



Daily Derivatives Report

Nifty Futures

	Value	Change
Most recent settlement	23,326	0.5% ▼
Open Interest (OI)	1,49,64,750	3.1% ▲
Change in OI (abs)	1,49,64,750	4,42,350 ▲
Premium / Discount (Abs)	76	31 ▼
Inference	Short Build Up	

Bank Nifty Futures

	Value	Change
Most recent settlement	51,799	0.4% ▲
Open interest (OI)	27,01,710	4.7% ▲
Change in OI (abs)	27,01,710	1,20,510 ▲
Premium / Discount (Abs)	201	32 ▼
Inference	Long Build Up	

Volatility Insights

	Value	Change
India VIX Index	13.6	0.1 ▼
Nifty ATM IV (%)	12.43	0.2 ▼
Bank Nifty ATM IV (%)	14.67	0.1 ▼
PCR (Nifty)	1.12	0.16 ▲
PCR (Bank Nifty)	1.02	0.08 ▲

The Long Ratio for FII Index Futures **fell** to 30.1%, **down** from 32.3 % in the **last session**..

Single Stock Futures Movers

Long Buildup (Open Interest Higher + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
PATANJALI	19,56,300	20.5%	1887.95	3.1%
PNBHOUSING	15,76,900	17.2%	941.3	2.1%
IDFCFIRSTB	58,86,67,500	10.0%	60.69	5.4%
IIFL	91,23,300	7.8%	351.55	4.1%
BANKINDIA	5,38,13,225	6.4%	115.14	2.9%

Short Buildup (Open Interest Higher + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
HINDZINC	25,52,900	32.1%	461.25	-0.5%
KPITTECH	27,16,400	23.5%	1203.6	-7.5%
PERSISTENT	24,52,300	19.7%	4811.45	-10.0%
INOXWIND	55,82,475	13.9%	159.26	-0.5%
M&MFIN	2,53,86,000	13.4%	265.95	-0.8%

Short Covering (Open Interest Lower + Price Higher)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
GLENMARK	49,95,900	-5.4%	1548.35	1.9%
BEL	8,96,55,300	-3.9%	288.3	1.5%
PAYTM	2,10,00,200	-3.6%	838.65	2.3%
CIPLA	1,20,89,350	-3.3%	1498.6	2.6%
AUBANK	2,38,20,000	-3.2%	562.1	4.8%

Long Unwinding (Open Interest Lower + Price Lower)				
Symbol	Open Interest	Chg (%)	Price	Chg (%)
MCX	21,97,000	-5.6%	5348.3	-1.0%
BAJAJFINSV	1,44,22,500	-3.1%	1925.5	-0.5%
BSE	47,50,125	-3.0%	5615.85	-0.5%
CYIENT	33,87,600	-2.9%	1220.55	-2.9%
ONGC	12,34,05,975	-2.2%	243.89	-2.9%

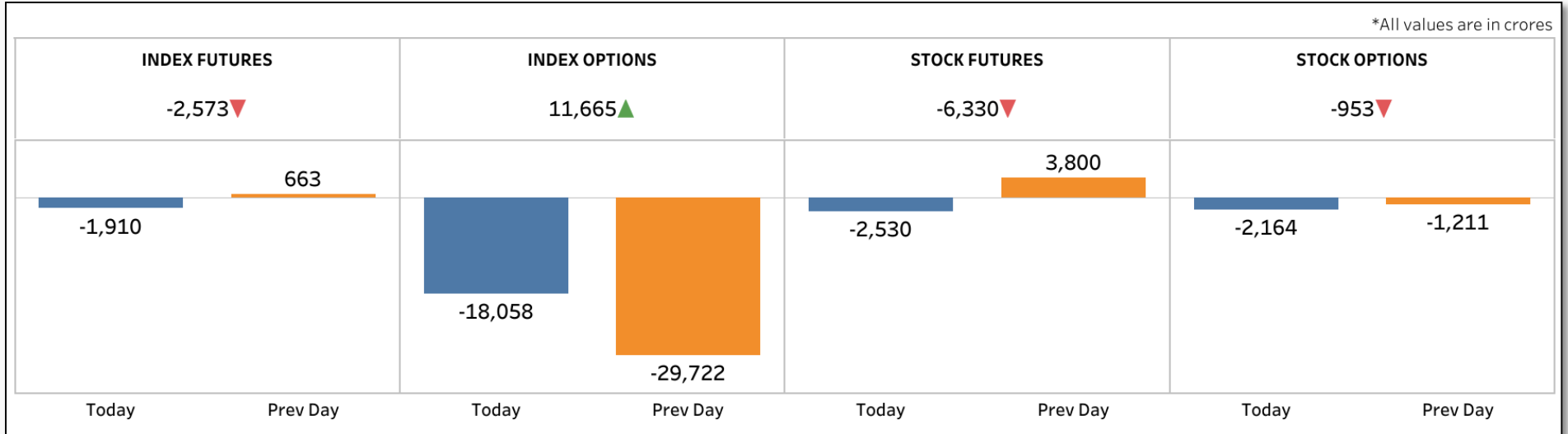
For an explanation of all the contents in this report, kindly click on the hyperlink at the top right which will take you to the end-of-report appendix

Open Interest Trends by Participant

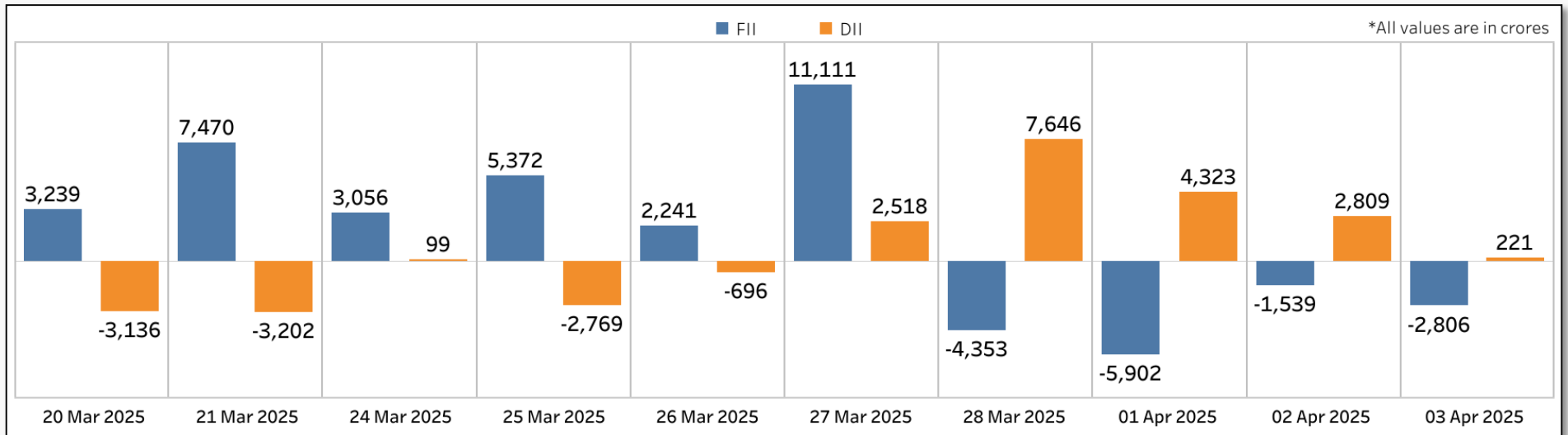
▲ and ▼ indicate positive and negative absolute changes, respectively

FII				DII			
INDEX CALL	INDEX FUT	INDEX PUT	STK FUT	INDEX CALL	INDEX FUT	INDEX PUT	STK FUT
256,292 ▲	-15,110 ▼	253,680 ▲	-109,218 ▼	-54,066 ▼	5,416 ▲	-21,754 ▼	17,957 ▲
205,226		147,661		27,033			
	4,249		67,517		7,399	1,983	9,258
	-10,861		-41,701				-1,816
		-106,019		-27,033		-12,496	-19,773
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
127,254	-50,471	170,373	1,579,492	70	73,226	65,797	-3,828,519
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
-216,356 ▼	11,148 ▲	-387,057 ▼	65,468 ▲	14,129 ▲	-1,454 ▼	155,133 ▲	25,793 ▲
		156,196		78,491		95,697	
	5,144		37,408	64,362			
	-6,004		-28,060		-1,682	-228	6,109
-256,685		-230,861				-59,436	-19,684
Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S	Net O/S
-167,884	25,792	-149,996	1,846,800	40,559	-48,547	-86,175	402,227
Today	Prev Day	Today	Prev Day	Today	Prev Day	Today	Prev Day

Daily Net Open Interest Change

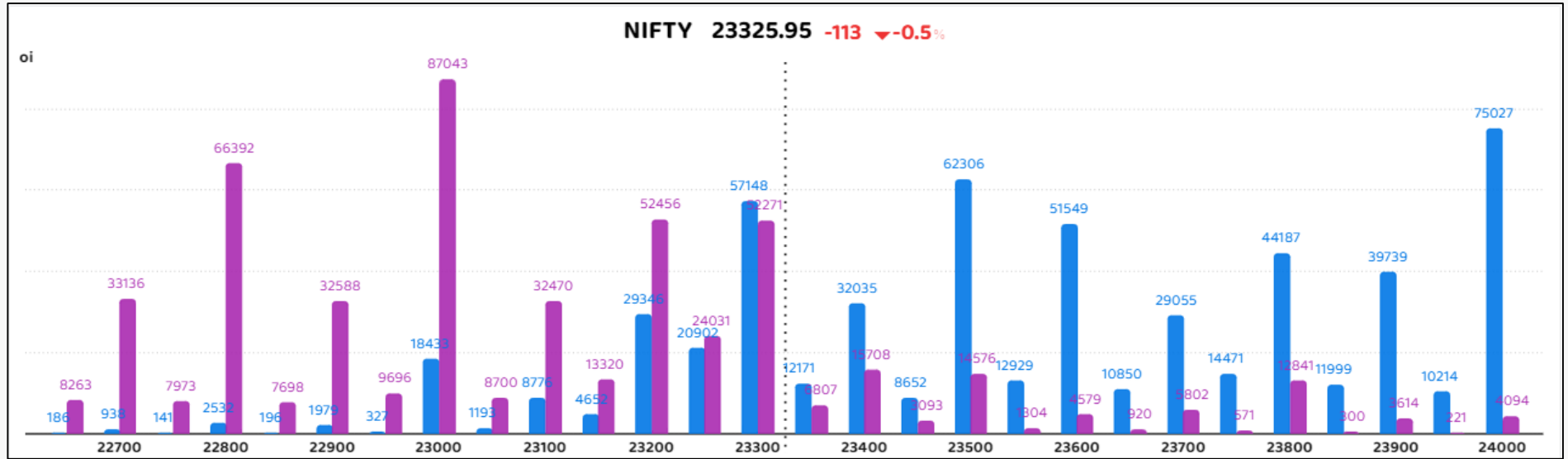


DII and FII Daily Cash Market Flows



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

Call ■ Put ■



For the Nifty, the 24000 Call and the 23000 Put had the highest call and put concentration (contracts). For the Bank Nifty, the 53000 Call and the 51000 Put saw the most amount of open interest.

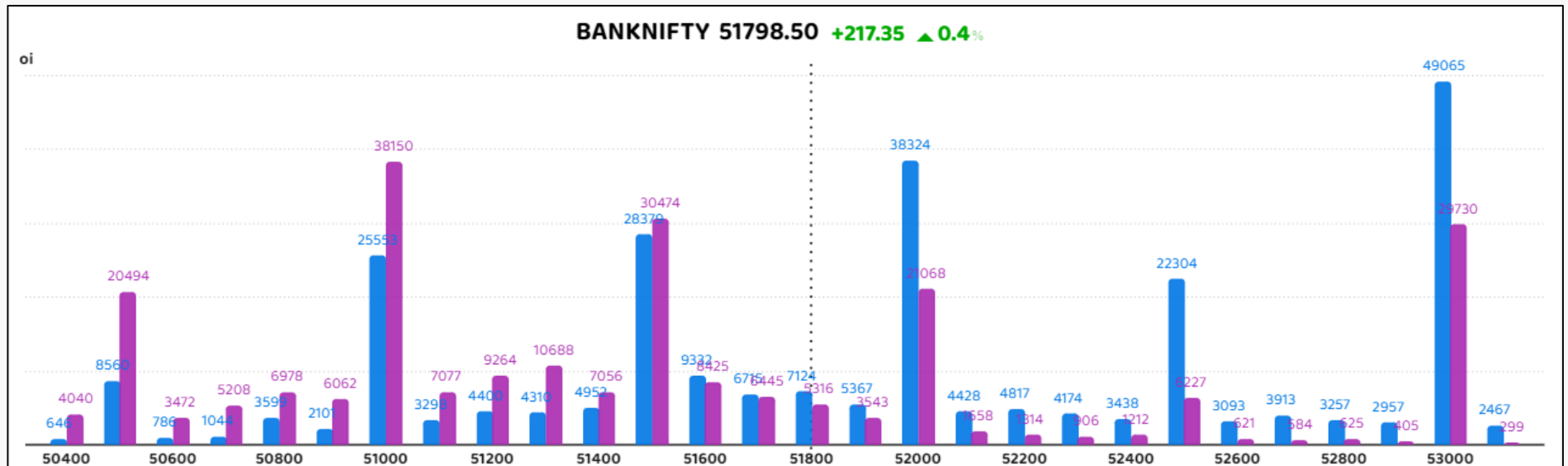
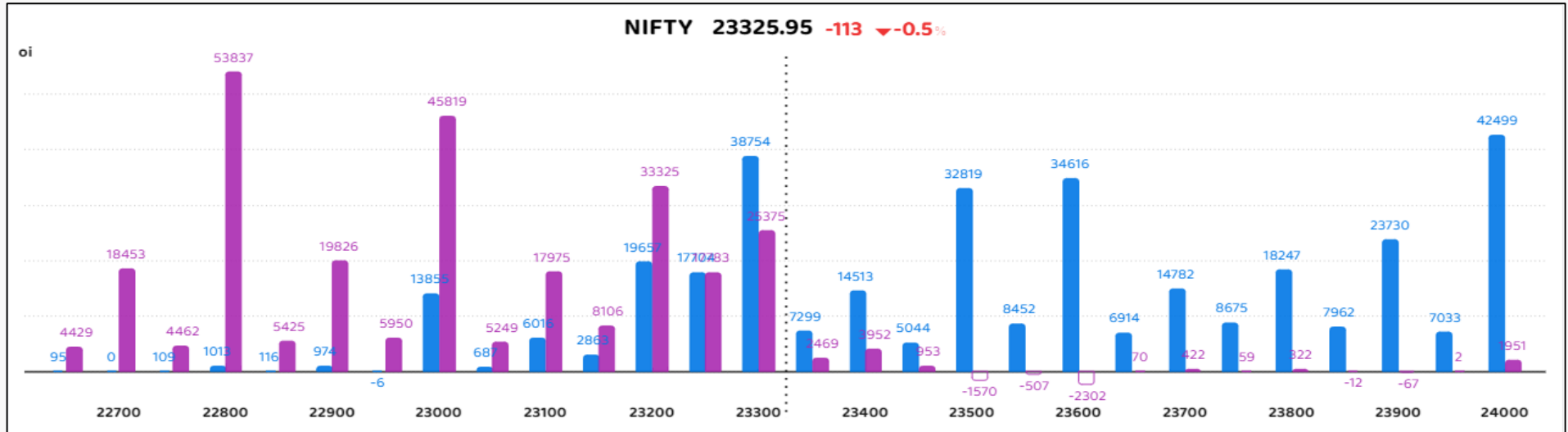


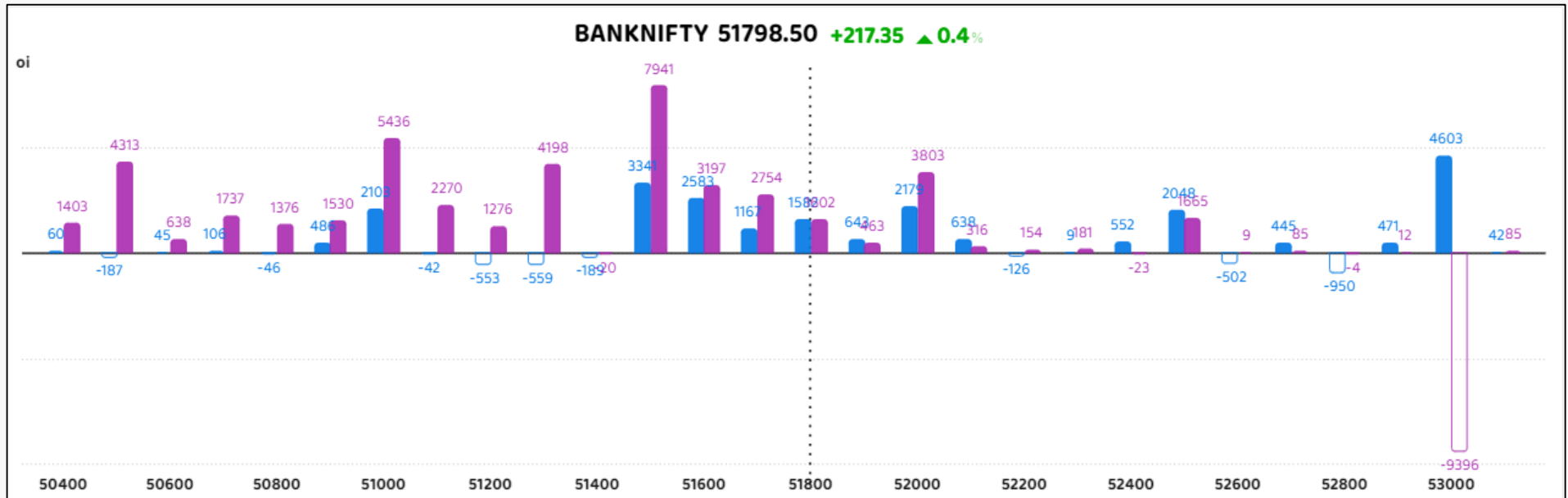
Chart quotes show front-month Nifty and Bank Nifty futures levels along with absolute and percentage change from prior trading session

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 22800 Put



For the Bank Nifty, the biggest open interest changes were seen at the 53000 Call & the 51500 Put

Stocks with High IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
PERSISTENT SYS	4793.35	-9.9	48.7	48.7	26.9	100.0
FSN E-COMMERCE V	179.37	-0.3	51.1	51.1	26.8	100.0
INFOSYS LTD	1496.5	-3.5	60.8	60.8	4.9	100.0
HOUSING & URBAN	209.93	2.0	57.9	57.9	35.2	100.0
KPIT TECHNOLOGIE	1211.1	-7.7	51.7	52.1	26.7	98.1

Stocks with Low IVR:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVR (1m/1y)
TATA TECHNOLOGIE	680.05	-1.1	30.9	47.2	30.9	0.0
INDIAN RENEWABLE	161.51	0.1	49.6	69.2	49.6	0.0
TATA CHEMICALS	849.9	-0.2	23.7	48.4	23.7	0.0
CENTRAL DEPOSITO	1238.3	1.4	32.2	53.8	31.2	4.4
IIFL FINANCE LTD	350.45	4.4	38.6	62.1	37.2	5.6

Stocks With High IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
PERSISTENT SYS	4793.35	-9.9	48.7	48.7	26.9	100.0
FSN E-COMMERCE V	179.37	-0.3	51.1	51.1	26.8	100.0
INFOSYS LTD	1496.5	-3.5	60.8	60.8	4.9	100.0
HOUSING & URBAN	209.93	2.0	57.9	57.9	35.2	100.0
INFO EDGE	6734.4	-2.8	44.7	48.1	23.7	99.6

Stocks With Low IVP:

Ticker	Last Px	Chg (%)	30d IV	30d IV High	30d IV Low	IVP (1m/1y)
TATA TECHNOLOGIE	680.05	-1.1	30.9	47.2	30.9	0.0
INDIAN RENEWABLE	161.51	0.1	49.6	69.2	49.6	0.0
TATA CHEMICALS	849.9	-0.2	23.7	48.4	23.7	0.0
APOLLO TYRES LTD	423.25	-1.2	23.2	46.7	20.8	2.6
HERO MOTOCORP LT	3753.35	-0.8	23.6	40.4	2.8	3.2

Stocks With High Call Volume To Put Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Call to Put Vol
TORRENT PHARMA	3247.7	1.3	7798	1395	5.6
VODAFONE IDEA LT	8.2	-0.4	15412	2987	5.2
COLGATE PALMOLIV	2409.9	1.9	12653	3186	4.0
YES BANK LTD	18.0	3.2	8900	2295	3.9
DELHIVERY LTD	263.6	1.8	7110	2108	3.4

Stocks With High Put Volume To Call Volume

Ticker	Last Px	Chg (%)	Total Call Vol	Total Put Vol	Put to Call Vol
RAMCO CEMENT/THE	941.4	2.7	7903	12058	1.5
ESCORTS KUBOTA L	3276	1.5	3367	5074	1.5
PB FINTECH LTD	1566.3	-1.0	2045	2740	1.3
KOTAK MAHINDRA	2132.6	-1.0	14427	15654	1.1
MANAPPURAM FINAN	234.41	0.0	4846	5128	1.1

Call Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Call OI	Highest Call OI	Relative to Highest Call OI
SIEMENS LTD	5248.55	-0.6	41534	41534	100.0
VOLTAS LTD	1352	0.5	29897	34182	87.5
PERSISTENT SYS	4793.35	-9.9	17432	21468	81.2

Put Open Interest Relative to Record High

Ticker	Last Px	Chg (%)	Total Put OI	Highest Put OI	Relative to Highest Put OI
MANAPPURAM FINAN	234.41	0.0	8602	9097	94.6
VOLTAS LTD	1352	0.5	14617	16517	88.5
SONA BLW PRECISI	450.15	-3.3	2288	2605	87.8
BSE LTD	5620.85	-0.6	35192	41293	85.2
RAMCO CEMENT/THE	941.4	2.7	4022	4900	82.1

Call Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Call Vol	Highest CV	Relative to Highest CV
PATANJALI FOODS	1878.75	3.0	13588	13588	100.0

Put Volume Relative to Record High

Ticker	Last Px	Chg (%)	Total Put Vol	Highest PV	Relative to Highest PV
DABUR INDIA LTD	465.4	-6.1	31354	31354	100.0

Call Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Call OI	Avg OI Call 20D	20D Call OI Ratio
AUROBINDO PHARMA	1176.35	1.6	11891	4649	2.6
SIEMENS LTD	5248.55	-0.6	41534	18314	2.3
DABUR INDIA LTD	465.4	-6.1	13179	7229	1.8
DR REDDY'S LABS	1151.45	0.1	19006	11643	1.6
PERSISTENT SYS	4793.35	-9.9	17432	10955	1.6

Put Open Interest to 20-day Average

Ticker	Last Px	Chg (%)	Total Put OI	Avg OI Put 20D	20D Put OI Ratio
SIEMENS LTD	5248.55	-0.6	21022	10719	2.0
AUROBINDO PHARMA	1176.35	1.6	6987	4059	1.7
TATA CONSUMER PR	1071	0.8	10969	6382	1.7
TATA ELXSI LTD	5194.4	-0.7	3998	2380	1.7
DABUR INDIA LTD	465.4	-6.1	8794	5252	1.7

Call Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Call Vol	Avg Vol Cal 20D	20D Call Vol Ratio
AUROBINDO PHARMA	1176.35	1.6	64531	9732	6.6
DABUR INDIA LTD	465.4	-6.1	45425	9994	4.5
DR REDDY'S LABS	1151.45	0.1	80543	18550	4.3
LUPIN LTD	2095.7	4.3	43676	11019	4.0
TORRENT PHARMA	3247.7	1.3	7798	2317	3.4

Put Volume Relative to 20-day Average

Ticker	Last Px	Chg (%)	Total Put Vol	Avg Vol Put 20D	20D Put Vol Ratio
DABUR INDIA LTD	465.4	-6.1	31354	5883	5.3
AUROBINDO PHARMA	1176.35	1.6	31496	6317	5.0
DR REDDY'S LABS	1151.45	0.1	39815	11758	3.4
PERSISTENT SYS	4793.35	-9.9	56887	17350	3.3
SYNGENE INTERNAT	747.15	3.2	3815	1182	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
ADANIENT	2600	1493400	7.8%	2411	2600	2444100	7.8%	INFY	1600	2542400	6.9%	1497	1480	3050000	-1.1%
ADANIPTS	1200	1586800	0.0%	1200	1200	1058400	0.0%	ITC	410	11243200	0.1%	409	400	2811200	-2.3%
APOLLOHOSP	6800	89750	1.9%	6671	6600	47375	-1.1%	JSWSTEEL	1100	762075	5.4%	1044	1000	584550	-4.2%
ASIANPAINT	2400	1003400	2.2%	2349	2300	315000	-2.1%	KOTAKBANK	2200	1008000	3.2%	2133	2100	1086400	-1.5%
AXISBANK	1100	2226250	0.9%	1090	1100	1151250	0.9%	LT	3500	868650	2.3%	3420	3500	386550	2.3%
BAJAJ-AUTO	8500	239625	7.4%	7912	7900	82950	-0.2%	M&M	2800	884625	7.2%	2611	2600	393225	-0.4%
BAJAJFINSV	2000	1123500	4.1%	1920	1800	494000	-6.3%	MARUTI	12000	260050	2.7%	11688	11000	102700	-5.9%
BAJFINANCE	9000	527000	4.7%	8595	8500	309875	-1.1%	NESTLEIND	2260	259600	0.6%	2246	2000	108800	-10.9%
BEL	300	1.2E+07	4.3%	288	280	4973250	-2.6%	NTPC	365	10717500	1.7%	359	360	2400000	0.3%
BHARTIARTL	1800	2413950	3.1%	1746	1700	830300	-2.6%	ONGC	260	17590650	6.9%	243	240	2779700	-1.4%
BPCL	300	2538000	4.6%	287	280	1902600	-2.4%	POWERGRID	310	3969000	3.6%	299	290	1891800	-3.0%
BRITANNIA	5000	71500	-1.4%	5073	4800	92600	-5.4%	RELIANCE	1300	11224500	4.1%	1249	1300	2758000	4.1%
CIPLA	1500	1235975	0.3%	1496	1300	311350	-13.1%	SBILIFE	1600	1683375	3.7%	1542	1460	177375	-5.3%
COALINDIA	420	4300800	5.8%	397	450	2450700	13.3%	SBIN	800	6775500	2.7%	779	800	4566750	2.7%
DRREDDY	1200	2309375	4.2%	1151	1100	519375	-4.5%	SHRIRAMFIN	700	1374750	7.0%	654	600	545250	-8.3%
EICHERMOT	5550	188825	3.2%	5379	5000	216125	-7.0%	SUNPHARMA	1800	1166900	1.7%	1770	1700	575050	-4.0%
GRASIM	2920	157000	10.1%	2652	2500	164000	-5.7%	TATACONSUM	1100	671688	2.7%	1071	1000	778392	-6.6%
HCLTECH	1600	616000	8.8%	1470	1400	471450	-4.8%	TATAMOTORS	700	7886450	7.0%	654	600	2951300	-8.2%
HDFCBANK	1800	2800600	0.3%	1795	1800	2252250	0.3%	TATASTEEL	160	26691500	4.2%	154	150	10290500	-2.4%
HDFCLIFE	715	2319900	3.2%	693	700	584100	1.0%	TCS	3700	968100	8.7%	3403	3200	626675	-6.0%
HEROMOTOCO	4000	429750	6.6%	3753	3800	220200	1.2%	TECHM	1500	837600	9.5%	1369	1200	462600	-12.4%
HINDALCO	700	3150000	7.3%	653	600	1204000	-8.1%	TITAN	3200	550375	2.3%	3128	3000	452025	-4.1%
HINDUNILVR	2300	904500	2.5%	2245	2100	440700	-6.4%	TRENT	6000	286000	5.7%	5675	5000	237200	-11.9%
ICICIBANK	1400	1967000	5.3%	1330	1300	2013200	-2.2%	ULTRACEMCO	12500	120550	7.7%	11607	11000	73050	-5.2%
INDUSINDBK	800	2270500	12.8%	709	600	1518000	-15.4%	WIPRO	300	5502000	17.0%	256	240	2604000	-6.4%

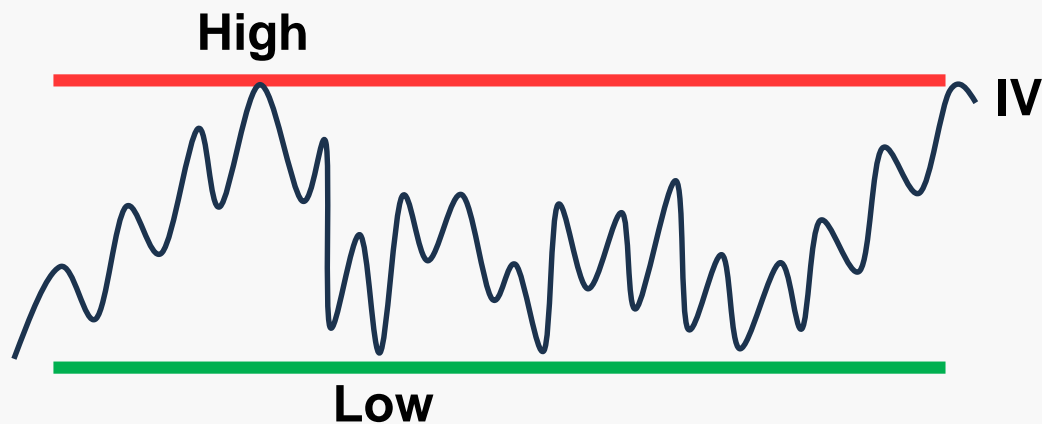
*If distance to call strike from current market price < distance to put strike from current market price, then the %Away for the call strike will be colored green
If distance to put strike from current market price < distance to call strike from current market price, then the %Away for the put strike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

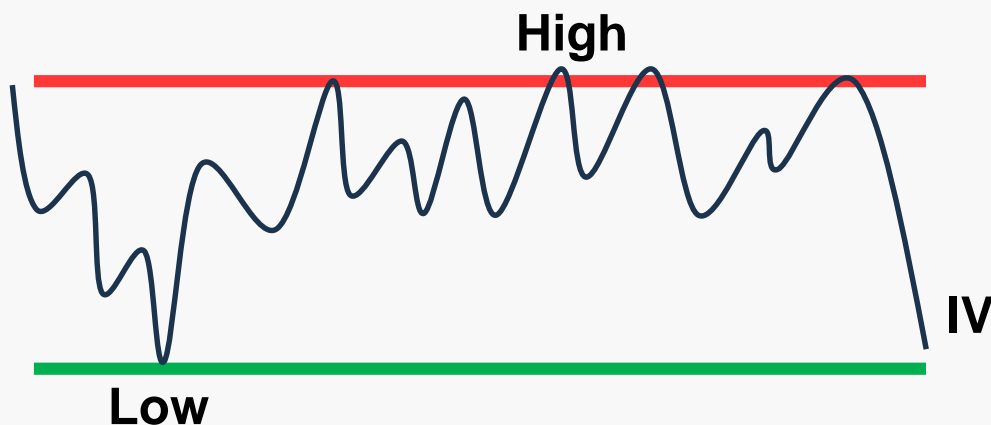
**ATM IV is the midpoint of the IV for the ATM call and put respectively*

- **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

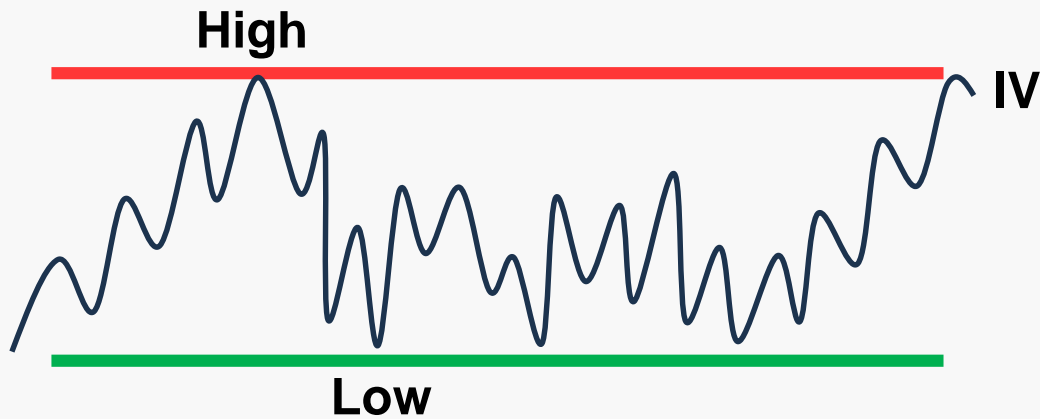


Assume the wavy line is IV over the last one year. Notice that today's IV is close to the highest high seen in the last one year. This means that IV for this option is expensive compared to where it's been in the last 12 months.

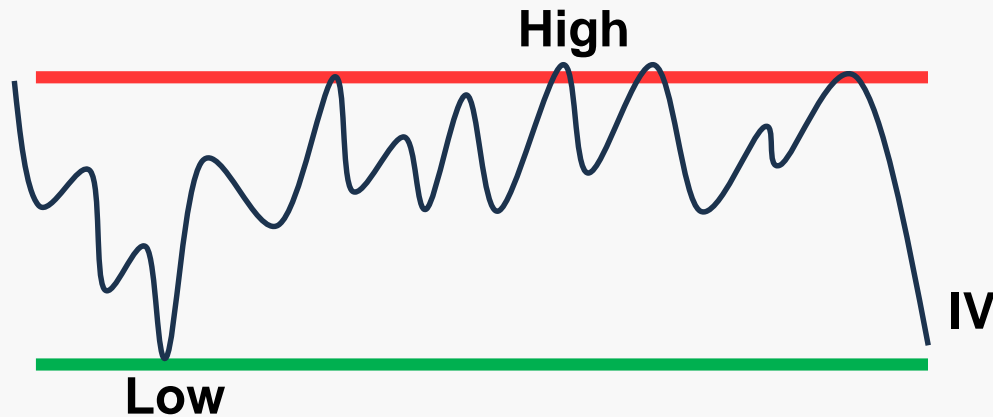


In this chart, notice that today's IV is close to the lowest low seen in the last 12 months. This means that IV for this option is cheap today compared to where it has traded over the last one year.

- **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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