



Daily Derivatives Report

Nifty Futures

	Value	Change
Most recent settlement	24,123	1.7%▼
Open Interest (OI)	2,02,47,435	10.8%▲
Change in OI (abs)	2,02,47,435	19,68,005▲
Premium / Discount (Abs)	94	1▼
Inference	Short Build Up	

Bank Nifty Futures

	Value	Change
Most recent settlement	56,319	3.0%▼
Open interest (OI)	30,23,700	7.4%▲
Change in OI (abs)	30,23,700	2,07,870▲
Premium / Discount (Abs)	299	3▲
Inference	Short Build Up	

Volatility Insights

	Value	Change
India VIX Index	23.36	3.48▲
Nifty ATM IV (%)	25.01	5.79▲
Bank Nifty ATM IV (%)	26.90	7.61▲
PCR (Nifty)	0.99	0.15▲
PCR (Bank Nifty)	0.79	0.03▼

The FII Long Ratio in Index Futures **drop** to 12.2%, **down** from 12.9 % in the previous session.

Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
WIPRO	16,16,31,000	3.7%	198.25	1.2%
TORNTPHARM	29,18,750	2.2%	4366.1	0.8%
MCX	1,26,24,375	2.1%	2589.3	1.9%
DMART	56,44,500	1.8%	3969.5	2.3%
APOLLOHOSP	25,25,750	1.5%	7792	0.7%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
OIL	2,45,85,400	20.0%	472.65	-2.2%
KPITTECH	79,54,300	18.3%	690.3	-1.6%
BPCL	4,24,68,425	10.2%	332.6	-5.7%
FEDERALBNK	7,60,05,000	9.4%	274.3	-4.6%
SBIN	7,05,87,000	8.4%	1103.7	-3.7%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
BSE	83,68,500	-3.6%	2779.2	1.2%
MUTHOOTFIN	41,71,200	-3.1%	3246.9	0.2%
BIOCON	3,65,75,000	-2.9%	391.35	0.1%
PERSISTENT	39,91,500	-2.8%	4772.5	0.2%
KFINTECH	25,04,500	-2.2%	912.45	0.1%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
BHARATFORG	64,59,000	-7.0%	1871.2	-2.4%
POLYCAB	20,83,375	-6.4%	8264.5	-3.5%
UPL	3,13,43,860	-6.1%	625.8	-0.6%
ICICIPRULI	1,75,32,450	-5.2%	602.2	-2.1%
LUPIN	69,06,675	-4.1%	2305.6	-1.7%

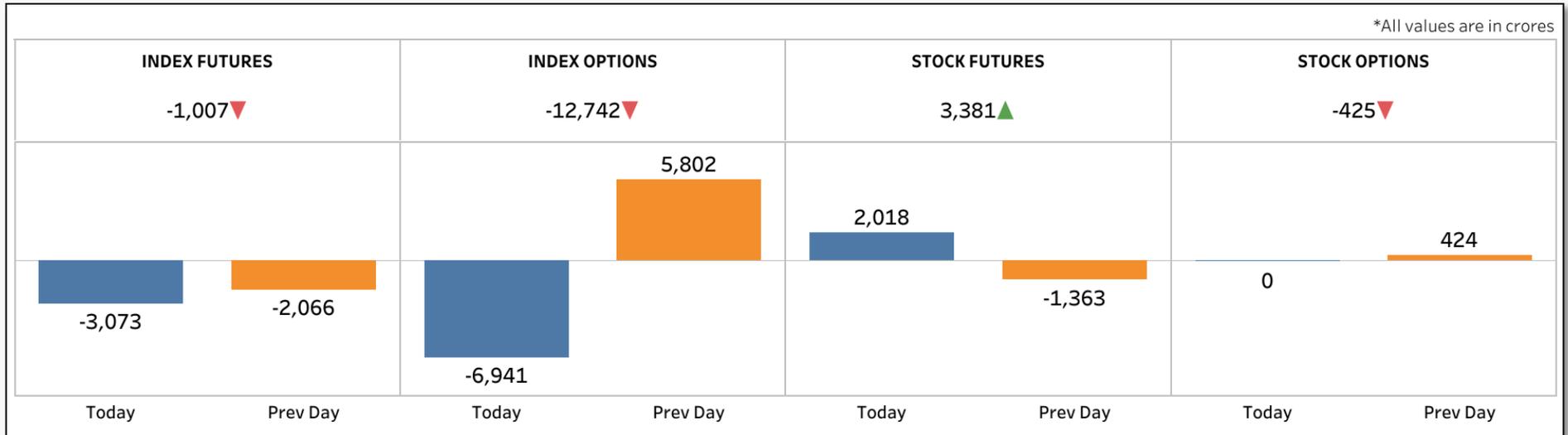
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

Open Interest Trends by Participant

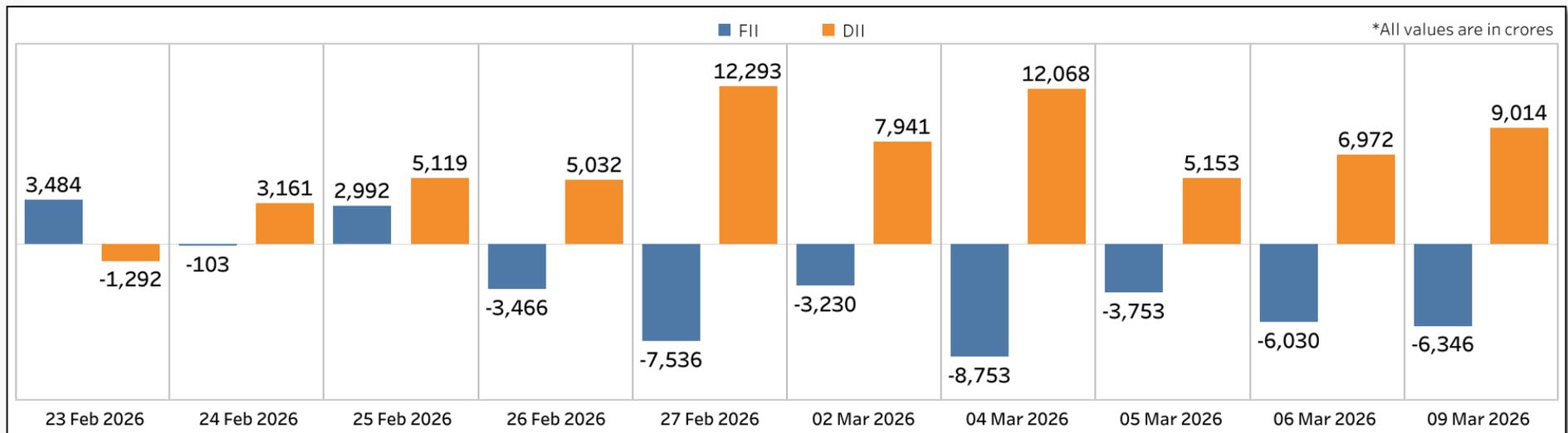
▲ and ▼ indicate positive and negative absolute changes, respectively

FII				DII			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
68,308 ▲	-7,168 ▼	-145,907 ▼	50,253 ▲	824 ▲	1,496 ▲	1,940 ▲	-29,349 ▼
16,619	-19,611	88,341	35,202	-146	-44	-2,380	-34,598
-51,689	-12,443	-57,566	-15,051	-970	-1,540	-4,320	-5,249
Net O/S -157,826 Today Prev Day	Net O/S -193,902 Today Prev Day	Net O/S 395,449 Today Prev Day	Net O/S 1,213,799 Today Prev Day	Net O/S -22 Today Prev Day	Net O/S 47,802 Today Prev Day	Net O/S 27,210 Today Prev Day	Net O/S -4,160,085 Today Prev Day
Clients				Pro			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
-84,027 ▼	-9,569 ▼	372,254 ▲	-37,176 ▼	14,893 ▲	15,241 ▲	-228,286 ▼	16,272 ▲
3,978	3,597	154,282	-19,882	-20,451	16,058	-94,335	19,278
88,005	13,166	-217,972	17,294	-35,344	817	133,951	3,006
Net O/S 252,005 Today Prev Day	Net O/S 117,688 Today Prev Day	Net O/S -478,446 Today Prev Day	Net O/S 2,506,900 Today Prev Day	Net O/S -94,156 Today Prev Day	Net O/S 28,412 Today Prev Day	Net O/S 55,787 Today Prev Day	Net O/S 439,386 Today Prev Day

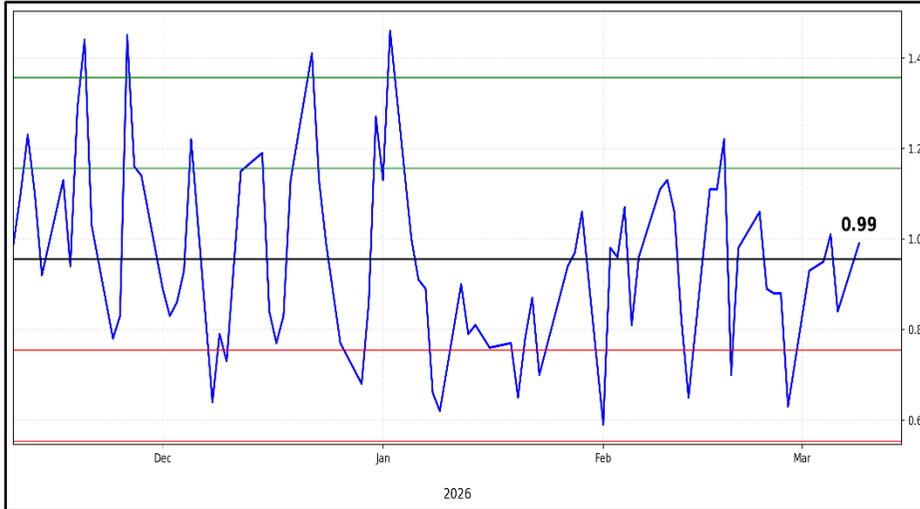
Daily Net Open Interest Change



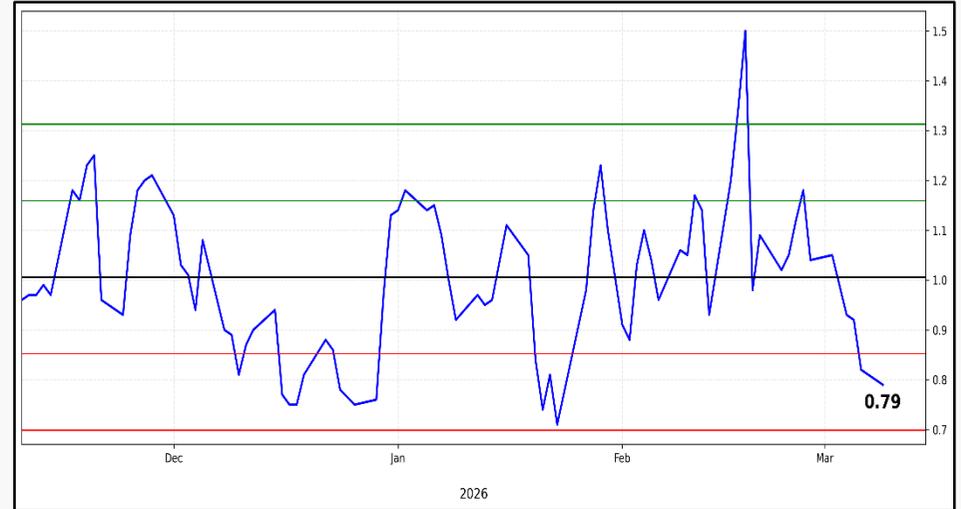
DII and FII Daily Cash Market Flows



Nifty



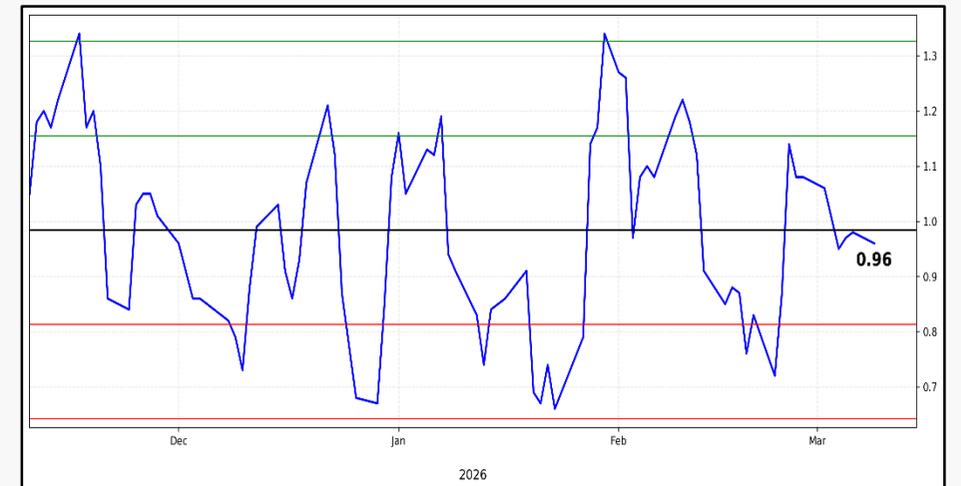
Bank Nifty



Fin Nifty



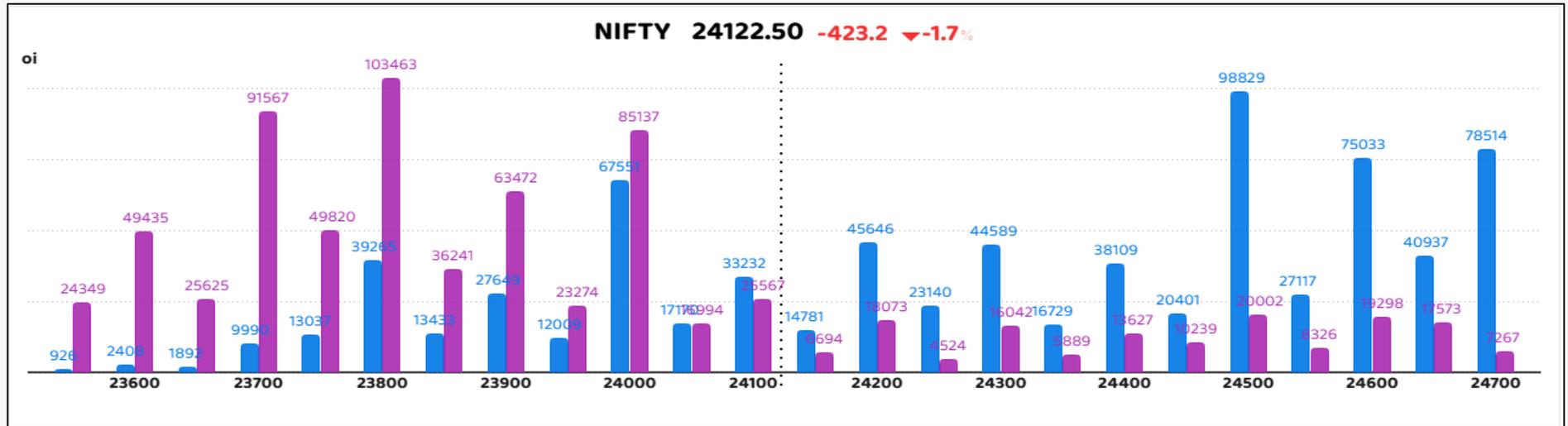
Midcap Select Nifty



On the day immediately post expiration, PCR values will differ due to the way open interest data for the expired series is treated for the PCR calculation

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

Call ■ Put ■



For Nifty, the 24,500 Call and 23,800 Put had the highest call and put concentration (contracts). For the Bank Nifty, the 56,000 Call and the 56,000 Put saw the most amount of open interest.

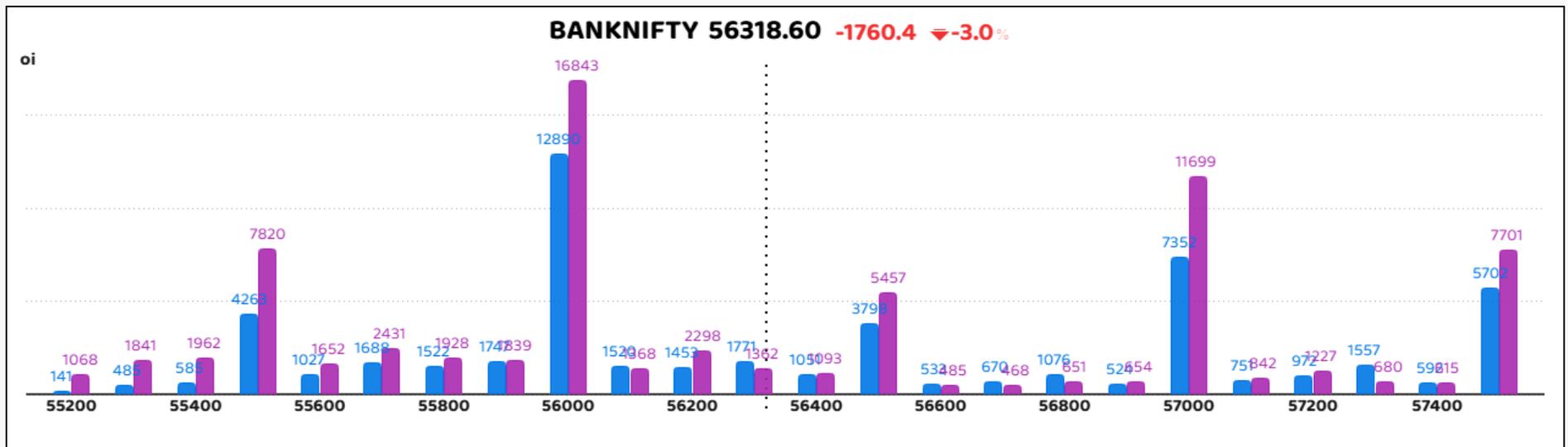
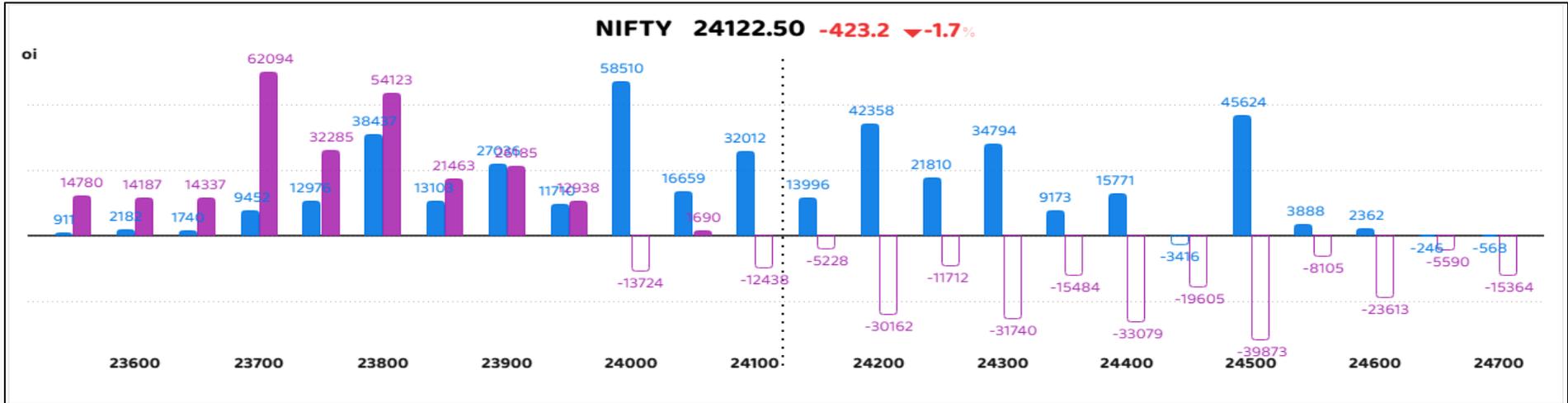


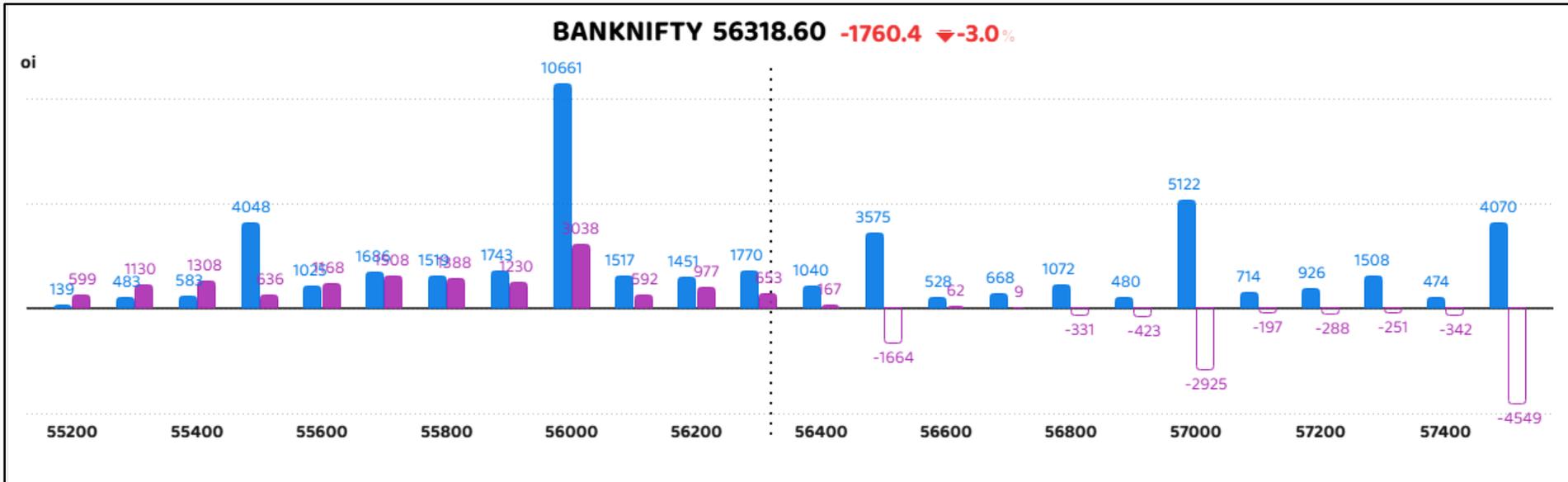
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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 23,700 Put



For the Bank Nifty, the biggest open interest changes were seen at the 56,000 Call & the 57,500 Put

Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
MARUTI SUZUKI IN	13,508.0	-4.6	30.7	30.7	11.3	100.0
ULTRATECH CEMENT	11,378.0	-5.1	34.8	34.8	14.1	100.0
ASIAN PAINTS LTD	2,220.8	-2.6	31.2	31.2	9.5	100.0
PIDILITE INDS	1,386.4	-3.3	28.9	28.9	11.8	100.0
HDFC BANK LTD	840.7	-1.9	27.8	28.0	1.5	99.3

Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
NTPC LTD	376.3	-1.1	25.9	116.6	14.9	10.8
HDFC LIFE INSURA	653.8	-2.2	26.9	64.6	16.6	21.4
ADANI PORTS AND	1,421.3	-2.8	37.6	99.7	19.0	23.1
TATA STEEL LTD	191.0	-3.8	30.2	110.0	5.2	23.9
NMDC LTD	79.1	-0.8	37.7	94.2	19.8	24.0

Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
MARUTI SUZUKI IN	13,508.0	-4.6	30.7	30.7	11.3	100.0
ULTRATECH CEMENT	11,378.0	-5.1	34.8	34.8	14.1	100.0
ASIAN PAINTS LTD	2,220.8	-2.6	31.2	31.2	9.5	100.0
PIDILITE INDS	1,386.4	-3.3	28.9	28.9	11.8	100.0
BLUE STAR LTD	1,875.1	-3.8	42.0	42.0	20.3	100.0

Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
ADANI ENERGY SOL	981.4	-1.1	26.3	61.7	20.6	2.0
STATE BANK IND	1,098.5	-3.9	14.8	39.0	2.1	3.0
MARICO LTD	778.0	-0.9	20.8	33.9	15.0	26.0
RBL BANK LTD	297.9	-1.9	33.3	71.1	10.6	45.9
PI INDUSTRIES	3,033.2	-1.5	27.1	57.8	12.5	48.2

Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
TORNTPHARM	4,373.6	1.3	8,988	2,201	4.1
DMART	3,966.2	2.3	68,495	16,891	4.1
AUROPHARMA	1,247.3	1.3	24,528	6,091	4.0
IEX	120.2	-1.2	7,103	2,054	3.5
CROMPTON	241.3	-2.7	5,447	1,586	3.4

Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
POLYCAB	8,228.5	-3.8	15,091	28,424	1.9
ADANIPOINTS	1,421.3	-3.8	19,254	30,687	1.6
ASIANPAINT	2,220.8	-2.6	34,483	49,885	1.4
BPCL	331.2	-6.1	27,030	38,398	1.4
BLUESTARCO	1,875.1	-3.8	5,192	6,962	1.3

Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Relative to Highest Call OI
CAMS	649.1	0.0	4,331	4,166	100.0
BANDHANBNK	174.1	-4.9	9,332	8,159	100.0
BHARTIARTL	1,866.7	-0.2	34,798	34,670	100.0
BAJAJ-AUTO	9,383.0	-4.4	21,610	21,378	100.0
BAJAJFINSV	1,841.5	-1.5	33,905	27,386	100.0

Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Relative to Highest Put OI
BPCL	331.2	-6.1	9,121	8,346	100.0
BOSCHLTD	31,600.6	-5.2	4,077	3,678	100.0
HINDPETRO	384.6	-5.0	7,732	6,915	100.0
INDIGO	4,236.6	-3.8	27,629	25,621	100.0
IOC	161.2	-4.4	10,620	9,560	100.0

Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	Relative to Highest CV
BAJAJFINSV	1,841.5	-1.5	43,566	40,936	100.0
DMART	3,966.2	2.3	68,495	25,195	100.0
HINDPETRO	384.6	-5.0	21,082	17,431	100.0
BPCL	331.2	-6.1	27,030	21,452	100.0
INDIGO	4,236.6	-3.8	1,02,392	64,186	100.0

Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	Relative to Highest PV
HINDPETRO	384.6	-5.0	23,305	18,024	100.0
DMART	3,966.2	2.3	16,891	8,966	100.0
BPCL	331.2	-6.1	38,398	22,717	100.0
BAJAJFINSV	1,841.5	-1.5	20,054	19,476	100.0
ASIANPAINT	2,220.8	-2.6	49,885	41,248	100.0

Call Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
INDIGO	4,236.6	-3.8	43,337	20,878	2.1
BAJAJFINSV	1,841.5	-1.5	33,905	19,770	1.7
MAZDOCK	2,387.0	-3.4	25,099	17,224	1.5
VOLTAS	1,436.5	-2.8	14,093	9,705	1.5
IDFCFIRSTB	66.8	-4.6	33,980	23,591	1.4

Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
RBLBANK	297.9	-1.9	8,610	5,180	1.7
INDIGO	4,236.6	-3.8	27,629	17,380	1.6
MAZDOCK	2,387.0	-3.4	12,814	8,149	1.6
POLYCAB	8,228.5	-3.8	9,743	6,791	1.4
HINDPETRO	384.6	-5.0	7,732	5,465	1.4

Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
DMART	3,966.2	2.3	68,495	10,711	6.4
INDIGO	4,236.6	-3.8	1,02,392	29,554	3.5
PGEL	522.4	-14.2	33,762	10,591	3.2
HINDPETRO	384.6	-5.0	21,082	8,684	2.4
PNBHOUSING	755.4	-2.3	6,883	2,858	2.4

Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
PGEL	522.4	-14.2	36,535	5,623	6.5
BPCL	331.2	-6.1	38,398	9,641	4.0
DMART	3,966.2	2.3	16,891	5,121	3.3
HINDPETRO	384.6	-5.0	23,305	7,296	3.2
MANKIND	2,163.3	-1.1	9,177	2,906	3.2

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
ADANIANT	2200	1175127	10.0%	1999	2200	808962	10.0%	JIOFIN	260	5959600	11.9%	232	260	4002050	11.9%
ADANIPTS	1500	1141900	5.5%	1421	1400	882075	-1.5%	JSWSTEEL	1300	759375	9.0%	1193	1200	354375	0.6%
APOLLOHOSP	7800	116125	0.3%	7779	7000	130875	-10.0%	KOTAKBANK	440	3340000	13.9%	386	400	2632000	3.5%
ASIANPAINT	2500	669000	12.6%	2221	2300	551750	3.6%	LT	4000	991550	4.1%	3842	4000	435050	4.1%
AXISBANK	1350	2299375	4.8%	1288	1340	780625	4.0%	M&M	3600	615600	12.9%	3188	3400	368800	6.7%
BAJAJ-AUTO	10500	327450	11.9%	9383	9000	116400	-4.1%	MARUTI	15000	257050	11.0%	13508	13000	85000	-3.8%
BAJAJFINSV	1860	1289250	1.0%	1842	1920	428750	4.3%	MAXHEALTH	1100	319200	5.6%	1042	1020	264075	-2.1%
BAJFINANCE	1000	1684500	6.6%	938	960	1428000	2.3%	NESTLEIND	1260	434000	2.0%	1236	1200	184000	-2.9%
BEL	500	5933700	9.3%	457	450	2807250	-1.6%	NTPC	380	10147500	1.0%	376	380	4171500	1.0%
BHARTIARTL	2000	2834800	7.1%	1867	1800	872575	-3.6%	ONGC	300	14447250	10.8%	271	265	3478500	-2.1%
CIPLA	1350	978750	1.9%	1325	1260	388500	-4.9%	POWERGRID	310	5781700	5.0%	295	300	2485200	1.6%
COALINDIA	450	3634200	2.8%	438	410	1852200	-6.3%	RELIANCE	1450	4796500	1.8%	1424	1300	3030000	-8.7%
DRREDDY	1360	861250	5.7%	1287	1300	433125	1.0%	SBILIFE	2100	533625	9.8%	1913	1960	131250	2.5%
EICHERMOT	8000	187600	10.1%	7266	7500	134100	3.2%	SBIN	1200	4698000	9.2%	1099	1000	3111750	-9.0%
ETERNAL	300	13604250	30.7%	230	250	5958225	8.9%	SHRIRAMFIN	1100	1423125	11.4%	987	1000	1244925	1.3%
GRASIM	2860	347250	6.7%	2681	2500	121250	-6.8%	SUNPHARMA	1800	2276050	-0.4%	1807	1700	732200	-5.9%
HCLTECH	1500	1071000	10.4%	1359	1360	368900	0.1%	TATACONSUM	1300	626450	17.9%	1103	1100	217250	-0.2%
HDFCBANK	900	10072150	7.1%	841	900	2824250	7.1%	TMPV	400	6319200	20.5%	332	290	2092800	-12.7%
HDFCLIFE	750	2249500	14.7%	654	650	551100	-0.6%	TATASTEEL	210	15598000	9.9%	191	200	7645000	4.7%
HINDALCO	1000	1310400	5.8%	945	900	913500	-4.8%	TCS	2700	1907850	6.8%	2527	2600	780850	2.9%
HINDUNILVR	2400	947400	9.4%	2195	2000	290100	-8.9%	TECHM	1440	1689000	7.8%	1336	1340	1525200	0.3%
ICICIBANK	1400	5500600	9.5%	1278	1400	2441600	9.5%	TITAN	4760	294000	14.4%	4159	4000	200725	-3.8%
INDIGO	4400	1284900	3.9%	4237	4000	439950	-5.6%	TRENT	4000	498700	8.4%	3689	3700	133400	0.3%
INFY	1400	5214400	6.5%	1315	1280	2593200	-2.7%	ULTRACEMCO	13000	138750	14.3%	11378	11500	38050	1.1%
ITC	320	14396800	4.6%	306	320	3896000	4.6%	WIPRO	220	10200000	10.7%	199	200	4608000	0.6%

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

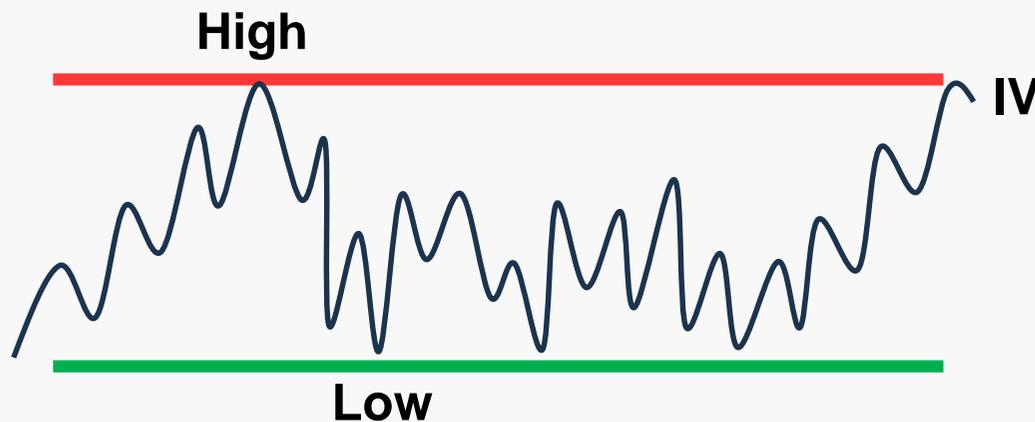
If distance to call strike from current market price = distance to put strike from current market price, then the %Away columns will be uncolored

- 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**

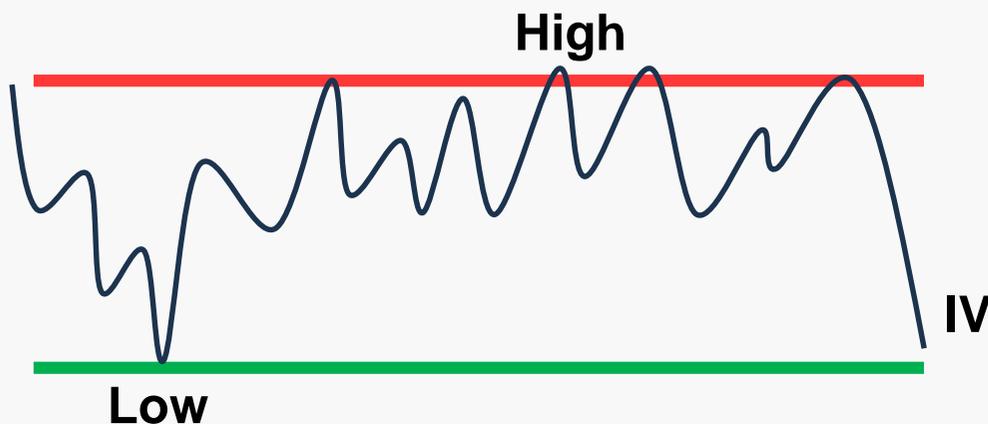
**ATM IV is the midpoint of the IV for the ATM call and put respectively*

- **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 (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

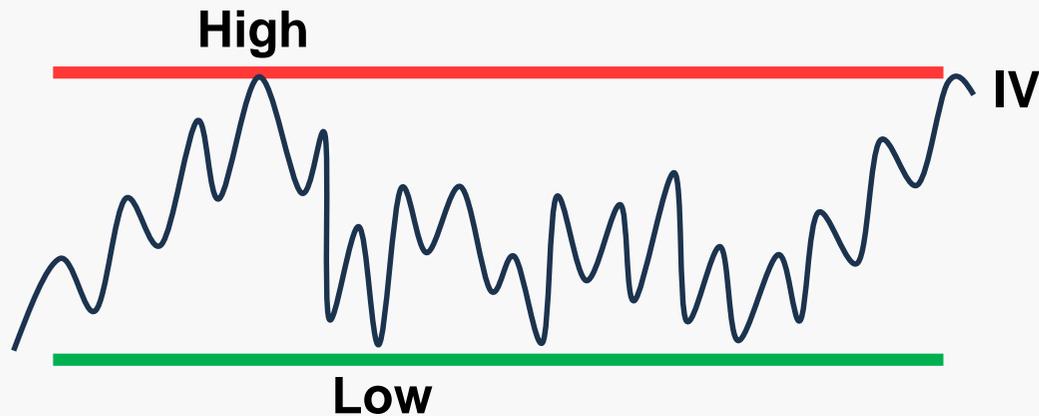


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.

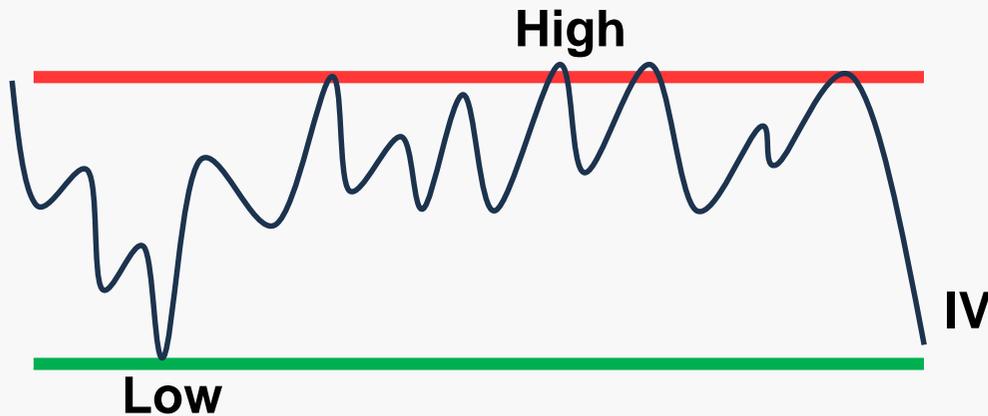


In this chart, notice that today's IV is close to the lowest low seen in the last 12 months. This means that IV for this option is cheap today compared to where it has traded over the last one year.

- **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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