Wall Street Club

TECHNICAL ANALYSIS

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1. INTRODUCTION TO TECHNICAL ANALYSIS

Technical Analysis helps you to develop a point of view on a particular stock or index and helps you define the trade in terms of entry price, exit price, and risk.
Like all stock market research techniques, Technical Analysis also comes with a few associated conditions and assumptions, some of which can be highly complex. However, technology makes it easy to understand and execute trades based on TA.

1.1 Setting expectations.

Market participants often approach technical analysis as a quick and easy way to profit. On the contrary, technical analysis is anything but quick and easy. If done right, consistently generating profits is possible, but to get to that stage, one must put in the required effort to learn the technique.

A trading catastrophe is bound to happen if you approach TA as a quick and easy way to make money in markets. When a trading debacle happens, more often than not, the blame is on technical analysis and not on the trader's inability to efficiently apply Technical Analysis. Hence before you start delving deeper into technical analysis, it is important to set expectations on what can and cannot be achieved with technical analysis.

1.2 Trades

TA is best used to identify short-term trades. Do not use TA to identify long-term investment opportunities. Long-term investment opportunities are best identified using fundamental analysis. Also, if you are a fundamental analyst, use TA to calibrate the entry and exit points.

1.3 Return per trade

TA-based trades are usually short-term in nature. Do not expect huge returns within a short duration of time. The right way to use TA is to identify frequent short-term trading opportunities that can give you small but consistent profits.

1.4 Holding Period

Trades based on technical analysis can last between a few minutes to a few weeks, usually not beyond that. We will explore this aspect when we discuss the topic of timeframes.

1.5 Risk

Often, traders initiate a trade for a certain reason; however, in case of an adverse movement in the stock, the trade starts to lose money. Usually, in such situations, traders hold on to their loss-making trade with the hope they can recover the loss. Remember, TA-based trades are short-term; if the trade goes bad, do remember to cut the losses, and move on to identify the next opportunity.

2. CANDLESTICK ANATOMY

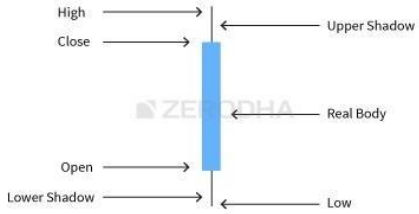
While in a bar chart the open and the close prices are shown by a tick on the left and the right sides of the bar respectively, however in a candlestick the open and close prices are displayed by a rectangular body.

In a candlestick chart, candles can be classified as a bullish or bearish candle usually represented by blue/green/white and red/black candles. Needless to say, the colors can be customized to any color of your choice; the technical analysis software allows you to do this. This module has opted for the blue and red combination to represent bullish and bearish candles, respectively.

2.1 Bullish Candle

The candlestick, like a bar chart, is made of 3 components.

The Central real body – The real body, rectangular, connects the opening and closing price.
Upper shadow – Connects the high point to the close.
Lower Shadow – Connects the low point to the open.
Have a look at the image below to understand how a bullish candlestick is formed:



This is best understood with an example. Let us assume the prices as follows.

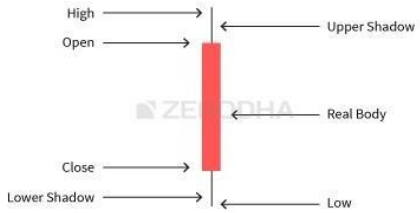
Open = 62
High = 70
Low = 58
Close = 67



2.2 Bearish Candle

Likewise, the bearish candle also has 3 components:

The Central real body – The real body, rectangular which connects the opening and closing price. However, the opening is at the top end, and the closing is at the rectangle's bottom end.
Upper shadow – Connects the high point to the open.
Lower Shadow – Connects the Low point to the close.
This is how a bearish candle would look like:



2.3 History tends to repeat itself – The big assumption

As mentioned earlier, one of the key assumptions in technical analysis is that we rely on the fact that history tends to repeat itself. This probably is one of the most important assumptions in Technical Analysis.

It would make sense to explore this assumption in greater detail at this juncture as candlestick patterns are heavily dependent on it.

Assume today, the 7th of July 2014 few things are happening in a particular stock. Let us call this factor:

Factor 1 – The stock has been falling for the last 4 consecutive trading sessions.

Factor 2 –Today (7th July 2014) is the 5th session, and the stock is falling on relatively lower volumes.

Factor 3 – The range in which the stock trades today is quite small compared to the last four days.

With these factors playing in the background, let us assume that on the next day (8th July 2014) the fall in stock gets arrested and the stock rallies towards a positive close. So, as an outcome of the 3 factors, the stock went up on the 6th day.

Time passes and let's say after a few months, the same set of factors is observed for 5 consecutive trading sessions. What would you expect for the 6th day?

According to the assumption – History tends to repeat itself. However, we need to make an addendum to this assumption. When a set of factors that have panned out in the past tends to repeat itself in the future, we expect the same outcome to occur, as was observed in the past, provided the factors are the same.

Therefore, based on this assumption, we can expect the stock price to go up on the 6th trading session even this time around.

2.4 Candlestick patterns and what to expect

The candlesticks are used to identify trading patterns. Patterns, in turn, help the technical analyst to set up a trade. The patterns are formed by grouping two or more candles in a certain sequence. However, sometimes powerful trading signals can be identified by just a single candlestick pattern.
Candlestick patterns help the trader develop a complete point of view. Each pattern comes with an in-built risk mechanism. Candlesticks give an insight into both entry and stop-loss price.
Just like anything in technical analysis candlestick patterns only suggest a strong possibility and not a necessity of an event.

2.5 Few assumptions specific to candlesticks

Before we jump in and start learning about the patterns, there are a few more assumptions that we need to keep in mind. These assumptions are specific to candlesticks. Do pay a lot of attention to these assumptions as we will keep referring to these assumptions quite often later.

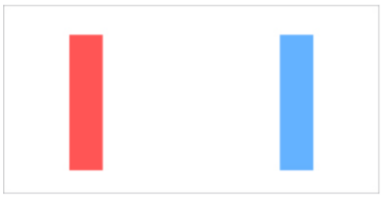
At this stage, these assumptions may not be obvious to you. I will explain them in greater detail as and when we proceed. However, do keep these assumptions in the back of your mind:

Buy strength and sell weakness – Strength is represented by a bullish (blue) candle and weakness by a bearish (red) candle. Hence whenever you are buying ensure, it is a blue candle day and whenever you are selling, ensure it's a red candle day.
Be flexible with patterns (quantify and verify) – While the textbook definition of a pattern could state certain criteria, there could be minor variations to the pattern owing to market conditions. So, one needs to be a bit flexible. However, one needs to be flexible within limits, and hence it is always required to quantify the flexibility.
Look for a prior trend – If you are looking at a bullish pattern, the prior trend should be bearish, and likewise, if you are looking for a bearish pattern, the prior trend should be bullish.

2.5 Few common candlestick patterns and the psychology behind them

2.5.1 The Marubozu

Marubozu as a candlestick with no upper and lower shadow (therefore appearing bald). A Marubozu has just the real body. The red candle would be a bearish Marubozu while the blue one is a bullish one. They are considered strong signals as the sellers(red) and buyers(blue) had full control and were ready to sell and buy at any price in the timeframe and didn't allow their counters to have any hold.

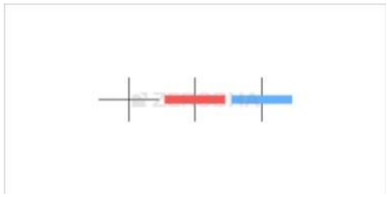


2.5.2 The Spinning top and the Doji

Spinning Tops are depicted with small bodies relative to the shadows. This demonstrates some indecision on the part of the bulls and the bears. They are considered neutral when trading in a sideways market. However, in a trending or oscillating market, a relatively good rule of thumb is that the next day's trading will probably move in the direction of the opening price. The size of the shadow is not as important as the size of the body for forming a Spinning Top. Usually, the colour of the spinning top does not hold much relevance.



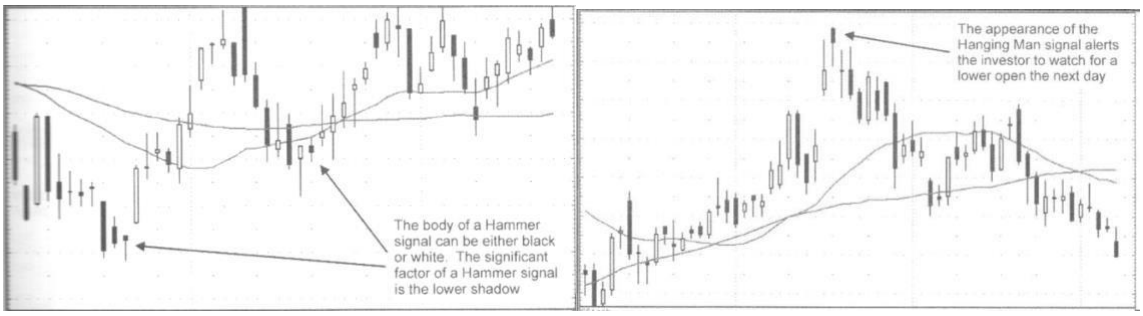
The Doji is one of the most important signals in candlestick analysis. It is formed when the open and the close are the same or very near the same. The lengths of the shadows can vary. The longer the shadows, the more significant the Doji becomes. The Dojis have similar implications as the spinning top. Whatever we learnt for spinning tops applies to Dojis as well. In fact, more often than not, the dojis and spinning tops appear in a cluster indicating indecision in the market. The doji in combination with other factors can form very powerful signals.



2.5.3 The hanging man, hammer and shooting star

The Hanging Man and hammer is comprised of one candle. It requires a lower tail/shadow approximately two times greater than the body. The difference between hanging man and hammer is the hammer occurs at the end of a downtrend while hanging man occurs after an uptrend.





After a period of great selling, formation of a hammer candle suggests a possible reversal, this is because during the candle's timeframe the buyers didn't let the price go below a certain level and raised the price up. (A blue candle might be a better signal for reversal)
After a period of buying hanging man candle suggests a possible reversal as it shows the buyers losing strength and the uptrend might come to a halt. (a red candle might be a better signal for reversal)

The shooting star is like an inverse hammer candle. The psychology and working are identically inverse of a hammer candle for a shooting star candle.



2.5.4 Bullish and Bearish engulfing

Both a relatively simple pattern. A bullish engulfing pattern is when a after a red candle a blue candle which starts the close or lower of red candle closes at higher than the open of the red candle. This after downtrend is a major reversal signal as it shows that the buyers might be coming back in control and are willing to buy above where previously the sellers were selling.



A Bearish Engulfing pattern is just the opposite of a bullish engulfing pattern.



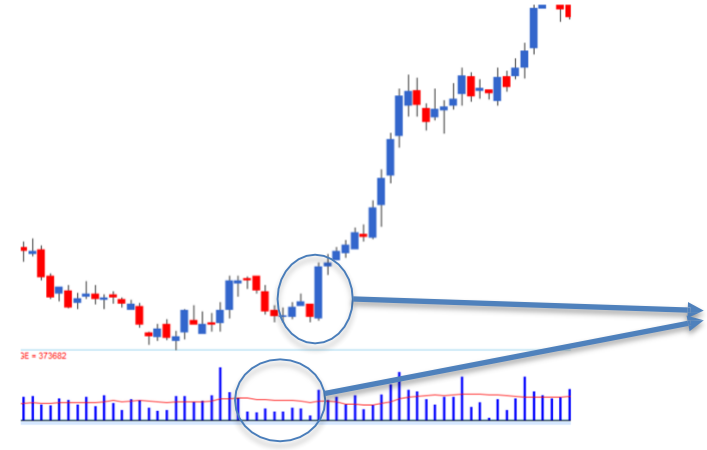
There are many other patterns, the important aspect is the understand the psychology and employ candlesticks to seller buyer behavior.

2.5.5 Volume

Volumes indicate how many shares are bought and sold over a given period of time. For example, you decide to buy 100 shares of Apple at 1000, and I decide to sell 100 shares of Apple at 1000. There are a price and quantity match, which results in a trade. You and I together have created a volume of 100 shares.
Volume as an absolute number doesn't provide much information. But comparing it with price it gives us a very powerful tool to analyze trends. Given below is a simple table that shows what different correlation of volume and price might mean.

Sl No	Price	Volume	What is the expectation?
01	Increases	Increases	Bullish
02	Increases	Decreases	Caution – weak hands buying
03	Decreases	Increases	Bearish
04	Decreases	Decreases	Caution – weak hands selling

Volume is one of the most important aspects we consider while analyzing any trend. Combining it with our previous knowledge of candlesticks we can assess when a candlestick pattern has a higher chance of working. This is because a trend validated by higher volume is more powerful.



Seeing that the blue candle had significantly higher volume than the previous candles and it being a bullish engulfing marubozu, the expectation of a uptrend is very strong.

3. SUPPORT AND RESISTANCE

The best way to identify the target price is to identify the support and resistance points. The support and resistance (S&R) are specific price points on a chart expected to attract the maximum amount of either buying or selling. The support price is a price at which one can expect more buyers than sellers. Likewise, the resistance price is a price at which one can expect more sellers than buyers.

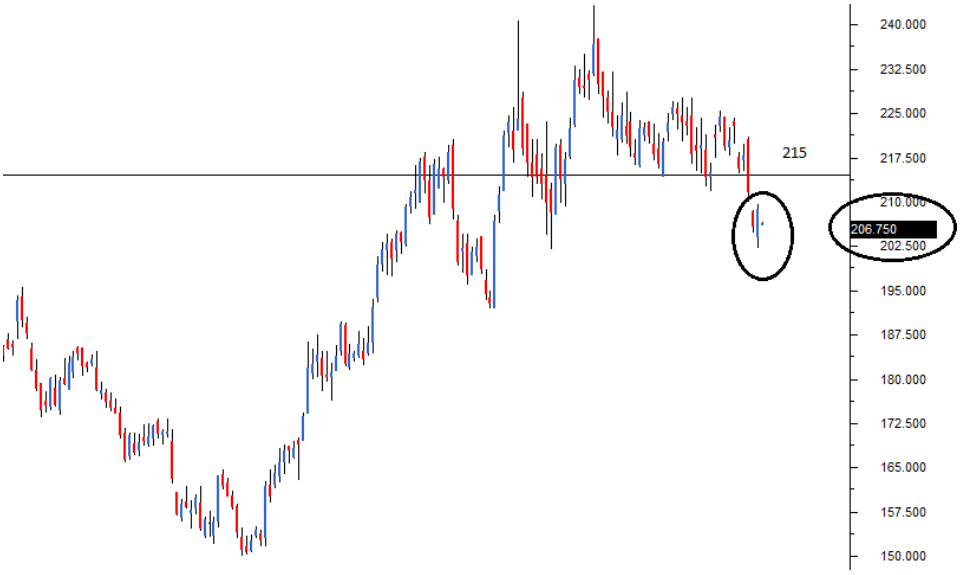
On a standalone basis, traders can use S&R to identify trade entry points as well.

3.1 The Resistance

As the name suggests, resistance is something which stops the price from rising further. The resistance level is a price point on the chart where traders expect maximum supply (in terms of selling) for the stock/index. The resistance level is always above the current market price.

The likelihood of the price rising to the resistance level, consolidating, absorbing all the supply, and declining is high. The resistance is one of the critical technical analysis tools which market participants look at in a rising market. The resistance often acts as a trigger to sell.

Here is the chart of Ambuja Cements Limited. The horizontal line coinciding at Rs.215 on the chart, marks the resistance level for Ambuja Cements.



I have deliberately compressed the chart to include more data points, the reasons for which I will shortly explain. But before that there are two things that you need to pay attention to while looking at the above chart:

The resistance level, indicated by a horizontal line, is higher than the current market price.

While the resistance level is at 215, the current candle is at 206.75. The current candle and its corresponding price level are encircled for your reference.
For a moment let us imagine Ambuja cement at Rs.206 forming a bullish marubozu with a low of 202. We know this is a signal to initiate a long trade, and we also know that the stoploss for this trade is at 202. With the new-found knowledge on resistance, we now know that we can set 215 as a possible target for this trade!

Why 215 you may wonder? The reasons are simple: -

The resistance of 215 implies there is a likelihood of excess supply.
Excess supply builds selling pressure.
Selling pressure tends to drag the prices lower.
Hence for reasons stated above, when a trader is long, he can look at resistance points to set targets and to set exit points for the trade.

Also, with the identification of the resistance, the long trade can now be completely designed as follows:

Entry – 206, Stop Loss – 202, and Target – 215.

The next obvious question is, how do we identify the resistance level? Identifying price points as either a support or resistance is extremely simple. The identification process is the same for both support and resistance. If the current market price is below the identified point, it is called a resistance point; else it is called a support point.

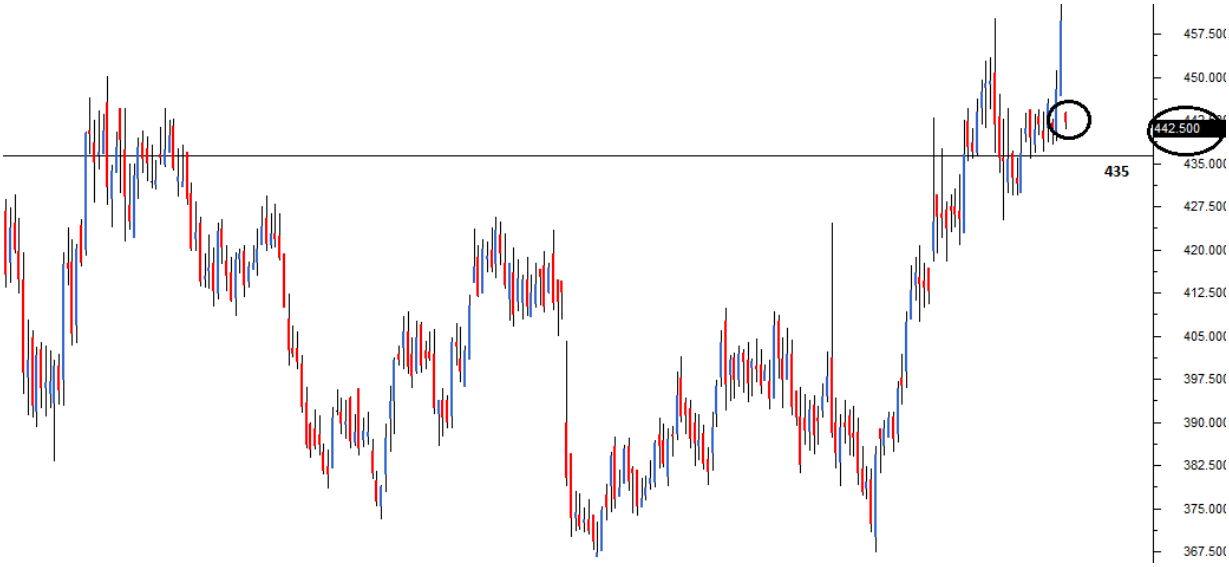
Since the process is the same, let us proceed to understand 'support', and we will follow it up with the procedure to identify S&R.

3.2 – The Support

Having learnt about resistance, understanding the support level should be quite simple and intuitive. As the name suggests, support is something that prevents the price from falling further. The support level is a price point on the chart where the trader expects maximum demand (in terms of buying) coming into the stock/index. Whenever the price falls to the support line, it is likely to bounce back. The support level is always below the current market price.

There is a maximum likelihood that the price could fall until the support, consolidate, absorb all the demand, and then start moving upwards. The support is one of the critical technical level market participants look for in a falling market. The support often acts as a trigger to buy.

Here is the chart of Cipla Limited. The horizontal line coinciding at 435 on the chart marks the support level for Cipla.



Few things that you need to notice on the chart above:

The support level, indicated by the horizontal line, is below the current m\arket price. While the support level is at 435, the current candle is at 442.5. The current candle and its corresponding price level are encircled for your reference
Like we did while understanding resistance, let us imagine a bearish pattern formation – perhaps a shooting star at 442 with a high of 446. Clearly, with a shooting star, the call is too short Cipla at 442, with 446 as the stop loss. Since we know 435 the immediate support, we can set the target at 435.

So what makes Rs.435 target worthy? The following reasons back the decision:

Support at 435 implies there is a maximum likelihood of excess demand to emerge.
Excess demand builds buying pressure.
Buying pressure tends to drag the price higher.
Hence for the reasons stated above, when a trader is short, he can look at support points to set targets and to set exit points for the trade.

Also, with the identification of the support, the short trade is now completely designed.

Entry – 442, stop loss – 446, and target – 435.

3.3 Construction/Drawing of the Support and Resistance level

Here is a 4 step guide to help you understand how to identify and construct the support and the resistance line.

3.3.1 Load data points

If the objective is to identify short term S&R load at least 3-6 months of data points. If you want to identify long term S&R, load at least 12 – 18 months of data points. When you load many data points, the chart looks compressed. This also explains why the above two charts look squeezed.

Long term S&R – is useful for swing trading.
Short term S&R – is useful intraday and BTST trades.
Here is a chart where I have loaded 12 months of data points



3.3.2 Identify at least 3 price action zones

A price action zone can be described as 'sticky points' on the chart where the price has displayed at least one of the behaviors:

Hesitated to move up further after a brief up move
Hesitated to move down further after a brief down move
Sharp reversals at a particular price point
Here are a series of charts that identifies the above 3 points in the same order:

In the chart below, the encircled points indicate the price hesitating to move up further after a brief up move:



In the chart below, the encircled points indicate the price hesitating to move down further after a brief down move:



In the chart below, the encircled points indicate sharp price reversals:



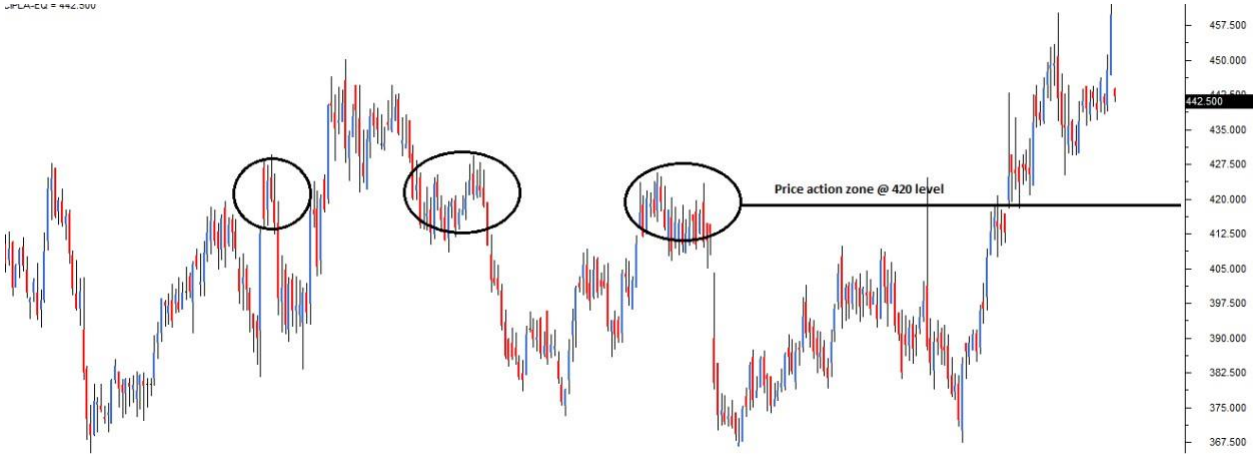
3.3.3 Align the price action zones

When you look at a 12-month chart, it is common to spot many price action zones. But the trick is to identify at least 3 price action zones at the same price level.

For example, here is a chart where two price action zones are identified, but they are not at the same price point.



Look at the following chart, I have encircled 3 price action zones that are around the same price points:

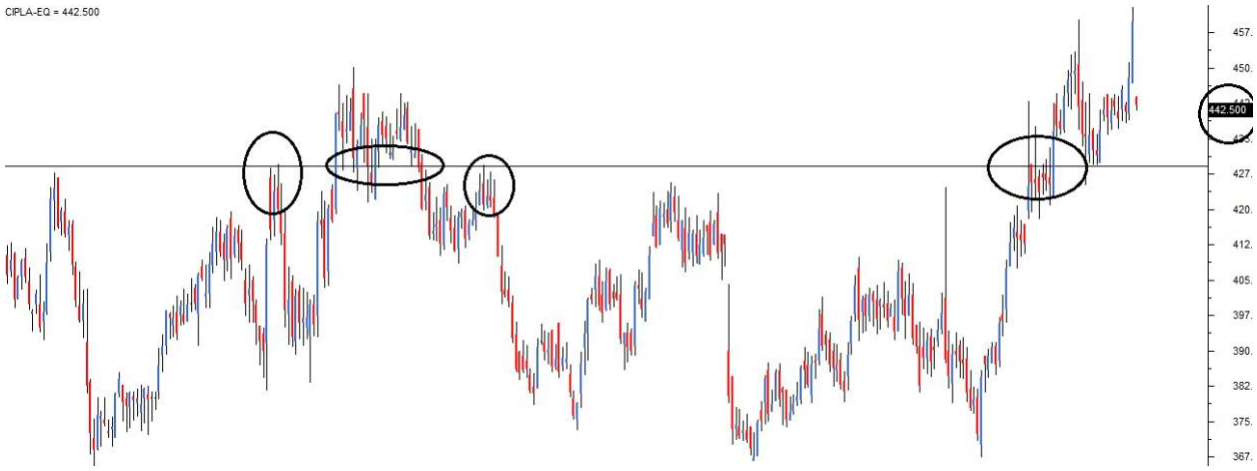


A critical point to note while identifying these price action zones is to make sure these price zones are well spaced in time. Meaning, if the 1st price action zone is identified in the 2nd week of May, then it will be meaningful to identify the 2nd price action zone at any point after the 4th week of May (well spaced in time). The more distance between two price action zones, the more powerful is the S&R identification.

3.3.4 Fit a horizontal line

Connect the three price action zones with a horizontal line. Based on where this line fits in concerning the current market price, it either becomes support or resistance.

Have a look at this chart



Starting from left:

The 1st circle highlights a price action zone where there is a sharp reversal of price.

The 2nd circle highlights a price action zone where the price is sticky.
The 3rd circle highlights a price action zone where there is a sharp reversal of price.
The 4th circle highlights a price action zone where the price is sticky.
The 5th circle highlights the current market price of Cipla – 442.5

In the above chart, all the 4 price action zones are around the same price points, i.e. at 429. Clearly, the horizontal line is below the current market price of 442.5, making 429 an immediate support price for Cipla.

Please note that whenever you run a visual exercise in Technical Analysis such as identifying S&R, you run the approximation risk. Hence always give room for error. The price level is usually depicted in a range and not at a single price point. It is actually a zone or an area that acts as support or resistance.

Going by the above logic, I would be happy to consider a price range around 426 to 432 as a support region for Cipla. There is no specific rule for this range; I just subtracted and added 3 points to 429 to get my price range for the support!

Here is another chart, where both S&R have been identified for Ambuja Cements Limited.

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The current price of Ambuja is 204.1, the support is identified at 201 (below current market price), and the resistance at 214 (above current market price). So if one were too short Ambuja at 204, the target, based on support, can be at 201. Probably this would be a good intraday trade.
For a trader going long at 204, 214 can be a reasonable target expectation based on resistance.

Notice in both the support and the resistance level, there are at least 3 price action zones identified at the price level, all of which are well spaced in time.

3.4 Reliability of S&R

The support and resistance lines are only indicative of a possible reversal of prices. They by no means should be taken for ascertainment. Like anything else in technical analysis, one should weigh the possibility of an event occurring (based on patterns) in terms of probability.

4. OPTIMIZATION AND CHECKLIST

Perhaps, we are now at the most important juncture in this module. We will start discovering a few optimization techniques which will help us identify high-quality trades. Remember, when you seek quality, quantity is always compromised, but this is a compromise that is worth making. The idea is to identify quality trading signals as opposed to identifying plenty but worthless trades.
Optimization, in general, is a technique wherein you fine-tune a process for best possible results. The process in this context is about identifying trades.



The above example shows how to optimize what we understood. The stock price came down a price action zone, where we saw high volume doji candles, which could be inferred as market being uncertain on direction. A high volume bullish engulfing candle after the dojis might hint us to take a bullish view of the market.

Similarly, after the market had rallied up we saw a gap up doji followed by a bearish high volume candle, in a price action zone, and hence we can understand that the uptrend might take a reversal.

The above is just an example on how you can combine the three aspects of this module to form opinions on the market.