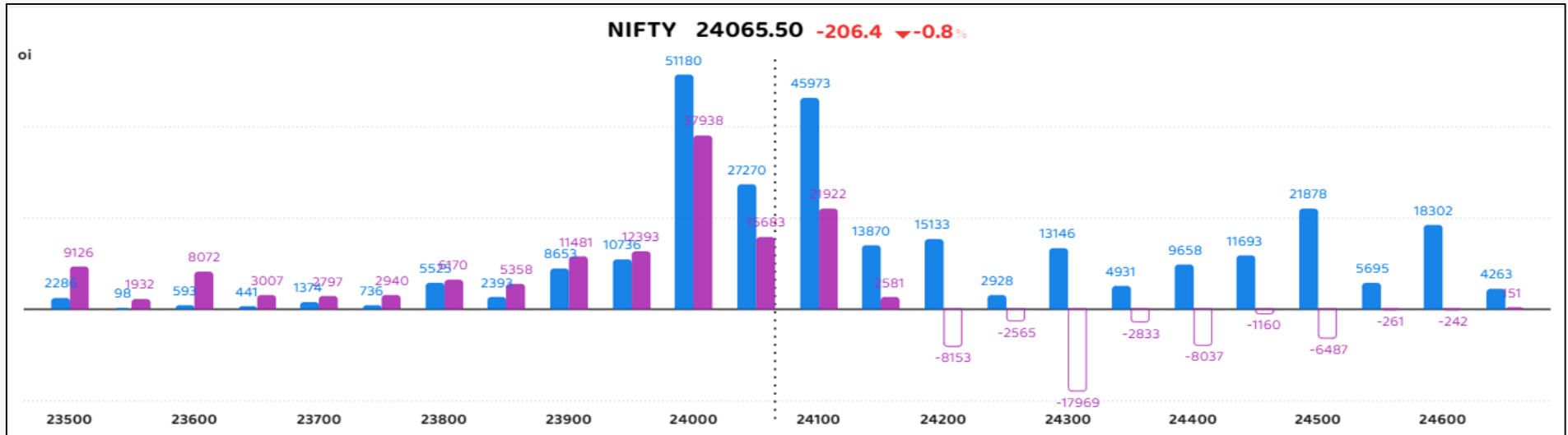


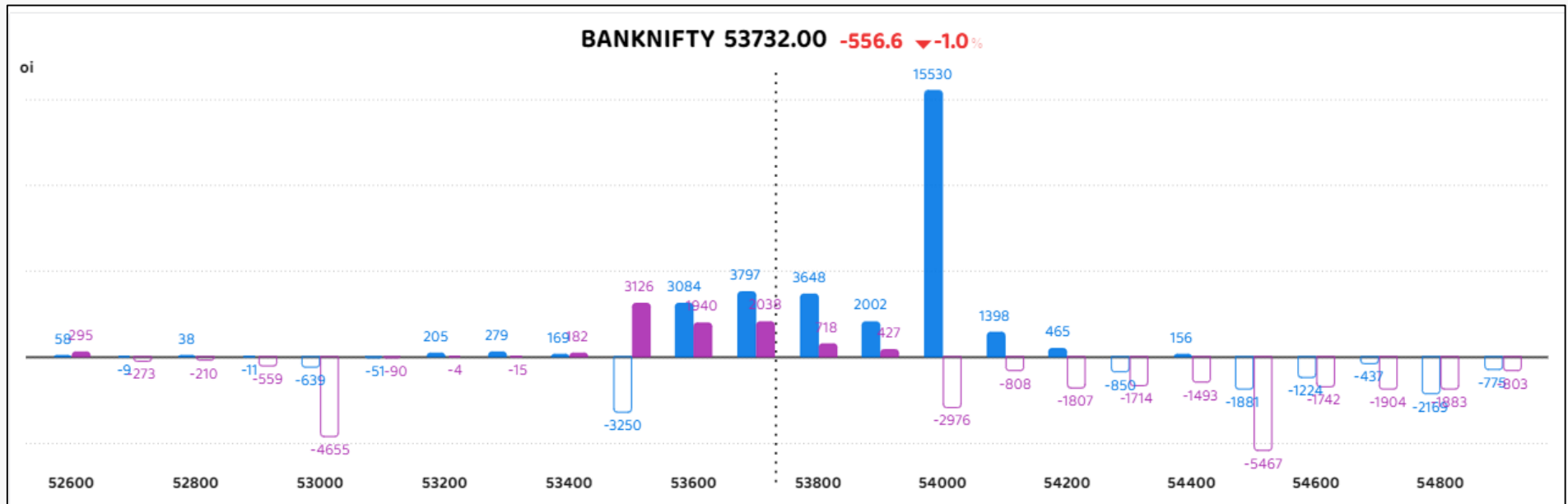
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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

Call ■ Put ■



The largest open interest changes (contracts) were seen at the 24,000 Call and the 24,000 Put



For the Bank Nifty, the biggest open interest changes were seen at the 54,000 Call & the 54,500 Put

Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
RAMCO CEMENT/THE	939.45	-1.2	41.4	43.6	0.5	94.9
UPL LTD	674.75	2.8	39.3	42.7	2.9	91.3
DIXON TECHNOLOGI	15190	-2.8	48.4	53.0	1.8	91.0
SRF LTD	3004.3	1.7	37.9	40.1	21.4	88.4
BAJAJ AUTO LTD	7682.5	-0.5	31.4	36.4	2.1	85.4

Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
HDFC LIFE INSURA	713.6	-1.3	26.0	80.6	19.6	10.5
NTPC LTD	334.75	-1.5	27.3	116.6	15.7	11.4
PATANJALI FOODS	1759.9	-2.2	30.8	65.0	24.7	15.3
WIPRO LTD	242.01	0.2	28.6	93.6	16.2	16.0
ADANI PORTS AND	1306.3	-2.0	35.5	99.7	23.2	16.1

Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
RAMCO CEMENT/THE	939.45	-1.2	41.4	43.6	0.5	99.3
INDIAN HOTELS CO	718.75	-4.2	41.3	46.4	22.6	98.7
SRF LTD	3004.3	1.7	37.9	40.1	21.4	98.3
CIPLA LTD	1480	-0.5	31.9	61.3	18.0	97.6
DIVI LABS LTD	6025.5	1.1	38.3	45.9	18.2	97.5

Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
GRASIM INDS LTD	2634.8	-2.4	19.6	36.1	13.4	6.1
SOLAR INDUSTRIES	13487	2.8	34.1	53.0	28.1	12.3
PATANJALI FOODS	1759.9	-2.2	30.8	65.0	24.7	13.4
BRITANNIA INDS	5436	0.8	18.8	32.5	15.1	14.1
MARICO LTD	723.3	0.5	23.1	38.6	14.2	15.8

Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
YES BANK LTD	20.02	9.8	78403	19565	4.0
SOLAR INDUSTRIES	13487	2.8	6538	1881	3.5
HINDUSTAN AERONA	4501.2	1.8	126344	36361	3.5
BHARAT FORGE CO	1165.6	4.7	83596	25890	3.2
BHARAT ELECTRON	315.85	2.8	65002	23286	2.8

Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
INTERGLOBE AVIAT	5101.0	-0.9	33171	71977	2.2
DALMIA BHARAT LT	1916.8	-2.4	2818	5646	2.0
CROM GREAVES CON	321.9	-1.3	2442	4772	2.0
PHOENIX MILLS	1478.9	-1.2	3120	4267	1.4
GRASIM INDS LTD	2634.8	-2.4	5899	8039	1.4

Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Relative to Highest Call OI
VARUN BEVERAGES	496.25	1.5	18541	18541	100.0
SYNGENE INTERNAT	614.1	0.6	15523	15523	100.0
PHOENIX MILLS	1478.9	-1.2	2255	2255	100.0
ACC LTD	1811.6	0.1	20791	21413	97.1
HFCL LTD	74.14	-1.7	7970	8236	96.8

Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Relative to Highest Put OI
IIFL FINANCE LTD	372.5	3.2	3079	3079	100.0
HFCL LTD	74.14	-1.7	5071	5071	100.0
TATA TECHNOLOGIE	665.95	1.7	6799	6973	97.5
PHOENIX MILLS	1478.9	-1.2	1949	2031	96.0
INDIAN HOTELS CO	718.75	-4.2	14106	14776	95.5

Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	Relative to Highest CV
NO STOCK OPTION MET THE CONDITION MENTIONED IN THE FOOTNOTE					

Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	Relative to Highest PV
INDIAN HOTELS CO	718.75	-4.2	57098	57098	100.0
LARSEN & TOUBRO	3443.9	3.6	119169	142048	83.9

Call Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
INDIAN HOTELS CO	718.75	-4.2	21162	9829	2.2
BANK OF BARODA	220.09	1.3	29005	13766	2.1
ACC LTD	1811.6	0.1	20791	10805	1.9
COMPUTER AGE MAN	3479.6	-2.5	10779	5790	1.9
MRF LTD	137675	-0.8	3959	2137	1.9

Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
INDIAN HOTELS CO	718.75	-4.2	14106	6620	2.1
YES BANK LTD	20.02	9.8	7388	3792	1.9
INTERGLOBE AVIAT	5101	-0.9	18761	10145	1.8
AARTI INDUS LTD	451.6	0.7	9151	5134	1.8
MRF LTD	137675	-0.8	3036	1705	1.8

Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
BHARAT FORGE CO	1165.6	4.7	83596	16771	5.0
LARSEN & TOUBRO	3443.9	3.6	255730	60516	4.2
TITAN CO LTD	3510.3	4.2	106938	33407	3.2
PIDILITE INDS	2980	0.8	12556	4415	2.8
BHARAT ELECTRON	315.85	2.8	65002	29899	2.2

Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
LARSEN & TOUBRO	3443.9	3.6	119169	29024	4.1
INTERGLOBE AVIAT	5101	-0.9	71977	19234	3.7
INDIAN HOTELS CO	718.75	-4.2	57098	15668	3.6
BHARAT FORGE CO	1165.6	4.7	25890	7138	3.6
TITAN CO LTD	3510.3	4.2	75882	21547	3.5

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	1847400	15.5%	2251	2600	2389200	15.5%	ITC	450	5910400	6.2%	424	430	3929600	1.5%
ADANIPTS	1400	1528400	7.2%	1306	1200	1094400	-8.1%	JIOFIN	300	6189150	20.8%	248	260	3700950	4.7%
APOLLOHOSP	7200	101125	7.1%	6722	6150	89500	-8.5%	JSWSTEEL	1050	980775	9.7%	957	900	1240650	-6.0%
ASIANPAINT	2500	939800	8.7%	2300	2300	767800	0.0%	KOTAKBANK	2300	1267600	9.4%	2103	2100	715600	-0.1%
AXISBANK	1300	2536875	12.9%	1151	1180	1458125	2.5%	LT	3500	1153950	1.6%	3444	3300	457200	-4.2%
BAJAJ-AUTO	8500	202350	10.6%	7683	7800	82350	1.5%	M&M	3300	814100	10.7%	2982	2900	444675	-2.8%
BAJAJFINSV	2100	2339500	6.6%	1970	1900	537500	-3.6%	MARUTI	12000	318650	-2.0%	12250	12000	204150	-2.0%
BAJFINANCE	10000	813500	15.7%	8641	8500	407625	-1.6%	NESTLEIND	2500	522600	7.5%	2325	2300	110200	-1.1%
BEL	320	7937250	1.3%	316	290	3856050	-8.2%	NTPC	370	8428500	10.5%	335	380	2151000	13.5%
BHARTIARTL	1900	2119925	2.8%	1848	1700	959500	-8.0%	ONGC	240	10252550	2.1%	235	215	2325400	-8.5%
CIPLA	1600	940550	8.1%	1480	1300	451425	-12.2%	POWERGRID	330	3933000	10.3%	299	300	1688400	0.2%
COALINDIA	400	5886300	4.6%	382	450	2149350	17.7%	RELIANCE	1400	6159000	1.7%	1377	1300	5505000	-5.6%
DRREDDY	1200	1169375	3.8%	1156	1000	875000	-13.5%	SBILIFE	1780	955875	4.7%	1700	1720	278250	1.2%
EICHERMOT	5700	190225	7.1%	5324	5300	168875	-0.5%	SBIN	800	10491750	2.7%	779	750	4371750	-3.8%
ETERNAL	260	8578000	14.5%	227	200	4540000	-11.9%	SHRIRAMFIN	700	2997000	16.4%	601	600	906750	-0.2%
GRASIM	3120	321000	18.4%	2635	2340	151750	-11.2%	SUNPHARMA	1900	2548350	8.9%	1745	1600	581350	-8.3%
HCLTECH	1600	976500	1.9%	1569	1200	897750	-23.5%	TATACONSUM	1300	792984	16.7%	1114	1100	470136	-1.2%
HDFCBANK	1980	3544200	4.8%	1890	1800	2357850	-4.7%	TATAMOTORS	700	4524300	-1.2%	709	650	3624500	-8.3%
HDFCLIFE	800	2119700	12.1%	714	720	1080200	0.9%	TATASTEEL	150	14998500	5.1%	143	140	13200000	-1.9%
HEROMOTOCO	4000	314100	3.8%	3854	3900	178650	1.2%	TCS	3500	1170925	1.7%	3440	3400	501725	-1.2%
HINDALCO	650	1884400	3.6%	627	620	1407000	-1.1%	TECHM	1500	618000	0.4%	1494	1500	452400	0.4%
HINDUNILVR	2500	1208700	7.2%	2333	2400	476700	2.9%	TITAN	3500	483000	-0.3%	3510	3300	404600	-6.0%
ICICIBANK	1460	3448200	5.1%	1389	1400	2120300	0.8%	TRENT	5700	465900	11.5%	5113	5200	368200	1.7%
INDUSINDBK	900	1916500	10.0%	818	800	1803000	-2.2%	ULTRACEMCO	13000	317600	14.4%	11364	10000	91550	-12.0%
INFY	1600	2174800	6.1%	1508	1200	1530000	-20.4%	WIPRO	250	9525000	3.3%	242	240	3051000	-0.8%

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

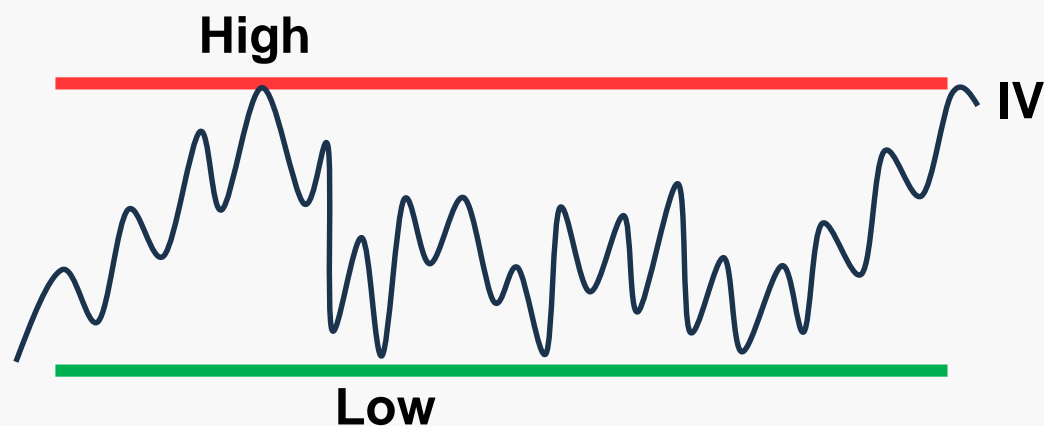
If distance to call strike from current market price = distance to put strike from current market price, then the %Away columns will be uncolored

- 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**

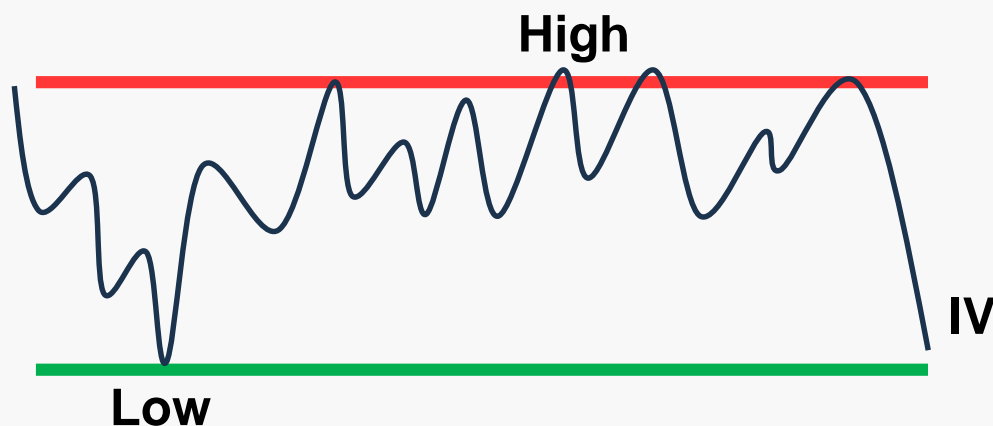
**ATM IV is the midpoint of the IV for the ATM call and put respectively*

- **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), 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

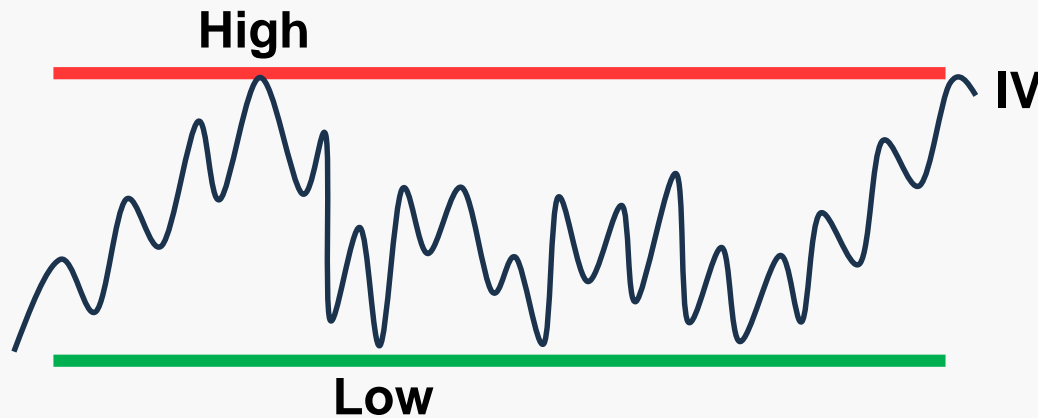


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.

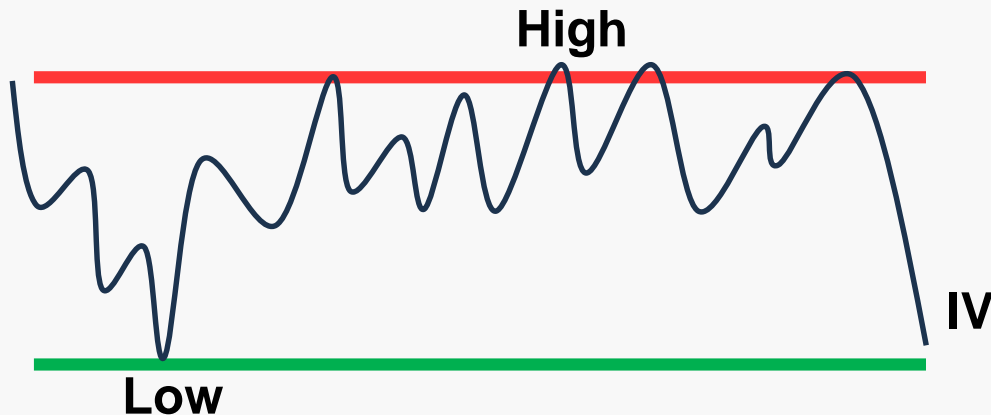


In this chart, notice that today's IV is close to the lowest low seen in the last 12 months. This means that IV for this option is cheap today compared to where it has traded over the last one year.

- **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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