



Daily Derivatives Report

Nifty Futures

	Value	Change
Most recent settlement	23,501	0.6% ▼
Open Interest (OI)	1,57,62,350	2.2% ▲
Change in OI (abs)	1,57,62,350	3,45,150 ▲
Premium / Discount (Abs)	69	52 ▼
Inference	Short Build Up	

Bank Nifty Futures

	Value	Change
Most recent settlement	48,886	1.8% ▼
Open interest (OI)	33,53,835	7.9% ▲
Change in OI (abs)	33,53,835	2,44,005 ▲
Premium / Discount (Abs)	152	132 ▼
Inference	Short Build Up	

Volatility Insights

	Value	Change
India VIX Index	14.91	0.3 ▲
Nifty ATM IV (%)	12.98	0.9 ▼
Bank Nifty ATM IV (%)	17.76	0.6 ▲
PCR (Nifty)	0.88	0.04 ▼
PCR (Bank Nifty)	0.58	0.08 ▼

*The Long Ratio for the FII Index Futures steep decline to close at 16.2%, against 19.2% recorded in the previous session.

Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
MPHASIS	31,75,975	9.4%	2922.4	1.5%
AUBANK	3,60,45,000	4.3%	570.35	1.0%
HCLTECH	1,33,08,750	4.2%	1981.85	3.0%
HINDPETRO	3,74,60,475	3.3%	388.2	0.6%
MARICO	1,89,99,600	2.5%	675.15	1.0%

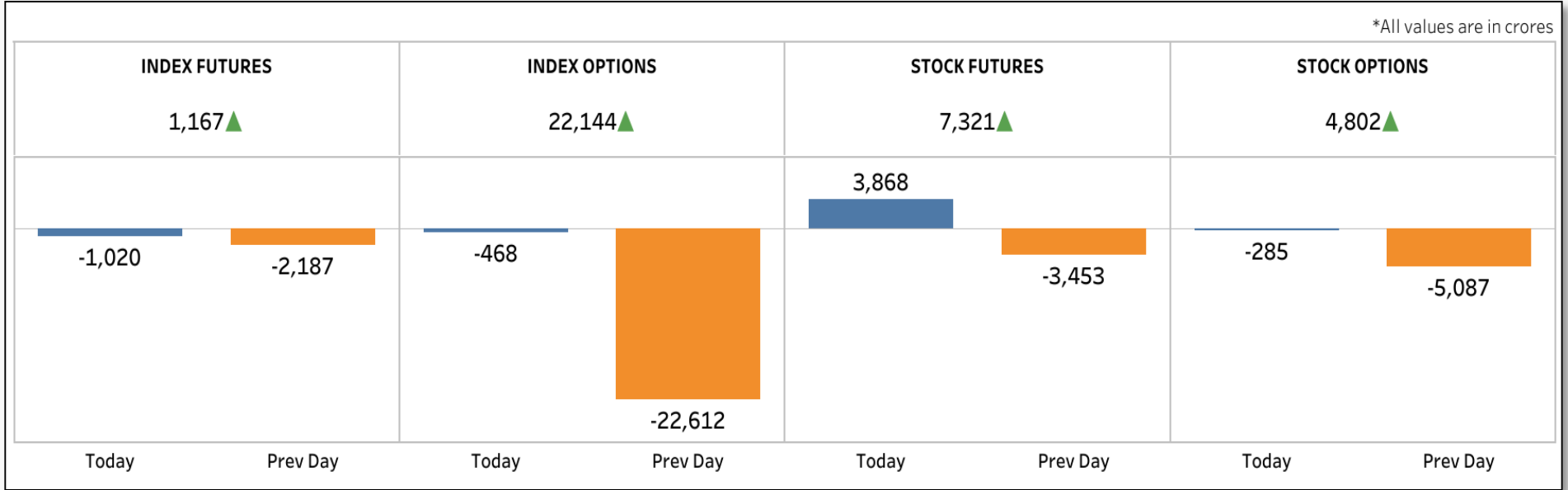
Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
CESC	1,42,82,775	33.8%	162.97	-4.1%
PAYTM	1,67,88,200	16.7%	851.8	-5.1%
CDSL	57,41,050	8.2%	1600	-4.9%
KPITTECH	17,00,000	10.9%	1365.7	-4.4%
DMART	37,30,050	8.4%	3680.05	-3.7%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
LTTS	5,67,400	-8.6%	4934	1.0%
IRCTC	1,62,61,875	-6.2%	782.65	2.2%
COFORGE	20,74,650	-4.7%	9393.7	0.9%
LTIM	22,99,950	-4.3%	6134.45	4.8%
BSOFT	1,23,20,000	-3.0%	552.4	1.4%

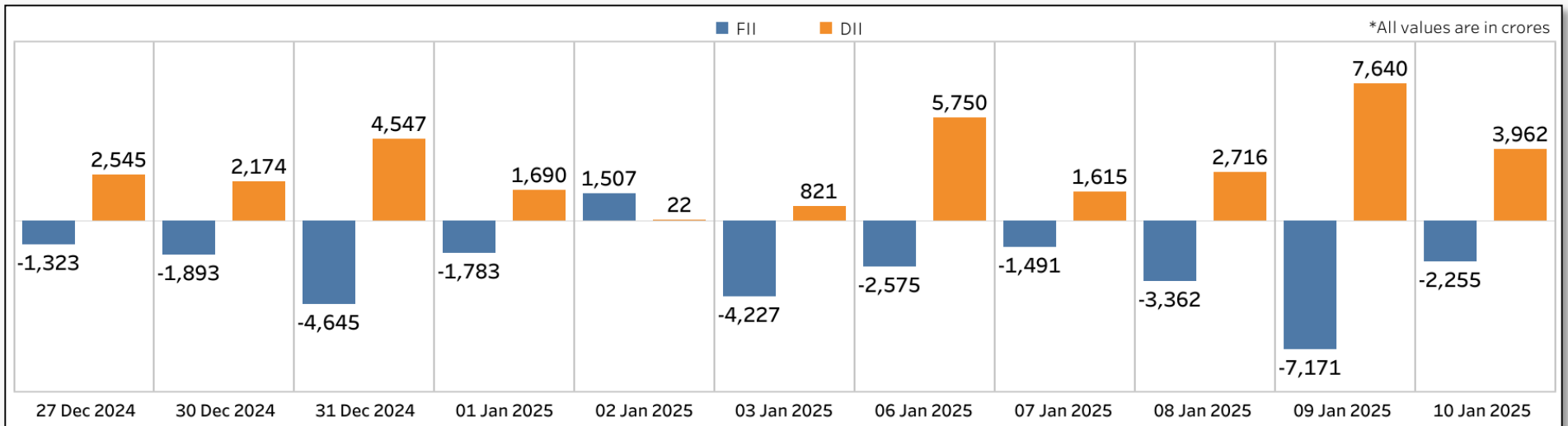
Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
APOLLOTYRE	1,35,30,300	-7.2%	462.8	-2.8%
JKCEMENT	8,04,875	-6.8%	4512.55	-5.0%
DIVISLAB	29,54,600	-5.2%	5777.75	-1.0%
DEEPAKNTR	19,46,700	-4.8%	2417.2	-1.9%
ASHOKLEY	5,85,17,500	-4.7%	210.15	-2.2%

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

Daily Net Open Interest Change

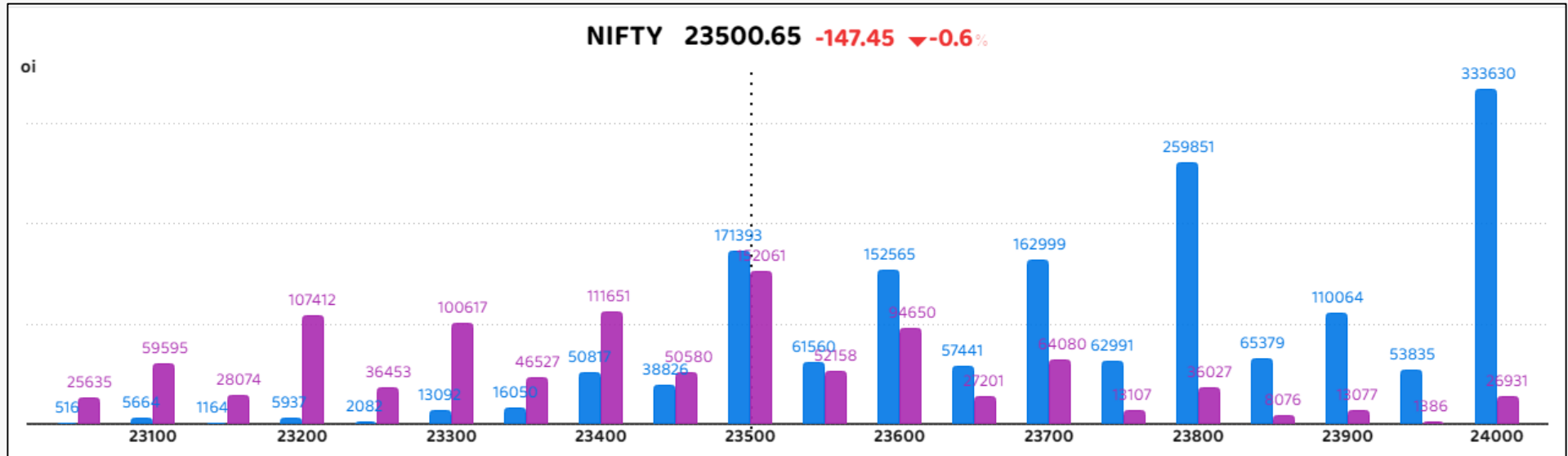


DII and FII Daily Cash Market Flows



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

Call ■ Put ■



For the Nifty, the 24000 Call and the 23500 Put had the highest call and put concentration (contracts). For the Bank Nifty, the 49000 Call and the 48000 Put saw the most amount of open interest.

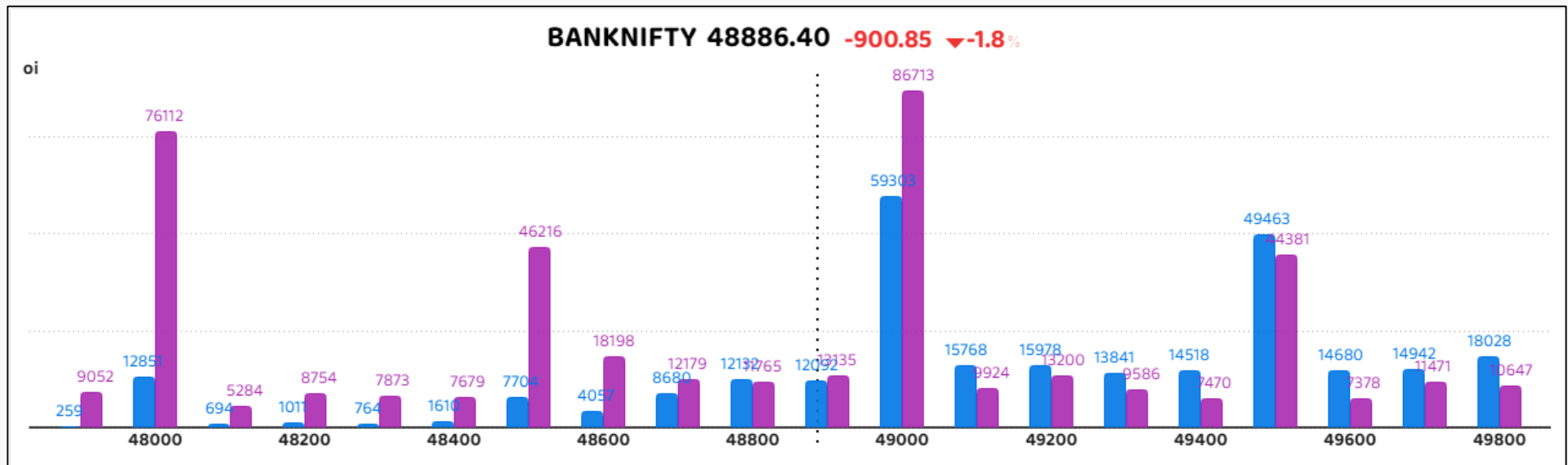
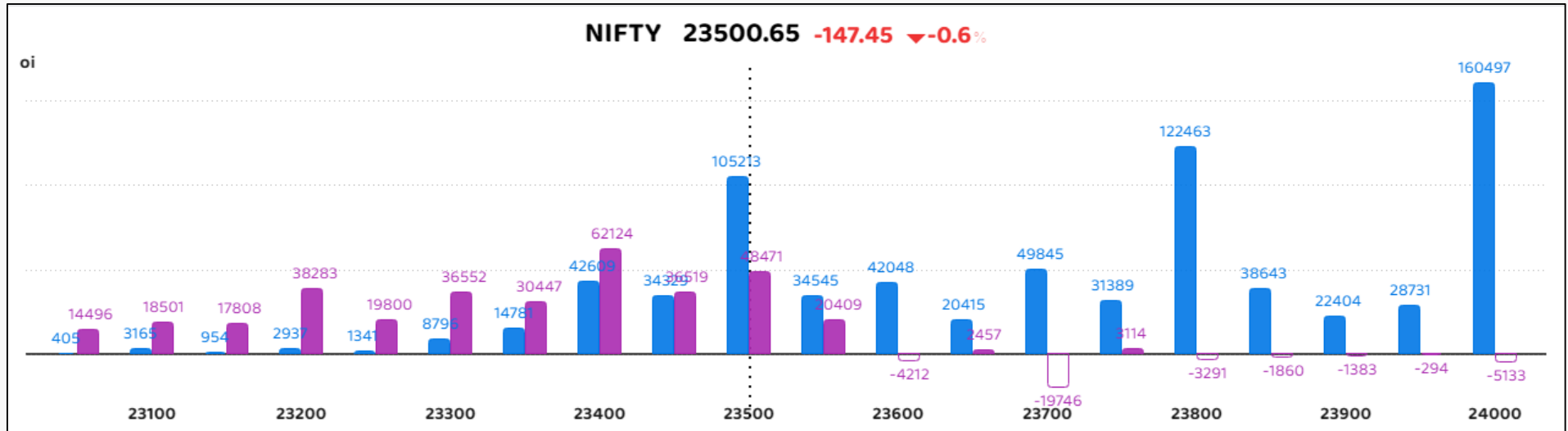


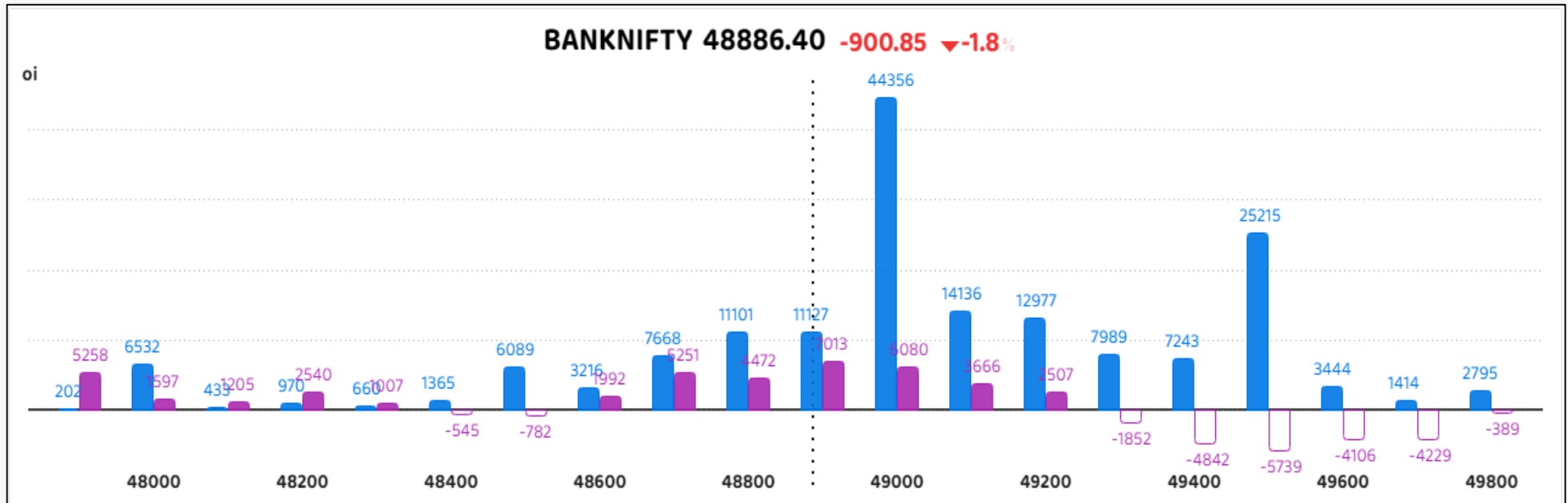
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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

Call ■ Put ■



The largest open interest changes (contracts) were seen at the 24000 Call and the 23400 Put



For the Bank Nifty, the biggest open interest changes were seen at the 49000 Call & the 48900 Put

Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
SHRIRAM FINANCE	532	-5.3	43.6	44.9	22.3	94.3
KOTAK MAHINDRA	1756.2	-1.9	25.8	28.7	1.9	89.1
AXIS BANK LTD	1040.7	-2.0	28.0	34.7	2.8	79.0
JK CEMENTS LTD	4543.55	-4.1	33.9	42.0	5.9	77.4
DIXON TECHNOLOGI	16709.2	-0.9	39.6	51.3	1.8	76.4

Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
BHARAT PETROL	277.65	-0.8	8.7	69.0	8.7	0.0
GUJARAT GAS LTD	486.05	-2.6	21.8	52.6	21.8	0.2
APOLLO TYRES LTD	462	-2.9	20.8	45.4	19.8	4.1
TATA CONSULTANCY	4265.65	5.6	5.4	57.2	1.3	7.3
HDFC LIFE INSURA	608.65	-0.6	25.6	80.6	19.6	9.9

Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
SHRIRAM FINANCE	532	-5.3	43.6	44.9	22.3	98.9
OBEROI REALTY	2128.3	-5.3	40.4	47.5	20.3	94.1
INDUSIND BANK	937.6	-4.4	34.1	60.4	12.4	93.1
KOTAK MAHINDRA	1756.2	-1.9	25.8	28.7	1.9	93.0
ULTRATECH CEMENT	10865.2	-3.5	27.1	37.1	16.2	91.9

Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
BHARAT PETROL	277.65	-0.8	8.7	69.0	8.7	0.0
GUJARAT GAS LTD	486.05	-2.6	21.8	52.6	21.8	0.4
TATA CONSULTANCY	4265.65	5.6	5.4	57.2	1.3	0.6
APOLLO TYRES LTD	462	-2.9	20.8	45.4	19.8	0.7
BATA INDIA LTD	1425.9	0.9	17.2	39.2	13.4	1.6

Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
BALKRISHNA INDS	2732.65	-1.7	2718	520	5.2
ASTRAL LTD	1564.4	0.9	13880	3026	4.6
MRF LTD	117104.5	-1.5	4099	1298	3.2
MPHASIS LTD	2915	1.5	11284	3597	3.1
PAGE INDUSTRIES	46745.55	-1.7	1807	670	2.7

Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
BANK OF BARODA	231.04	-2.4	23022	33409	1.5
JK CEMENTS LTD	4738.8	-4.1	3614	4342	1.2
SRF LTD	2673.9	-2.7	41536	48510	1.2
ATUL LTD	6917.6	-1.8	1158	1323	1.1
COROMANDEL INTER	1951.95	-1.5	3177	3548	1.1

Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Call OI Diff
DIXON TECHNOLOGI	16852.7	-0.9	47598	48247	98.7
CUMMINS INDIA	3108.5	-3.5	11496	12151	94.6
PVR INOX LTD	1161.6	-2.2	12579	15156	83.0

Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Put OI Diff
BANK OF BARODA	225.4	-2.4	17708	20549	86.2
ICICI LOMBARD GE	1877.6	-0.6	3591	4193	85.6
ASTRAL LTD	1564.4	0.9	5214	6340	82.2
SYNGENE INTERNAT	859.8	-2.0	2174	2654	81.9
CAN FIN HOMES	679.35	-2.0	3799	4732	80.3

Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	CV Diff
NO STOCK OPTION MET THE CONDITION IN THE PREVIOUS TRADING SESSION					

Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	PV Diff
NO STOCK OPTION MET THE CONDITION IN THE PREVIOUS TRADING SESSION					

Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
TATA CONSULTANCY	4265.65	5.6	651499	124502	5.2
AARTI INDUS LTD	421.75	2.0	49849	10803	4.6
INDIAN RAILWAY C	779.15	2.0	62644	14468	4.3
HCL TECH LTD	1995.1	3.1	93946	28869	3.3
SRF LTD	2601.1	-2.7	41536	14842	2.8

Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
TATA CONSULTANCY	4265.65	5.6	358395	72929	4.9
SRF LTD	2601.1	-2.7	48510	10355	4.7
NAVIN FLUORINE I	3630.95	-5.1	19752	4343	4.5
AARTI INDUS LTD	421.75	2.0	19931	4752	4.2
INDIAN RAILWAY C	779.15	2.0	26380	8242	3.2

Call Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
SRF LTD	2601.1	-2.7	11925	4315	2.8
MRF LTD	117104.5	-1.5	8645	3694	2.3
INFO EDGE	7835.7	-1.4	14724	7652	1.9
NAVIN FLUORINE I	3630.95	-5.1	5674	3098	1.8
APOLLO TYRES LTD	462	-2.9	6810	4107	1.7

Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
SRF LTD	2601.1	-2.7	14544	3992	3.6
NAVIN FLUORINE I	3630.95	-5.1	4562	2225	2.0
TATA CONSULTANCY	4265.65	5.6	52318	27867	1.9
UNITED BREWERIES	2029.5	0.3	2365	1307	1.8
BRITANNIA INDS	4939.2	0.3	13753	8224	1.7

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	2800	1484400	17.9%	2374	2800	2752500	17.9%	INFY	2000	5974800	1.7%	1967	1900	1247600	-3.4%
ADANIPTS	1200	1847200	7.9%	1112	1200	801600	7.9%	ITC	460	7508800	3.4%	445	440	2014400	-1.1%
APOLLOHOSP	7500	188875	6.6%	7037	7200	77375	2.3%	JSWSTEEL	1000	959175	11.1%	900	900	624375	0.0%
ASIANPAINT	2500	982400	7.7%	2321	2200	668200	-5.2%	KOTAKBANK	1860	1685200	5.9%	1756	1760	1067200	0.2%
AXISBANK	1200	2736250	15.3%	1041	1100	1466875	5.7%	LT	3700	728250	4.6%	3536	3500	547050	-1.0%
BAJAJ-AUTO	10000	253425	14.1%	8764	7600	121875	-13.3%	LTIM	6500	146700	6.1%	6124	5700	115500	-6.9%
BAJAJFINSV	1700	1832500	-0.1%	1701	1700	742500	-0.1%	M&M	3500	556500	13.2%	3093	3000	364175	-3.0%
BAJFINANCE	7500	629875	2.9%	7288	7000	339000	-4.0%	MARUTI	12000	590600	3.2%	11631	11000	178900	-5.4%
BHARTIARTL	1640	2921725	1.5%	1616	1600	733875	-1.0%	NESTLEIND	2300	395800	2.3%	2248	1940	247800	-13.7%
BPCL	300	6807600	8.0%	278	260	2467800	-6.4%	NTPC	340	9364500	10.3%	308	300	1930500	-2.7%
BRITANNIA	4850	241300	-1.8%	4939	4700	466900	-4.8%	ONGC	275	13113100	4.6%	263	250	3630550	-5.0%
CIPLA	1540	671450	4.8%	1469	1360	320125	-7.4%	POWERGRID	330	3774600	10.1%	300	300	2235600	0.1%
COALINDIA	400	3998400	8.5%	369	400	1590750	8.5%	RELIANCE	1300	10983500	4.7%	1242	1200	4647000	-3.4%
DIVISLAB	6200	99200	7.4%	5771	5700	80300	-1.2%	SBLIFE	1440	549000	-2.6%	1478	1420	224250	-3.9%
DRREDDY	1400	1557500	3.4%	1354	1350	391250	-0.3%	SBIN	800	11316000	7.6%	743	800	3991500	7.6%
EICHERMOT	5000	250075	-1.2%	5058	4800	152425	-5.1%	SUNPHARMA	1920	1581300	7.6%	1785	1820	269150	2.0%
GRASIM	2600	336250	10.0%	2364	2500	201000	5.7%	TATACONSUM	1000	567720	2.8%	973	900	635208	-7.5%
HCLTECH	2000	1802500	0.2%	1995	1900	845950	-4.8%	TATAMOTORS	800	8735650	3.3%	775	750	3683350	-3.2%
HDFCBANK	1800	7604300	8.6%	1657	1700	2255550	2.6%	TATASTEEL	140	28853000	9.9%	127	135	13095500	5.9%
HDFCLIFE	640	2381500	5.2%	609	600	903100	-1.4%	TCS	4200	1282225	-1.5%	4266	4000	1396850	-6.2%
HEROMOTOCO	4300	396450	4.3%	4122	4100	152400	-0.5%	TECHM	1760	1708200	3.2%	1706	1680	414000	-1.5%
HINDALCO	600	3458000	4.4%	574	600	1706600	4.4%	TITAN	3600	524300	4.6%	3440	3400	241150	-1.2%
HINDUNILVR	2500	869100	2.4%	2442	2400	579300	-1.7%	ULTRACEMCO	12000	124900	10.4%	10865	11500	45000	5.8%
ICICIBANK	1300	3469200	4.0%	1250	1300	1838200	4.0%	UPL	600	1976945	9.3%	549	500	750670	-8.9%
INDUSINDBK	1000	4543000	6.7%	938	1100	1029000	17.3%	WIPRO	310	5376000	3.1%	301	280	3543000	-6.8%

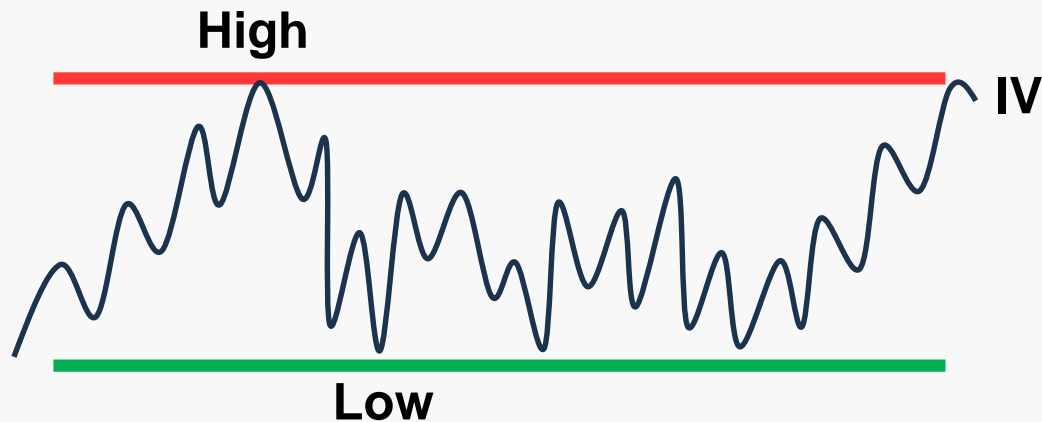
If distance to call strike from current market price < distance to put strike from current market price, then the %Away for the call strike will be colored green
 If distance to put strike from current market price < distance to call strike from current market price, then the %Away for the put strike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

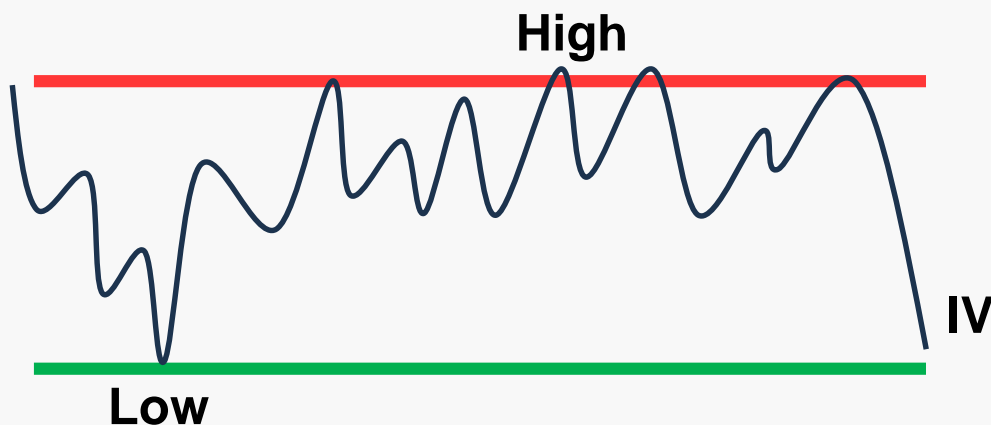
**ATM IV is the midpoint of the IV for the ATM call and put respectively*

- **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 (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

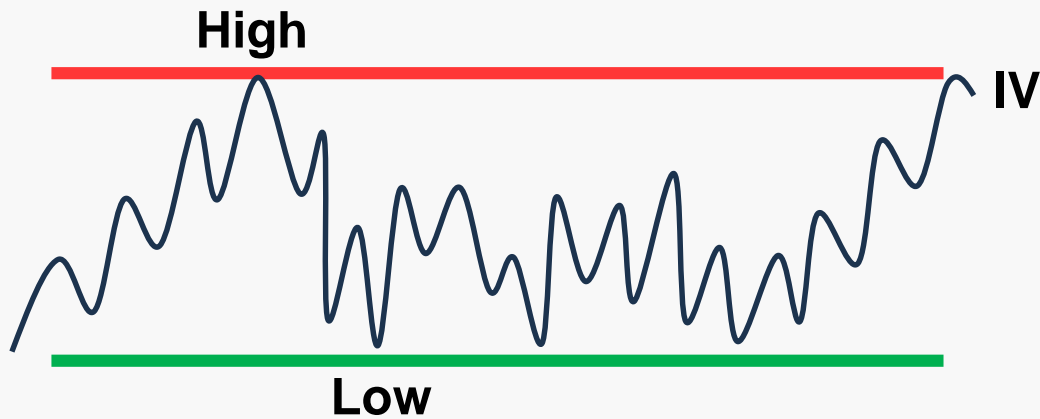


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.

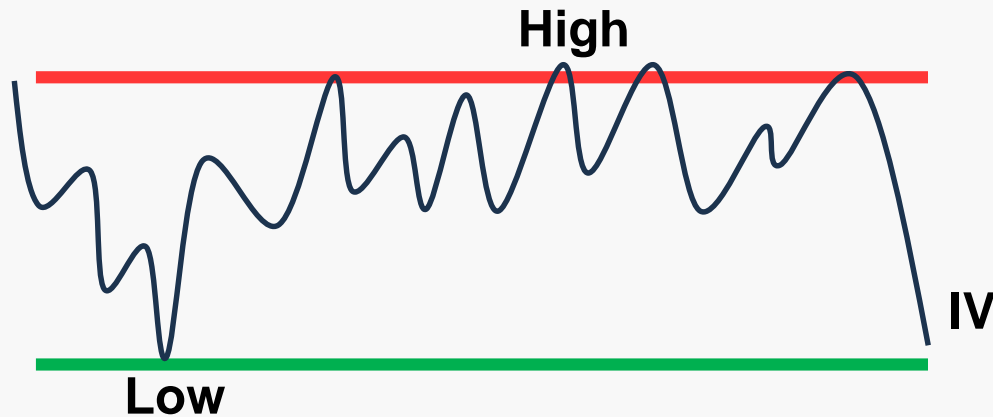


In this chart, notice that today's IV is close to the lowest low seen in the last 12 months. This means that IV for this option is cheap today compared to where it has traded over the last one year.

- **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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