



Daily Derivatives Report

Nifty Futures

	Value	Change
Most recent settlement	22,978	0.6%▲
Open Interest (OI)	2,07,59,500	3.1%▲
Change in OI (abs)	2,07,59,500	6,29,150▲
Premium / Discount (Abs)	20	3▲
Inference	Long Build Up	

Bank Nifty Futures

	Value	Change
Most recent settlement	48,829	1.6%▲
Open interest (OI)	36,90,915	8.0%▼
Change in OI (abs)	36,90,915	3,22,365▼
Premium / Discount (Abs)	-38	54▼
Inference	Short Covering	

Volatility Insights

	Value	Change
India VIX Index	18.2	0.1▲
Nifty ATM IV (%)	20.32	1.4▲
Bank Nifty ATM IV (%)	23.53	1.5▲
PCR (Nifty)	0.95	0.20▲
PCR (Bank Nifty)	0.75	0.16▲

*The Long Ratio for the FII Index Futures closed **higher** at 24.9% against 22.8%, as recorded in the previous session.

Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
BANKINDIA	6,19,67,475	25.8%	109.76	5.0%
INDIANB	45,39,100	13.1%	510.95	3.4%
MFSL	58,42,400	12.0%	1044.3	0.1%
KALYANKJIL	2,00,12,825	10.9%	439	0.2%
GODREJPROP	67,00,950	9.7%	2163.95	3.1%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
CDSL	77,14,700	21.1%	1268.15	-5.9%
CGPOWER	1,05,95,150	14.6%	574.5	-3.9%
COFORGE	29,03,325	12.8%	8493	-3.5%
GUJGASLTD	63,70,000	11.7%	468.95	-3.1%
CANFINHOME	68,23,050	11.3%	664.6	-1.7%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
LTF	7,45,95,716	-17.0%	141.99	0.7%
APOLLOTYRE	1,44,09,200	-12.7%	424.75	1.0%
PVRINOX	38,71,791	-12.0%	1054.75	1.7%
BATAINDIA	29,43,750	-8.6%	1239.65	0.1%
HINDPETRO	4,54,91,625	-7.5%	348.95	1.0%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
BERGEPAIN	1,18,68,120	-13.3%	474.45	-1.5%
ATGL	47,65,475	-12.9%	616.3	-0.4%
DELHIVERY	96,95,950	-12.6%	312.55	-0.2%
DIVISLAB	28,44,100	-11.2%	5399.15	-3.3%
COALINDIA	6,02,39,550	-8.3%	371.1	-1.1%

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

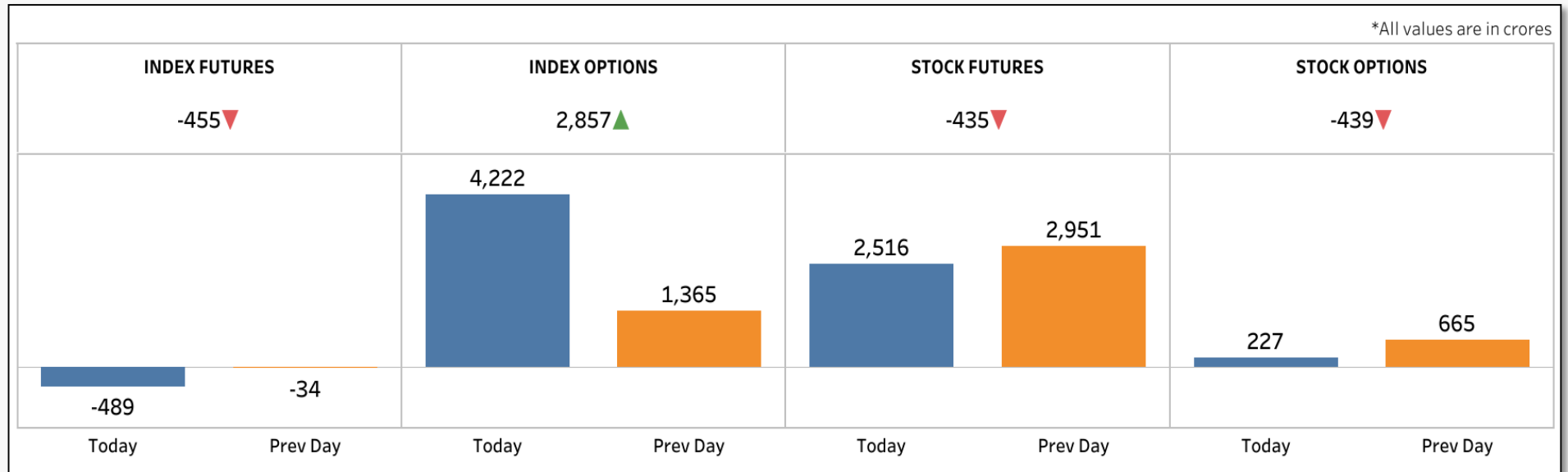
Open Interest Data by Participant

▲ and ▼ indicate positive and negative absolute changes, respectively

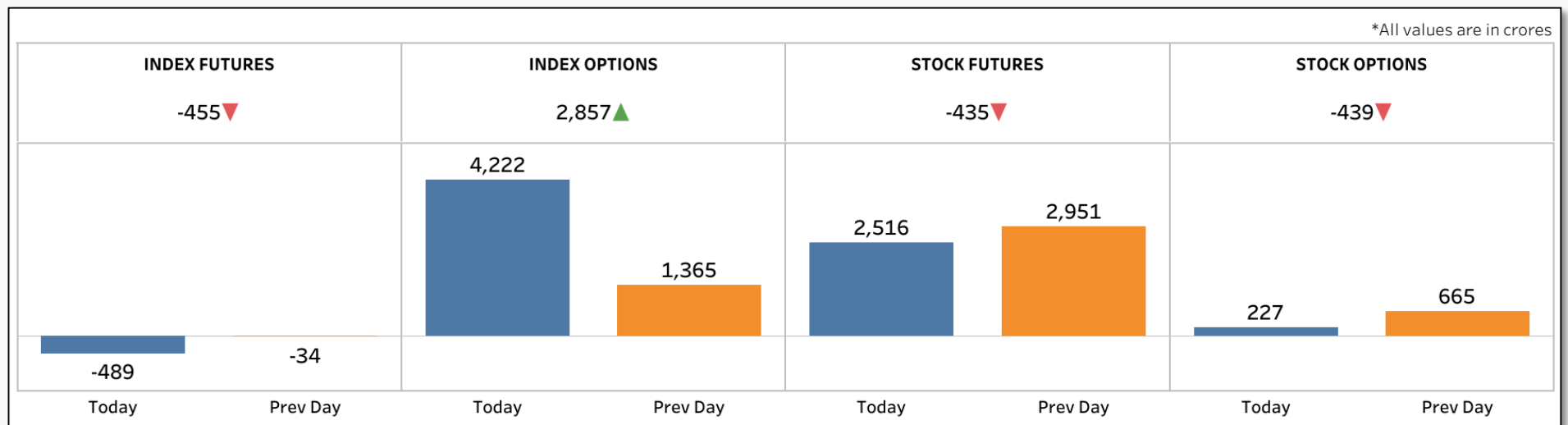
FII				DII			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
206,339 ▲	-3,956 ▼	-6,807 ▼	2,730 ▲	0	-7,252 ▼	-4,562 ▼	-11,747 ▼
216,365				0			13,393
	10,026						
	34,514	38,470			-7,035	-6,000	
			41,877		-14,287	-10,562	1,646
		-77,779					
		-70,972					
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
287,411	-213,967	97,816	1,256,973	70	16,634	127,809	-3,870,856
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
-857,468 ▼	-5,952 ▼	90,272 ▲	27,884 ▲	651,129 ▲	17,160 ▲	-78,900 ▼	-18,867 ▼
				523,560			
117,543							
	-19,266	177,204			-961	-9,961	
	-13,314	86,932			-18,121	-88,861	
			-36,703				12,047
			-64,587				
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
-657,288	251,760	-276,228	2,181,375	369,807	-54,427	50,602	432,508
Today	Prev Day	Today	Prev Day	Today	Prev Day	Today	Prev Day

Daily Net Open Interest Change

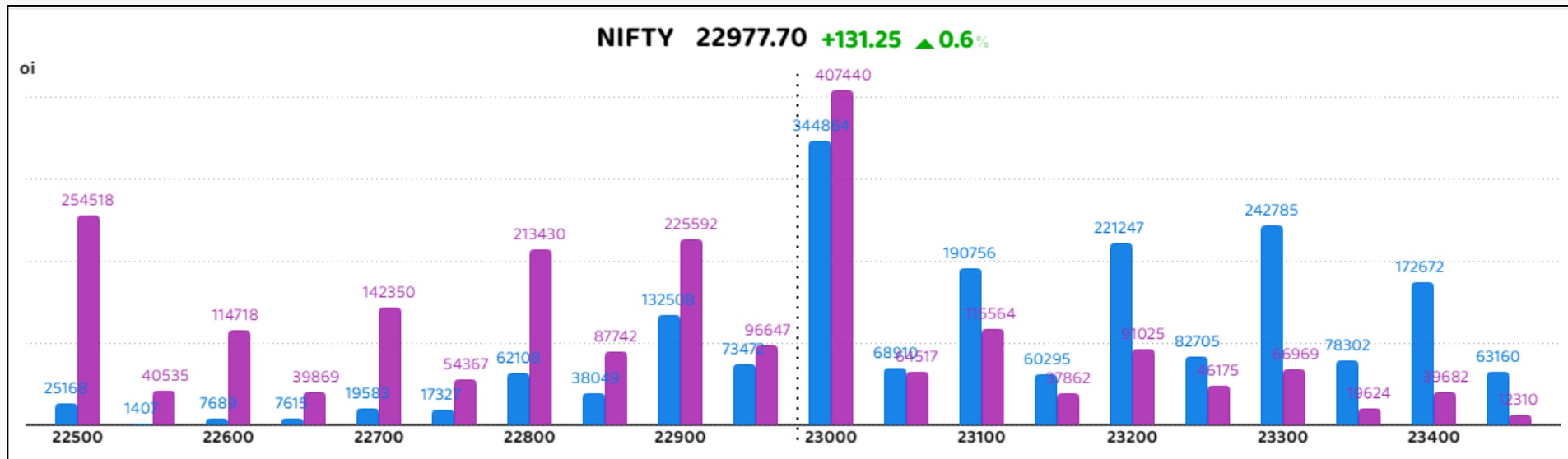


DII and FII Daily Cash Market Flows



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

Call ■ Put ■



For the Nifty, the 23000 Call and the 23000 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.

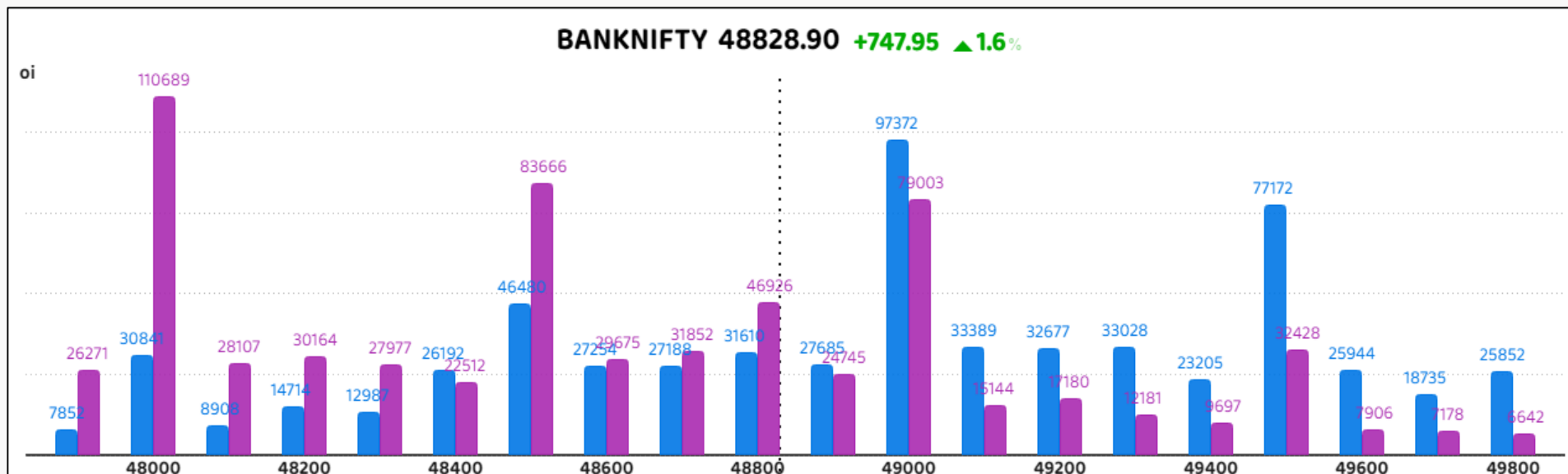
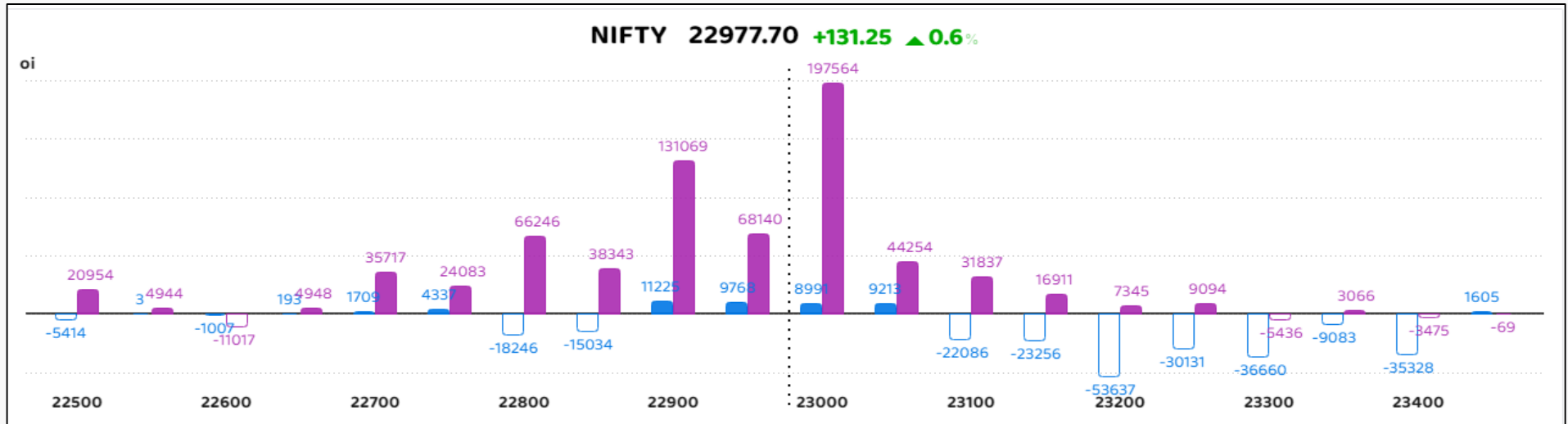


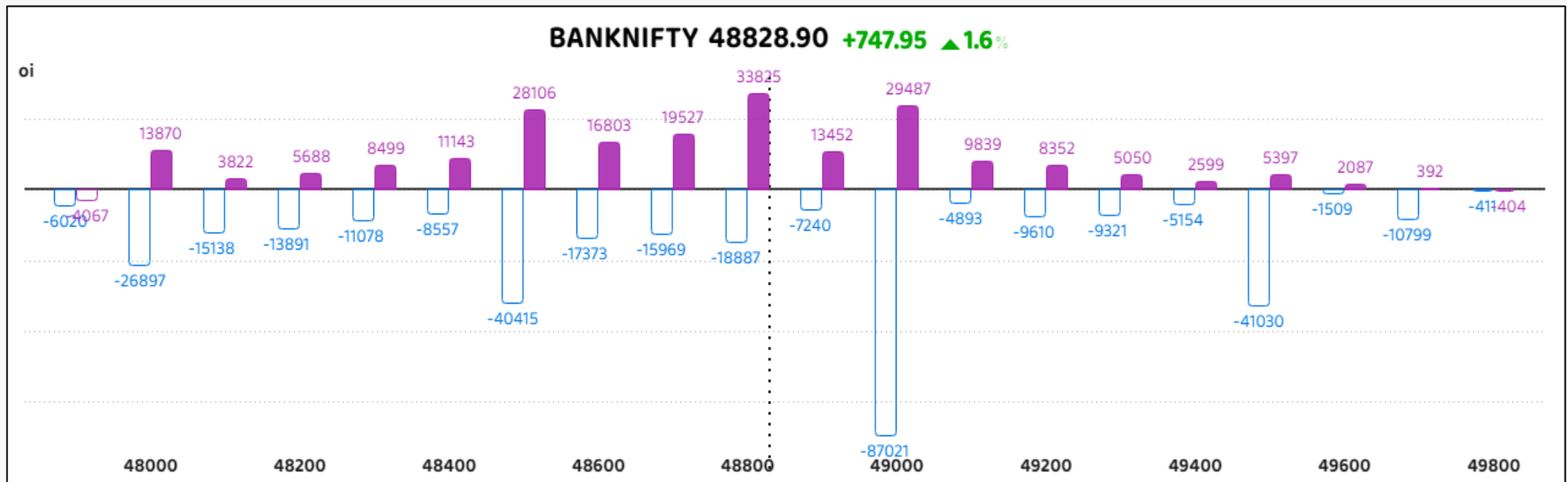
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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

Call ■ Put ■



The largest open interest changes (contracts) were seen at the 23200 Call and the 23000 Put



For the Bank Nifty, the biggest open interest changes were seen at the 49000 Call & the 48800 Put

Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
BRITANNIA INDS	5060.75	-2.2	32.5	32.5	15.1	100.0
CHOLAMANDALAM IN	1241.7	5.6	42.7	42.7	24.3	100.0
TATA CONSUMER PR	961.25	-0.5	33.8	33.8	13.6	100.0
DIXON TECHNOLOGI	14586.95	-5.5	51.5	51.5	1.8	100.0
ABBOTT INDIA LTD	25698.05	-3.1	36.5	36.5	6.5	100.0

Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
AU SMALL FINANCE	588.7	4.5	16.5	116.2	1.7	12.9
HDFC LIFE INSURA	611.55	0.2	28.4	80.6	19.6	14.3
FED BANK LTD	184.1	-3.7	29.4	130.9	7.0	18.1
MANAPPURAM FINAN	190.98	3.5	14.8	64.2	2.7	19.6
ADANI PORTS AND	1080.7	-0.1	38.8	97.8	23.2	20.9

Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
BRITANNIA INDS	5060.75	-2.2	32.5	32.5	15.1	100.0
CHOLAMANDALAM IN	1241.7	5.6	42.7	42.7	24.3	100.0
TATA CONSUMER PR	961.25	-0.5	33.8	33.8	13.6	100.0
DIXON TECHNOLOGI	14586.95	-5.5	51.5	51.5	1.8	100.0
ABBOTT INDIA LTD	25698.05	-3.1	36.5	36.5	6.5	100.0

Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
MANAPPURAM FINAN	190.98	3.5	14.8	64.2	2.7	0.7
AU SMALL FINANCE	588.7	4.5	16.5	116.2	1.7	1.4
INDIAMART INTERM	2087.35	0.2	28.0	56.4	16.6	9.4
MRF LTD	112883.7	1.5	18.7	39.1	8.9	13.1
BATA INDIA LTD	1237.7	0.0	21.2	39.2	13.4	16.1

Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
HERO MOTOCORP LT	4026.35	0.3	36458	13449	2.7
SHREE CEMENT	26033	3.6	4267	1590	2.7
VODAFONE IDEA LT	9	1.2	25066	9433	2.7
APOLLO HOSPITALS	6708.95	0.2	18609	7379	2.5
ICICI PRUDENTIAL	600.3	1.9	11990	4828	2.5

Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
COROMANDEL INTER	1713.5	-1.0	2739	6901	2.5
UNITED BREWERIES	2030.5	0.3	2428	5756	2.4
ABBOTT INDIA LTD	25698.1	-3.1	719	1279	1.8
ATUL LTD	6232.1	-1.6	6543	11507	1.8
GRANULES INDIA	516.4	-5.2	16078	26145	1.6

Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Call OI Diff
HINDUSTAN AERONA	3599.15	-1.9	68088	68088	100.0
COFORGE LTD	8498.8	-3.4	33877	33877	100.0
LAURUS LABS LTD	510.75	-4.5	15338	15338	100.0
PERSISTENT SYS	5910.3	-2.5	20061	20966	95.7
ORACLE FINANCIAL	9246.5	-0.6	28573	31148	91.7

Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Put OI Diff
TRENT LTD	5455.1	0.8	22894	22894	100.0
COLGATE PALMOLIV	2679.4	-1.1	10881	10881	100.0
BRITANNIA INDS	5060.75	-2.2	18459	18745	98.5
INDUS TOWERS LTD	353.5	1.3	14902	15214	98.0
STEEL AUTHORITY	102.84	-0.6	11235	11723	95.8

Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	CV Diff
CIPLA LTD	1420.60	1.8	164725	164725	100.0

Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	PV Diff
HINDUSTAN AERONA	3599.15	-1.9	262074	262074	100.0
SUN PHARMA INDU	1705.5	-4.6	91029	91029	100.0
CIPLA LTD	1420.6	1.8	100943	119325	84.6
COLGATE PALMOLIV	2679.4	-1.1	21894	26190	83.6
CHOLAMANDALAM IN	1241.7	5.6	24917	30201	82.5

Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
CIPLA LTD	1420.6	1.8	164725	19881	8.3
PIRAMAL ENTERPRI	950.15	3.9	41940	6357	6.6
TVS MOTOR CO LTD	2335.8	4.7	70994	12043	5.9
BALKRISHNA INDS	2706.15	5.5	36923	6840	5.4
BANDHAN BANK LTD	151.12	1.1	20031	4523	4.4

Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
CIPLA LTD	1420.6	1.8	100943	14147	7.1
PIRAMAL ENTERPRI	950.15	3.9	30866	4704	6.6
BALKRISHNA INDS	2706.15	5.5	15168	2481	6.1
SUN PHARMA INDU	1705.5	-4.6	91029	16264	5.6
TVS MOTOR CO LTD	2335.8	4.7	41126	7803	5.3

Call Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
POLYCAB INDIA LT	5674.65	0.6	29394	12808	2.3
LAURUS LABS LTD	510.75	-4.5	15338	7477	2.1
ATUL LTD	6232.05	-1.6	3483	1887	1.8
CIPLA LTD	1420.6	1.8	22866	12431	1.8
DR REDDY'S LABS	1181.25	-1.4	25942	14796	1.8

Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
POLYCAB INDIA LT	5674.65	0.6	15982	8026	2.0
ATUL LTD	6232.05	-1.6	1573	877	1.8
MPHASIS LTD	2883.75	-1.8	6533	3658	1.8
BALKRISHNA INDS	2706.15	5.5	2454	1383	1.8
GRANULES INDIA	516.4	-5.2	3994	2319	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	2500	975300	9.4%	2286	2800	691800	22.5%	INFY	2000	5908000	9.3%	1830	1800	1064400	-1.6%
ADANIPTS	1200	1421200	11.0%	1081	1200	603200	11.0%	ITC	460	5731200	5.6%	435	445	1888000	2.2%
APOLLOHOSP	7200	130375	7.3%	6709	6700	63125	-0.1%	JSWSTEEL	950	1182600	3.7%	916	900	1161000	-1.8%
ASIANPAINT	2400	660600	7.1%	2242	2200	471000	-1.9%	KOTAKBANK	2000	2254800	5.9%	1888	1800	1005600	-4.6%
AXISBANK	1000	2839375	1.6%	984	960	1126875	-2.4%	LT	3700	740100	8.4%	3414	3600	389400	5.5%
BAJAJ-AUTO	9000	154275	7.2%	8398	7600	120000	-9.5%	LTIM	6500	151650	14.7%	5665	5000	79650	-11.7%
BAJAJFINSV	1700	1471500	-3.9%	1769	1700	996000	-3.9%	M&M	3000	506800	4.5%	2871	2800	458675	-2.5%
BAJFINANCE	8000	461750	5.2%	7607	7200	364375	-5.3%	MARUTI	12000	748250	-1.0%	12124	12000	280000	-1.0%
BHARTIARTL	1640	3261350	1.3%	1618	1600	725800	-1.1%	NESTLEIND	2180	317000	1.1%	2156	1940	247600	-10.0%
BPCL	280	8292600	8.5%	258	270	1974600	4.6%	NTPC	340	12888000	6.8%	318	300	2182500	-5.7%
BRITANNIA	4850	241800	-4.2%	5061	4700	473900	-7.1%	ONGC	264	15634850	6.2%	249	240	2321550	-3.5%
CIPLA	1500	845325	5.6%	1421	1440	280475	1.4%	POWERGRID	320	4455000	12.7%	284	290	1270800	2.1%
COALINDIA	390	4342800	5.2%	371	360	1254750	-2.9%	RELIANCE	1300	8718000	5.3%	1234	1200	3398500	-2.8%
DIVISLAB	6000	125800	10.9%	5410	5600	73900	3.5%	SBLIFE	1600	933000	12.7%	1420	1460	225000	2.9%
DRREDDY	1400	1708125	18.5%	1181	1200	505625	1.6%	SBIN	800	7514250	6.3%	752	700	4605750	-7.0%
EICHERMOT	5000	315350	-2.1%	5105	5000	180425	-2.1%	SUNPHARMA	1920	1324400	12.6%	1706	1700	354200	-0.3%
GRASIM	2500	252000	3.7%	2411	2400	162000	-0.5%	TATACONSUM	1000	766536	4.0%	961	900	398088	-6.4%
HCLTECH	2000	1894200	18.1%	1693	1600	660450	-5.5%	TATAMOTORS	800	6778200	9.9%	728	750	2478850	3.0%
HDFCBANK	1800	4439050	7.8%	1670	1560	2099900	-6.6%	TATASTEEL	140	24068000	8.8%	129	150	8805500	16.6%
HDFCLIFE	640	2044900	4.7%	612	600	893200	-1.9%	TCS	4200	947975	4.0%	4040	4000	417025	-1.0%
HEROMOTOCO	4300	433350	6.8%	4026	4000	117300	-0.7%	TECHM	1760	1655400	6.8%	1648	1620	364800	-1.7%
HINDALCO	600	3008600	4.6%	574	580	1264200	1.1%	TITAN	3500	449400	5.2%	3326	3200	198975	-3.8%
HINDUNILVR	2400	1685400	0.5%	2389	2300	515400	-3.7%	ULTRACEMCO	11500	164700	1.8%	11296	10500	90550	-7.0%
ICICIBANK	1300	3956400	4.3%	1247	1200	1592500	-3.8%	UPL	560	2379380	4.0%	539	500	669370	-7.2%
INDUSINDBK	1000	4801000	7.0%	934	960	665000	2.8%	WIPRO	314	5256000	3.4%	304	294	4137000	-3.2%

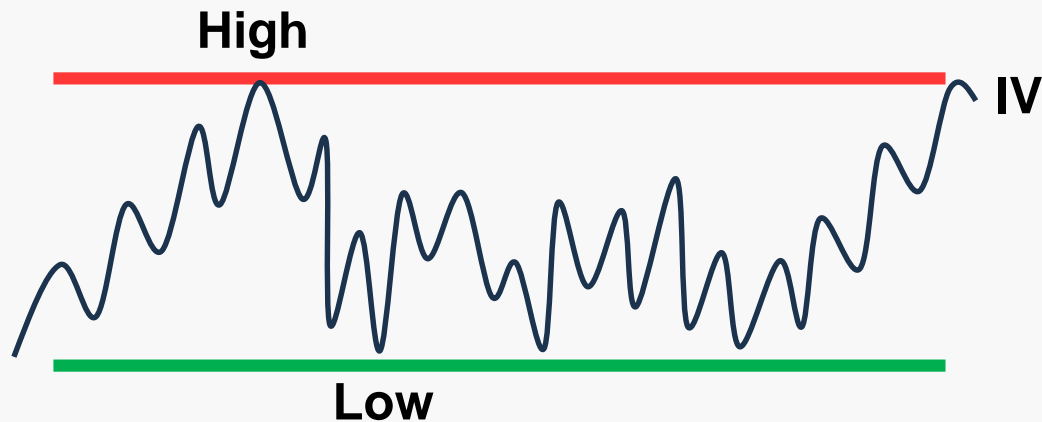
*If distance to call strike from current market price < distance to put strike from current market price, then the %Away for the call strike will be colored green
If distance to put strike from current market price < distance to call strike from current market price, then the %Away for the put strike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

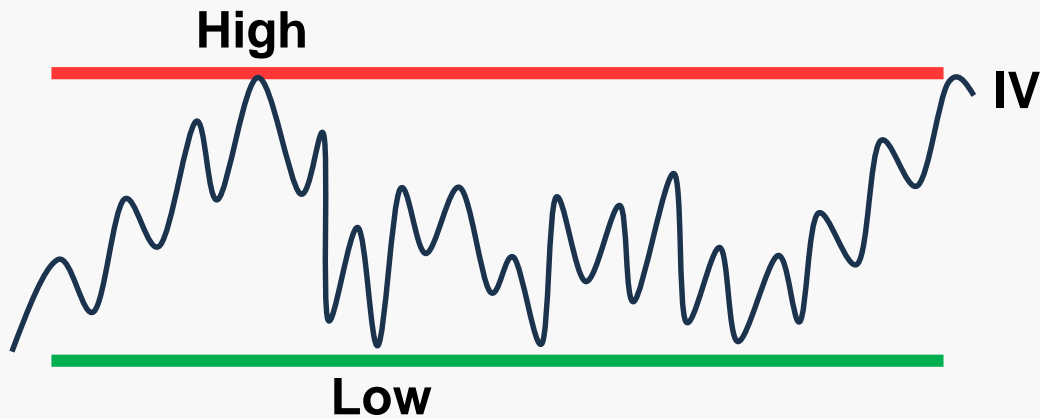


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.



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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