

## **Kase Bars (Equal TrueRange Bar Chart)**

Kase Bars are equal TrueRange bars previously known as Kase Universal Bars. The Kase Bar method creates bars with a TrueRange based on an input TrueRange target by the user, such as 10 cents, 20 points, etc., and uses only real price data. Kase Bar charts look like traditional bar or candlestick charts except that, because the size of each bar is dictated by a target range, the bars are all approximately the same size (range).

Kase Bars are superior to other “equal range” bar methods in two ways. First, the bars are equal true range which counts any gaps between the previous bar’s close and the current high or low into the bar’s range – as opposed to simple range bars, which only account for the high-low range and leave out any gaps. Second, Kase Bars use only real data to form bars. Thus, if there are any gaps on the chart, such gaps are shown, as opposed to filling the gap by creating bars using counterfeit data. And, if the minimum range between two ticks exceeds the target range, the actual minimum range is shown. This is in opposition to range bar methods, which forces bars to the exact target by inserting fake data. So for example if two sequential prices were \$10.1 and \$10.2, Kase’s method, using a 5-cent range, does not put in fake data but would generate a 10-cent bar, since that is as close to the target as one can get with real data. Other methods would insert a false tick at 10.15 to break up the 10-cent bar into two 5’s.

Thus the user can be assured of three things:

- 1) Real market gaps will be displayed, such as breakaway, measuring or midpoint, and exhaustion gaps which are important in anticipating market behavior, as well as patterns such as morning and evening stars and island reversals.
- 2) Any signals generated by indicators will be generated by real data, by prices that actually traded in the market, as opposed to fake data, which, by definition, would generate a fake signal, and potentially an erroneous one. This is especially important in backtesting, because, while in a backtest a fake early entry might be triggered, or a fake better stop price. In real life, since those prices did not trade, no action could have been taken and the “signal” will always show up in the past tense.
- 3) Because gaps are not filled in and bars are not broken up with fake data, the real risk in the market, which is proportional to the real range of what actually traded, will not be masked, potentially lulling the user into employing incorrect stops that trigger retroactively.

### **How are Kase Bars Built**

As each data interval is fed in, the TrueRange of the current bar is measured. Once the TrueRange is met, or given the data, is met as closely as possible, the bar is written.

### **How to Set the Target Range**

There are a number of ways to set the Target Range.

- 1) As a guideline, the target range should be no less than three times the average difference between ticks. So, for example, if a typical tick chart looked like this “10 – 12 – 14 – 12 – 14 – 16”, then the average tick difference is “2” and the minimum range one would use is “6”.
- 2) Set up the normal time or tick volume chart you would use, such as 15 minute, 30 minute, or 610 tick, etc. Plot the Average TrueRange on that chart. Whatever the ATR is of the chart you normally use should be roughly equal to the “Target Range” you choose to input.
- 3) You can always just choose a range that seems appropriate to you. Visually, the bars should look about the same size. If there is a large variation, it usually means that the target range you have set is too small.
- 4) Check the Kase Bar Average TrueRange by plotting it on your Kase Bar chart. Adjust your target up or down as necessary to result in the specific range you want.

### **How Will Kase Bars Help Me Trade?**

The two major ways that Kase Bars will help you trade are 1) reduced risk and 2) cleaner signals without the insertion of fictitious data.

- 1) Volatility and risk are directly related, and volatility is proportional to TrueRange. The more variation there is in the TrueRange from bar to bar, the more risk there is. Kase Bars **reduce risk by about a factor of 4**, so where one might need to place a stop at \$2.00 with normal time bars, with Kase Bars, the stop may only need to be placed at \$0.50.
- 2) Reduced false signals and signals earlier and at better prices take place with the Kase bars. In a recent study on the Stochastic and MACD with Kase versus minute bars, it was found that Kase bars trigger signals
  - a. Reduced false signals – overall, Kase Bars generated over **40% fewer false signals**, that is divergence signals that didn't result in turns were reduced by over 40%
  - b. Faster signals – Kase Bars generated divergences about **50% earlier** for day session trades (so when compared with a 60-minute chart, 30 minutes sooner)
  - c. Kase Bars generated signals at **prices 30% better**- so if the Average TrueRange is \$1.00, that would be equivalent to \$0.30 per signal.

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