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# Instruction (Manual) Document

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## Introduction to Sideways Market Statistical Analyzer

### Sideways Market and Trend Market

Notable low volatility period and non trending movements in the financial market can be considered as Sideways Market. Such a market is neither strong bullish or strong bearish. Soon or later, the low volatility will increase and the price will pick up a trend after Sideways Market. In terms of trading point of view, Sideways Market can serve as the very good entry timing for traders. Loosely speaking, just think that Sideways Market as the resetting period of the financial market. The old trend will be reset and new trend will be born.

Traditionally the Average Directional Index (ADX) indicator or moving average of standard deviation indicators was used to roughly determine the presence of Sideways Market. However both of the indicators are lagging with very low correlation with future price movement. In addition, they will not provide you clear idea on when the Sideways Market started and when they ended. Missing all this important information can leave traders with very uncertain picture on the current market view.

Here we have developed an accurate Sideways Market Analyser inspired from the sound statistical theory. This Sideways Market Statistical Analyzer can deliver comprehensive set of information about current market state. As a result, this information can be used to make accurate trading decision for traders.

### Introduction to Sideways Market Statistical Analyser (SMSA)

SMSA detects sideways movement based on market volatility. SMSA uses probability distribution to express current market state. Cut Probability is the boundary probability separating sideways market from normal market condition. We have devised statistical procedure detecting this sideways market including trinomial tree method and volatility filtering method. Indeed these procedures use intensive statistical reasoning and heavy computation. However, traders don't need to understand what complex algorithm SMSA uses to calculate probability distribution for current market state. What is important for traders is that the detected probability below Cut Probability statistically expresses the low volatility market state whereas the detect probability above Cut Probability statistically expresses medium and high volatility period. Market state below Cut Probability is the period of interest for our trading. All these important information will be displayed in the chart. SMSA will provide you full alert for your trading opportunity when this low volatility period is detected. You will be provided set of trading instruction too after the signal is detected.

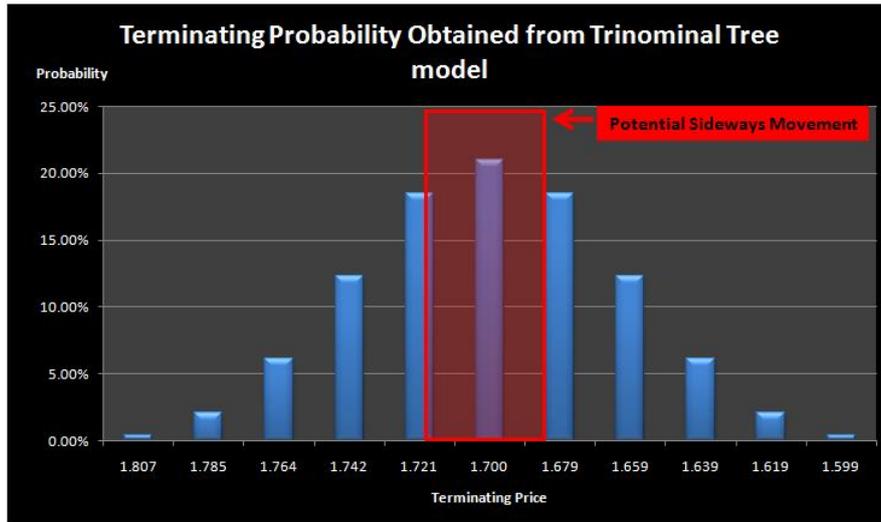


Figure 1. Terminating probability distribution using trinomial tree model when equal probabilities are assigned for 5 step progress of trinomial tree simulation.

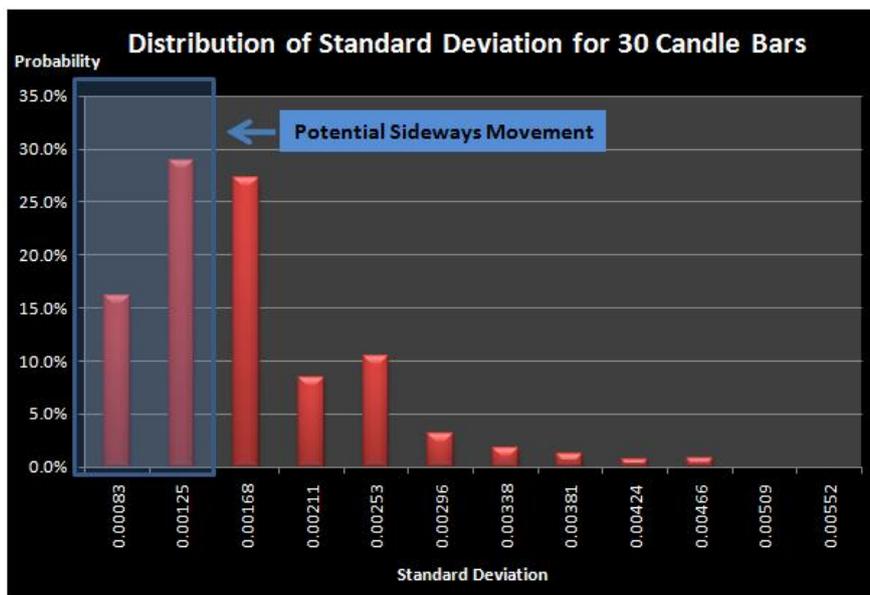


Figure 2. Probability distribution of Standard deviation for 30 candle bars

When low volatility period is detected, the Sideways Market Statistical Analyzer will draw box around these low volatility period on your chart. This box visually helps you to distinguish sideways market from normal market. The recommended trading entry is to trade on breakout of this sideways box. However, in practice it is advised to give some distance between this box and your trading entry to avoid false entry. The distance between the box and your trading entry is shown using the buffer line and it is adjustable for better trading condition in SMSA. The box height and length of detected sideways movement is different for every detected sideways movement.

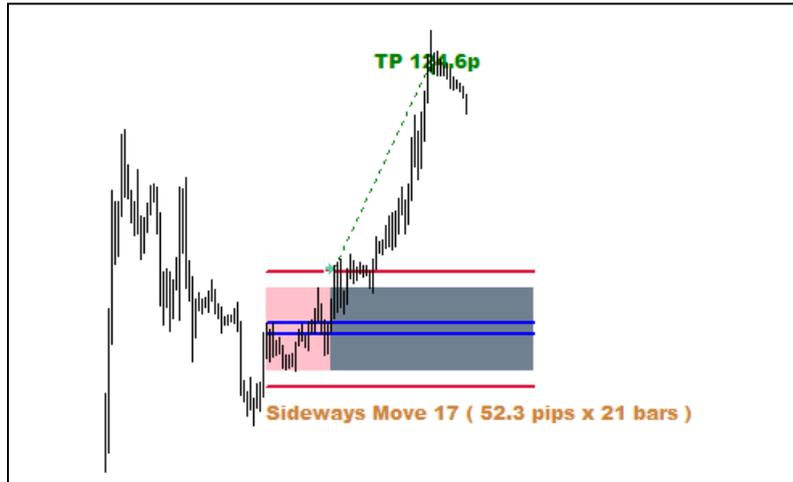


Figure 3. Pink box shows the example of the detected sideways Market and red line is the buffer line.

How to trade with Sideways Market Statistical Analyser is straightforward. If price breakout above the top red buffer line, then traders can take buy position anticipating the strong bullish movement. Likewise, if price breakout below the bottom red buffer line, then traders can take sell position anticipating the strong bearish movement. Both pending order and market order can be used. When you use pending order, you need to check what the minimum distance between market price and the order open price is for your brokers. Stop loss and take profit are defined using the multiple of box height. The ratio of take profit to stop loss, take profit ratio or Reward/Risk ratio is used to control your trading risk and trading condition in SMSA.



Figure 4. Buy Example with detected Sideways Market.



Figure 5. Sell Example with detected Sideways Market.

To further improve your trading profitability, SMSA contains backtesting algorithm inside. This backtesting algorithm will display each trading entry using arrow on the historical sideways box. Observing this trading entry on the historical detected sideways box is very education for traders. Traders have access to all the useful trading statistics. Visually drawn take profit and stop loss in the chart is very educational for traders. Trading statistics even include independent success rate at each level of trading entry. Traders can both use controlled martingale or selective entry at the entry with higher success rate. Outcome of backtesting is shown by net pip gains. Interactive graphical user interface helps to maximize trading setup for traders at any market condition. Every detected sideways box is unique. AS a result, each sideways movement detected by SMSA is different in terms of size and length. This indicates that traders will be provided different size of take profit and stop loss for different period of market. Therefore, the trading risk with SMSA is strictly communicated using Take Profit Ratio or Reward/Risk ratio only. At each sideways box, you will be notified take profit by green take profit line. Stop loss is bottom of sideways box for buy and top of sideways box for sell.

## Main Trading Parameter Description

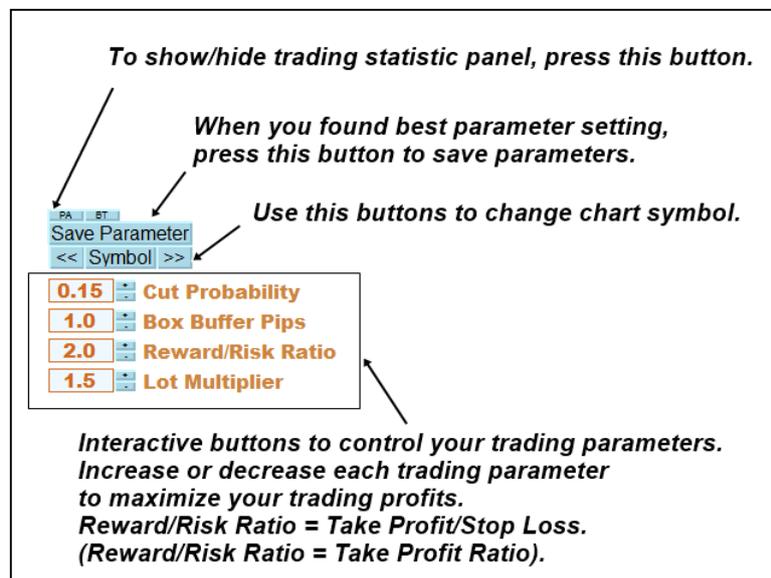


Figure 6. Graphical User Interface for Sideways Market Statistical Analyzer.

- **Cut Probability** – It is probability value from 0.01 to 0.99. The value will mostly stay between 0.05 and 0.5. The Cut Probability is the boundary probability to qualify the Sideways Movement from normal market condition. Smaller probability value indicates that SMSA will use lower volatility to filter sideways market.
- **Buffer Pips** – you can enter from 0 to 100 pips. The Box Buffer pip value is the offset distance from the detected Sideways Market box to your trading entry to avoid false entry. This buffer line will be represented by the long horizontal line above and below the detected Sideways Market on your chart. This line can be used as the trigger point for your buy and sell orders.
- **Take Profit Ratio** – the Ratio of your take profit pips/stop loss. Take Profit Ratio 1 indicates that your take profit's pips are equal to the height of the box.
- **Lot Multiplier** – In case of using controlled martingale, lot Multiplier can be used when your previous trading hits stop loss. The value will mostly stay between 1.5 and 2.0. It is recommended to use the value less than 1.7.

## Trading Setup Basic

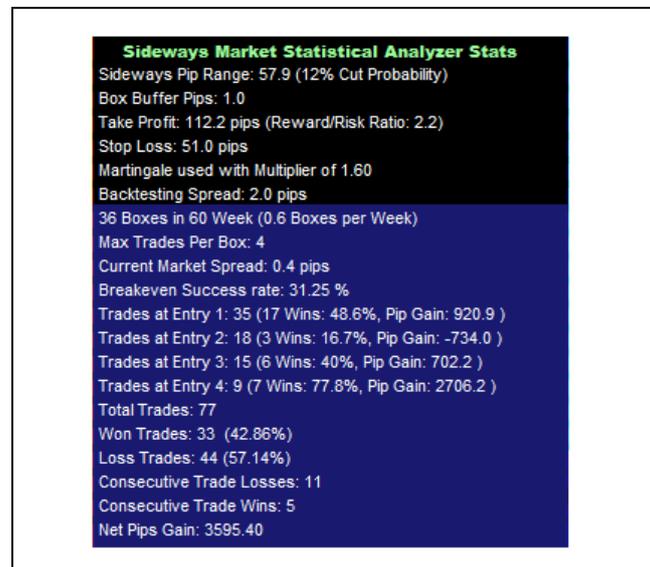


Figure 7. Example trading parameter configured for EURUSD Hourly time frame.

Sideways Market Analyser is a complete trading system on its own. You can trade without any other supplementary indicators. In this section, we explain the most basic trading setup. You will need to configure the Cut Probability and box buffer pips together with take profit ratio for the best pip gain. Also using higher Lot Multiplier can help you to improve your profitability too but this should stay within reasonable range between 1.0 to 2.0 only and do not go beyond 2.0 unless you know what you are doing. Once you have configured the best setting for Sideways Market Analyser, don't forget to click "Save Parameter" button to save your best parameter settings for that currency pairs.

Note that looking at how backtesting is done in previous box can be very educational. So please give some time to study the entry and exit display on your chart. After you have configured your setting, you can have few different trading ideas. You can mechanically trade at every signal given from Sideways Market Analyser as shown in Backtesting. For example, when you set Max Trade per Box = 4, you can trade 4 times for each detected sideways box.

However, looking at above trading statistics carefully, you can see that breakeven success rate is 31.25% and trades at entry 1 provide lower success rate than breakeven success rate. In such a case, you can avoid to trade for entry 2. This will improve your trading profits further but this will not be reflected on the backtesting statistics. If this idea is not claver enough for you, then you can decide to trade at entry 1 and entry 4 only because they both gives much better success rate than entry 2 and entry 3.

You must be analytical in interpreting this trading statistics and creative in designing your trading strategy because they can improve your profitability huge. Also it is very important to practice your trading on demo account before you go on live trading mode. Depending on your knowledge and experience, we recommend you to practice at least 2 weeks to 4 weeks on demo account.

## Summary of the Basic Trading setup

- Configure the Cut probability and box buffer pips and take profits for the best setting
- Save Parameter setting by clicking on “Save Parameter” button
- Analyse trading statistics on Stats Panel
- Practice trading on demo account initially for at least 2 weeks to 4 weeks
- Go on to live trading
- Use individual trading statistics at each entry to improve your profitability.

## Trading Setup with Economic Calendar

Once you have mastered basic trading setup, there are many ways to improve your trading further with SMSA. One good way is to monitor important economic news. As economic news often move market, knowing the news release time can help your trading with Sideways Market Statistical Analyzer. To do this, you can use our Fundamental Trade Manager. Fundamental Trade Manager can draw news release time for scheduled economic news. Fundamental Trade Manager can even alert you for some important economic news in advance by sending you email or push notification. In addition, Fundamental Trade Manager have the built in order execution functionality compatible with Sideways Market Statistical Analyzer. For example with Fundamental Trade Manager you can send both market and pending orders with fixed stop loss and take profit with few button clicks. Using the straddle setup provided from Fundamental Trade Manager, you can send both buy stop and sell stop order around sideways box in less than 1 second.

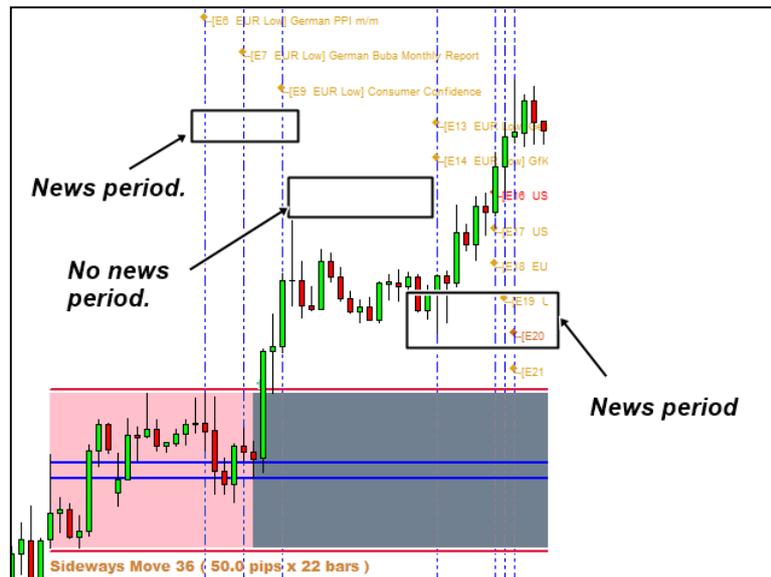


Figure 8. Sideways Market Statistical Analyzer with Economic News drawn by Fundamental Trade Manager.

### Trading Setup with custom buffer line using custom support and resistance

It is even possible to create more advanced sideways market trading with SMSA. In the original mechanical trading using SMSA, traders take entry when the price breakout the box buffer lines. Instead of using original buffer line as entry trigger, you can use custom support and resistance lines. When you use this modified trading setup, you will not trade with box buffer line provided by Sideways Market Statistical Analyzer. But you will trade with custom support and resistance line detected by traders. Here I will share few tips on how one can draw very effective support and resistance line for Sideways Market Statistical Analyzer.



Figure 9. Custom support and resistance line example for sell entry. First peak presents before sideways box and second peak present after sideways box.



Figure 10. Custom support and resistance line example for buy entry. 2 peaks are present after the sideways box.

Firstly, you need to be attentive to few peaks around sideways box. You need to identify at least 2 peaks to draw custom support or resistance lines. The 2 Peaks must be not too distant from sideways box. Once you have identified them, you need to connect those 2 peaks and need to draw

custom support or resistance lines. Also remember that the drawn support or resistance line will somehow provide the entry near the buffer line over the sideways box. It is important that your support or resistance line should not diverge too far from your buffer lines. In such case, you may enter market too late and it is not recommended. The drawn support and resistance line will simply double confirm the breakout line over the buffer line provided by SMSA. From our experience, this improves the success rate as well as reward/Risk ratio for your trading. This might be little bit of art than science but sideways box can give you a lot of hints on which peaks you might need to pay attention to. You will find that market will produce the similar patterns over and over again. You just need to take trade on these repeating patterns. Here are some screenshots to help your understanding.

### **Summary of the advanced trading setup**

- Configure your cut probability and box buffer pips and take profits for the best setting
- Find important peaks around sideways box
- Your potential entry must be near the box buffer line
- You should look for your risk reward ratio always greater than 1 (i.e. take profit > stop loss)
- You don't have to trade every single box. But you will trade only the box with clear breakout patterns.
- When you trade with this modified sideways box trading setup, you don't trade with box buffer line any more.
- This modified sideways box trading setup will reduce your frequency of trading however your success rate will increase far more than the original trading setup.

### **Further Note on trading ideas using Sideways Market Statistical Analyser**

In this manual, we have offered 3 solid trading setups for traders. However, we never underestimate creativity and experience of individual trader. Indeed, we have seen several customers create their own trading styles using Sideways Market Analyser and they enjoy solid profits beyond our expectation. So feel free to explore many trading ideas using our Sideways Market Analyser. Plus all our trading software can be combined for even more profitable trading setup. Here is the list of combinable trading system on top of SMSA:

- Harmonic Pattern Plus
- Price Breakout Pattern Scanner
- Sideways Market Analyser
- Smart Renko
- Pair Trading Station.

Please do not rush. Our trading software is built on very deep trading philosophy and to master one of our trading software, it definitely requires some good dedicated learning time. When you are good at one, you can always add another system on your trading setup.