In this lecture we are going to analyze a classic example of market manipulation in the US dollar versus the Canadian dollar in the daily timeframe, and we are also going to see how manipulations can be perfectly aligned with the science of pitchforks. Interestingly enough, even though market manipulations are a purely praxeological event in the chart, they still function within the mathematical and physical fabric highlighted by the professional linework we use with this whole methodology.

In this chart we can immediately recognize two major highs and one low. This particular low was going to become solid if price had surpassed the last high, but as it turns out, price reversed exactly at the last high's level. That means the major low in question is not confirmed yet, meaning that buyers were not able to prove their strength. That's an important observation to make since the market has been rising so far. This might be just a temporary stop in the trend of course, but it can also mean the exhaustion of major buyers, which directly points to sellers gaining control of the market.

Right after price touched the resistance created by the last high, it started to go down in direction of the inward frequency line marked by the horizontal black line. Even though this is not a confirmed demand line, it still a demand line because it marks the point where buyers went up in the attempt of making that major low a confirmed solid extreme and increase the power of the upward bias in this market. The interesting detail here that begins to point to a market manipulation is the fact that price creates a hybrid bar with fractal and buying pressure qualities at the inward line. That's a bit weird because a bar with that much volatility shouldn't be the case after those buyers failed to break a simple resistance.

Three bars later, price creates yet another hybrid bar pointing to the upside, which is almost exactly the same as the bar we just talked about. Let's put ourselves in the shoes of retail traders now so we can view this market from their perspective, and then apprehend what that means for the market makers' mind. When retail traders see bars like that in the direction of a high in this case, they start to think that it's a good idea to buy the breakout of that high. The rationale for this is intuitive, but it's wrong.

Retail traders believe that when price breaks a high, it means that price has momentum to continue going up. That's partially true, but what they ignore not by negligence but by lack of understanding, is the fact that there is such a thing called market location, and when price surpasses a high or low, the market is usually in a pretty bad location. Bad trade location means that the true stop is too far away and the optima target is too close, meaning that there is too much true risk for a small potential reward. That's perhaps one of the key ideas that render these simplistic retail trading ideas useless in the long term because, if you trade with bad location, statistics will eventually catch up with your operation style, and you'll see that your expectancy of return plummets. Needless to say, this is very bad for the equity in the long term, especially when we are talking about compound interest.

This whole expectation shaping dynamics derived from these bars in the chart are associated with something called Von Restorff effect, which is one of the famous cognitive biases that all human beings have, and it's also the first axis in the tridimensional axis of market manipulation according to my theory. In behavioral finance, the Von Restorff effect is when our attention shifts immediately and automatically to something that deviates from the mean so to speak. For example, imagine that you are walking in a crowded street, and all of a sudden, an unusually tall person appears. Your attention immediately shifts to that person because she clearly deviates from the mean of the crowd.

The danger here is that we cannot really pay close attention to two things at the same time. Some people like to say that they multitask, but that simply means that they alternate

quickly between many tasks. They don't do all the tasks all at once because we cannot really divide our attention like that, and there are evolutionary reasons for this. This cognitive bias was probably very useful for our ancestors who were trying to avoid dangerous animals and things of that sort because that allowed them to focus on the sudden dangers that appeared without notice. This bias was probably shaped and naturally selected because it benefited the individuals who attempt to escape those dangers. If you are trying to escape from a dangerous animal for example, you are certainly not going to benefit from dividing your attention in that moment.

The fact is that such a bias is deeply hard wired in our biology, and in modern paradigms like financial speculation, it can be used against ourselves by market makers for example. Market makers are interesting people because they have a really powerful sense of the impartial spectator, which is the amazing ability that human beings have of being aware of their own biases even though we cannot really erase them. In other words, large traders and market makers know very well how the mind works, so they will take advantage of that fact since most retail traders have a very poor education on behavioral finance since they only focus on finding the holy grail of the market.

If you think about it, that's another expression of the Von Restorff effect because trading techniques and the unachievable holy grail of the markets is where our attention wants to go for obvious reasons, but meanwhile, there are all these other sneaky details that will catch you if you're not careful. Right, so with all of that in mind, market makers will purposefully produce price bars that induce retail traders to a specific area in the chart. When retail traders see those large bullish bars going in the direction of a high, the green light for a long trade lights up in their brains.

For practical purposes, that means that that last major high will have a cluster of buy stop orders, which is exactly what market makers want. Their primary goal is to enter the market with very large positions, and they can only do that in areas where there is a deep liquidity pool as a result from the concentration of many orders. Thinking in terms of simple supply and demand, if there is too much demand, there can be too much supply to balance things out. Let's advance price a little bit to see what happens.

IMAGE 2

Take a look at these two new bars for a moment. They are not strong hybrid bars, but they show selling pressure once price surpasses the major high. Once the market hits that cluster of buy stop orders created by the retail traders, the large traders can start selling with a lot of power. It has to be enough power to counteract all the buying pressure from the sum of all retail traders in that market, which is not exactly small. We are talking about a major currency market, so each pip represents about 100 million dollars of liquidity. This is also the daily timeframe, so those upper bar wicks are about 40 pips in size. The creation of those two upper wicks cost at least 8 billion dollars for the large traders in this market. It's probably more than that because we are talking about an area with deep liquidity, so the supply has to be much higher to counteract the deep demand.

Once retail traders see those two bars failing to render their long trade idea as a winner, they start changing their market bias very quickly. This is what I call the reverse psychology axis of the manipulation for a simple reason. Large traders induced the retail traders to the upside of the market with the sole purpose of inducing them to the downside right after. They only do this to take advantage of the deep liquidity pool that this whole process creates. What happens is that large traders are able to enter an insanely large short position, which is at least 80,000 standard lots big according to our simple calculations, and

even better than that, they now have retail traders quickly changing their biases to the direction of their large position. That means that retail traders will start selling hard.

This is the third and final axis of the manipulation called bandwagon effect. Retail traders are afraid of missing opportunities in the market, so they follow mass psychology or as some people ironically call crowd wisdom. Once they see price failing to the upside, they start selling without realizing that they have been maneuvered, and they are now helping large traders to make a lot of money. Let's see what happens with price action next.

IMAGE 3

In this next picture we can see a simple pitchfork, but there are a lot of details about it. The first thing to notice is that price went down hard after the manipulation. Price went down about 200 pips. Remember that market makers had at least 80,000 lots in their short position, and with 200 pips of profit more or less, that represents about 160 million dollars for the market makers. You might ask how they know the market will reverse at the c axis of that pitchfork. The answer is that don't necessarily know, but they can align the mathematical framework of the market with the fact that they can nudge price to induce the rest of the market.

Notice that this pitchfork represents an exact example of Newton's third law in the market. From the tail upward we have the action space, and observe the frequency respecting the tail exactly in one of those hybrid bars that started to generate the Von Restorff effect. If you understand Newtonian extrapolations from the volume one, you'll have no problem seeing that the reaction space falls exactly where the c-axis of this fork is grounded. That would be the mathematical layer of the market. In alignment with that, large traders have to unload their positions, and eventually they can nudge price in the opposite direction.

This is the part where we as smart retail traders can start thinking about how we are going to take advantage of this whole situation. The important realization here is that the market has a short-term memory window, and the level where the manipulation occurred is engraved in this short-term memory. I already said this many times, but if you have trouble believing this, remember that if this concept of the short-term memory window wasn't true, neither technical analysis nor price action would work at all. This is an absolutely central idea to financial speculation.

That means we can think about a trade opportunity if price reaches those levels that are within this short-term memory window, which is exactly what's happening at this moment in the chart. First going back to the blue fork, we can see that its centerline is suggesting a dynamic level of exhaustion for buyers in this market, and there is a moment where the center line correlates with the wash line, which is the level that was used as an axis to manipulate the market a while ago. There is one bar in the chart that pierces both lines very near their intersection.

Right at the current bar we have a fractal bar pointing to the downside after touching the wash line. This fractal bar also represents a small Hagopian's rule for the blue fork. Notice that it's a failure to reach the center line of the blue fork again. According to the Hagopian's rule, a failure to reach a line of the pitchfork will produce a violent reaction to the opposite side, which is confirmed by the fractal bar. In this chart you can also see another red pitchfork that has an unusual grounding for its c-axis. It's unusual but it's certainly logical. Instead of grounding the pitchfork on the absolute extreme of what appears to be the beginning of a down vector, we ground the pitchfork on the actual beginning of the vector, or the praxeological interpretation of the vector's beginning.

That's why it's important to become aware of these different layers of interpretation of price. The mathematical and the praxeological layers. Often times they will point to slightly different details that can make all the difference in the end. In the case of manipulations, the stop loss placement is obvious. It should be above or below the manipulation maneuver. In this case we are talking about a high that was manipulated, so the stop should be a few pips above the manipulation itself, not the high that was maneuvered.

There are basically two ways of entering this short trade. You can risk entering after price pierces the wash line and the center line simultaneously, which is riskier but has more potential for profit, or you can enter after the obvious signal of the large fractal bar down. The target in this case is also pretty straight forward. We can always aim for the center line of the fork. At the very minimum the last major low, but in this case that would be a very conservative target and not enough to give a 1 to 3 risk reward ratio. Let's see what price does next.

IMAGE 4

In this image you can see the outcome of both types of entry. The riskier entry has half the stop size, and that ultimately means in this case a risk reward ratio of almost 1 to 5. The least precise entry with the fractal bar produces about 1 to 2.2 risk reward ratio, which is not bad, but it's not ideal either. What I would like you to extract from this lecture is precisely what I said in the beginning, which is the fact that the mathematical layer of the market with pitchforks and the complex line work can indeed work in perfect synchrony with the praxeological layer of the market in the case of the interpretation of how manipulations occur.

This relates to the most fascinating idea in econophysics, which is the relation of the mind, in this case mass psychology, and the mathematical reality of the universe that allows such things to develop in the first place. That's why I made a lesson about econophysics and the anthropic principle in the price action trading volume one. In a nutshell, the anthropic principle claims that conscious life can only occur due to the specific settings of the laws of physics in our universe, which could be different.

It turns out to be the case that the specific calibration of physical constants falls under such a setting that allows organic conscious life to act in such a way. As I said, there could be other versions of laws of physics that would spark universes where life wouldn't be able to rise, or at least it would emerge in a vastly different way. All of that means that there is a clear connection of the laws of physics and the way conscious life operates, which is the starting position of econophysics. That's a vastly unexplored territory at this point in time, but it's interesting to image the possibilities in the expansion not only in this field of study, but also in other similar fields like neurophysics and psychophysics.

Discovering certain archetypes of how the mind works within the intersection of physics and psychology would be an extremely tempting idea to any trader, and that's pretty much what we attempt to do here. We try to identify these patterns that align themselves with mathematics and psychology simultaneously. This is one of the reasons speculation is so immensely interesting and challenging, and it will probably continue to be like that for a very long time.