eBook

SEARCHING FOR AN ENTRY POINT: THE SECRETS OF A TAPE AND DOM
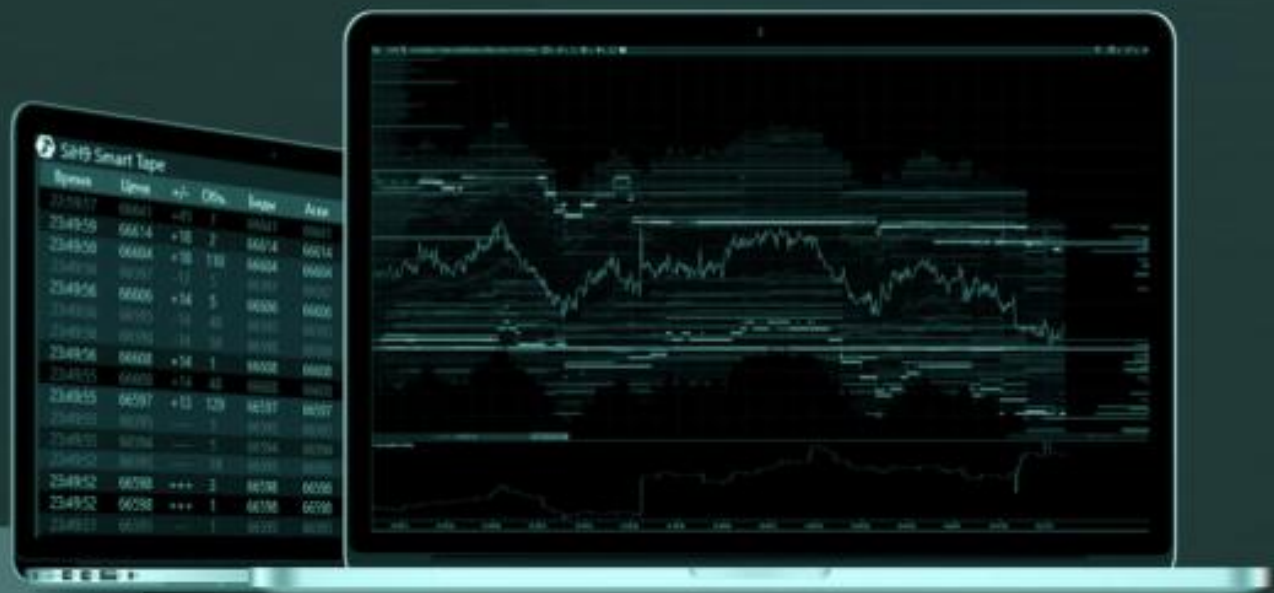
Content

Introduction

In this book we will touch on a very interesting topic - the interaction between tape (SMART Tape module) and depth of market (DOM indicator Levels), as well as a footprint (BidAsk Ladder) and cluster analysis (indicator Cluster Search) in ATAS platform.

We will consider these volume analysis instruments on the example of operation of cryptocurrency exchanges Bitfinex and BitMEX. High volatility Bitcoin XBTUSD futures are traded on the Bitmex exchange, and cryptocurrency pair BTCUSD is traded on the Bitfinex exchange.

To be noted that, the presented examples for crypto exchanges are universal for other markets as well.
Mention also, that the following tape and DOM analysis approaches are applicable on other exchanges.

Knowing the principle of orders matching and having on hand such analysis instruments as tape and Dom Levels indicator, day trader can:

- monitor really important levels;
- find good places to enter with minimal risk;
- at the right time find those moments when the market goes under control of a buyer or a seller.

WHAT MANAGED MONEY IS

There is an opinion that the markets are driven by "managed money", also known as string-pullers, professionals, insiders and composite operators.

Managed money refers to major investors, banks, hedge funds, investment funds and financial management companies. It is considered to be managed since it has resources, both financial and human, which allow collecting and processing an impressive volume of data from open and closed sources and carrying out high quality analysis with the aim of receiving profit in the financial markets.

Managed money, as well as average traders, carries out a similar activity on the same exchanges – buys and sells stocks, bonds, futures and options. However, the volumes managed money works with are much bigger than that of the retail traders. It is rather difficult for the managed money to conceal its presence, since they operate with significant positions. And still, the managed money has a big desire to conceal its intentions in order to simplify its trading.

As it is known, different exchanges broadcast the price quotes differently, some broadcast ticks and passed volume only, others show bid and ask direction and volume. If an exchange broadcasts a trade direction, everything is rather simple. But if broadcasting goes without specifying a trade type, the ATAS platform would identify a trade direction using a special algorithm. In any case, user will have an access to the tape with a specification of directions:
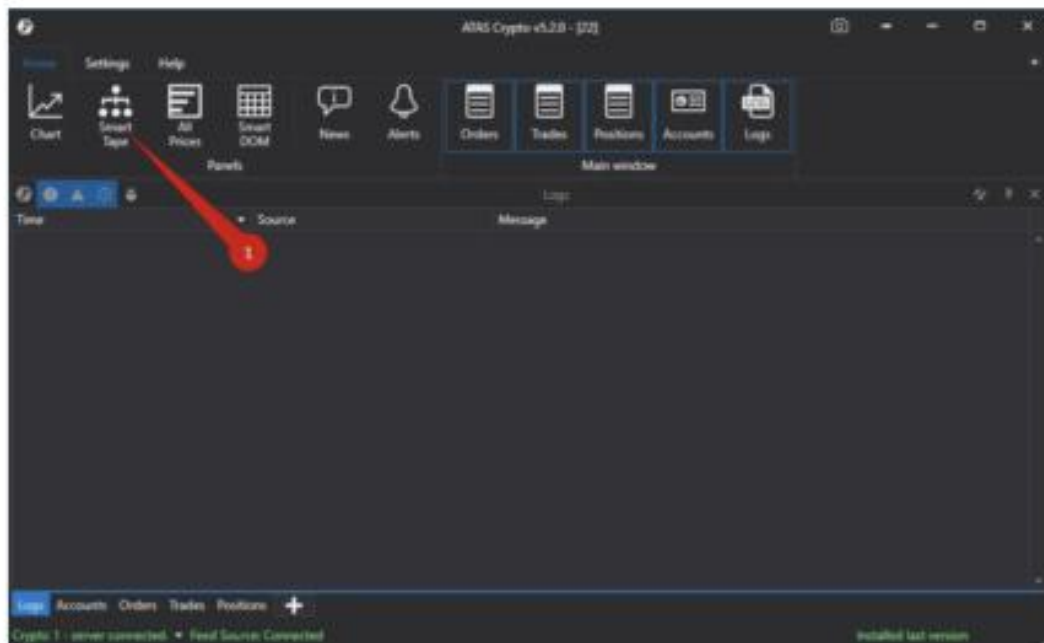
Tape settings

Create a new chart of XBTUSD cryptocurrency pair from the Bitmex exchange. Click point 2 in the pop-down menu and select SMART Tape in the point 3.

Or choose a module SMART Tape in the main window.

By default, the tape shows the following data:

- time;
- price;
- +/- (price change);
- Vol (Volume);
- Bid;
- Ask;
- Sizes;
- Avg (Average Volume);
- OI (Open Interest)

In order not to overload the tape with data, we will keep the necessary columns only. Right-click and select "Columns" and uncheck all units except for Time, Price and Vol (Volume).
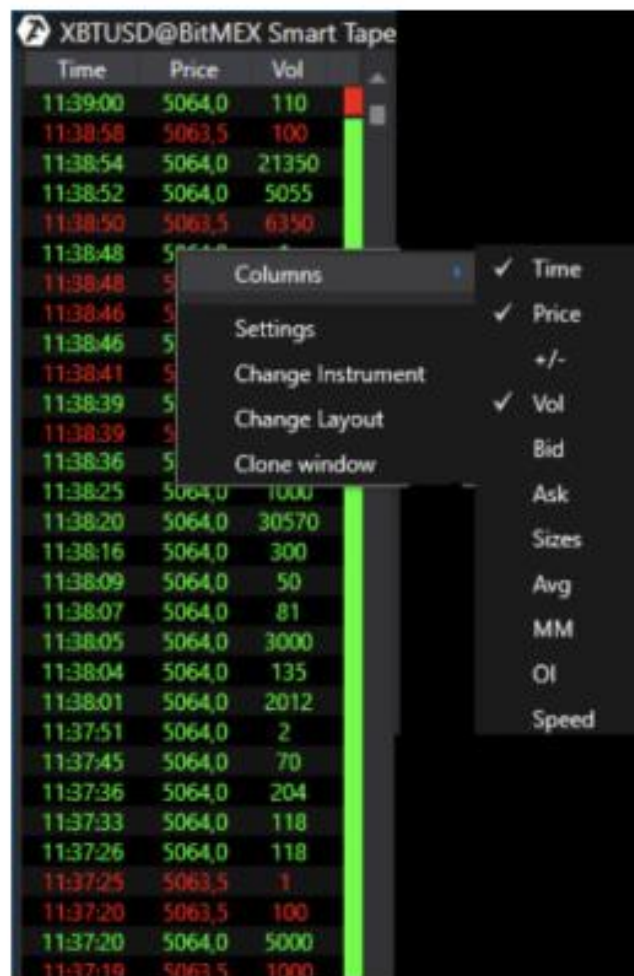
The above picture shows how the tape will look like now.

The tape movement speed depends on a liquidity of the instruments, number of market participants and number of high-frequency software robots. The tape moves very fast on popular instruments and it is necessary to adjust the filter, which would filter out small trades, in order not to miss an important moment.

To do that mouseover the tape, click the right mouse button, select Settings, select the Filters tab and set Minimum Volume in the Cumulative Trades Filters to 100000. This setting will be different for other currency pairs and could be selected experimentally.

Now the tape reflects only those trades, the aggregated volume of which is more than 100,000 contracts. This setting allows concentrating on major aggressive volumes. For your convenience you can create several tapes where the filter of aggregated trades will infiltrate trades with a higher or lower volume in order to break the major aggressors down for clarity.

This is how we set visualization of aggressive market trades.

DOM settings

In this book, we will also actively use the DOM Levels indicator.

The Dom Levels indicator allows to display data changes in the DOM higher and lower the current price.

You may specify the indicator's minimum and maximum volume of limit orders, basic colors of asks/bids and colors of asks/bids above the maximum volume.

- If the volume of a limit level in the DoM is above the minimum, but below the maximum volume, price level will be colored proportionally to the volume.
- If the volume of the limit level is higher than the maximum, then the price level will be colored in the color of the maximum volumes.
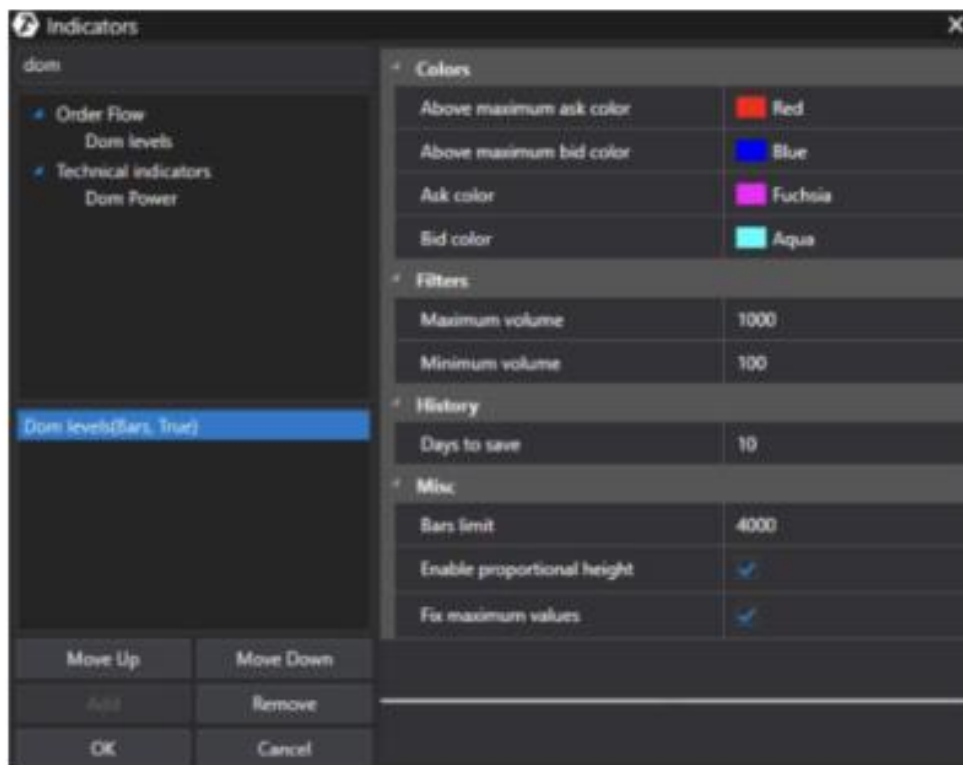
This indicator is best used on a tick chart with the value that equals 1, where each bar (tick) consists of a separate aggregated trade, also it is good to analyze on the Cumulative Trades chart with the ability to set custom values of a volume filter, as on the picture below.
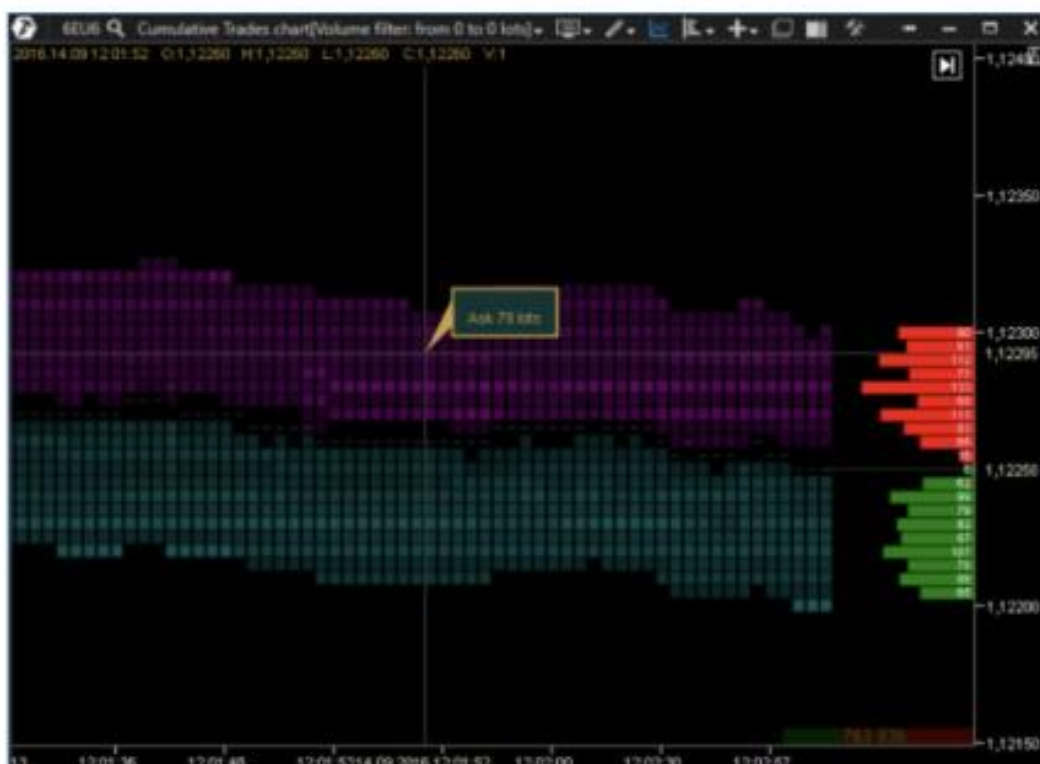
To configure such a display on your computer, follow these steps:

1. Download the BitMEX DOM Levels Snapshot using the link: http://bit.ly/2N9wB7n
2. Put the downloaded file into the following folder: ...\Documents\ATAS Crypto\snapshots\
3. Mouseover the XBTUSD@BitMEX chart in the ATAS Crypto platform, click the right mouse button and select Template
4. In the appeared window select "Snapshots" and find the BitMEX DOM Levels Snapshot and press to load.

Perfect. Now your chart should look like this:

Let us say a few words about the Cumulative Trades charts. This is essentially a tape, but presented as a chart. Calculations are made similar to the Smart Tape module, but the data is presented in the form of clusters.
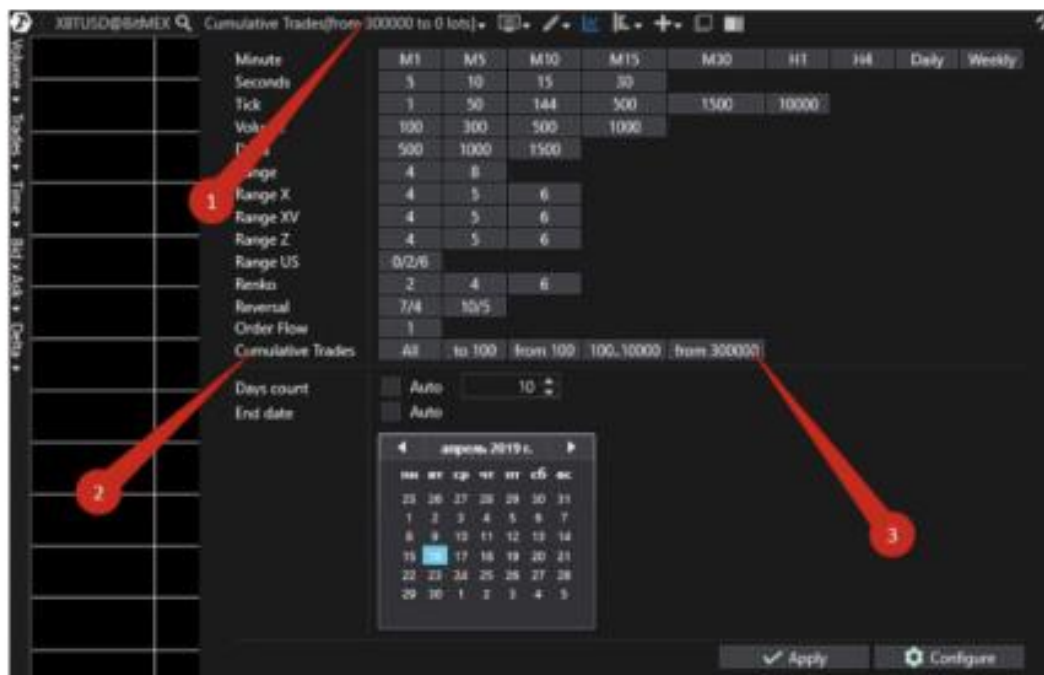
This innovative approach in displaying of order flow makes it easy to perceive all incoming information. In the tape it was necessary to take a hard look at the numbers to determine the price of orders, here everything is visible in dynamics right on the chart.

In addition, it is possible to filter clusters on the minimum and maximum volume. Bars will be built on the chart only if they fall within the specified range of the order size in contracts. Thus, it is possible to see the dynamics of traders' orders with different capitalization.

Let's go back to our example. On the chart, large limit orders from the DoM are displayed as horizontal green and red lines (levels). A filter is set for the DOM Levels indicator for more than 1,400,000 contracts for XBTUSD on BitMEX, so that the chart would show only those levels, which have a big number of limit orders. Later, such levels might stop the price movement.
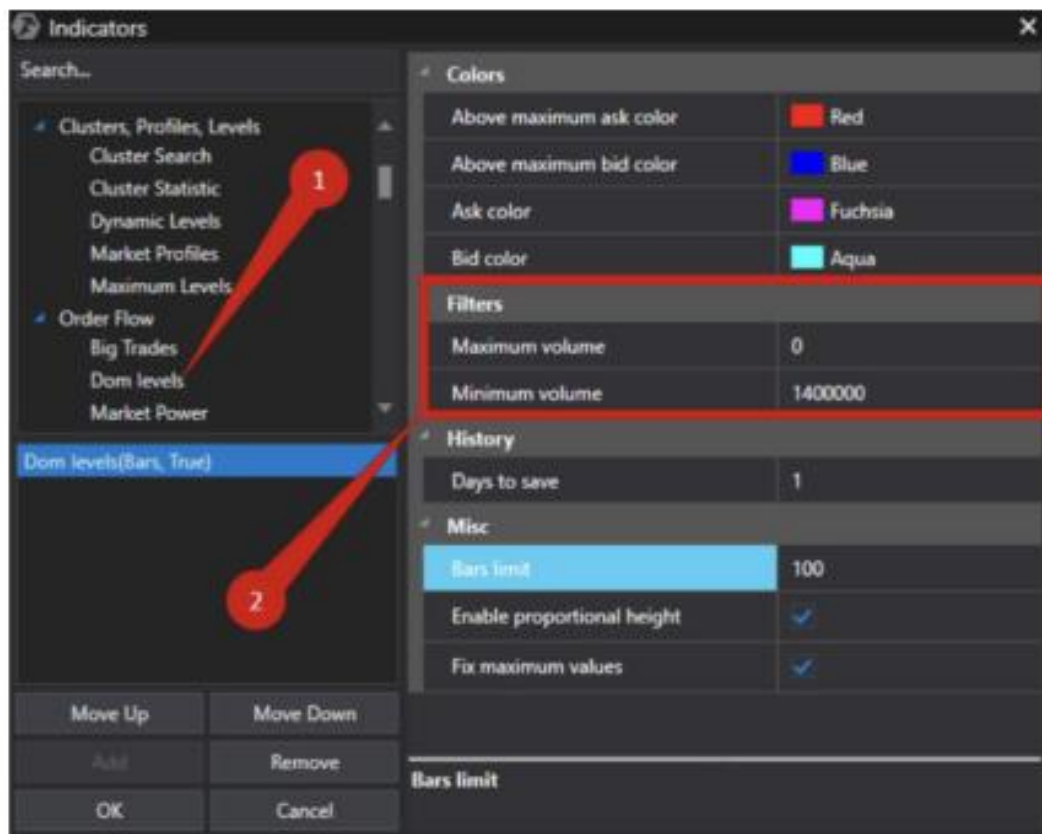
The order book is shown along the right edge of the chart (indicator Depth of Market). It is presented in the form of a red-green vertical bar chart. The green horizontal bars below the current price show accumulation of the buy limit orders. The red bars above the current price show accumulations of major sell limit orders.

When the price approaches such an accumulation, it is important to pay attention to the tape and monitor how aggressive buyers and sellers act at these levels.

DOM levels analysis

If to look attentively at the chart and DOM Levels indicator, which reflects major orders in the order book, we may notice that the levels could be conditionally divided into two categories:

1. Levels with major limit orders, which stay in the chart for a long time, and the market participants do not withdraw major orders.

2. Levels with short-term limit orders. Very often they emerge after breakouts or during focused trend moves, thus offering support or resistance.

When you monitor the tape it is important to understand, that when big aggressive orders enter the market, the price should respond. This is a normal price reaction, because market orders must move the price and the limit orders must stop. And if you see that the price does not respond and does not move towards the market orders, it means that the price is held by limit orders from the opposite side.

That is why, when the price tests levels with a big liquidity, you should pay attention to the tape and interpret the price response after emergence of aggressive market orders.

It is necessary to see a breakout of a red level of DOM Levels for confirming the strength of aggressive buyers.

A breakout of a green level of DOM Levels is required for confirming the seller's strength.

Also, please, pay attention to emergence of short-term support levels of the DOM Levels indicator, which usually appear after the upward breakout, that is a limit buyer tries to support the price. If this short-term support level in the order book manages to hold the price for some time, we can expect emergence of a wave of new aggressive buyers, who will join the starting price increase and would "race" the market upward.

A vivid sign of the market control by a buyer or seller is that all major cross limit orders are broken by the price.

If, at the same time, you observe pronounced bounces from the support levels and the market supports major buy limit orders during the whole period of growth, it is a bullish market behavior. And usually we could state a change of moods on the tape during attenuation of short-term downward movements (pullbacks) and predominance of major buy orders, which resume the growth.

Continue to view the chart with the DOM levels. The price reached the levels, where major orders of a limit seller were posted in the order book, after a just another bullish impulse. Moreover, they were posted long before the price reached them.

These levels are marked with blue color on the chart below.

These levels might be reversal rather than short-term, that is why it is worth to concentrate on the buyers and sellers behavior at this level and attentively monitor the tape.

If this level is really interesting to the seller, we can see on the tape a reaction of an aggressive seller and reaction of the price after emergence of these major sells. Then the tape will be saturated with red color. Such a flow of aggressive sells should result in a downward impulse. Then we will understand that the seller snatched the initiative and the market entered into a correction.

In the picture below, we see the predominance of sales over purchases. To be reminded, that we are looking at the tape with the minimum displayed volume of 100 000 contracts. So, this flow of sales contains not the smallest orders.

If aggressive orders of the buyers enter the market, and it does not result in a growth and all buys at the market price would be consumed without increase of price quotes, this will tell us that a further decline can take place at this level soon. A major limit order for buying below the current price may serve as an additional argument in favour of the reversal. It is a fake support, which helps a major player to exit from buys and/or enter into sells.

This happens because many traders do not "want" to see only this level and this will convince them of the power of managed money, although, in reality market dynamics in the current moment tells us that the seller seized the initiative. At least for a short term.

Thus, analyzing activity in the order book with the help of the DOM Levels indicator, you can receive information about various key levels. Some levels would reverse the price movement. Breakout of other levels would point at domination of one of the acting parties.

Setting more rigid filters in the DOM Levels indicator would filter really strong levels, from which you should expect a pronounced bounce.

Using the levels, which are built on the basis of especially major orders in the order book, would allow focusing namely on those areas, which can produce a reversal.

Now let's add to the tape and order book analysis also the analysis of clusters using progressive instruments of trading and analytical ATAS-Crypto platform. We will analyze the clusters to determine the hidden intentions of a major player.

What are clusters?

A cluster is an asset price in a certain period of time on which the trades were made. The chart below is an example of a large cluster of volumes in the Bid x Ask Digital Histogram display mode.

With the help of cluster analysis, one can see the activity of market participants inside even the smallest price bar. This is the most accurate and detailed analysis, as it shows a point distribution of trade volumes for each price level of an asset. But to simplify the analysis, we will use the Cluster Search indicator, which is developed to look for large volume bunches.

Add the Cluster Search indicator

The indicator is set up in such a way as to find aggressive trades of large players and show the direction of these deals in the appropriate color - green for purchases and red for sales. We set the search for trades on the Bitfinex exchange in two charts with white background. The lower one works on 1 minute timeframe and the upper one is a Range chart with clusters.

This is the way, how the indicator settings look like. The first one is configured to search sellers by overbalance in the delta, it means, when there will be more sales than buys for 300 coins \ contracts \ stocks, the indicator will display them on the chart in the corresponding color. Also, the indicator additionally monitors 100 neighboring candles in order to see the overbalance at a certain price level.

For buys the settings are mirrored and they are on the picture below.
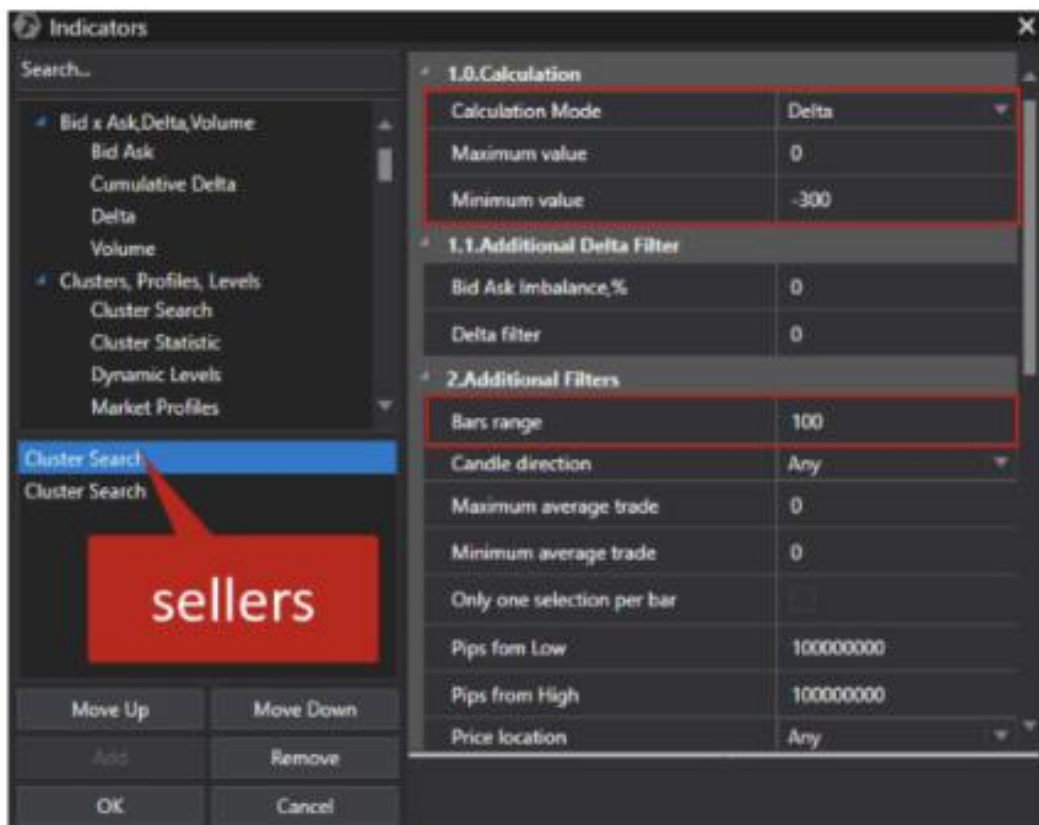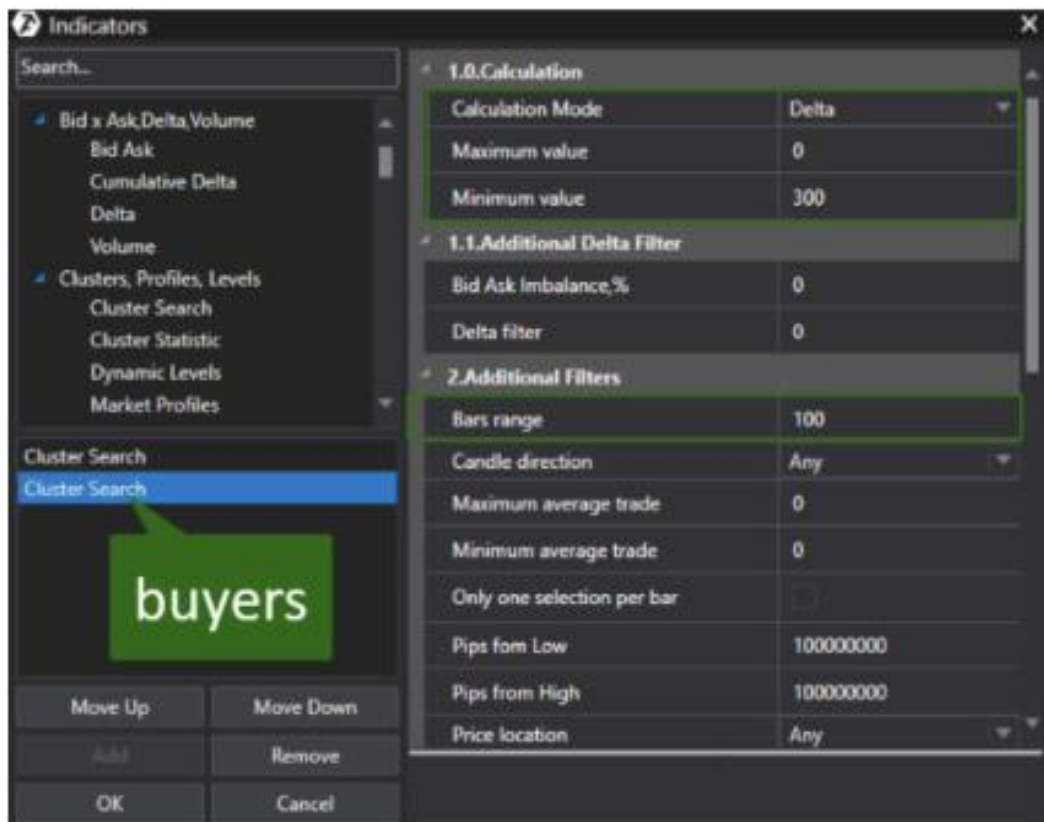
On the charts we see the indicator Cluster Search in action. The red and green circles on the upper chart show us where the sellers were active, and where the buyers, respectively.

Cluster and DOM levels Analysis

We will use two tapes and place them in the left part of our working space. Why two? One is required to track big volumes only and filter out "the noise". The tape is needed to understand whether the current movement is supported.

In the right part there is a chart with the Market Depth Indicator (red and green horizontal bar chart) and the Dom Levels Indicator (it reflects filtered limit orders of large volume on the chart). We will use values of these indicators to identify important levels in the order book and assess market positions of passive buyers and sellers.

Notice. We will analyze the local situation on the market, without taking into account the influence of the older Time Frame trend. That is, we take the cluster as a basis and the short-term price reaction for it.

We recommend taking always into account the current situation in the context of a larger scale in your trading

At this moment, market is in the short-term downward movement (indicated by red arrow). What is it caused by? Pay attention to the green circles - the Cluster Search Indicator - before this movement started. The green circles reflect buying bursts. However, do they result in the bullish progress – an upward breakdown? No.

Failure of the buyers is a bearish sign. Maybe this buying activity reflects a massive (controlled?) entrance of minor retail traders into a trap before the downward movement started.

One way or another, the subsequent movement caused negative emotions and an increase in negative PnL (floating result of an open trade) among the buyers, whose activity was registered by the Cluster Search Indicator

While the price went down, a seller appeared on the market, who wanted to hold the price below the level of his limit order, which can be seen from the Dom Level Indicator values on the following chart.

1. The red line of the indicator says that a major trader posted a sell limit order and we built the resistance level from it (yellow line).

2. For the first time, this resistance level kept the price from growing.

3. Second time the level was broken.

We do not assert, we just dissert. Perhaps, a hypothetical major trader had a short position and wanted to boost the panic of "the crowd" of retail traders with this sell-limit and to fix, partially, the profit from short covering after a downward movement from the previous peak. Having achieved that, he lost his temporary interest in holding the price under resistance. As a result, the market moved up.

Continue to read the chart.
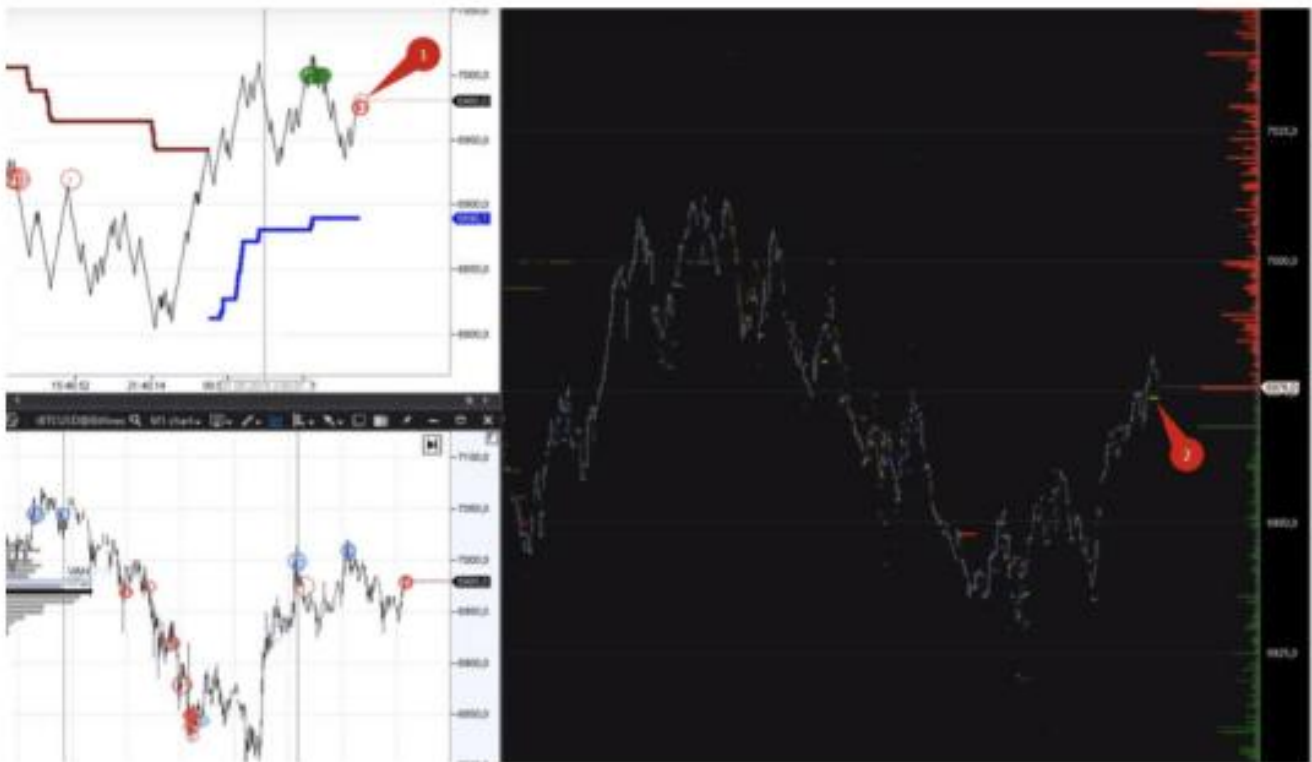
1. While the price is growing (movement to the green cluster test, after which the price went down), the Cluster Search Indicator fixes emergence of an aggressive selling activity (the red circle), and ...

2. ...the Dom Level Indicator marks the level of a major buy limit order.

If this support level testifies to the bullish mood of the market, it should keep the price from falling and confirm the buyer's strength.

However, after some time the price breaks through the support level from top downward.
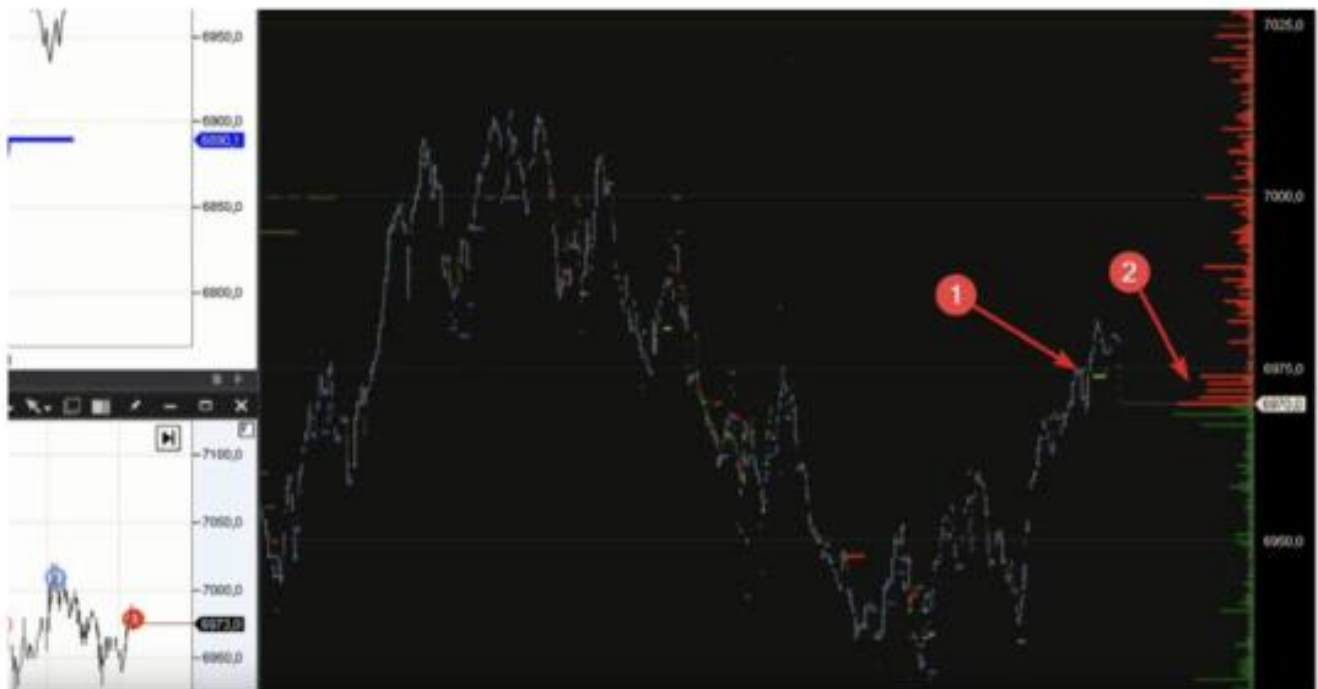
1. The support level from a major buy limit order in the order book - broken from top downward.

2. The sell order grid accelerates reduction of quotes.

Why the support level did not hold? Perhaps, there was a manipulation. The major trader showed a buy limit order and motivated a big number of minor traders to bull the market. However, alas and alack, they experienced negative emotions and losses again.

Let's go further. The price accelerates the downward movement and it causes an intraday panic. Pay attention to tape. There is an avalanche of sell orders. In this sales flow there can be Stop Loss of buyers, who played for the growth of Bitcoin quotes, and sellers who trade strategies for the breakdown, as well as robots that subtly catch the price movement dynamics. Anyway, all these sales are aggressive orders that, by their nature, should push quotes to the next levels.

This massive sell order flow from unlucky buyers is a good moment for a major bear to close (partially or completely) his short position and fix profit from previously opened short positions. He uses the buy limit orders grid for short covering, facing an avalanche of panic and building up his account, while the majority of traders clean out their deposits.

We discussed an interaction of clusters, Time and Sales Tape and order book. These techniques are applied to all markets, and you can see this by analyzing trading using the functionality of the ATAS trading and analytical platform.

How to set up a Footprint chart

And now let's replace the tape on footprint and try to find an opportunity to enter the market on Bitcoin to the dollar BitMEX exchange. In the process of analyzing the market will use the simple logic behind the price movement. It focuses on the efforts of buyers and sellers, their trades in the struggle for profit. Therefore, the techniques described below can be applied to any other markets.

To find a setup, we will use:

1. **Footprint**, or cluster chart (a chart with white background);
2. **Tape** (a chart with black background).
3. Continue to use **Cumulative Trades** chart. This period is one of the many possibilities of the flexible functionality of the ATAS platform.

To analyze the footprint, we will use a 15-minute period. It is not a very small timeframe, where multiple trades are distributed over a big number of candles, and not a very big one, so that we can see details of what is going on.

Load the Bid x Ask Ladder cluster chart mode. In this mode, in Footprint the price levels, where the seller won are separately highlighted in red, and where the buyer won - in green.

Yellow level on the black chart indicates the Dom Levels indicator readings. It has built a blue level in the order book, where a large number of buy limit orders was recorded. At these levels you need to track the price reaction. Therefore, it would be logical to see the change of initiative from the seller's hands into buyer's.
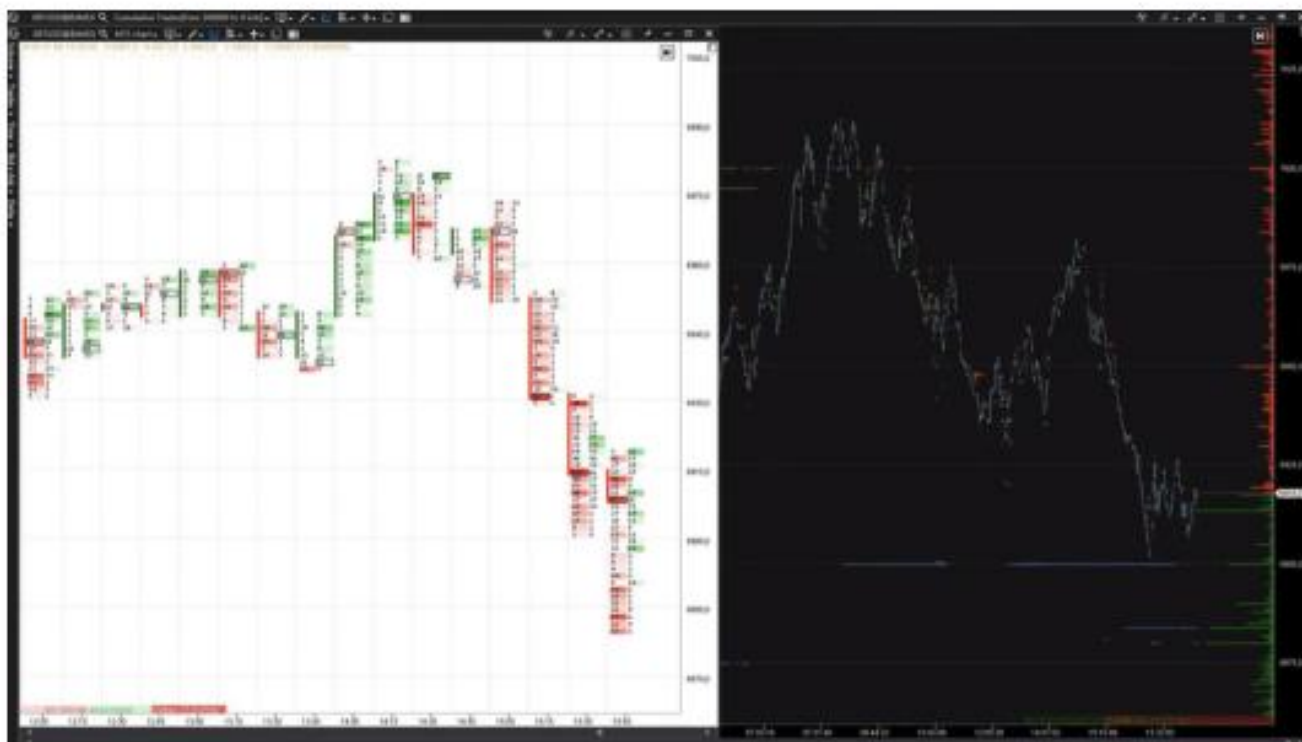

Pay attention to the closest background on the cluster chart.

During the last impulse, a lot of market sales went down (red clusters), some of which may be stop-losses of weak buyers, stuck in unfavorable buying positions. This could be seen from the plenty of bright red cells in the footprint (marked with a yellow rectangle in the picture below) and the significant impulse price movement during the breakdown of extremum.

Monitor the price behavior after this breakout on approach to the 6900 level, which is marked with the DOM Levels Indicator. Since limit orders, by virtue of their nature, should stop movement, we want to make sure that the price would not go below that level, at which the sellers wanted to stop it.

Let us analyze a new portion of information. We notice that very many sells had emerged at the breakout of the 6900 DOM Level and were completely engulfed. The price, which moved above the support level (marked with red arrows), confirms this conclusion.
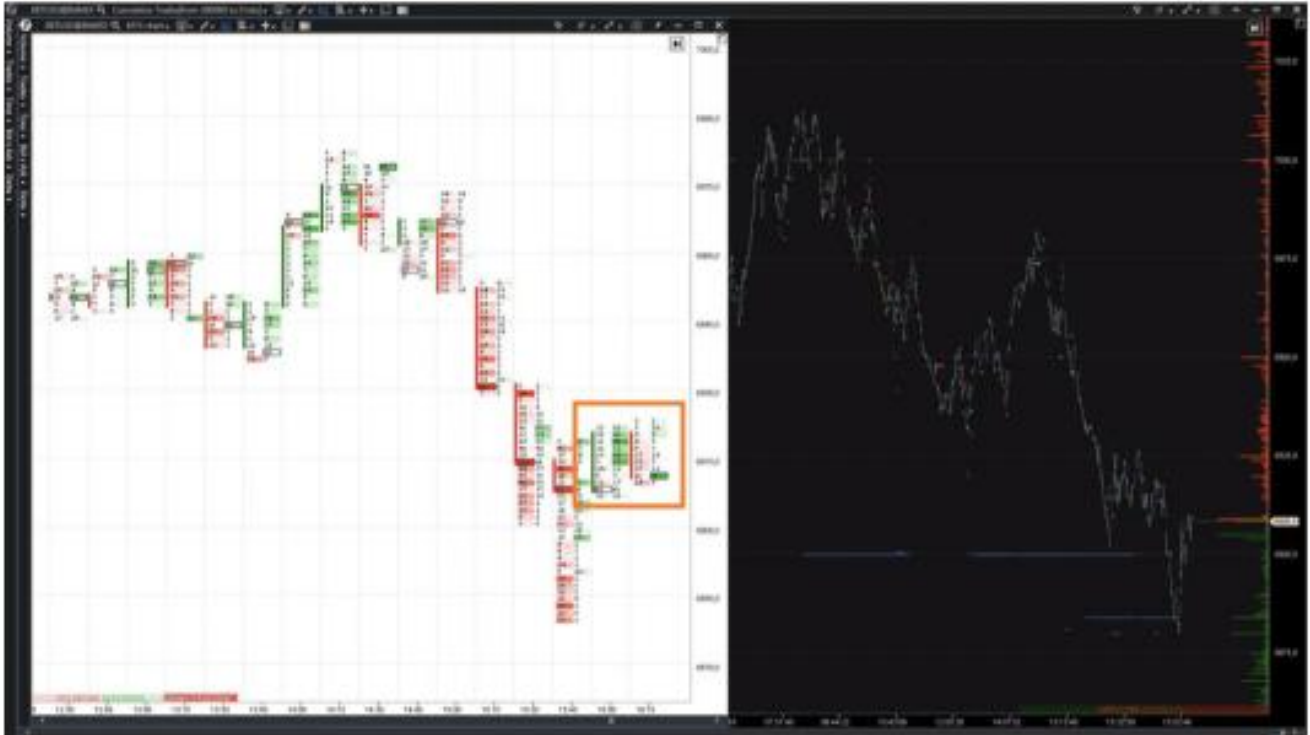

The footprint registers appearance of the buyers and absence of big sells (marked green), which provides us with a chance of upward reversal.

Long position on Bitcoin

We see the signs of seller's weakness in real time. After an attempt to break through the DoM levels, the downward movement did not occur. In this place we have a fairly low risk for intraday trading.

We make a decision to enter into a buy after a bounce from the DOM Levels. A part of the long position is opened at a high price (buy market order No. 1), and one more part of the position is posted for opening at a lower price (buy limit order No. 2), hoping that the market would test the support level once again.

How do we limit losses in this buy? The chart tells us that the DOM Levels support level is under buyers protection, that is why we decide to limit losses behind this level (sell stop order No. 3).
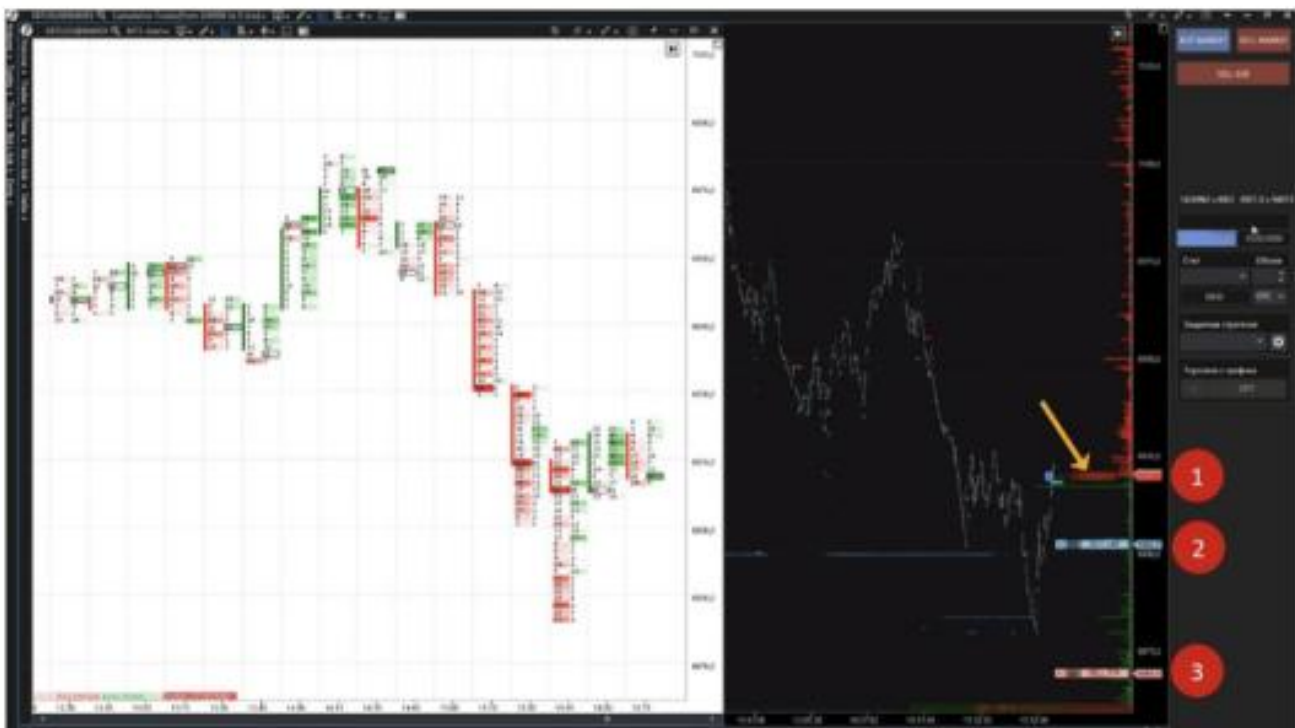
Important note. Our task is not to urge you to buy at each bounce from the DOM Levels order book level or at each its test. Our task is to show how to use the functionality of the ATAS platform efficiently: footprint, order book and tape for searching signs of a price reversal in real time.

Now we need to understand whether there is a seller in the market who is ready to push the price further down. Look at the footprint. Practically, during one hour we haven't seen big sells, while green clusters confirm emergence of an aggressive market buyer.

When all efforts to sell are not accompanied with big red clusters and price stops downward movement practically immediately - it means that the sells dried out. Footprint confirms the trading plan. We just need to monitor the price movement and wait.

There was a small correction during the further development of the market situation, however, the price stopped within several dollars reach from our limit order.

And then a full-scale upward impulse (on the chart below), which we expected, took place.

We can see predominance of buyers in the footprint, but, judging by the nature of movement, these could have been mostly sellers that closed their positions making losses (marked with a green rectangle).

Once again we saw that the decisive importance for the search for trades during an intraday trading can be provided by:

- powerful functionality of the trading and analytical ATAS platform for monitoring market activity;
- application of basic logic of the auction theory and mechanics of the intraday market and limit orders.

Useful links

1. Tutorial videos

YOUTUBE

2. Latest news and articles

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Platform User Support

E-mail - support@atas.net