

# 1 WHY IS TICK VOLUME IMPORTANT TO MONITOR IN THE FOREX MARKET?

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There is no denying that large parts of the retail trading community have been excessively focused on the analysis of price action. Traders have disregarded the usefulness of combining price action techniques with volume studies. If you are one of them, the truth is that you can't be blamed.

Unlike futures trading, one of the challenges of trading spot forex is its opaque and fragmented nature, with no exchange or central entity facilitating a transparent volume representation. Trading activity via banks, financial institutions, hedge funds, asset managers, individual traders around the clock makes it incredibly difficult to track the real-time aggregated volume coming through the books. Because of this wrongly assumed limitation, many traders have led to believe that volume activity is therefore not available.

## 2 TICK VOLUME TO THE RESCUE

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Fortunately, there is a way around to replace this shortcoming. What if you could add a 'non-lagging' indicator that would allow you to make better-informed decisions as a trader? That's where tick volume, which measures the number of times the price ticks up and down, comes into play.

Did you know that tick volume activity and actual traded volume in spot forex exhibit a relationship that is extremely high? All it takes is to find a broker with sufficient depth of liquidity and learn how to properly interpret these volume patterns that occur over and over.

First, let's briefly touch on why is volume such a powerful piece of information. The answer lies in the influence it has to move prices and similarly because it communicates the involvements of the big or smart money. Volume is the fuel to cause new cycles and tells us the degree of commitment that it exists to endorse a certain buy or sell-side campaign.

By understanding the bias of big players, we can piggyback their market bias. Let's now back up with empirical evidence why tick volume matters.

In a landmark [research paper](#)\* published back in 2011 by Caspar Marney, veteran forex trader, who served tenures at banks such as UBS or HSBC, debunked the myth of the limited usefulness of tick volume in spot forex. Caspar, after a thorough study, concluded the existence of striking high levels of accuracy between tick activity and actual traded volume, which vindicates the importance of tick data and hence the relevance of this tutorial.

Find below an extract of the correlations Caspar came up with, which shows the intimate relationship between price updates and real volume. As you can notice, we are talking about correlations of 90% plus. Therefore, we should safely conclude that the analysis of tick volume activity provides real insights into the actual buy or sell-side commitment shown by the major market participants moving the price in the forex market.

In order to confirm what can be seen visually, the correlation was analysed mathematically; results can be seen below:

|         | EURUSD | USDJPY | GBPUSD | EURCHF |
|---------|--------|--------|--------|--------|
| Pearson | 0.9683 | 0.9583 | 0.9894 | 0.9714 |
| $r^2$   | 93.8%  | 91.8%  | 97.9%  | 94%    |

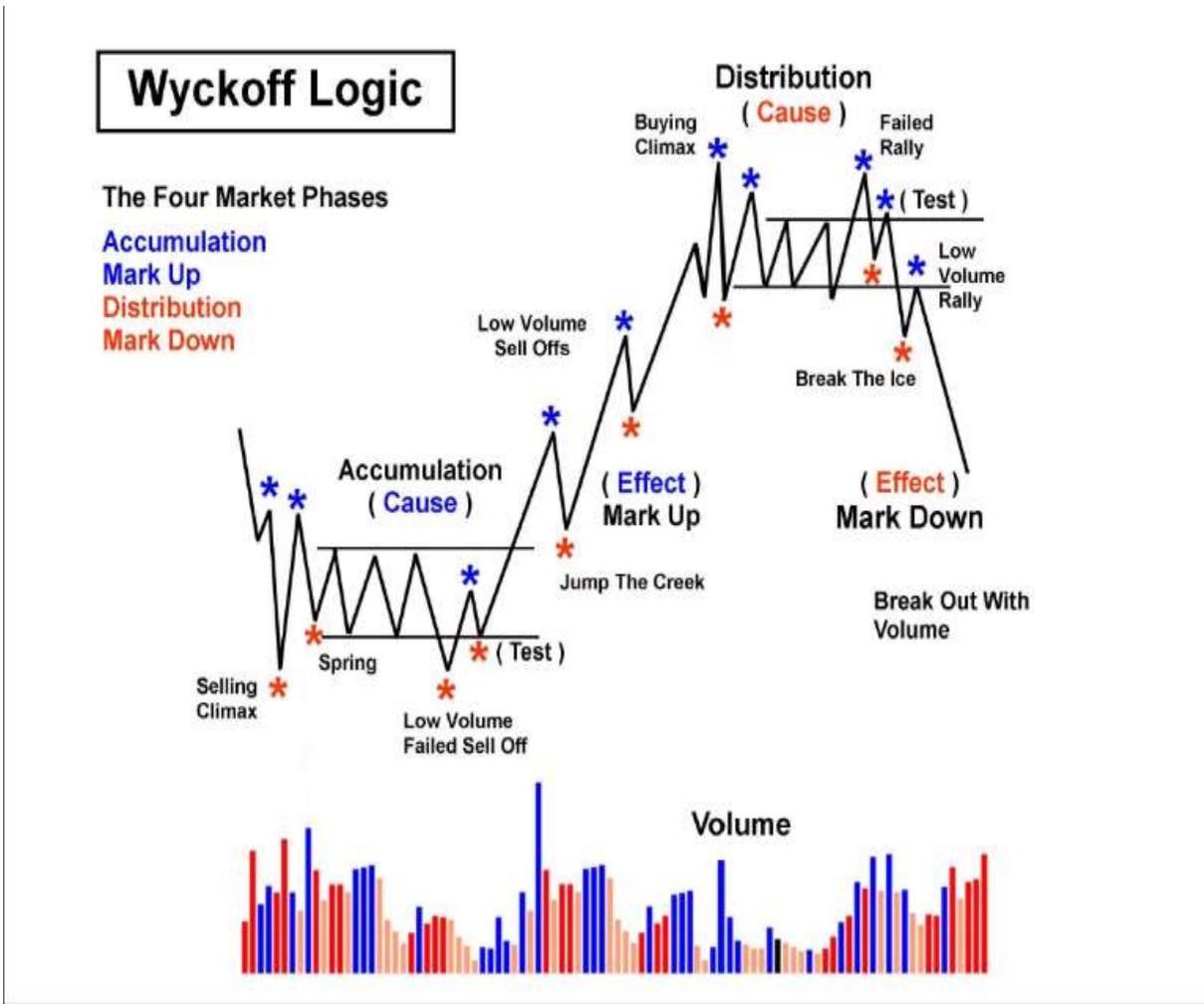
*\*The Pearson product-moment correlation coefficient (typically denoted by  $r$ ) is a measure of the correlation, or linear dependence, between two variables  $X$  and  $Y$ .  $r$  returns a value between  $+1$  and  $-1$  inclusive, with  $1$  and  $-1$  values indicating absolute positive and negative correlation and zero indicating absolute independence.*

$$r = \frac{\sum_{i=1}^n (X_i - \bar{X})(Y_i - \bar{Y})}{\sqrt{\sum_{i=1}^n (X_i - \bar{X})^2} \sqrt{\sum_{i=1}^n (Y_i - \bar{Y})^2}}$$

*The square of the coefficient ( $r^2$ ) is equal to the percentage of the variation in  $X$  that is related to the variation in  $Y$ . An  $r$  value of  $0.9683$  tells us that  $93.8\%$  of the variance of tick volume in EURUSD is shared by trade volume.*

From our analysis of these four currency pairs, we could postulate that over  $90\%$  of movement in tick volume in any currency pair is reflected in the movement of actual traded volume, ie. If tick volume is seen to be increasing, traded volume will be increasing in a very similar manner.

I must say, the search of an exploitable edge by blending in volume with price dates back to 1900s after a major influencer in the study of volumes, Richard Wyckoff, presented a research known as Wyckoff Analysis. His findings then evolved into what is today popularly known as Volume Spread Analysis (VSA). However, to simplify this tutorial, I will focus on the volume patterns that I have personally come to identify as a trader. Nonetheless, find below the basics of what Wyckoff would understand as his own logic.



### 3 CONTEXT IS KING: IS THE SMART MONEY BEHIND?

One important aspect to clarify is the absolute ‘must’ to always understand the environment and conditions you are trading. If the volume is going to be taken in isolation, it means very little. It’s only when contextualizing recent price movements and its volume evolution that it starts to tell us a story, unfolding bar by bar. The art of reading the market is to take a holistic and pragmatic overall view, moving away from the read of individual bars.

What I mean by stressing the above point is that as a trader, you must keep your multi-timeframe analysis in mind. Failure to do so may easily lead to picking the toughest and most costly battles as the tide is not in your favor. Never forget this tip. If you want to find out much more about how I personally analyze cycles, find my [tutorial](#) in market structure.

I once read a great analogy for volumes, which I can’t credit to one particular individual as it was many years ago and I completely lost track. He would compare volume to the accelerator of a car, price movement to the actual car motion, while a universal level of resistance/support would be a ‘hill’.

If the car is expected to keep going up a steep hill, do you think gently pressing the gas pedal would do the job? The forward motion of the car going up the hill can't possibly be long-lasting unless there is more power (gas) applied, correct? What if you were to press the accelerator to its maximum capacity yet the car motion is still stagnant going up the hill? That would be another clue, right? Do you start to see how the study of volume can be of real value to tell us a story about the intentions of market participants?

So, how can we tell if a price movement has the characteristic of being smart money-driven? To accomplish our objective, we will stick to our 3 elements, that is, the car (price), the gas (volume) and the hill\* (key level). How price heads into major areas of interest will be absolutely key to make a well-informed call about the environment as traders we face.

*\*I assume the reader will be interested to engage in relevant areas of support and resistance, as that will ensure that the volume analysis occurs in areas that are universally followed by all types of traders. Nothing will have more usage than support and resistance, even algorithms-driven systems take these levels into account. This implies that liquidity will be available on the proximity of the level and especially on a breakout, making it a decision point.*

## 4 VOLUME SEQUENCE: TYPE OF VOLUME ACCELERATION

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Depending on the type of trader you are, this is all you may need to get your entry confirmation. Other traders will need some extra info before pulling the trigger, and that's fine too. It's all about styles. I will be exploring both scenarios, that is, the two most basic yet most fundamental volume sequence to constantly be monitoring, while I will also provide different individual candle formations that add an extra input of potential confirmation.

Let's dive into it. The first pattern to be aware of is what I personally refer to as **false acceleration**, even if it's more commonly known as exhaustion sequence. If you observe price heading into a key decision point on lower or decreasing tick volume, we are likely to find ourselves in a context where a rejection of that level is likely. Remember, the car is trying to go up a hill with little gas being applied. It doesn't bode well unless gas (volume) increases.

This type of acceleration in price without the backing of volume tends to be a false picture of the market intentions, and certainly not one that carries the interest of the smart money. The low tick volume is caused by the professional money staying away from participating in the move. The absence of this big money riding the move results in thinner market liquidity, which facilitates a larger price extension even of low volumes. Unless the 'smart money' takes part in the move, the hill will get too steep for the car to keep moving forward.



Opposite to the pattern above described, let's now look at a price movement that does carry the participation of big players, and therefore a continuation of the directional bias should be expected. I call it **smart acceleration**. If the price moves towards a decision point or the level is broken amid higher or increasing tick volume, more often than not, it communicates that the bias has the backing of the institutional money. When this happens, a continuation of the developing trend is expected. Find an illustration of this pattern below.



## 5 MOST COMMON TICK VOLUME CANDLES

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Aren't you aggressive enough to factor in the above volume sequences to trade off your selected levels? No worries, I've got you covered. It's now time to dig deeper into the most common individual tick volume candles that may show up at these trading levels. It should serve as yet another invaluable piece of the jigsaw to make an informed trading decision. These candle formations can reveal plenty of clues to confirm a thesis over a particular direction.

As an important note. You must make sure these candles are formed at the right levels with enough room to run to the next logical targets. And again, remember that candle formations are as good as the context traded.

If at a key decision point as in the illustration below, we spot a volume that stands out above the rest, with a sizeable tail of at least  $\frac{1}{2}$  the size of the candle, that's what is known as an **absorption candle**.

An immense amount of selling pressure came in, yet buy orders ended up overwhelming buyers. After this print, do you think sellers are likely to engage again or will they re-assess at the next best level? Remember, the driver has applied maximum force to the gas pedal yet the car can't seem to go further up the hill. You'd probably want to find a different hill (level) as this one is clearly too steep to make it through.

Bonus: If you see an absorption candle followed by an exhaustion sequence, as in the example below, then it's almost perfection.

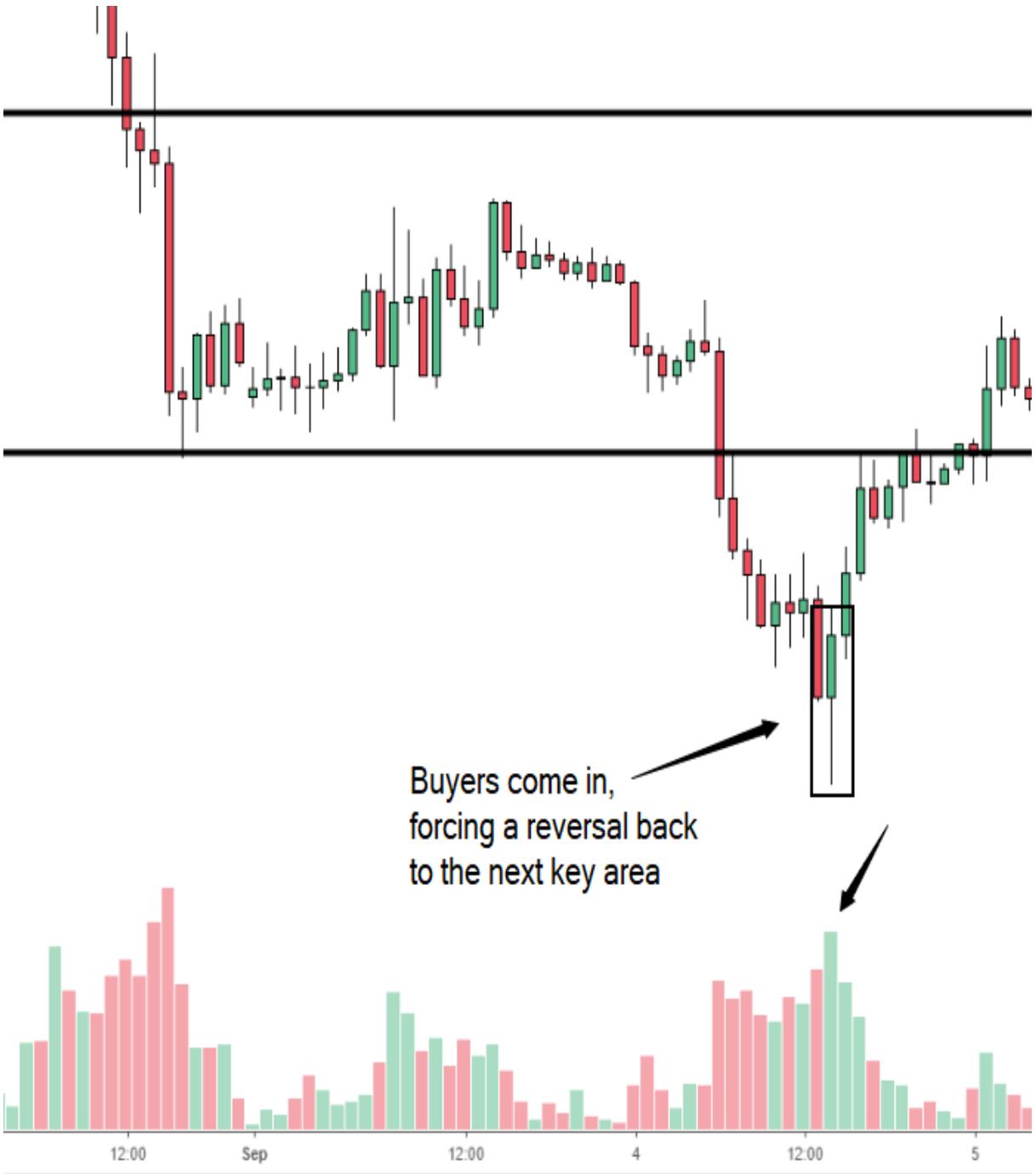


Another candle formation that communicates an analogous message to the absorption candle is what is known a **stopping volume candle**. This is a move that carries high volume, but this time, the size of the candle is much more compressed. It doesn't need to have a tail either.

Ideally, the close is in favor of your preferred trading direction, but it's not necessary. In the first illustration below, the relatively small bullish candle is printed on much higher volume as price heads back into a resistance level.

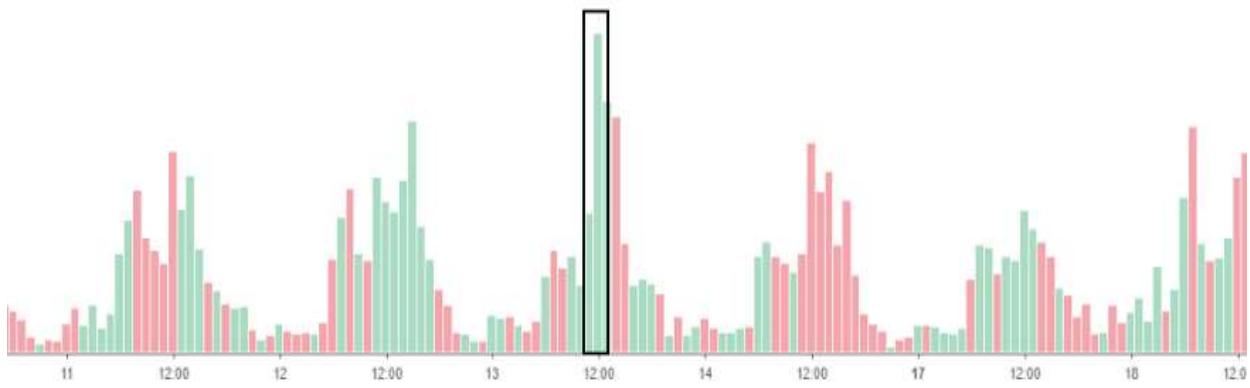
If you think about it, that small size candle on such high volume can only be possible if there is strong interest by sellers to absorb whatever demand comes in. When this pattern occurs, it tends to halt price for a potential reversal.





Another type of price formation that will be screaming at you is the **real-money candle**. Its unique feature includes the sizeable candle, accompanied by ballooning volume. This formation has very little if any absorption, so by itself it communicates that the imbalance of demand/supply has far exceeded the opposing side. When these candles occur, one should expect a limited continuation of the move. They can only be created on the participation by the smart money community (banks, institutions, hedge funds, etc).

If there is enough room until the next target area, this candle formation tends to run further with little retracement as momentum traders jump onto the bandwagon. However, unless you are a short-term momentum trader, due to the over-extended conditions, it usually retraces, and that's where swing traders and the smart money will look to re-engage.



Again, reiterating the same point, pay attention to the context traded. In this second illustration, notice how the bullish real money candle fails as it trades into a key resistance against a downcycle?



The next price formation on the list is the **exhaustion candle**. If the price comes into a decision point amid paltry volume activity, the chances that the area will be breached are quite slim. As the name indicates, sellers simply exhaust themselves. As a result, the dynamics of price discovery will force the price to retreat, looking to get fillings at the next optimal points of equilibrium. In the chart below, I've combined several exhaustion candles as part of a false acceleration move, which at the same time, occurs within a broader context of trading into the origin of a real-money candle move.

