

## Lesson 5

### Support, Resistance, and Moving Averages

As price moves up and down on our charts, it encounters “barriers” along the way. If this barrier acts like a floor, keeping price from dropping any lower, it is known in trading terminology as *support*. When it acts more as a ceiling and stands in the way of upward moves, it is called *resistance*.

What is interesting to note is that if a certain price level acts as resistance on the way up (such as the doji candle which highlights a moment of market indecision on the way up at 1.4848 in the example on the right), then it also has a high probability of acting as support on the way back down (and vice-versa).



#### What Causes Support & Resistance

When price is moving up, it means that more people are buying than selling. These bulls eventually need to take their profits. Likewise bears, who are waiting in the wings and looking for an opportunity to enter short, are more likely to do so the higher the price gets. When the amount of sellers eventually overpowers the buyers, a resistance level is formed (as shown in the illustration above when price reached 1.4862).

Similarly, when price is moving down, there are more sellers than buyers. The sellers will eventually need to cover their short positions and take profit. Likewise, if there are bulls waiting to buy, then the lower the price goes the more tempting it becomes for them to enter into new long positions. Eventually the number of buyers will overpower the sellers, creating a support level.

Since many traders use pending orders set at a specific level, the same level is likely to act as support or resistance multiple times until it finally breaks (as seen in the example above as we approach 1.4848 for the second time, now to test it as support).

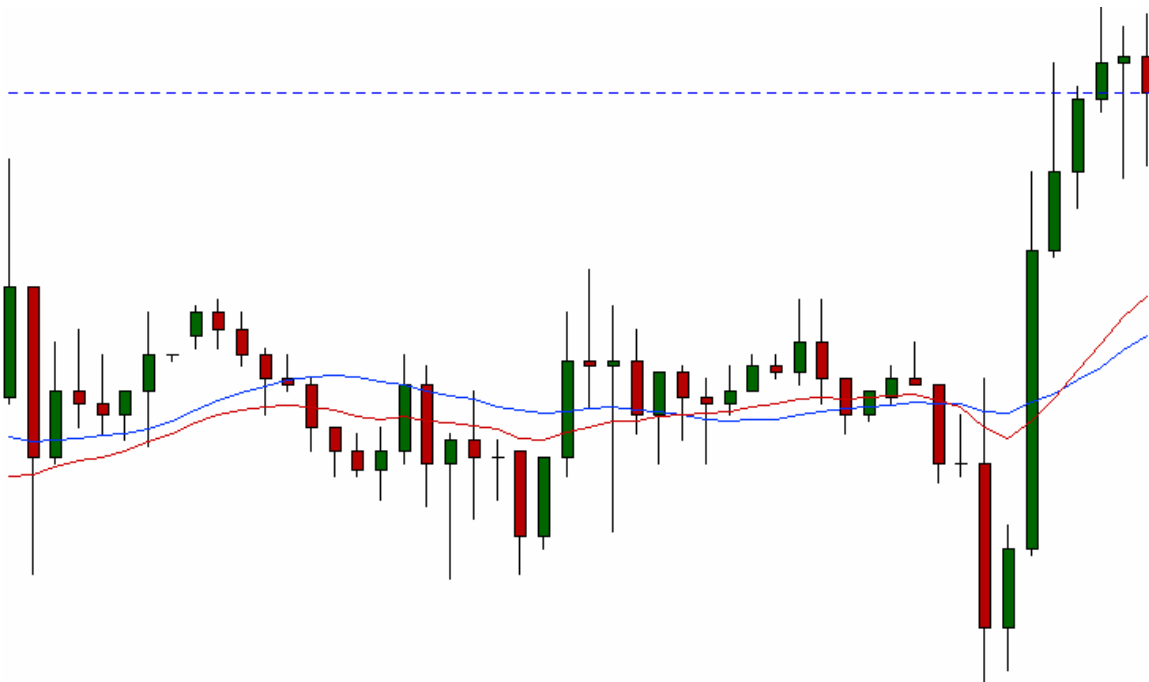
There can be many different support and resistance levels at any given time, and the wise trader tries to be aware of as many of them as possible so as not to be caught by a surprise reversal. As price approaches each of these levels it will either break it and go on to the next, or it will bounce.

A good technique may be to zoom out to the longer time frames and draw horizontal lines at key levels where you observe price stalling or reversing. Then, as you zoom in to find your trades, you will have reminders of these important levels.

## Moving Averages

Additional levels of likely support and resistance can be identified by drawing *moving averages*. A moving average is simply a line chart which shows the average value of a series of periods.

There are several different kinds of moving averages. Most are an average of the *closing* price, though there are cases when they can be calculated also on the *high* or the *low* of the periods being averaged.



When the value being plotted is a straight average with no modifications, we refer to it as a *simple moving average*. The blue line in the chart on the previous page represents a 21-period simple moving average (21 SMA) – at any given time its value reflects an average of the closing prices of the previous 21 candles.

Since the blue line is an average, it is by its very nature slow to respond to sudden movements in price. The red line in the chart above is an *exponential* moving average for the same 21 periods (21 EMA). Here there is more value placed upon the most recent candles. And, as you can see, it responds a bit faster to both the sudden drop in price, as well as the rally which follows. Both kinds can have advantages and disadvantages, depending on the situation.

As you can see in the above example, moving averages can act as both support and resistance when price approaches them. But unlike regular support and resistance levels, they do not remain at one stationary level and can also move on your chart.

## **Common MA Strategies**

People use moving averages in many different ways. Traders will often check to see whether price is trading above or below its moving average in order to decide if they are a bull or a bear (especially on a longer time frame).

As price gets closer to the moving average, traders look closely to see whether it will bounce back away from it or break that barrier, just as with any other support and resistance level. And, as price moves further away from its moving average, the trade becomes ever more risky as price is thought to be out at an “extreme” (since the moving average is still an average, logic suggests that eventually it and price will meet again at the same level).

Some people even use crosses of various different moving averages back and forth over one another to signal entries and exits.

## **Going Further**

Advanced tools which can help us identify other likely support and resistance levels include *pivot points* and *Fibonacci retracements* and *extensions*. The common factor among all support and resistance levels is their likelihood to either break or bounce when price reaches them, which is why it pays to be aware of them.