WHS FutureStation - Guide

LiveStatistics ©

LiveStatistics is a paying module for the WHS FutureStation trading platform. This guide is intended to give the reader a flavour of the phenomenal possibilities offered by LiveStatistics. This guide does not replace the user manual. In order to enjoy all the significant benefits offered by LiveStatistics it is necessary for the user to read the manual.

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■ **LiveStatistics** allows investors to define an event based on different parameters. LiveStatistics will identify in real-time how often the event occurred in the past. The evolution of the market price after each similar event is analyzed. Based on this historic price analysis projections for the current market price are displayed in the chart. In short …

1. The user defines an event based on a set of parameters. In LiveStatistics terminology this is called the '**master extract**'.

2. LiveStatistics identifies all similar events in the past. In LiveStatistics terminology these are called '**hits**'.
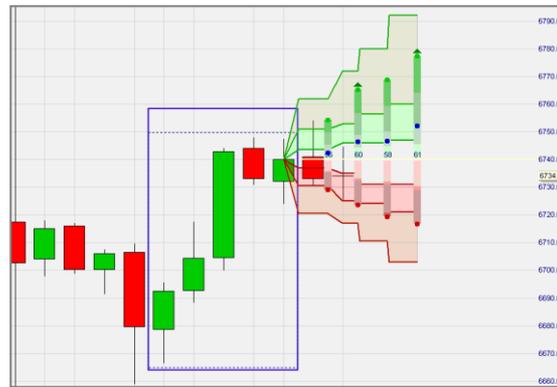
3. LiveStatistics provides **projections** for the current market price based on the statistical price movement of all the hits.

■ Experienced investors develop a 'feeling' for charts over the years. This is nothing else than a mental database of historical data. But investors tend to have a preference for some events. They also put an interpretation on data and … memories are not perfect. LiveStatistics can handle all events and all data. As such it provides actionable data in **situations** when traders need to make a **decision**.

See instantaneously what happened in the past when an event occurs.

■ The below **example** is an event which raises a classic trader question: **to buy or not to buy**?

Don't buy: the market was well down after the opening and the rally has run out of steam? Buy: it is a long, strong rally which is only taking a pause? Both are valid opinions. Both cannot be proven wrong. But … **what happened in the past when this event occured**? LiveStatistics projects real-time statistics of the market price evolution of similar events in the past.

> In this case the statistics show a bullish bias. This example is dealt with in great detail later in the guide.

Not only does LiveStatistics provide potential answers to classic investor dilemmas. It also provides statistical data to help with stops and price targets.

■ LiveStatistics can be **used for**:

1. A '**reality check**'. The projections are a good indication of how the market price can move over a given period of time. Many investors have price expectations which are not realistic.

2. Determining **stops** and price **targets**. These levels are visible in the chart.

3. **Confirming** a signal given by a strategy. If, for example, a strategy gives a buy signal, the live statistical data should show a bullish sentiment.

4. Trading **strategies** based on live statistical data. This guide contains several examples.
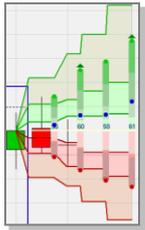
■ An investor with a trading strategy must patiently wait until a signal appears. It is even possible that a signal appears when the investor does not have the time to trade. Few of us can trade whenever we want. When we do have the time to trade, we do not want to passively wait for a signal. This is where LiveStatistics has a big **advantage**. A trader using LiveStatistics can actively analyze the market in search of statistically significant trading opportunities.

■ **Empirical data**. LiveStatistics shows in the current chart what happened in the past when events similar to the one defined by the trader occurred. In its most basic form this empirical data is projected as such:
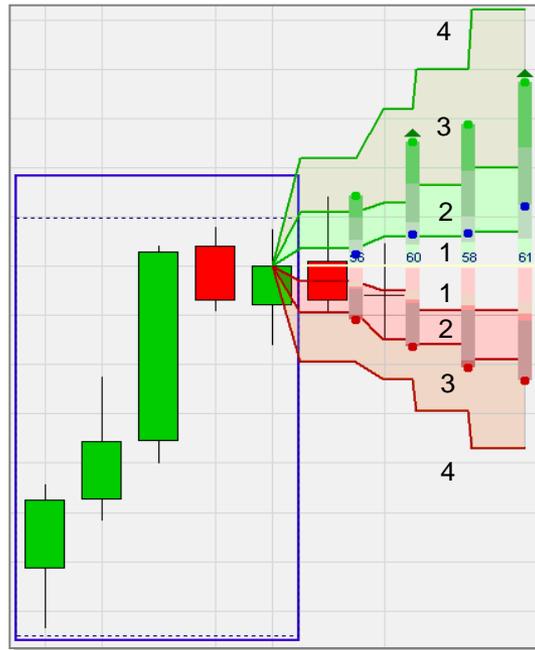

This raw data projection gives the trader already a good visual feel of the extremes and the clusters. Interpreting the raw data, however, becomes easier when the projections are shown as such:

Historical data and confidence intervals are displayed in the current chart.

The green dots are the **average highs** of the hits. The red dots are the **average lows**. Together they indicate something useful … the **expected trading range**. The blue dots are the **average close** prices. The blue numbers indicate the **sentiment***. Triangles indicate projections with bullish (green) and bearish (red) sentiment.

The yellow line indicates the price on which the projections are based. The areas above (positive hits) and below (negative hits) the line are **each** divided into **four zones**. The zones represent respectively 20%, 30%, 30% and 20% of all hits (*see* the numbers 1-2-3-4 added to the chart).

■ **Probabilities**. Empirical data cannot be interpreted as probabilities. It is not because the market price evolved in a certain way in the past, that it will evolve in an identical way in the future. At best one can assume that the market price will evolve in a somewhat similar way.

So LiveStatistics is not an attempt to predict the market price. It is a display of empirical data. Nevertheless, LiveStatistics also has a setting which plots the normal distribution of the empirical data. These are the blue dots in the screenshot below. The zones between the dots are called confidence intervals (again 20%, 30%, 30% and 20% respectively). The blue dots are the most likely outcomes and allow for probability statements. For example: 80% of outcomes are likely to be above the lowest line of blue dots.

* As usual in the platform 0 is most **bearish** and 100 most **bullish**. Hence 50 is **neutral**. In LiveStatistics sentiments >60 and <40 are relevant. Sentiments between 40 and 60 are neutral. The user can change these setting.

■ **Drawing Tool** (DT). The drawing tool selection style allows the user to simply draw around any combination of candles. It is the easiest way to analyze special-looking chart formations to see if they offer trade opportunities.

The user can either work in the present by drawing in today's chart or in the past by drawing in historic charts.

The box drawn is static. The projections will not change as the market evolves. The new candles will appear next to the projections.

The DT selection style identifies similar events on the basis of four **parameters**:
- **width** (number of candles),
- trading **range** (market price oscillation),
- **net change** (market price movement) and,
- **shape** (shape of the market movement).

■ **Last Periods Shape** (LPS).
■ **Last Periods Trading Range** (LPTR). Both these selection styles are dynamic. This means that each subsequent candle, when finished, is added to the chart formation. At the same time the oldest candle is dropped.

The LPS selection style identifies similar events on the basis of three **parameters**:
- **width** (number of candles),
- **net change** (market price movement) and,
- **shape** (shape of the market movement).

The LPTR selection style identifies similar events on the basis of three **parameters**:
- **width** (number of candles),
- **net change** (market price movement) and,
- trading **range** (market price oscillation).

Tip: humans are good at visually detecting special-looking formations in charts. Machines check all formations. They will identify formations with trade potential which look innocuous to the human eye. It is good to keep LPS, LPTR and DDR running. In parallel you can manually detect opportunities with the DT. You can also work with the scroll arrow icons (*see* other third Tip on this page).
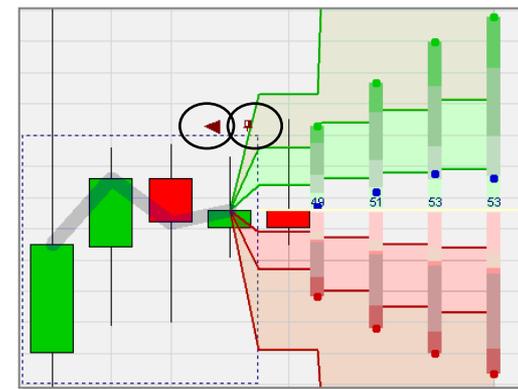
Tip: the WHS FutureStation trading platform contains a template studies with the names **WHS LiveStatistics DT, WHS LiveStatistics DDR, WHS LiveStatistics LPS, WHS LiveStatistics LPTR**. These preconfigured studies allow you to work as described above.

■ **Dynamic Day Range** (DDR). The DDR selection style starts at a particular point in time such as the market open. Each subsequent candle, when finished, will be automatically added to the selection. This makes the DDR a dynamic selection style.

The DDR selection style identifies similar events on the basis of three parameters:
- **time start**,
- **time end** and,
- trading **range** (market price oscillation).

Tip: if you decide to open a position based on statistically interesting projections it is good to freeze the projections by clicking the **pin icon** in the chart. You need the projections to manage the open position. If you forget to click the pin icon or if you would like to see if there were trading opportunities earlier that day, use the arrow icon to scroll back.

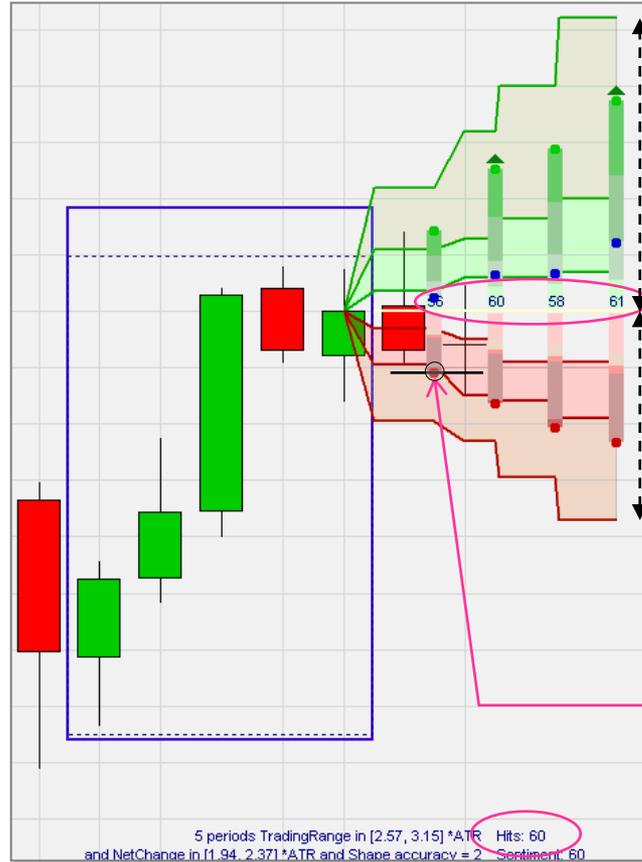Four selection styles are available to define the master extract.

■ This user used the **Drawing Tool** selection style to draw around a combination of candles that show a **simple yet common event**. The market opens weak and then goes down. Later that morning the market stages a strong, sustained rally. After the rally there is a pause.

So … buy or short sell? Short sell because the market was down significantly after the opening and the rally has run out of steam? Or buy because it was a strong rally and the pause is only temporary?

Tip: do not limit yourself when drawing to the chart formation which you think is the 'right' one. Experiment by adding/excluding one or more candles before or after the formation you spotted. This can make the difference between identifying a trading opportunity and a neutral result.

The examples in this guide focus on 15-minute charts but LiveStatistics works in all timeframes.

5 periods TradingRange in [2.57, 3.15] *ATR
and NetChange in [1.94, 2.37] *ATR and Shape accuracy = 2   Hits: 60   Sentiment: 60

LiveStatistics identified 60 hits. The user asked for 4 projections based on the hits. It is a 15-minute chart so the 4 projections cover 1 hour.
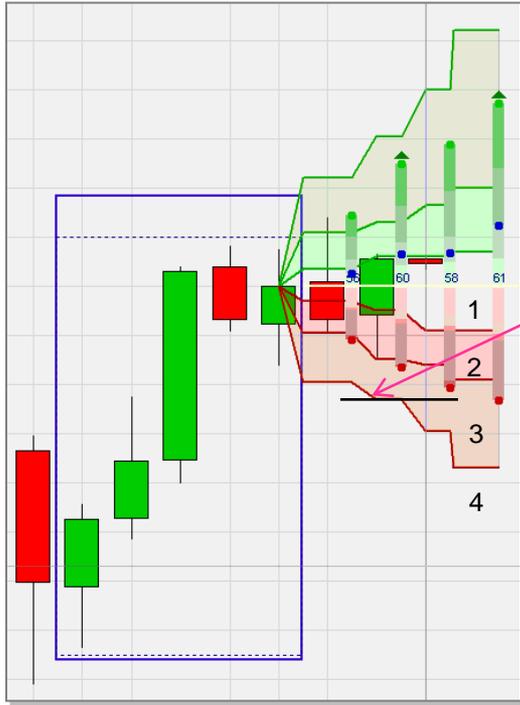
In 2 projections the sentiment is bullish. The green zones are proportionally higher than the red zones are low, indicating upside potential.

The empirical data of 60 similar events in the past indicate that the market went up more often than it went down and that the upward movements were bigger than the downward movements.

This makes the case for a **buy** decision. The next question is **at what price to buy**? Again LiveStatistics can be of help. A trader must first try to buy 'cheaply' i.e. at a low price. The expected trading range of the first projection shows the average low. A buy limit order can be placed at or around this price level. In this example the order is triggered not by the first but by the second candle.
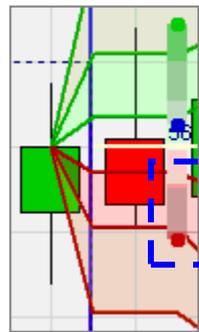
…

An open position should be protected by a stop. So … **where to place the stop**? Again LiveStatistics can provide guidance. Remember that the 4 zones below the yellow line depict 20% (1), 30% (2), 30% (3) and 20% (4) of the negative hits. The initial sell stop order could, for example, be placed on the red line above which 80% of the negative hits lie.

The stop can remain at this level. Better, however, is to raise the stop level when the position evolves positively. Do **not** lower the stop level by following the red line.

With a stop order in place it is time to think about **when to close the position**? The blue dots indicate the average close price of the 60 hits. One profit target could be the blue dot of 4th projection.

The above is an example. One can be more flexible on the target than on the stop. Since we bought at a low price a less aggressive possibility is the blue dot of the second or third projections. Another idea would have been to add, after the third candle, 4 more projections and see where the blue dots of the new projections lie. Yet another possibility is to use the normal distribution quantiles.

> A note on **the importance of opening a position at a good price**.

Say the trader decides to buy after the green candle. He has three possibilities: (1) an immediate buy at the market price, (2) a buy limit below the market price and (3) a buy stop above the market price. Which is trader uses which order is based on psychology.
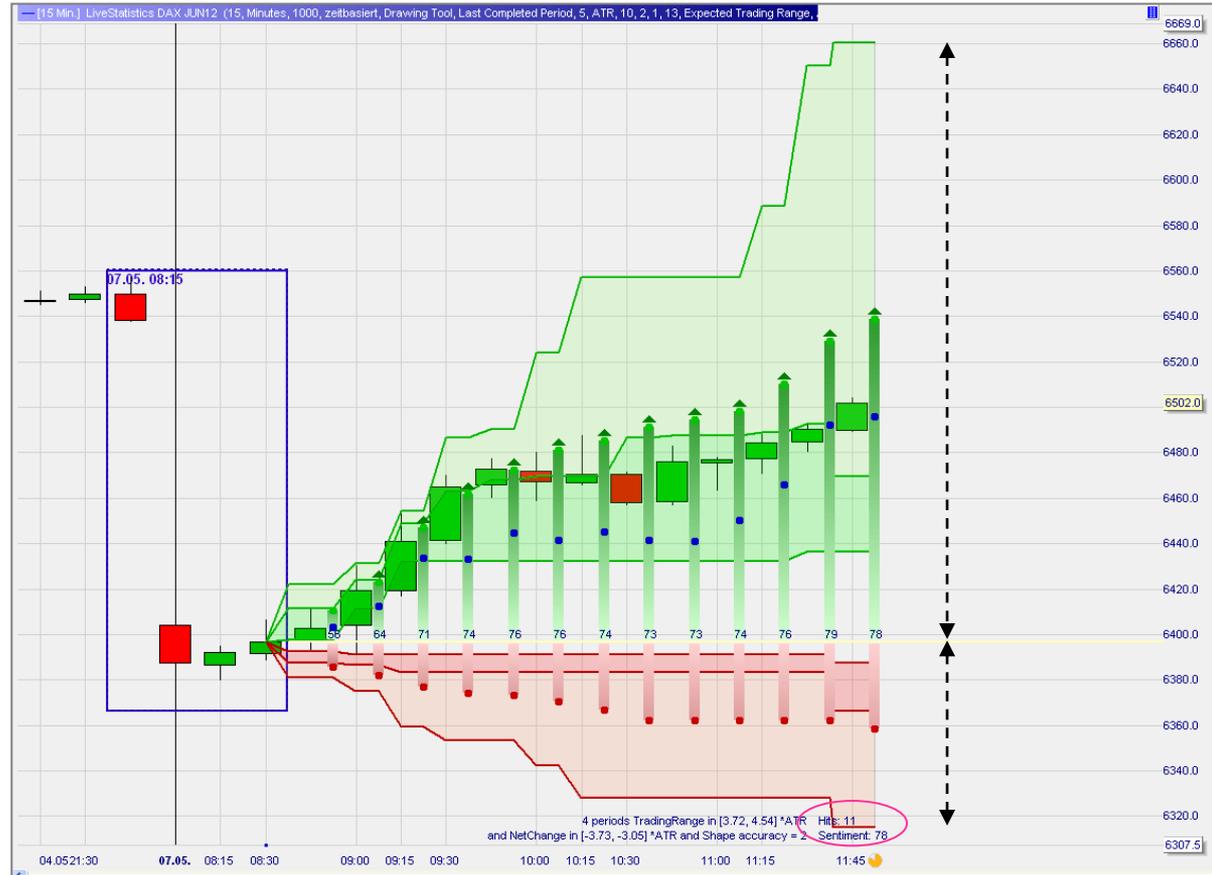
Buy at market is probably the most common. Many traders, once they have spotted a trading opportunity, worry they will miss the boat and jump in. Second most popular is the buy stop. The reasoning is that the trader expects the market to go up but he will only buy when it really goes up. There is nothing wrong with this reasoning except that by doing so a lot of the potential profit is lost. Also, why is another confirmation needed? Probably the least used tactic to open the position is the buy limit. It is psychologically difficult because it requires the trader to wait to be hit all the while worrying that he will not be hit and miss the boat. This is where **LiveStatistics** is of great assistance as it projects the expected trading range. Even if the candle ultimately goes up it will usually also trade in the lower half of the expected trading. This is where the buy limit order can be placed. By buying low **good traders maximize their profits**. And anyway should the buy limit not be executed, there is still time to buy at market.

LiveStatistics provides traders with live statistical data allowing them to make a reasoned decision.

■ In this **example** on a 15-minute chart the user used the drawing tool to analyze another **classic trading question**. The market opens with a significant gap down. But … the red opening candle is relatively small. Two green candles, one of which goes above the open price, follow. **Will the market go down again or will the gap close?**

LiveStatistics has identified 11 hits. Not a lot but logical. A gap down of this size is uncommon. With a limited number of hits one must be careful to draw conclusions. In this case the event is very precise and 11 hits is acceptable. All projections except the first have a strong bullish sentiment. The empirical data of 11 similar events indicate that the market went up more often than down and that the upward movements were bigger. This makes the case for a **buy** decision.

LiveStatistics gives an historic perspective to help traders with classic trader questions.
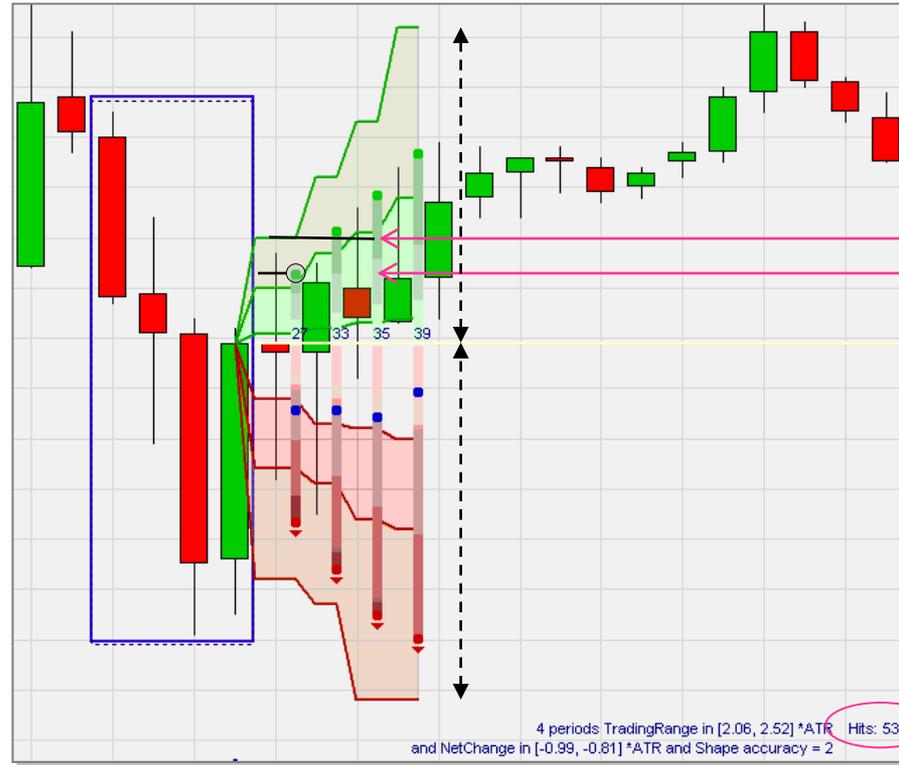

This screenshot shows 13 projections (= 3 ¼ hours). For many trading opportunities in a 15-minute time frame this is too long. 4-8 Projections (= 1-2 hours) is a good limit. In this particular, however, closing such a gap would take time and a longer projection makes sense. The candles show the real subsequent evolution of the market price. In this case buying low (around the bottom of the first expected trading range) was not possible. Given the significant upside potential of this gap closing this is not a reason to abandon the trade idea. This gap did indeed close later the same day.

■ In this **example** on a 15-minute chart the drawing tool was used to analyze another **classic trader question**: a series of large red candles followed by one equally large green candle. **Is this a rebound or will the market go down again?**

LiveStatistics has identified 53 hits. All projections have a bearish sentiment. The empirical data of 53 similar events indicate that the market went down more often than up. Note, however, that the upward and downward movements are about the same size. This makes the case for a **short sell** decision.

The trader who buys, tries to buy at a low price. In this case the trader who sells short tries to sell at a high price. **At what price to sell short?** A short sell limit order can be placed around the green dot representing the average high price of the first projection. The order is triggered in the first candle.
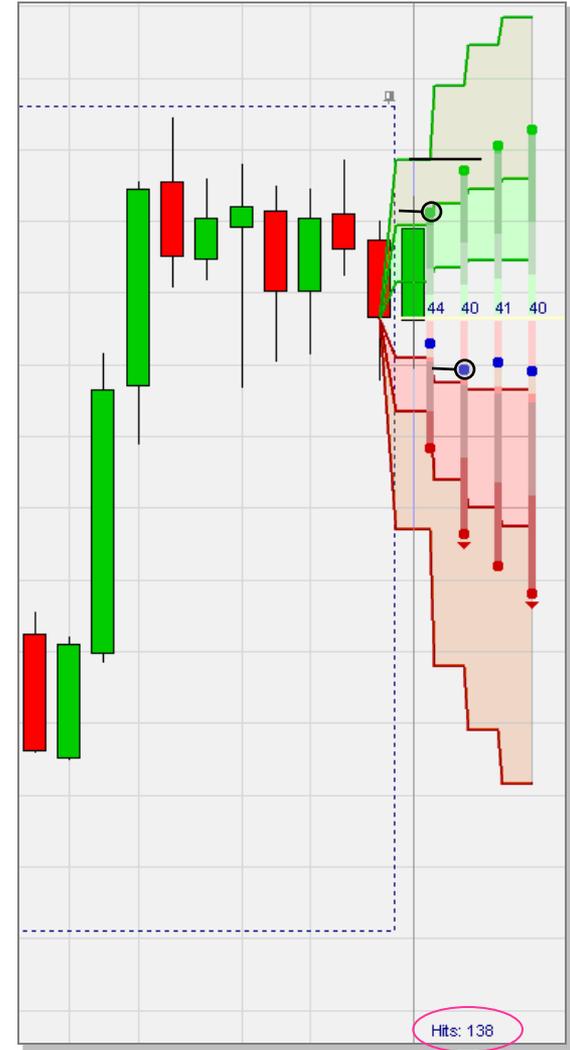
Once the position is open it is recommended to place a stop. **Where to place the stop**? A buy stop order can be placed on the green line below which 80% of the positive hits had their highs (note: the user can change these percentages in the settings). This stop order is triggered by the third candle and the position is closed with a loss.

LiveStatistics furnishes statistics for opening and closing (stop and target) a position.

■ This **example** on a 15-minute chart is a good example of LiveStatistics identifying a statistical opportunity which a trader would not visually identify.

DDR has continuously covered the DAX starting at 8h00. Suddenly LiveStatistics displays projections with bearish sentiments. Two projections have a bearish sentiment (*see* next screenshot). Four would have been better but it is worth a look. The empirical data of 138 similar events indicate that the market went down more often than up and that the downward movements are bigger. This makes the case for a **short sell** decision.

LiveStatistics is a real novelty in the field of trading and active investing.

The trader who sells short must try to sell at a high price. **At what price to sell short**? A short sell limit order can be placed around the green dot representing the average high price. The order is triggered in the first candle.

Once the position is open a stop is needed. **Where to place the stop**? A buy stop order can be placed on the green line below which 80% of the positive hits had their highs.

With the stop order in place it is time to consider **when to close the position**? One of the great advantages of LiveStatistics is that it allows the user a lot of leeway in determining targets. Given that we sold at a high price we do not need to be too ambitious in the choice of our profit target. A good starting point is the blue dot representing the average close price of the second projection. Even between the two first blue dots would be a good choice. So a buy limit order can be placed here. In the screenshot below the order was triggered and the position closed with a profit.