# Backtest - OI : II

## To Analyse Trend

Price trend can be identified by comparing Spot price vs 10day-20day EMA values. Same can be done for the last week and standard deviation calculated on the same for identifying stop losses and volatility.

## Important Option chains

Use current week and next week (along with month expiry chart) to get a more continuous OI for each strike price (this will smooth out the data in case of rolling over). However, a simple weighted average can be done on the same to account for recent week changes more, especially at the start of the month.

* For historical data, the previous week + current + next will work just as fine.

## Important Strike Prices

For this strategy we will look at OTM call and put options only. For nearby strikes the older strategy can be considered. It will move dynamically with the spot price, with more focus on the 100 and 500 multiples.

* Other indicators will be used for confirmation of unclear trends.

## Entry/Exit Conditions

### Price trend +ve

OI continuously rises for two days OR  (overall change >8-10%)

* ATM and near OTM Calls
Market expects the uptrend to continue, an increase in volume should be visible (check for futures volumes). This can also be confirmed with a low put volume, or OI fall there.

OI fall in puts can also just happen with writers pocketing premium.

* ATM and near OTM Puts
Market expects the uptrend to turn around, not enough strength in the momentum, increase in volume should be visible (check for put volumes) and volumes for calls should be decreasing on average.

**Price trend -ve**

OI continuously rises for two days OR  (overall change >8-10%)

* ATM and near OTM Calls
Market writers expect a bearish trend, heavy increase is just sellers trying to pocket premiums in the market.. These will not be mostly exercised. (check for volume in calls as well).

* ATM and near OTM Puts
 Strong bearish, check for futures volume decrease. Fall or stagnant OI will indicate not enough momentum in the down move.

**How to use Options Price**

- If call premium has decreased while an increase in OI, this indicates short positions being built up.

- Similarly, if say OI and call premium both decrease this could be a sign of traders booking profits (liquidation).

- Likewise for put options, if OI has decreased and put premiums increase, this generally signals traders are closing short positions to cover losses (short covering).

- Another case when both OI and Put premium increase, this usually looks like fresh longs being created.

**PCR ratio**

In my opinion :- Since most of the people buy at the top, sell at the bottom, and get insurance only after the markets have fallen. I would use PCR ratio as a contrary indicator instead of saying a high PCR indicates bearish moves.

Each time, volume/OI confirms the price trend, this need not be used, any opposite or caution scenario when price and OI do not conform, PCR can be used as a contrarian.

In these cases, Other indicators like RSI/MACD can also be used to judge the sentiment.

* 2 or 3 strike prices will be checked for confirmation with nearby strikes given more weightage

* Stop losses depend on the expiry and std deviations.

Check for stop loss always and/or other indicators if unclear results

| Price Trend use std_dev | Options OI (OTM) +- 8-10% | Volume (C/P) +- 5% | PCR (low pref) +- 0.2 points | Futures Volume +- 5-10% | Action |
|---|---|---|---|---|---|
| +ve | Call OI rises for two days OR (overall change >8-10%) | Call volume increase, Put volume decrease may accompany | Decrease | Increase | Buy/ Hold |
| +ve | Put OI rises for two days OR (overall change >8-10%) | Put Volume Increase, Call volume decrease | Increase | Decrease | Caution - Check for confirmation with pricing/using MACD/RSI |
| -ve | Call OI continuously rises for two days OR (overall change >8-10%) | Call volume increase | Decrease | Increase (not enough momentum in down move) | Caution - Pocketing premium, check for confirmation and exit |
| -ve | Put OI continuously rises for two days OR (overall change >8-10%) | Put volume increase | Increase | Decrease | Exit |

| Option Price<br>+-20-30% | Options OI (corresponding)<br>+-8-10% | Action |
|---|---|---|
| Call premium decrease | Increase | Exit (shorts increasing) |
| Call premium decrease | Decrease | C - Book Profit,exit |
| Put premium increase | Decrease | C - Shorts closed, enter |
| Put premium increase | Increase | Enter |

* For Caution scenarios, check for MACD/RSI/Bollinger as per standard entry/exits.