Open interest and derivatives

Open interest is the total number of options and/or futures contracts that are not closed or delivered on a particular day. Open interest is NOT the same thing as volume of options and futures trades.

On Jan 1, A buys an option, which leaves an open interest and also creates trading volume of 1
On Jan 2, C and D create trading volume of 5 and there are also 5 more options left open
On Jan 3, A takes an offsetting position and therefore open interest is reduced by 1, and trading volume is 1
On Jan 4, E simply replaces C and therefore open interest does not change, trading volume increases by 5.
Open interest, the total number of open contracts on a security, applies primarily to the futures market.
It is often used to confirm trends and trend reversals for futures and options contracts.

What Open Interest Tells Us

A contract has both a buyer and a seller, so the two market players combine to make one contract.
The open-interest position that is reported each day represents the increase or decrease in the number of contracts for that day, and it is shown as a positive or negative number. An increase in open interest along with an increase in price is said to confirm an upward trend. Similarly, an increase in open interest along with a decrease in price confirms a downward trend. An increase or decrease in prices while open interest remains flat or declining may indicate a possible trend reversal.

Rules of Open Interest

If prices are rising and open interest is increasing at a rate faster than its average, this is a bullish sign. More participants are entering the market, involving additional buying, and any purchases are generally aggressive in nature

If the open-interest numbers flatten following a rising trend in both price and open interest, take this as a warning sign of an impending top

High open interest at market tops is a bearish signal if the price drop is sudden, since this will force many 'weak' longs to liquidate. Occasionally, such conditions set off a self-feeding, downward spiral

An unusually high or record open interest in a bull market is a danger signal. When a rising trend of open interest begins to reverse, expect a bear trend to get underway

A breakout from a trading range will be much stronger if open interest rises during the consolidation. This is because many traders will be caught on the wrong side of the market when the breakout finally takes place.

When the price moves out of the trading range, these traders are forced to abandon their positions. It is possible to take this rule one step further and say the greater the rise in open interest during the consolidation, the greater the potential for the subsequent move

Rising prices and a decline in open interest at a rate greater than the seasonal norm is bearish. This market condition develops because short covering and not fundamental demand is fueling the rising price trend.
In these circumstances money is flowing out of the market. Consequently, when the short covering has run its course, prices will decline

If prices are declining and the open interest rises more than the seasonal average, this indicates that new short positions are being opened.
As long as this process continues it is a bearish factor, but once the shorts begin to cover it turns bullish

A decline in both price and open interest indicates liquidation by discouraged traders with long positions. As long as this trend continues, it is a bearish sign. Once open interest stabilizes at a low level, the liquidation is over and prices are then in a position to rally again.

If prices are rising and the volume and open interest are both up, the market is decidedly strong. If the prices are rising and the volume and open interest are both down, the market is weakening.

Now, if prices are declining and the volume and open interest are up, the market is weak, but
when prices are declining and the volume and open interest are down, the market is gaining strength.

Volume and open interest

Used in conjunction with open interest, volume represents the total number of shares or contracts that have changed hands in a one-day trading session in the commodities or options market.

The greater the amount of trading during a market session, the higher the trading volume. A new student to technical analysis can easily see that the volume represents a measure of intensity or pressure behind a price trend.
The greater the volume the more we can expect the existing trend to continue rather than reverse.
Volume precedes price, which means that the loss of either upside price pressure in an uptrend or downside pressure in a downtrend will show up in the volume figures before presenting itself as a reversal in trend on the bar chart.
The rules that have been set in stone for both volume and open interest are combined because of their similarity; however, having said that, there are always exceptions to the rule, and we should look at them.

So, price action increasing in an uptrend and open interest on the rise are interpreted as new money coming into the market (reflecting new buyers) and is considered bullish. Now, if the price action is rising and the open interest is on the decline, short sellers covering their positions are causing the rally.

Money is therefore leaving the marketplace and is considered bearish. If prices are in a downtrend and open interest is on the rise, chartists know that new money is coming into the market, showing aggressive new short selling. This scenario will prove out a continuation of a downtrend and a bearish condition.

Lastly, if the total open interest is falling off and prices are declining, the price decline is being caused by disgruntled long position holders being forced to liquidate their positions. Technicians view this scenario as a strong position technically because the downtrend will end as all the sellers have sold their positions.