



## Daily Derivatives Report

## Nifty Futures

	Value	Change
Most recent settlement	24,069	<b>0.6% ▼</b>
Open Interest (OI)	1,56,83,980	<b>18.4% ▲</b>
Change in OI (abs)	1,56,83,980	<b>24,37,110 ▲</b>
Premium / Discount (Abs)	73	<b>46 ▲</b>
<b>Inference</b>	<b>Long Unwinding</b>	

## Bank Nifty Futures

	Value	Change
Most recent settlement	55,745	<b>1.52% ▼</b>
Open interest (OI)	20,88,420	<b>31.7% ▲</b>
Change in OI (abs)	20,88,420	<b>5,02,470 ▲</b>
Premium / Discount (Abs)	345	<b>261 ▲</b>
<b>Inference</b>	<b>Long Unwinding</b>	

## Volatility Insights

	Value	Change
India VIX Index	18.05	<b>0.33 ▼</b>
Nifty ATM IV (%)	17.27	<b>1.31 ▼</b>
Bank Nifty ATM IV (%)	19.78	<b>2.18 ▼</b>
PCR (Nifty)	0.98	<b>0.02 ▼</b>
PCR (Bank Nifty)	0.98	<b>0.07 ▲</b>

The FII Long Ratio in Index Futures **drop** to **13%**, **down** from **19.5 %** in the previous session.

## Single Stock Futures Movers

### Long Buildup (Open Interest Higher + Price Higher)

Symbol	Open Interest	Chg (%)	Price	Chg (%)
CROMPTON	4,65,62,400	6.9%	271.13	4.4%
GLENMARK	1,11,57,375	6.2%	2419.4	3.4%
NAM-INDIA	36,16,875	4.2%	1023.8	3.9%
FORCEMOT	2,25,650	3.1%	20530	3.9%

### Short Buildup (Open Interest Higher + Price Lower)

Symbol	Open Interest	Chg (%)	Price	Chg (%)
ETERNAL	19,95,77,500	7.5%	255.18	-0.8%
IDFCFIRSTB	38,96,24,200	1.9%	69.16	-2.3%
APLAPOLLO	48,75,500	1.7%	1991	-0.5%
ICICIBANK	12,75,91,100	1.4%	1299.1	-1.8%
SAMMAANCAP	10,41,11,600	0.9%	144.41	-0.1%

### Short Covering (Open Interest Lower + Price Higher)

Symbol	Open Interest	Chg (%)	Price	Chg (%)
ADANIPOWER	6,40,77,500	-27.2%	224.89	2.4%
ANGELONE	2,15,40,000	-23.4%	320.67	0.1%
COALINDIA	5,57,34,750	-21.6%	469.35	4.2%
PGEL	1,10,41,850	-20.4%	565.25	0.3%
NUVAMA	13,78,000	-19.8%	1382.8	1.2%

### Long Unwinding (Open Interest Lower + Price Lower)

Symbol	Open Interest	Chg (%)	Price	Chg (%)
360ONE	40,49,000	-29.2%	1043.65	-0.4%
BPCL	4,52,27,500	-23.5%	309.8	-1.7%
SBILIFE	1,08,77,625	-20.4%	1814.8	-0.5%
HCLTECH	4,53,97,450	-19.0%	1200	-0.9%
HINDUNILVR	1,47,36,300	-18.8%	2301.6	-1.5%

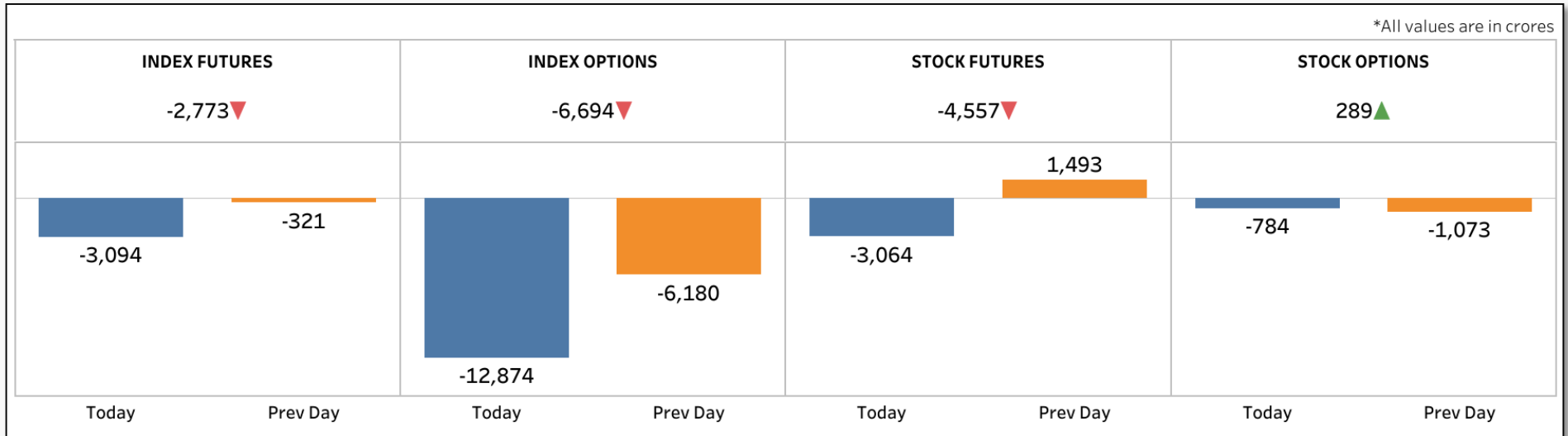
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

## Open Interest Trends by Participant

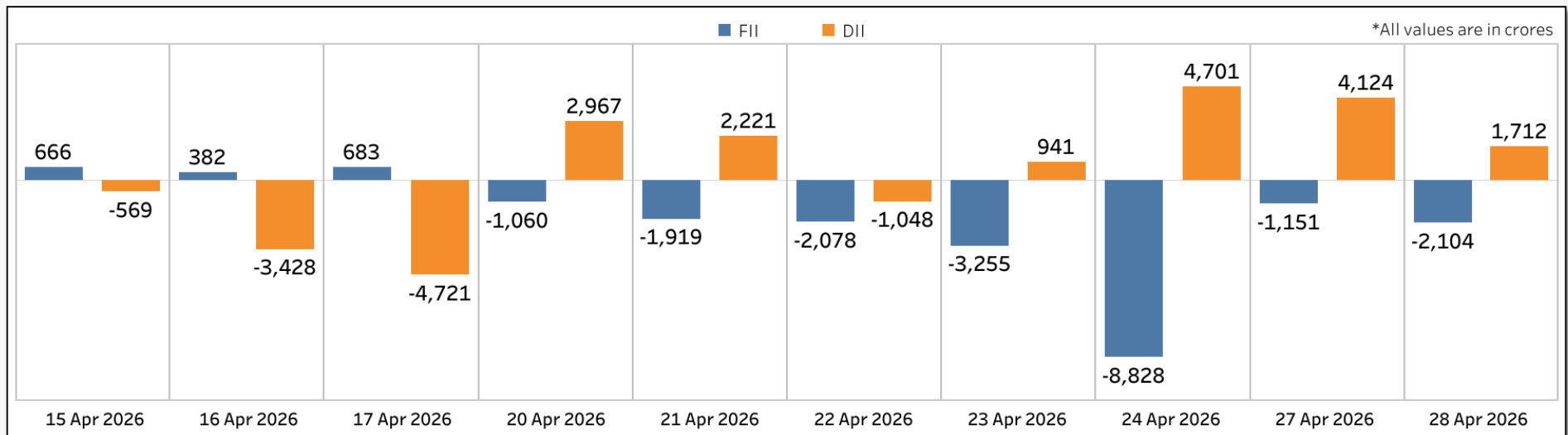
▲ and ▼ indicate positive and negative absolute changes, respectively

FII				DII			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
-19,410 ▼	37,205 ▲	71,816 ▲	-136,818 ▼	-4,327 ▼	-5,581 ▼	-8,689 ▼	-98,614 ▼
2,761	22,171	35,303	15,758	950	-1,103	3,300	31,718
	-1,902	-56,058	-105,100	-3,377	-6,684	-5,389	-104,843
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
-201,818	-170,678	343,512	795,158	20	45,158	49,156	-3,795,317
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
137,920 ▲	1,925 ▲	-137,462 ▼	-20,326 ▼	-114,183 ▼	-33,549 ▼	74,333 ▲	255,758 ▲
92,046		148,133	10,671	22,753	10,617		233,615
-45,874	-5,687	-7,612	-23,672	-91,430	-22,932	-21,041	-22,143
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
211,608	124,558	-575,307	2,566,723	-9,810	962	182,639	433,436
Today Prev Day	Today Prev Day	Today Prev Day	Today Prev Day	Today Prev Day	Today Prev Day	Today Prev Day	Today Prev Day

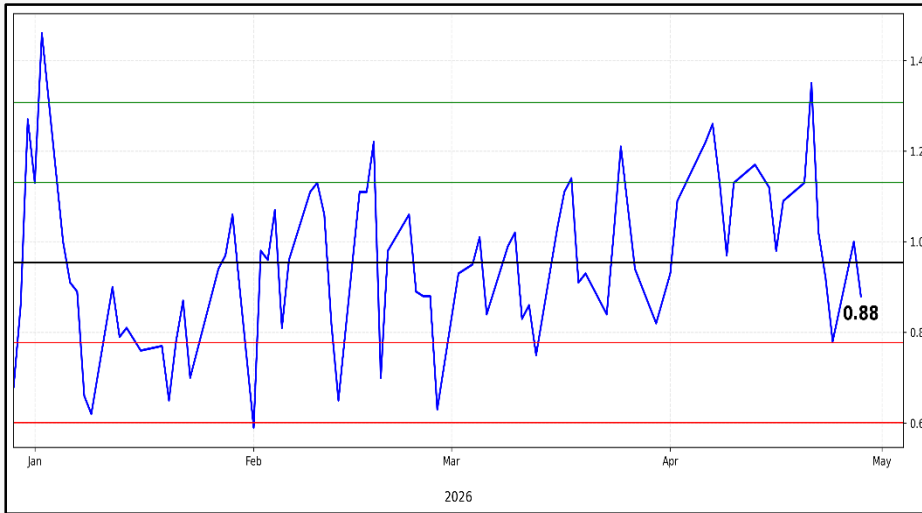
## Daily Net Open Interest Change



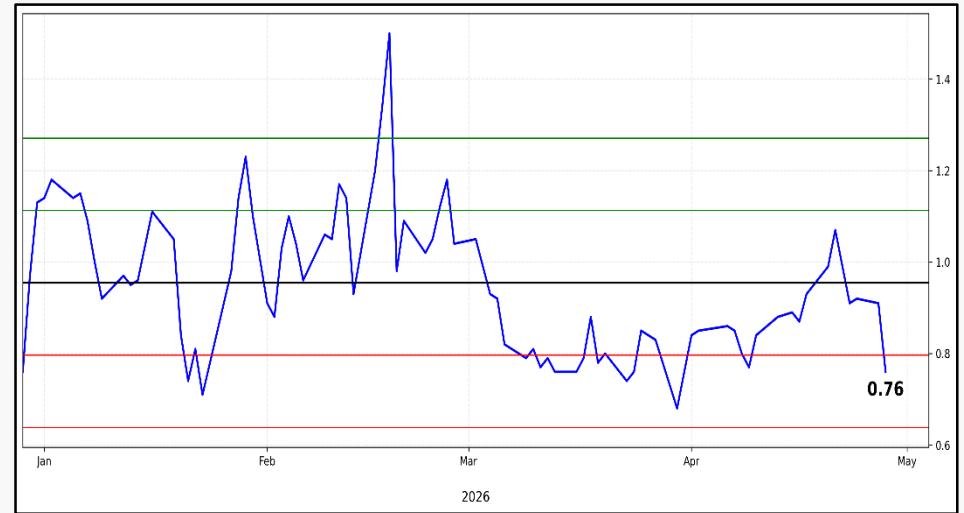
## DII and FII Daily Cash Market Flows



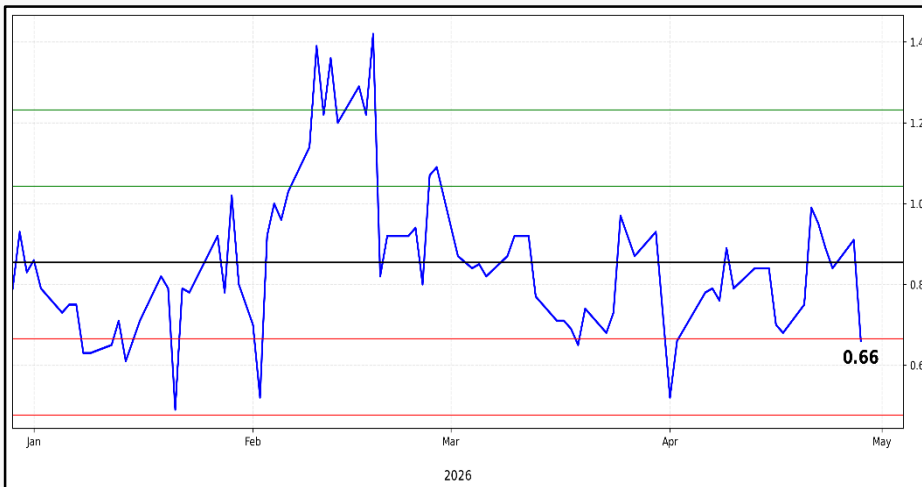
### Nifty



### Bank Nifty



### Fin Nifty



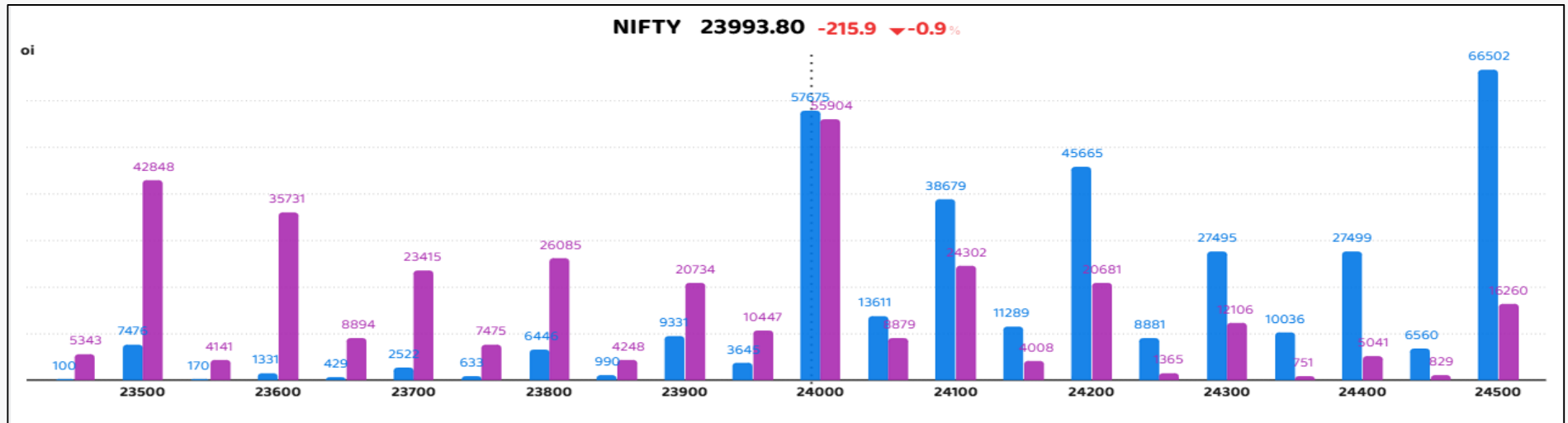
### Midcap Select Nifty



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 24,000 Put had the highest call and put concentration (contracts). For the Bank Nifty, the 57,000 Call and the 56,000 Put saw the most amount of open interest.

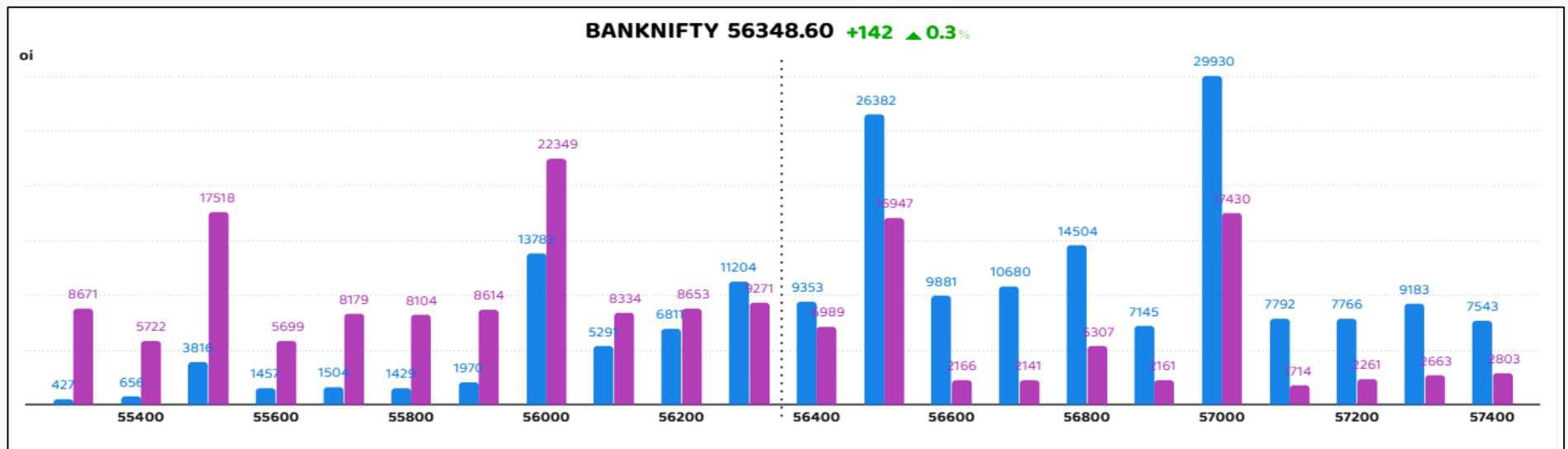
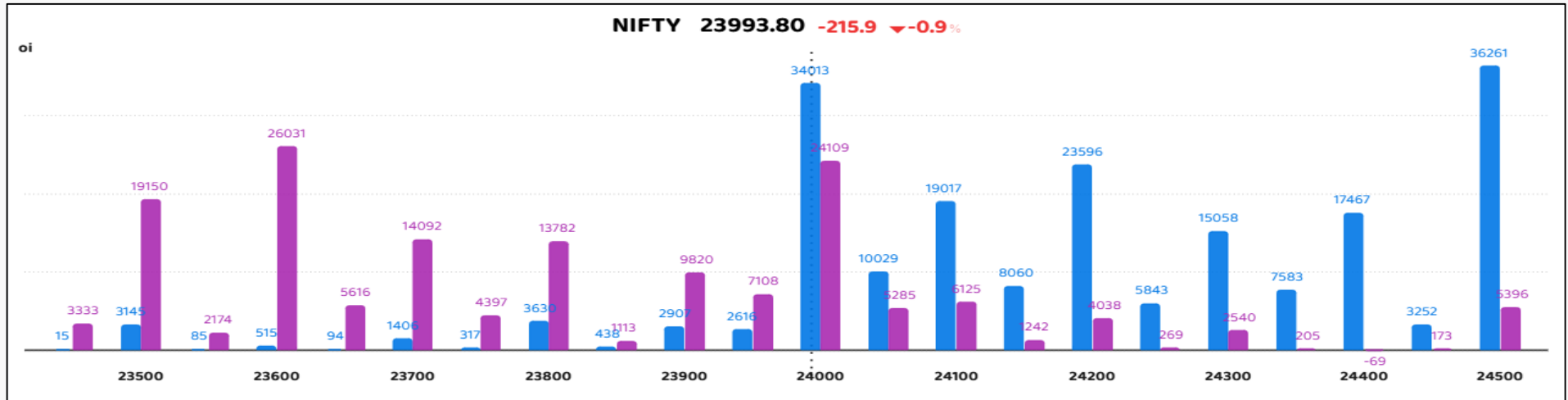


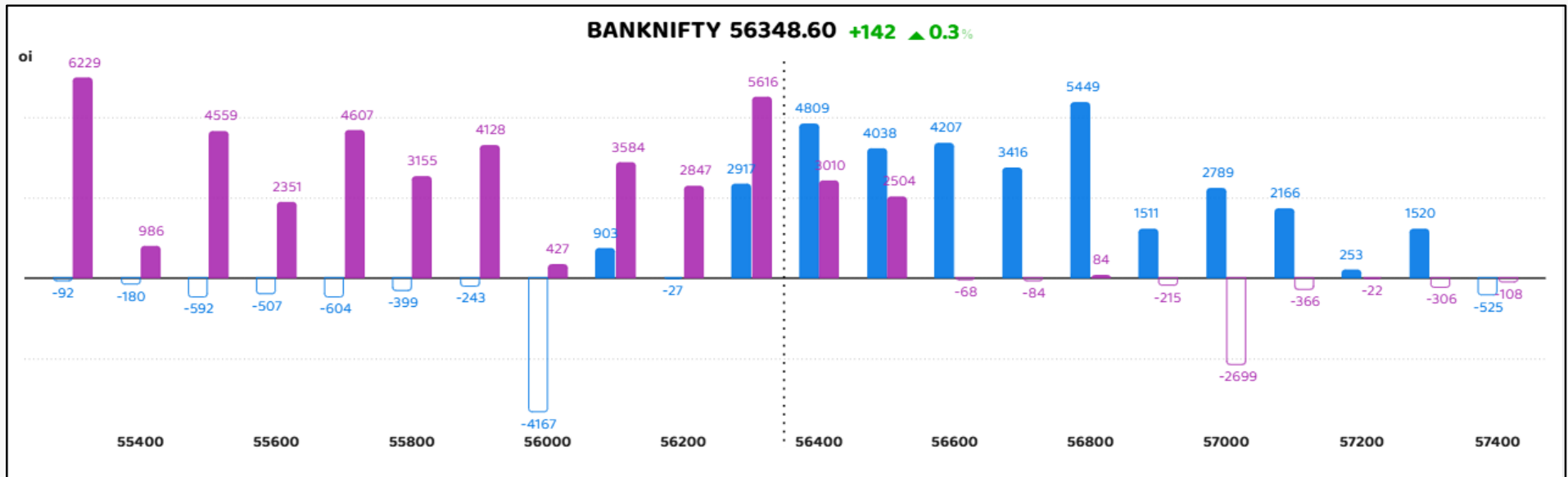
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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

Call ■ Put ■



The largest open interest changes (contracts) were seen at the 24,500 Call and the 23,600 Put



For the Bank Nifty, the biggest open interest changes were seen at the 56,000 Call & the 55,300 Put

## Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
BRITANNIA INDS	5662.0	-1.0	29.1	30.2	16.3	92.0
TORRENT PHARMA	4182.9	-0.9	30.6	32.2	15.4	90.6
HINDUSTAN UNILEV	2289.5	-1.7	28.3	31.6	0.8	89.3
BHARAT HEAVY ELE	354.7	1.8	42.0	47.9	5.2	86.0
COLGATE PALMOLIV	2125.2	-0.7	30.2	33.8	9.7	85.1

## Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
VEDANTA LTD	739.3	-0.4	9.2	46.2	9.2	0.0
ASHOK LEYLAND	167.5	-1.1	46.3	734.8	18.5	3.9
ADITYA BIRLA CAP	338.3	-1.2	39.8	658.6	8.2	4.9
HINDALCO INDS	1074.3	1.2	33.9	254.2	12.3	8.9
PERSISTENT SYS	4803.5	-0.3	28.6	61.7	24.7	10.6

### Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
BLUE STAR LTD	1891.6	-1.3	48.8	49.0	20.3	99.9
TORRENT POWER LT	1754.9	-1.0	46.0	47.5	21.8	99.6
MANKIND PHARMA L	2264.4	-0.2	39.7	40.7	20.2	99.2
PIRAMAL PHARMA L	164.5	-2.6	50.5	58.0	24.9	99.0
BRITANNIA INDS	5662.0	-1.0	29.1	30.2	16.3	98.4

### Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
VEDANTA LTD	739.3	-0.4	9.2	46.2	9.2	0.0
HDFC BANK LTD	782.6	-0.9	13.4	43.1	1.5	4.6
VODAFONE IDEA LT	10.0	2.7	43.1	212.9	10.0	4.9
PERSISTENT SYS	4803.5	-0.3	28.6	61.7	24.7	12.9
BSE LTD	3626.1	2.6	40.7	57.7	32.9	29.0

### Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
OIL	497.2	4.4	33,227.0	6,736.0	4.9
CROMPTON	269.6	4.2	20,993.0	4,648.0	4.5
ONGC	301.3	5.4	112,984.0	27,075.0	4.2
JSWENERGY	580.9	1.2	15,041.0	3,749.0	4.0
WAAREEENER	3,453.7	2.8	45,049.0	12,247.0	3.7

### Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
TORNTPHARM	4,182.9	-0.9	1,657.0	4,846.0	2.9
SHREECEM	24,890.0	-0.9	1,248.0	2,919.0	2.3
UNOMINDA	1,129.7	-0.1	1,235.0	2,710.0	2.2
BOSCHLTD	37,320.0	0.3	4,244.0	8,586.0	2.0
PAGEIND	37,505.0	-0.5	2,071.0	3,725.0	1.8

## Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Relative to Highest Call OI
AUBANK	1,022.8	-1.9	12,817.0	11,980.0	100.0
ULTRACEMCO	11,817.0	-1.6	34,628.0	34,205.0	100.0
INDUSTOWER	414.0	2.9	17,945.0	16,274.0	100.0
SBICARD	647.4	-3.5	12,636.0	12,444.0	100.0
SHRIRAMFIN	953.2	-2.2	28,056.0	28,023.0	100.0

## Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Relative to Highest Put OI
ASHOKLEY	167.5	-1.1	14,577.0	14,111.0	100.0
EXIDEIND	356.2	1.1	9,439.0	9,435.0	100.0
INDUSTOWER	414.0	2.9	10,139.0	9,073.0	100.0
RELIANCE	1,388.9	1.7	109,781.0	94,266.0	100.0
VBL	518.6	-0.1	13,442.0	13,369.0	100.0

**Call Volume Relative to Record High**

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	Relative to Highest CV
ADANIENT	2,412.4	3.9	93,743.0	83,852.0	100.0
DALBHARAT	1,918.9	-2.7	11,418.0	9,853.0	100.0
IDEA	10.0	2.7	31,139.0	29,453.0	100.0
INDUSTOWER	414.0	2.9	44,450.0	45,143.0	98.5
COALINDIA	467.0	3.2	145,764.0	150,525.0	96.8

**Put Volume Relative to Record High**

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	Relative to Highest PV
PHOENIXLTD	1,761.9	-2.1	7,510.0	5,889.0	100.0
MARUTI	12,892.0	-2.5	92,014.0	82,611.0	100.0
INDUSTOWER	414.0	2.9	19,184.0	18,370.0	100.0
VEDL	739.3	-0.4	50,180.0	55,217.0	90.9
IDEA	10.0	2.7	10,402.0	13,988.0	74.4

**Call Open Interest to 20-day Average**

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
HCLTECH	1,196.0	-2.6	92,400.0	34,700.4	2.7
ULTRACEMCO	11,817.0	-1.6	34,628.0	14,144.8	2.4
SBILIFE	1,808.3	-0.4	20,193.0	8,879.0	2.3
HAVELLS	1,272.2	-0.1	17,148.0	8,615.6	2.0
INFY	1,152.1	-1.6	146,370.0	73,775.2	2.0

**Put Open Interest to 20-day Average**

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
HCLTECH	1,196.0	-2.6	47,494.0	20,995.5	2.3
MANKIND	2,264.4	-0.2	3,962.0	1,820.1	2.2
ADANIENSOL	1,435.4	0.0	7,417.0	3,771.8	2.0
OFSS	9,570.0	2.2	15,333.0	7,879.4	1.9
PAYTM	1,129.2	-0.3	13,650.0	7,082.8	1.9

### Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
ULTRACEMCO	11,817.0	-1.6	149,570.0	28,181.4	5.3
GLENMARK	2,403.7	3.4	42,442.0	11,758.3	3.6
COALINDIA	467.0	3.2	145,764.0	42,741.8	3.4
DALBHARAT	1,918.9	-2.7	11,418.0	3,414.6	3.3
INDUSTOWER	414.0	2.9	44,450.0	13,442.2	3.3

### Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
PHOENIXLTD	1,761.9	-2.1	7,510.0	1,775.0	4.2
ULTRACEMCO	11,817.0	-1.6	62,955.0	15,669.3	4.0
ZYDUSLIFE	911.3	-3.0	7,210.0	1,956.2	3.7
INDUSTOWER	414.0	2.9	19,184.0	6,274.6	3.1
SBICARD	647.4	-3.5	18,607.0	6,369.4	2.9

## 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	2400	1361145	-0.5%	2412	2400	613983	-0.5%	JIOFIN	250	9242550	-0.3%	251	250	4460300	-0.3%
ADANIPTS	1640	879225	0.1%	1638	1500	751925	-8.4%	JSWSTEEL	1300	641250	1.4%	1282	1200	423900	-6.4%
APOLLOHOSP	8000	67500	3.2%	7753	7800	21375	0.6%	KOTAKBANK	400	3742000	5.8%	378	360	5094000	-4.7%
ASIANPAINT	2600	373500	5.6%	2463	2400	421750	-2.5%	LT	4100	401800	1.5%	4038	4000	404950	-0.9%
AXISBANK	1400	1286250	8.6%	1289	1300	863125	0.9%	M&M	3100	505600	0.4%	3088	3100	602400	0.4%
BAJAJ-AUTO	9800	71700	3.2%	9496	9000	106050	-5.2%	MARUTI	14000	207700	8.6%	12892	12000	107100	-6.9%
BAJAJFINSV	1820	350750	2.3%	1779	1680	298750	-5.6%	MAXHEALTH	1100	330225	9.5%	1005	1000	227850	-0.5%
BAJFINANCE	1000	1425000	8.3%	924	900	1571250	-2.6%	NESTLEIND	1440	368000	0.0%	1440	1400	441000	-2.8%
BEL	500	4061250	14.7%	436	440	2010675	1.0%	NTPC	450	2692500	10.6%	407	400	2007000	-1.7%
BHARTIARTL	1900	921975	3.0%	1844	1840	662625	-0.2%	ONGC	300	5967000	-0.4%	301	280	3721500	-7.1%
CIPLA	1360	516000	4.1%	1307	1250	544125	-4.3%	POWERGRID	320	2948800	0.3%	319	320	1803100	0.3%
COALINDIA	470	3422250	0.6%	467	450	2631150	-3.6%	RELIANCE	1400	5348500	0.8%	1389	1350	2573000	-2.8%
DRREDDY	1400	723750	3.4%	1355	1300	361250	-4.0%	SBILIFE	2000	477375	10.6%	1808	1700	295875	-6.0%
EICHERMOT	7200	108500	1.8%	7072	6800	95200	-3.8%	SBIN	1100	3296250	0.8%	1091	1100	3203250	0.8%
ETERNAL	260	9057375	2.7%	253	250	6035825	-1.2%	SHRIRAMFIN	1100	3249675	15.4%	953	900	995775	-5.6%
GRASIM	2800	270500	0.6%	2783	2800	214250	0.6%	SUNPHARMA	1800	712950	3.0%	1747	1620	553000	-7.3%
HCLTECH	1300	4103400	8.7%	1196	1200	1726900	0.3%	TATACONSUM	1200	394350	4.6%	1148	1100	225500	-4.2%
HDFCBANK	800	8489800	2.2%	783	800	3569500	2.2%	TMPV	360	1711200	2.6%	351	350	1318400	-0.2%
HDFCLIFE	650	1078000	10.1%	590	570	1001000	-3.4%	TATASTEEL	210	16230500	-2.3%	215	210	6369000	-2.3%
HINDALCO	1100	709100	2.4%	1074	1000	611100	-6.9%	TCS	2600	1381625	6.4%	2445	2400	685650	-1.8%
HINDUNILVR	2400	427800	4.8%	2290	2400	273900	4.8%	TECHM	1500	1339800	6.5%	1408	1300	479400	-7.7%
ICICIBANK	1400	2713200	8.4%	1292	1300	2026500	0.6%	TITAN	4500	168525	1.9%	4417	4300	165025	-2.6%
INDIGO	5000	246750	12.6%	4442	4200	197850	-5.5%	TRENT	4500	348600	5.8%	4254	4200	181300	-1.3%
INFY	1300	4592800	12.8%	1152	1100	1950800	-4.5%	ULTRACEMCO	13000	230800	10.0%	11817	12000	82600	1.5%
ITC	310	8150400	1.8%	304	290	5312000	-4.7%	WIPRO	210	17235000	4.2%	202	200	8994000	-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

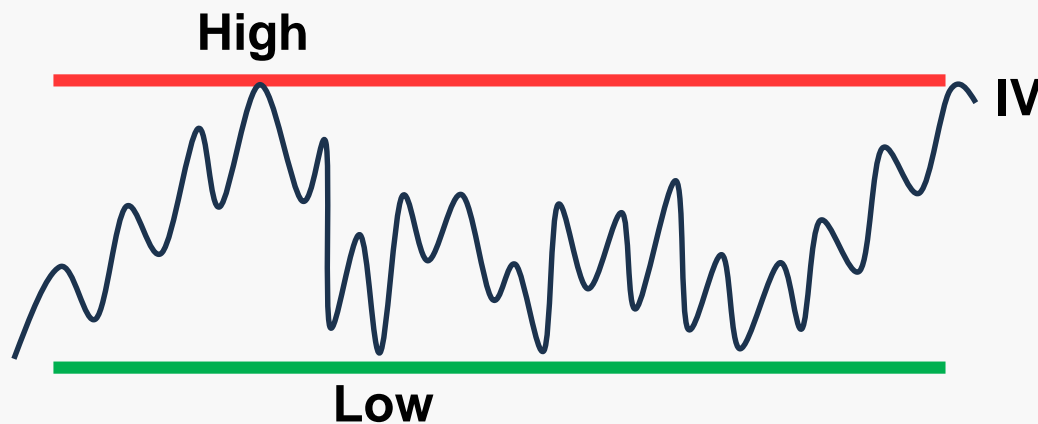
If distance to call strike from current market price = distance to put strike from current market price, then the %Away columns will be uncolored

- 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 (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](http://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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