

# Introduction to Fibonacci Analysis

Learn how to use one of the most popular technical analysis tools for optimal results.

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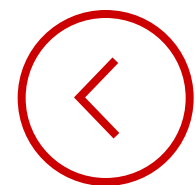
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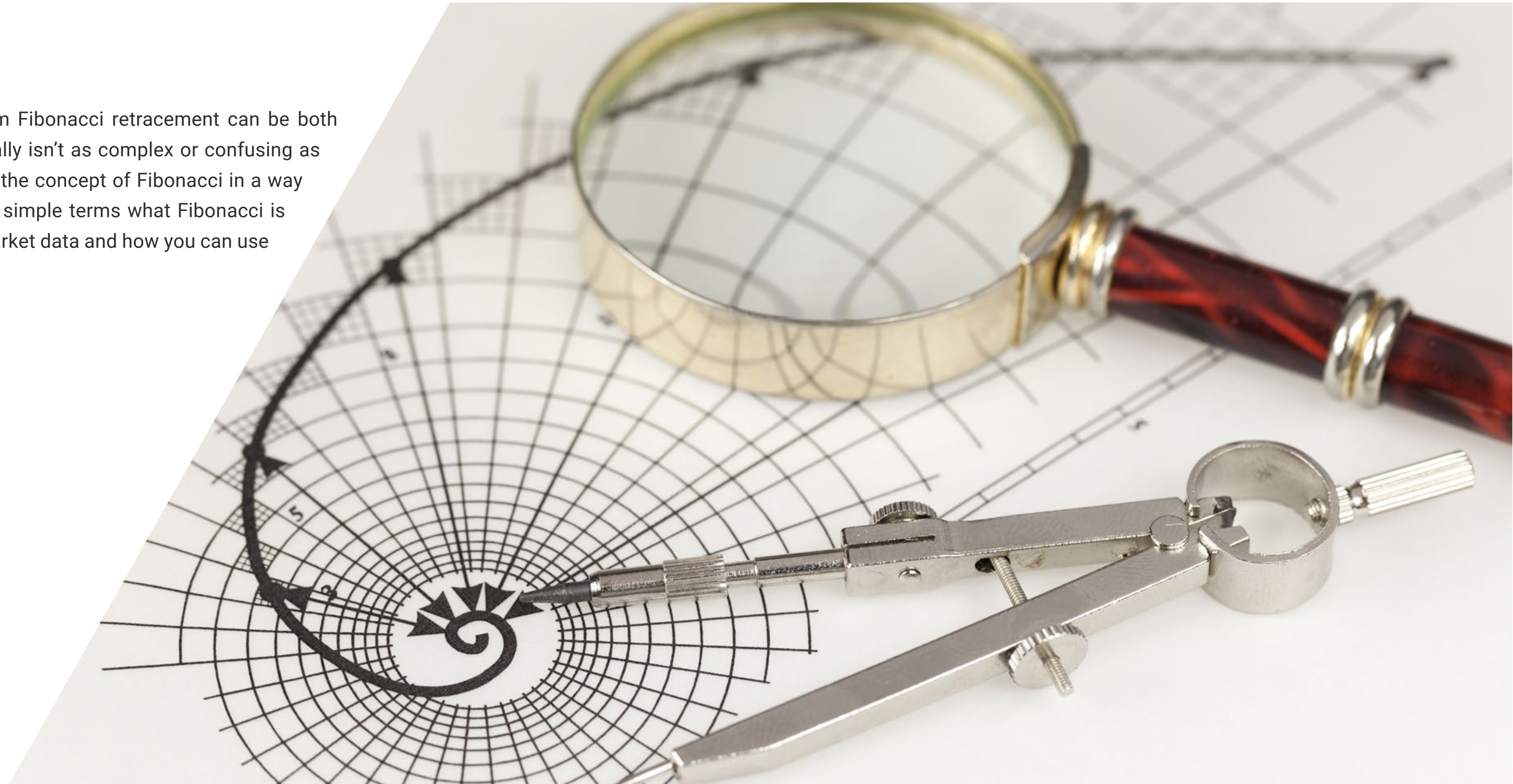
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# Introduction

For the less experienced trader, hearing the term Fibonacci retracement can be both confusing and intimidating, but don't worry, it really isn't as complex or confusing as you may think. In this eBook we will deconstruct the concept of Fibonacci in a way that it is easy to comprehend. We will explain in simple terms what Fibonacci is and how it is used in practical trading to frame market data and how you can use it to profit in the markets.



# | 1. Fibonacci: The Man, the Myth, the Legend



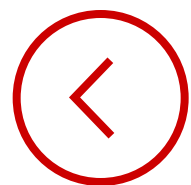
Before we get into the basics of how Fibonacci is used in trading, it is useful to briefly cover its history and background. Leonardo de Pisano was born in Italy circa 1170, his father Guglielmo Bonacci (the name Fibonacci, literally mean son of 'Fi' Bonacci) was a Pisan consul at a Mediterranean port called Bugia, now called Bejaia, in Algeria. Leonardo studied Mathematics in Bugia with an Arab teacher and travelled widely to Syria, Greece and Egypt where he acquired his extensive knowledge of numerical systems and calculus.





## | 2. The Golden Ratio

Fibonacci is credited with introducing the western world to the 'Golden Ratio' and the Fibonacci numerical sequence in his book 'Liber Abaci' published in 1202. It is noteworthy that this sequence was known to Indian mathematicians as far back as the sixth century. The book popularised Hindu Arabic numerical sequences, making it one of the most influential books on mathematics in the Middle Ages.





### 3. The Fibonacci Sequence



In his book, Fibonacci explained a mysterious numerical series that has been referred to as the 'Golden Ratio' or nature's secret code, that has more recently gained notoriety in the 2006 blockbuster movie 'The Da Vinci Code'. In the Fibonacci sequence of numbers after 0 and 1, each subsequent number is the sum of the prior numbers.

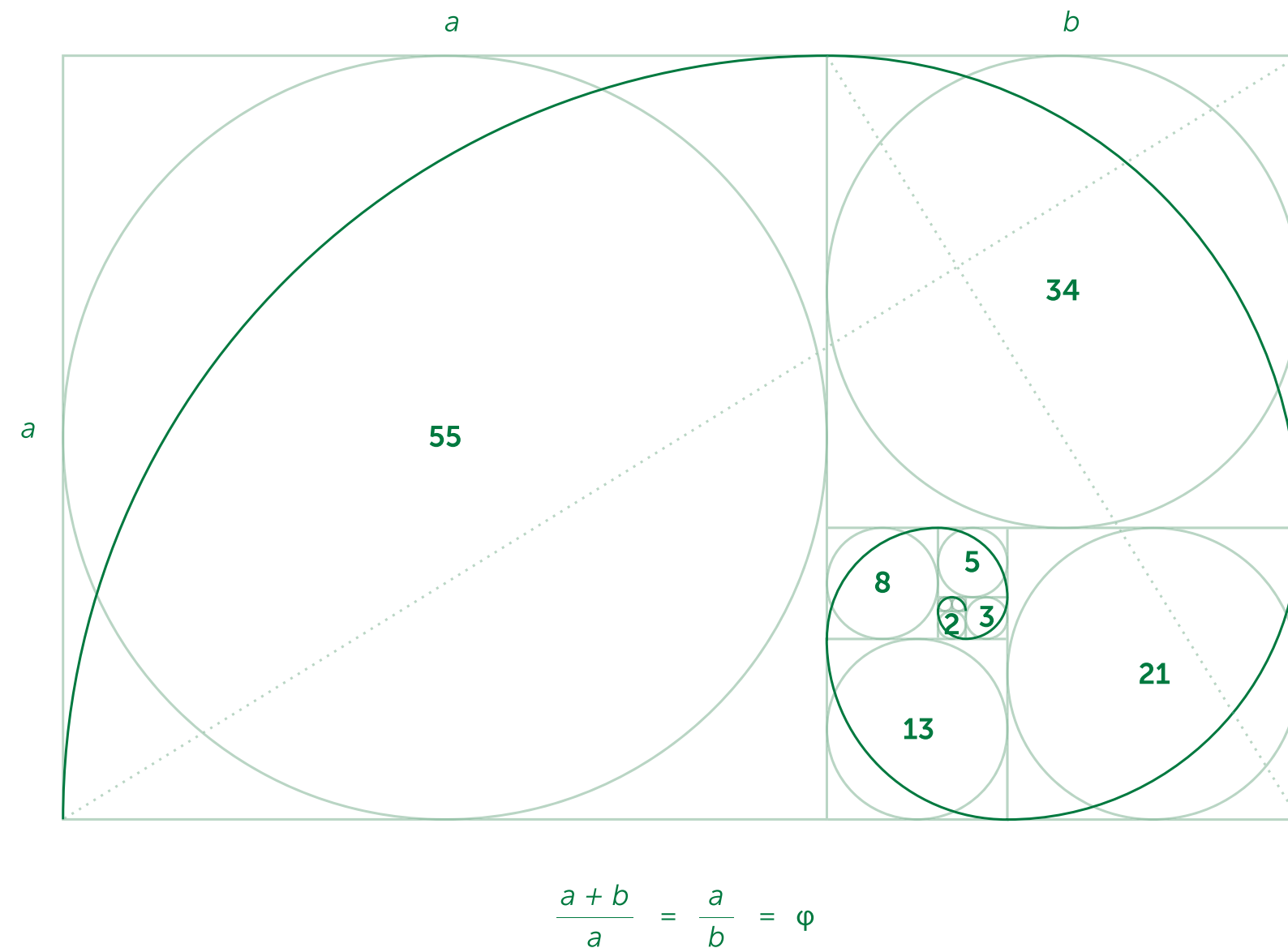
**The sequence works as follows:**

**0,1,1,2,3,5,8,13,21,34,55,89,144,233,377,610,987**

So as you can see  $1+1=2$ ,  $1+2=3$ , the number 55 in the sequence is the sum of 21 and 34. So now that we have a core understanding of who Fibonacci is and what the Fibonacci sequence is, we should finally note that each number in the sequence is approximately 1.618 times larger than the prior number. This ratio is going to be important as we proceed. It is a number that has significance in the natural world around us, it is commonly found in manmade architecture referred to as the 'Golden Rectangle'. It is believed that the shapes it creates are naturally pleasing to the eye, creating a sense of harmony. It can also be seen in all aspects of nature from the structure and replication in flowers to fossils and even seashells.



## | 4. The Fibonacci Sequence & Ratios



At this point, it is key to understand how the ratio is calculated. The calculation is made by dividing a number in the sequence by the number that comes directly after it, so it looks something like this:

**5 divided by 8 gives a ratio of 0.625**

**13 divided by 21 gives a ratio of 0.619**

**89 divided by 144 gives a ratio of 0.618**

The final ratio in that series above is the most important ratio and forms the basis for 'The Golden Ratio', however, there are other key ratios, for instance when you divide a number in the sequence with a number two places ahead of it, so you get:

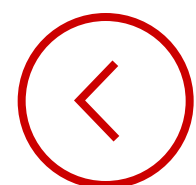
**8 divided by 21 gives a ratio of 0.382**

Then divide the same number by the number three places ahead of it, so you get:

**8 divided by 34 gives a ratio of 0.236**

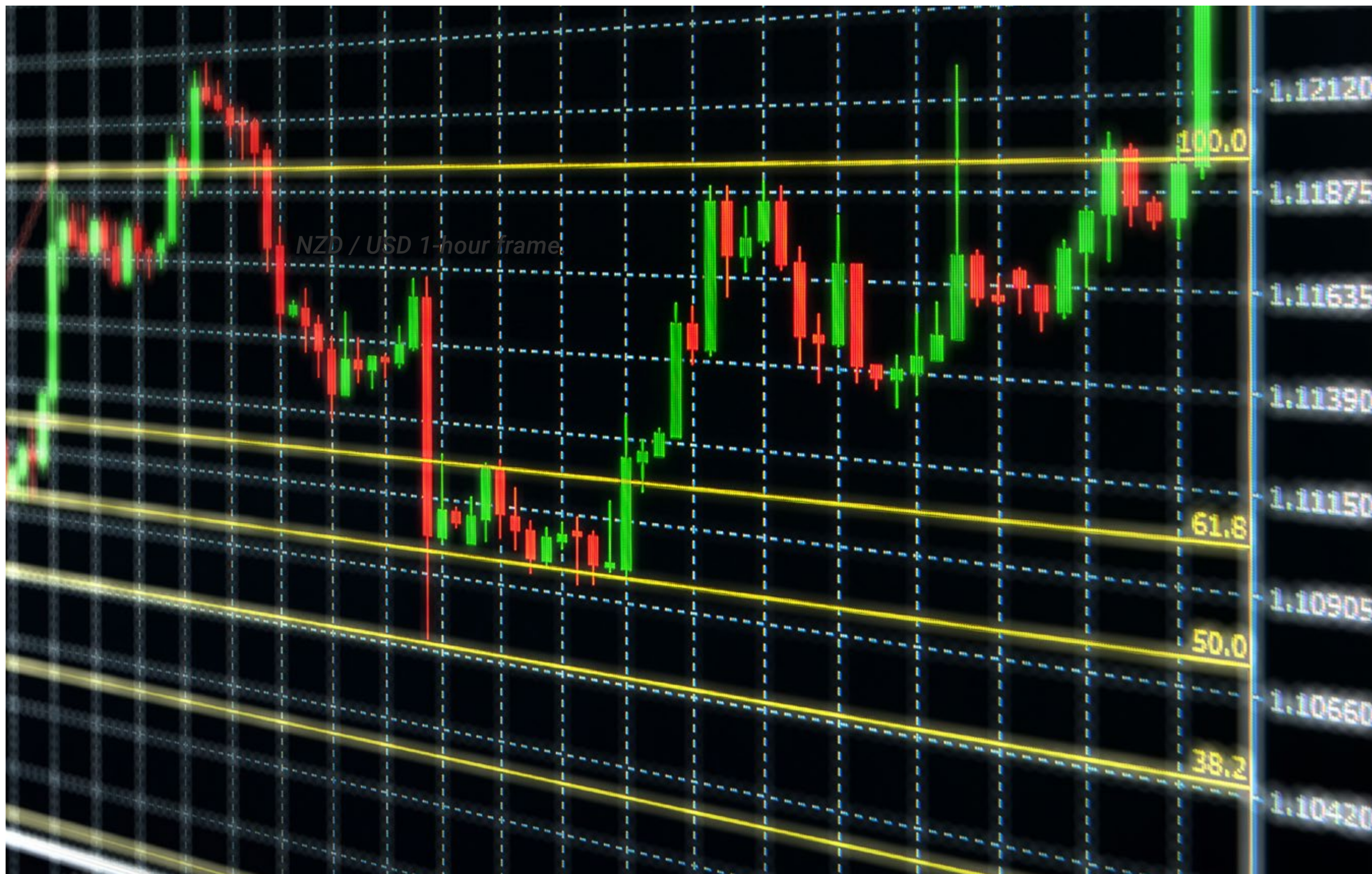
Therefore, we now have some core ratios derived from the Fibonacci sequence, namely 23.6%, 38.2% and 61.8%. Traders use these ratios to determine retracement levels in trading; prices have a high probability of reacting at these levels. In the meantime, there are a couple of other key ratios traders pay attention to, as you can see in the list below:

**23.6%, 38.2%, 50%, 61.8% and 78.6%**





## 5. The 50% Level Theory



It is noteworthy to mention that the 50% level does not have a specific Fibonacci significance, however, traders do pay attention to this level as it represents the half way back point for any retracement, over the years traders have noticed that prices have a tendency to respond when prices retrace half of the prior swing.

Now that we have a better understanding of what Fibonacci numbers are and how we derive retracement levels from extracting ratios from the Fibonacci sequence, let's get down to business and define how we use these ratios in trading.

Although Fibonacci analysis is a widely used method and much respected by experienced technical analysts, it should not be deemed as the "magic wand" that is going to magically unlock the secrets of your price charts and allow you to make a fortune in the markets overnight. Fibonacci analysis should be considered as part of your trading tool kit that helps give you an edge in the markets when you use it appropriately. In the coming pages we will demonstrate how Fibonacci retracements can serve you well in highlighting high probability support and resistance levels, which can in turn be used to enter trades and also help to identify profit targets.

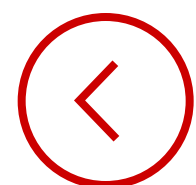




## 6. Fibonacci Retracements

In the first section we learned about the most commonly used retracement levels (23.6%, 38.2%, 50%, 61.8% & 78.6%) Now let's look at how we practically draw these key levels on our charts.

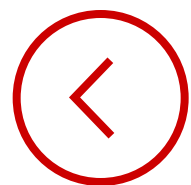
As you may know or as you will certainly learn, markets very rarely move in a straight line; more often than not, price moves in one direction and then pulls back either correcting against the trend or reversing to commence a new trend. Fibonacci retracements are helpful in giving traders a clue as to where a retracement may terminate and where the dominant trend may resume. To draw our Fibonacci retracements on a chart we must first identify a significant swing high and swing low, or vice versa.





## | 7. Using Fibonacci Retracement Tools

On the chart below you can see that we have a swing high and swing low indicated by the blue arrows; once these are identified, you then choose the Fibonacci tool from your charting software. The Fibonacci tool comes as a standard offering on nearly all common charting packages, like MT4 and has the most common retracement levels already set up as a default. The chart package I am using is TradingView.

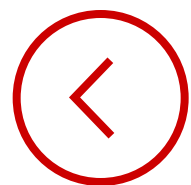




## | 8. Fibonacci Retracements in a Downtrend



You can apply the Fibonacci tool to the swing high and swing low, be sure to apply it to the absolute low and high of the price candles to get a precise reading. As you can see from the chart, after making the swing low price retraces sharply to the 50/61.8% ideal retracement zone before resuming the dominant trend and trading to new lows.

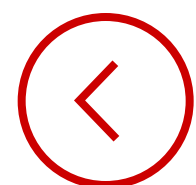




## | 9. Fibonacci Retracements in an Uptrend

Now let's look at an example of a retracement in an uptrend. When we are analyzing a chart and define that the current trend is up as denoted by higher highs and higher lows, we want to identify the highest high and lowest low point to draw our Fibonacci retracement levels, as indicated on the chart below:

On this daily chart of the Australian dollar, the swing low and swing high are highlighted again with the blue arrows. Price retraces from the swing high, eventually touching the 50% retracement before resuming the uptrend and ultimately taking out the prior swing high.

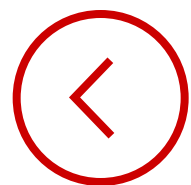




## | 10. A Simple Fibonacci Trading Strategy



So, we have learnt how and where to draw our Fibonacci retracement levels; now let's see how we can convert our analysis to a profitable trading strategy, with some simple rules. Obviously the most important aspect of using the Fibonacci retracement levels is identifying the most high probability levels to pay attention to; as a general rule the levels that most technical analysts adhere to are the 50/61.8% levels, because they are so widely followed, however, there is a degree to which other retracements levels become relevant too. For instance, the 23.6% level tends only to become significant in very extended moves and similarly, so does the 38.2% level. The 78.6% level has significance in so far as that when price breaches this retracement level there is a high probability that the current trend retracement has failed, and we are likely in a new trend.



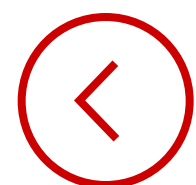


## | 11. 50% Entry, 78.6% Stop & Exit at 0%

So, from a trading perspective we are going to enter trades when price strikes a level, whereby we will enter one position at the 50% level and a second position if price strikes the 61.8% retracement with a stop below the 78.6% level, exiting our trades on a retest of the prior swing high or swing low.

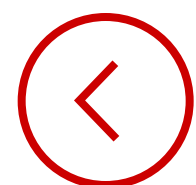
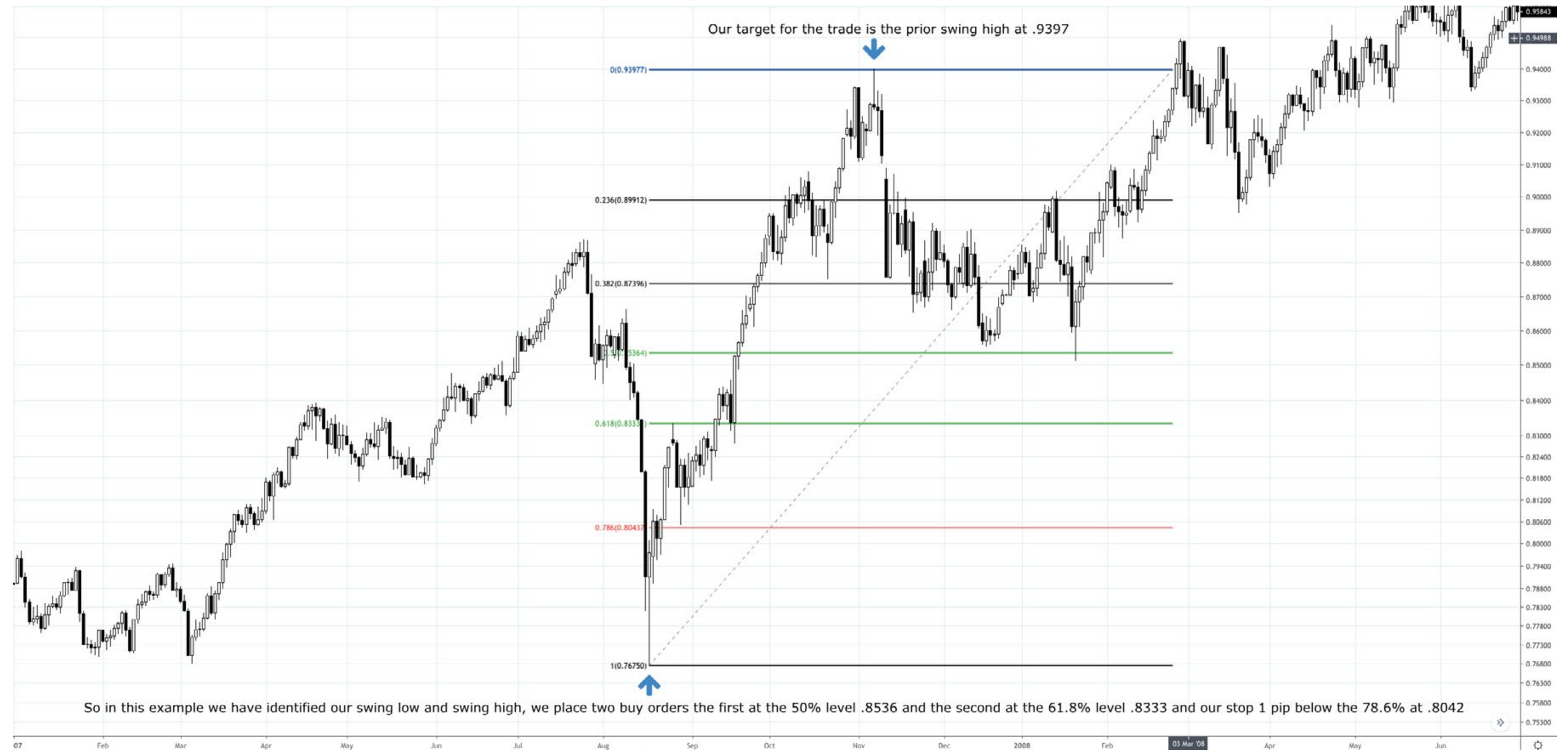
**Let's look at an example for a short trade:**

So, in this example, only our order at the 50% retracement level is triggered, price action consolidates before resuming the downtrend and moving to our profit objective, allowing us to exit our position for a profit





Now let's take a look at how the strategy works for a long trade.



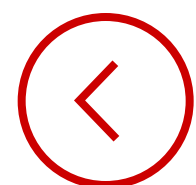


## 12. Trading the Trend Using Fibonacci



In this trade example only our order at the 50% retracement level is triggered; the spike to test the 50% level is met by strong demand and price resumes the prior uptrend, reaching our profit objective and allowing us to exit our position for a profit of 831 pips. The eagle eyed amongst you will notice that once price takes out the prior high, we get another retracement. This retracement allows us to redraw our Fibonacci retracement levels, from the current swing low where we entered our prior trade to the new swing high.

As you can see in the chart, if we repeat our trading process entering buy orders firstly at the 50% level .9006 and the second buy order at the 61.8% level .8890, placing our protective stop 1 pip below the 78.6% level at .8723. Once again, price retraces to the 50% level filling one of our buy orders. Price resumes the uptrend and retests the prior swing high and we exit our position at the profit target of .9498, allowing us to capture a 492 pip profit. Price proceeds to make a new swing high, and therefore, we repeat our process, redrawing our Fibonacci retracement levels from the prior swing low where we entered our last buy orders. We re-enter our buy orders at the 50% and 61.8% levels. The subsequent retracement fails to trigger either of our buy orders.





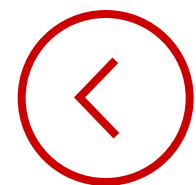


Prices retrace to the 38.2% retracement level before extending to make new trend highs, as such we redraw our Fibonacci retracement levels, the swing low remains anchored and we simply extend the Fibonacci tool to capture the new swing high.



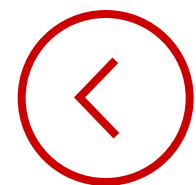


Once again, price duly retraces from the new swing high and comes within pips of triggering our 50% but does not actually strike our entry level before making another new trend high, as such we redraw our Fibonacci retracement levels from the new swing low to the new swing high and enter our buy orders at the 50% and 61.8% levels, with our protective stop placed 1 pip below the 78.6% level.





Prices retrace to fill our first buy order at the 50% level before once again extending higher in the uptrend, to trigger our take profit orders at the prior swing high allowing us to capture another 162 pips of profit. Once again, the dominant trend resumes, and we make another swing high as such we redraw our Fibonacci retracement levels from our prior entry point.







In this instance, price pulls back to fill both our 50% and 61.8% buy orders and trades directly to our stop level at 95.51 resulting in net 169 pip loss. So let's recap how we traded the uptrend, we had six trade set ups, of those six set ups four trades triggered three trades resulted in profitable outcomes totaling 1485 pips in profits, one trade resulted in a net loss of 169 pips, leaving us with a total profit for the trend sequence of 1316 pips. You will also note that as the trend expands, the Fibonacci retracements swing narrow from swing low to high, and this helps to protect the bulk of our gains when trading a Fibonacci trend sequence.

Now you have an overview of how to effectively use Fibonacci retracement analysis. Remember it is essential to use this tool as part of your trading arsenal; it is not the trading 'Holy Grail' and is best used as part of a broader tool kit, therefore, let's look at how we can combine Fibonacci retracement levels with some other common analysis tools, to provide additional confirmation and confluence to our Fibonacci levels.

## | 13. Fibonacci and Trendline Confluence

As you can see from the chart example above, price starts to develop in a down trending channel. Using our Fibonacci retracement tool combined with the trendlines provides a high probability set up to join the downtrend. As we see, the confluence in the trendline intersecting our Fibonacci retracement giving entries at both the 50% and 61.8% retracement levels, when you get these confluent set ups you may consider increasing your trade size to maximise gains, given the additional confirmation and higher conviction.



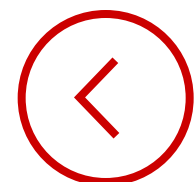


## 14. Fibonacci and Moving Averages

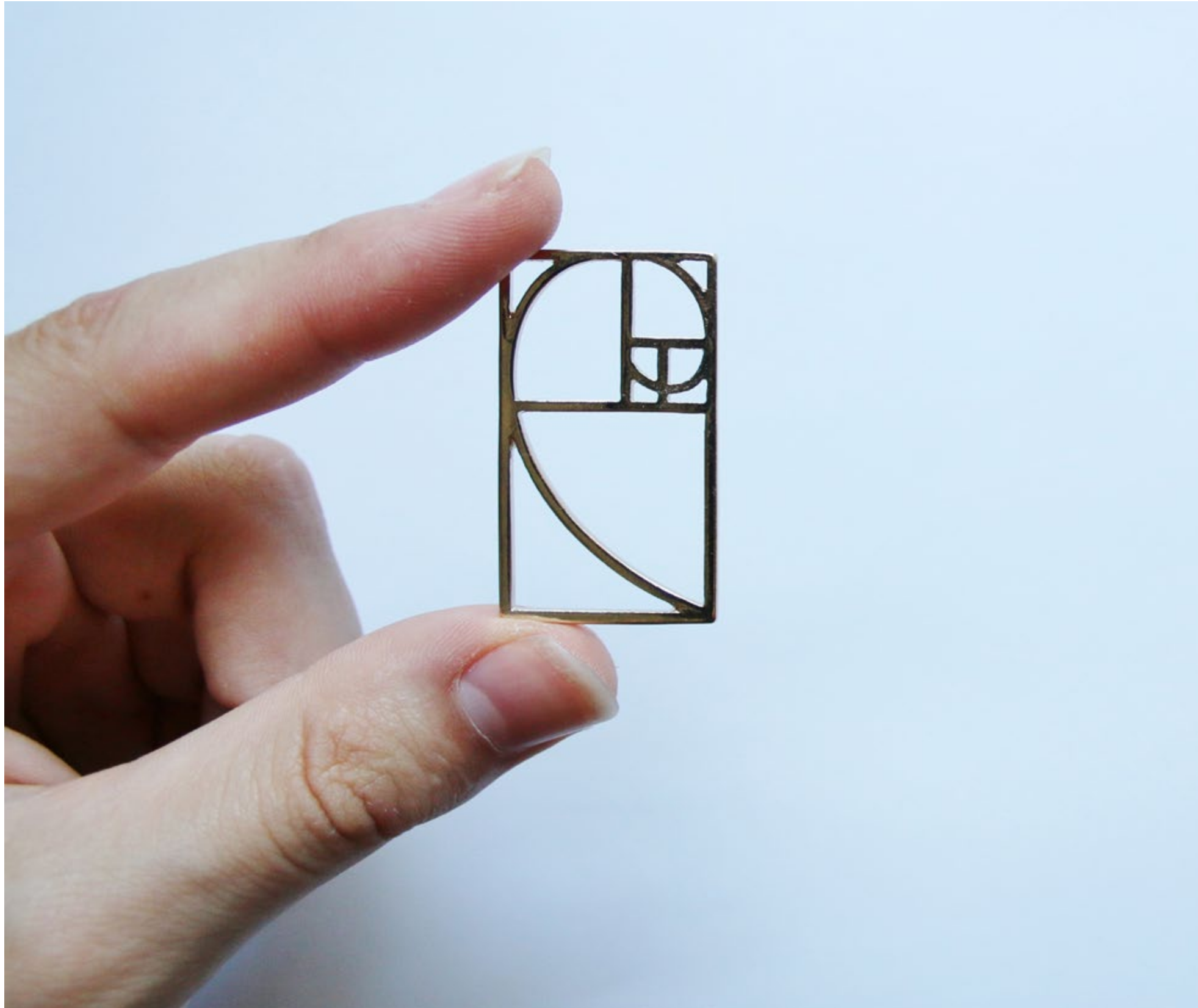


Another great way to look for trade set ups is to look for confluence with Fibonacci retracement levels and moving averages. What are these moving averages? They are most commonly 50, 100 and 200 periods look backs. When a trend develops denoted by prices consistently above or below one of the moving averages and price moves back to retest the moving average, there is a chance it will find support there. If you can connect this level with the Fibonacci retracement, you have a potential great entry point into the emerging or established trend as you see in the chart below

As you can see, price breaks above the 50-period moving average suggesting the potential for a new phase of trend development, it then pulls back to retest the 50-period moving average as support from above. Once we see the swing low prior to crossing the moving average and then the subsequent swing high, we can draw our Fibonacci retracement levels in this instance the 50% level coincides with the moving average and price touches the 50% level to the pip before taking off to the upside, in an extended up trend.

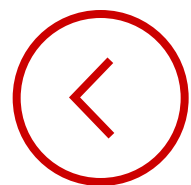


## | 15. Final Thoughts



Hopefully, you can now see the potency of combining the Fibonacci retracement levels with other common forms of technical analysis, to increase your conviction trading from Fibonacci levels. As with any technical analysis tool, convergence or confluence with other tools really increases the potential for profitable trade outcomes.

The best way to take advantage of Fibonacci analysis is to take time to learn to identify price swings and correctly drawing your Fibonacci retracement level, in time you will train your eye to see these swings instinctively and then remember to add conviction to the best Fibonacci levels to trade, look for additional confluence, prior support and resistance, trend lines or moving averages all work really well, as the old adage goes 'Practice makes Perfect!'







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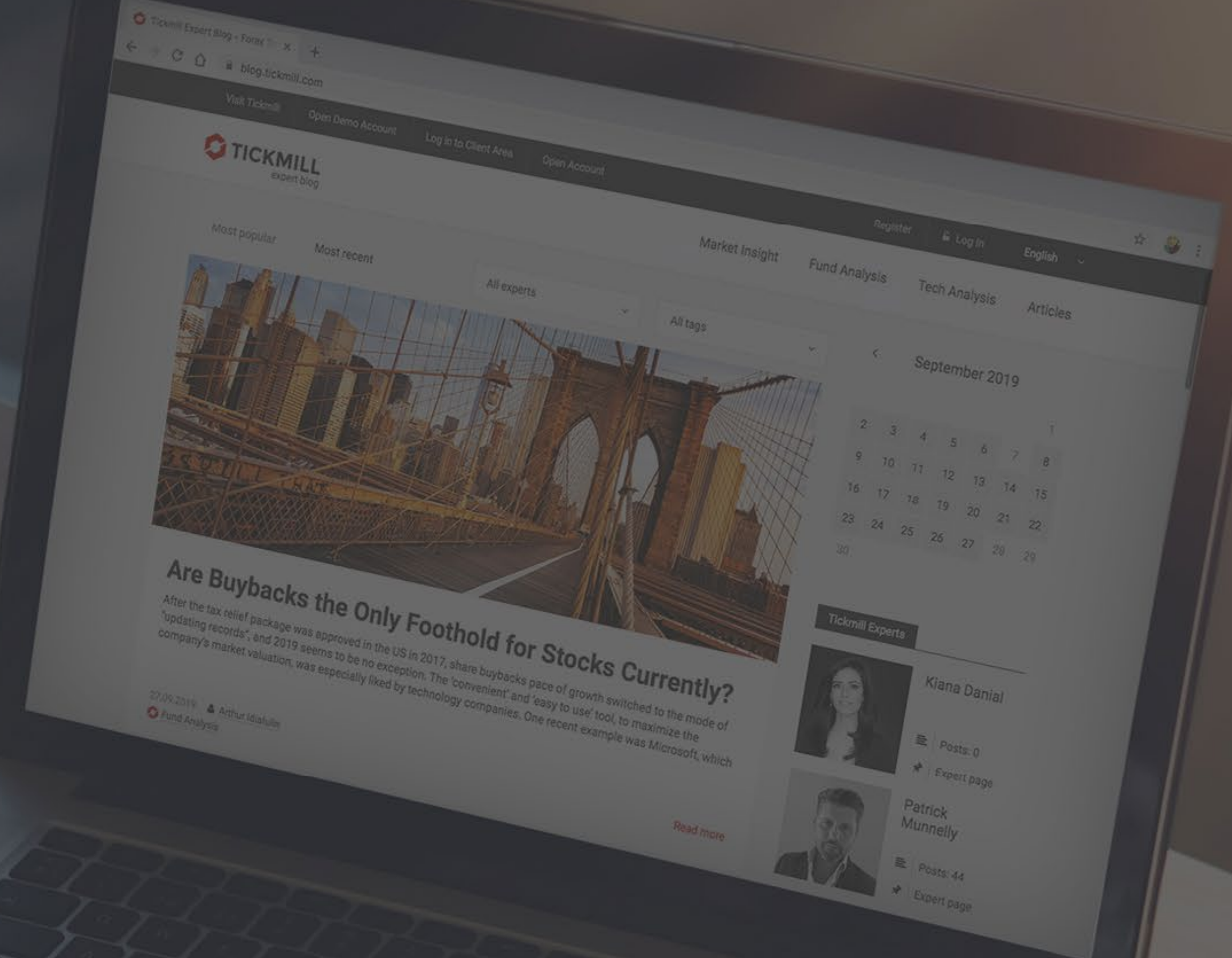


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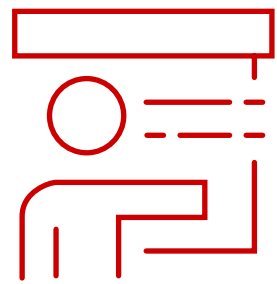




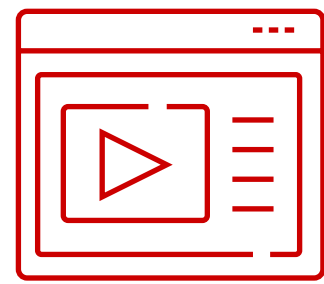
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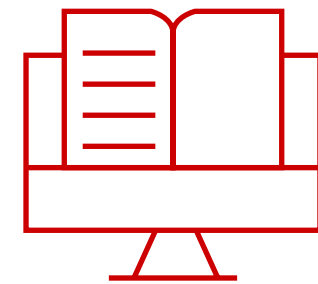
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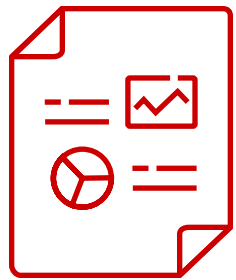
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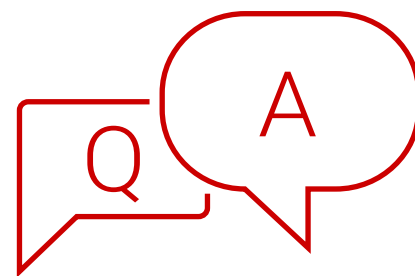
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