Moving Averages

by www.surefire-trading.com

Hi everyone, this is Ty Young with Surefire-Trading.com.

In our last lesson, we found that Moving Averages are the building blocks of the MACD: remember: ***Moving Average Convergence Divergence***; and as such, we find that they also can be useful tools in confirming our entries.

There are two distinct ways that I make use of Moving Averages. One is for higher time frames; such as, Daily, Weekly, and Monthly charts. The other is for intra-day trading, which are the 1-min. through 4-hr. charts. In this lesson, I will be discussing the latter.

But first – Let's check out the preliminaries.

MAs are probably one of the most popular trading tools utilized by the technical analyst, which are often broken down into several categories; i.e., the Simple Moving Average (SMA), the Exponential Moving Average (EMA), and the Weighted Moving Average (WMA). And there are other deviations, such as the Double Exponential Moving Average (DEMA). In fact, indicators such as Envelopes and Bollinger Bands find their basis in the manipulating of Moving Averages; however, since the two most popular Moving Averages are the SMA and the EMA our lesson today will concentrate on the use of these two.

Calculations

Calculating the average price of a particular asset over a specific time period forms the Simple Moving Average.

Let's assume for a moment that we are trading the 15-min chart and we decide to use a 3 SMA to aide in our decision-making. What exactly is taking place? What precisely is the charting software calculating behind the scenes? The software is adding the closing

prices of the present plus the past two (15-min.) time periods and dividing the total by 3….very simple, huh? I guess that's why they call it a "Simple" Moving Average….LOL.

As each new bar or candle appears, the most recent 3 candles are used to recalculate the present SMA; discarding the closing price that is farthest down the line. It looks like this:

1.5531 + 1.5529 + 1.5527 = 4.6587

4.6587 is then divided by 3 which equals 1.5529.

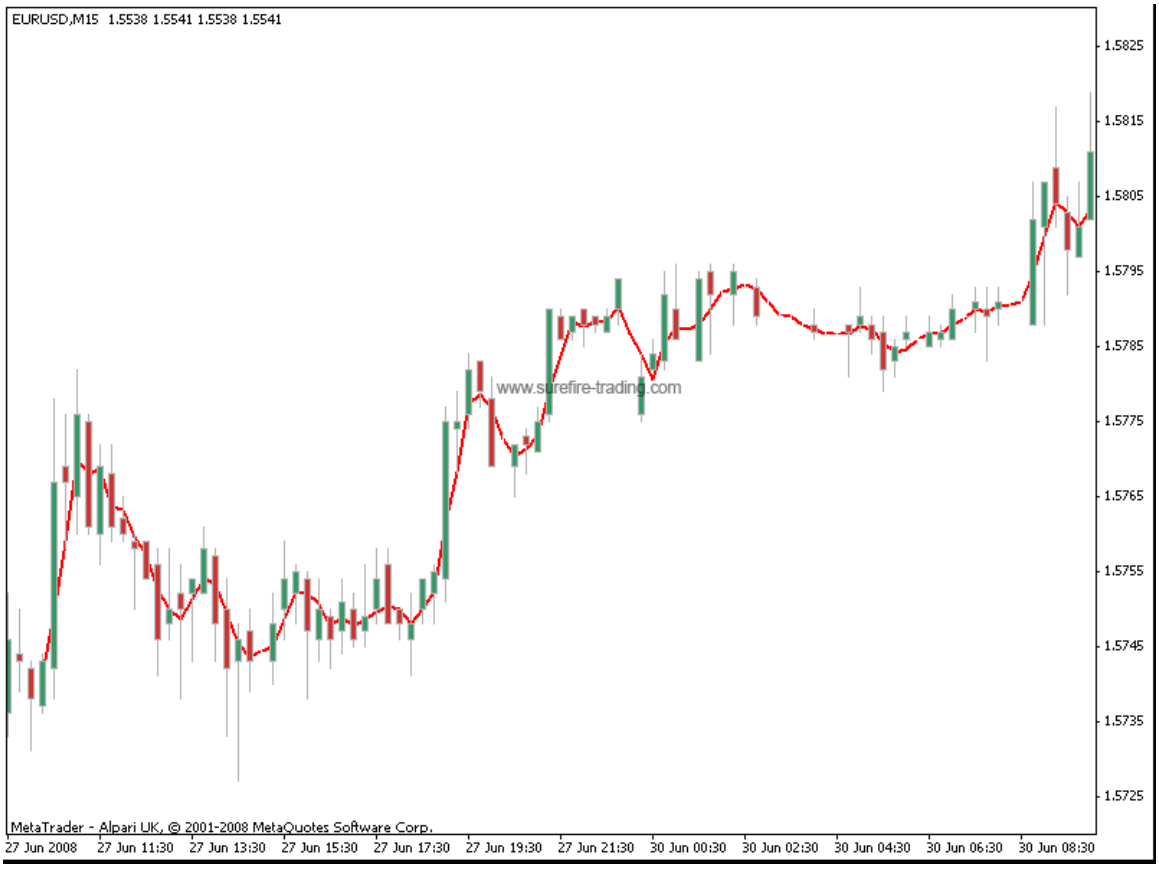
The 3 SMA line is then pinpointed by the software where the 1.5529 price registers on the chart.

Let's say the next candle closes at 1.5555. The initial price of 1.5531 would automatically be dropped from the calculation and the most recent three candles would be recalculated to look like this:

1.5529 + 1.5527 + 1.5555 = 4.6611

The quotient of 1.5537 would then be plotted on the chart. The 3 SMA indicator would instantly move from the position of 1.5529 (as previously calculated) to a position of 1.5537 (the present calculation). Since 1.5537 is a greater number than 1.5529, the charting software would interpret this calculation as a move in a positive direction. It would then display the SMA as an upward sloping line – telling us that during the last 15-minutes the bulls commanded the market.

As the market continues to move, every 15-minute period is recalculated displaying a continuous line that visually provides us with a means of determining who is dominating the market. As we can plainly see on the chart below, despite the whipsawing movement of the Moving Average, the indicator is clearly telling us that the bulls are controlling the market.



Despite its usefulness, the SMA has a minor flaw (well, to some of us, it's not so minor) – that is, its apparent delay in responding to price action, which is why it is considered to be a "lagging" indicator. Even though the EMA lags as well, by giving greater importance to the most recent prices in its calculation than that which is attributed to the earlier prices, we create an indicator that responds more quickly.

For you mathematicians, here's the formula:

EMA = [S * (C-P)] + P

S = Smoothing Factor
C = Current Closing Price
P = Previous Closing Price

The Formula for the Smoothing Factor is:

S = 2/(1+N)

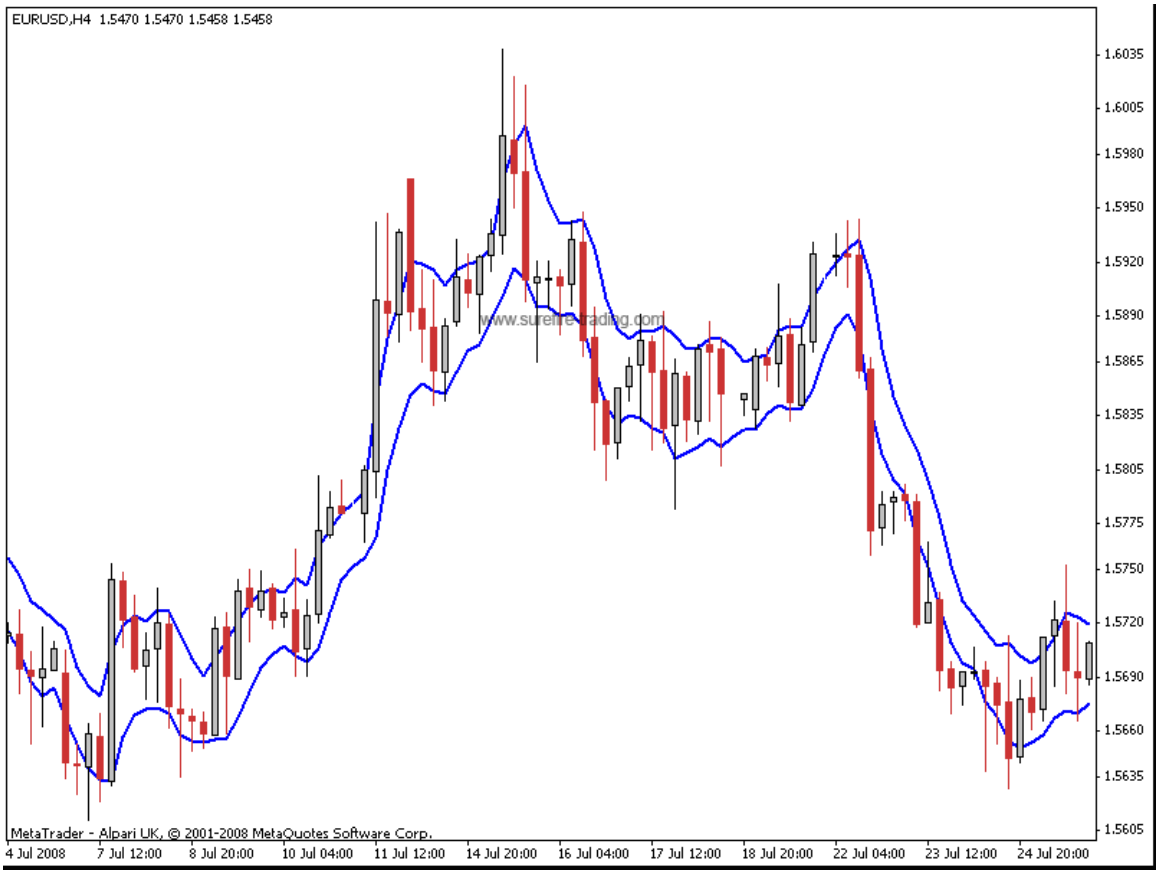
N = Number of days for EMA

I don't know about you, but I'm thankful I have charting software doing my calculations. ☺

Looking at the chart below, I have placed a 21 SMA (red) and a 21 EMA (blue) together to provide a comparison.

Practically speaking, though the EMA is calculated differently than the SMA, as we can see, it is applied to the chart in the same manner as to indicate the strength and weakness of the Bulls and the Bears.

Below, we see a chart with a 5 EMA of the High and a 5 EMA of the Low providing us with an interesting channel depicting the current trading range. Remind anybody of another indicator we recently covered?



In addition to these configurations, there are as many combinations that can be used when trading with Moving Averages, as there are traders who use them. I recommend experimenting with many variations to see which suits your trading style and the markets traded.

Now, although Moving Averages can be manipulated in a variety of ways, I will be using the Closing prices as opposed to the Highs, Lows, or the Opens for our examples. And by understanding how they respond to price, we begin to grasp the importance of such an indicator as a "stand-alone" Trading System or more so - as a confirming tool.

Deficiencies with Moving Averages

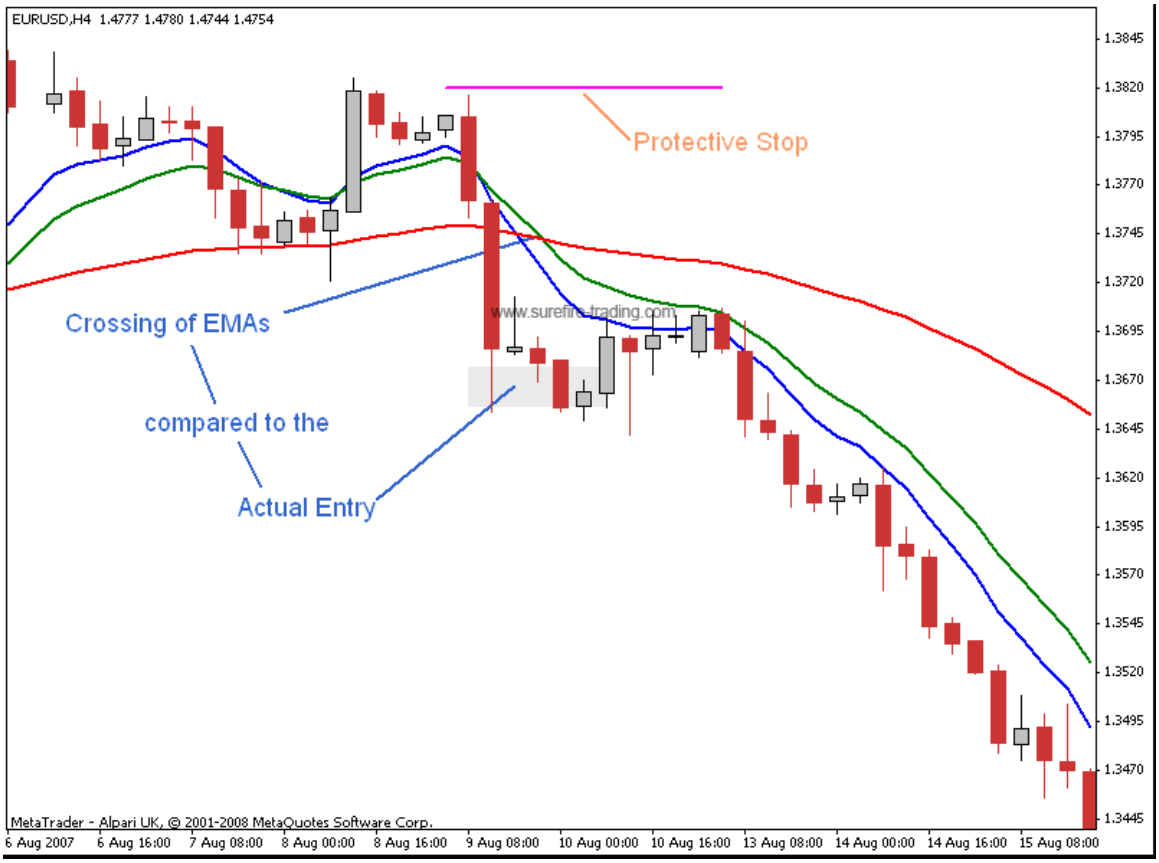
The most popular method of using Moving Averages is to position two or more MAs, of different size with the intention of entering the market as one crosses above the other. However, if traders understood

more of what the “crossing” represents, they would be less inclined to use this tool in such a way.

And to make my point, I ask the question, “Isn’t the primary purpose of utilizing any indicator to determine who is dominating the market?”

The point at which two EMAs begin to cross depicts a balance of power – not domination. It is imperative that we interpret the “moving” of these Averages in such a way as to inform us who is beginning to take control of the market at any given time. In order to accomplish this, we must wait for the MAs to develop a more definitive signal.

Also, as stated earlier, another discrepancy found with the crossing of Moving Averages is its lag-time. That is, by the time the EMAs have reversed and completed crossing forming its sequential order, the price has generally advanced significantly - even to the point of reaching the shaded area, as in the chart below.



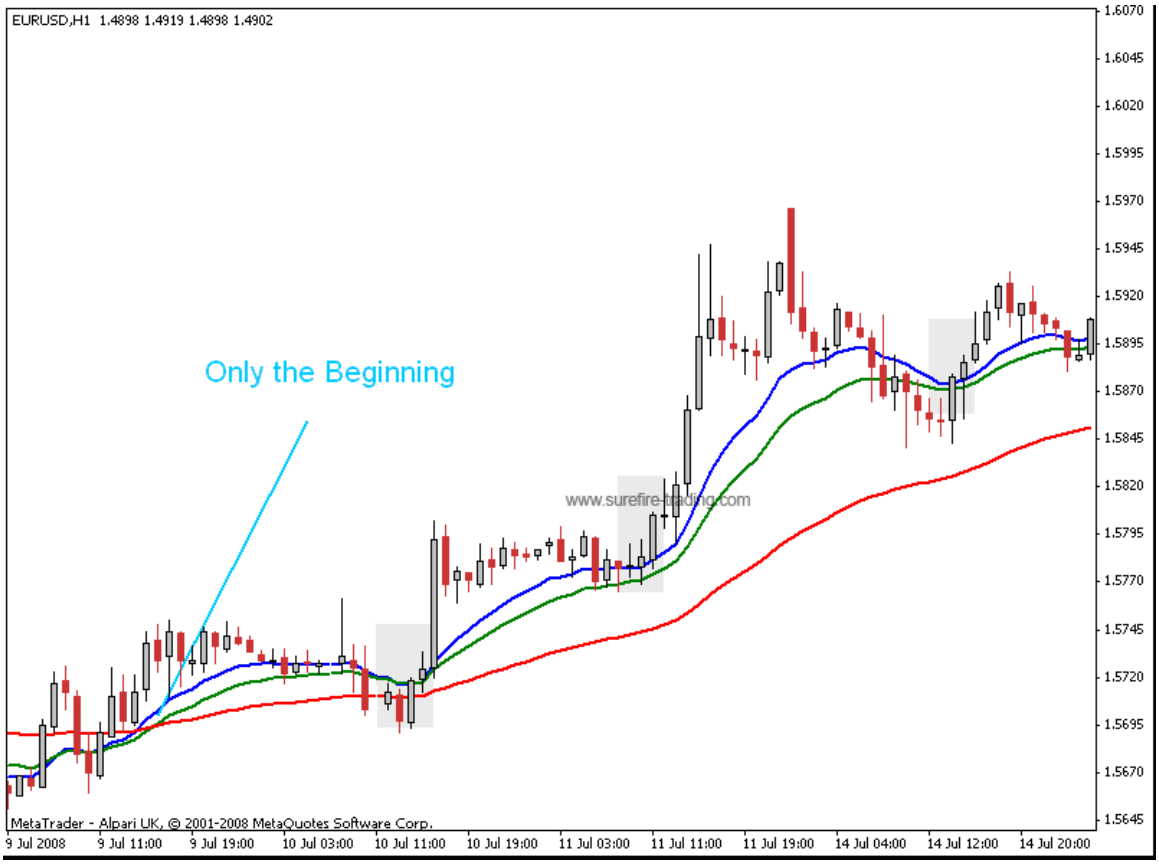
Now, in this example, this would not have been a big problem because there was plenty of movement below the shaded area to capture a small profit from the market (which is not always the case).

This leaves us with only one small (significant) problem – the Protective Stop (P/S). With such a delayed entry, had the market gone against us, the loss would have been unnecessarily grave. Notice the span between the entry and the previous high. I cannot stress this enough, it is imperative that we wait for the EMAs to align themselves in such a way as to "decrease" the gap between our entry and our P/S.

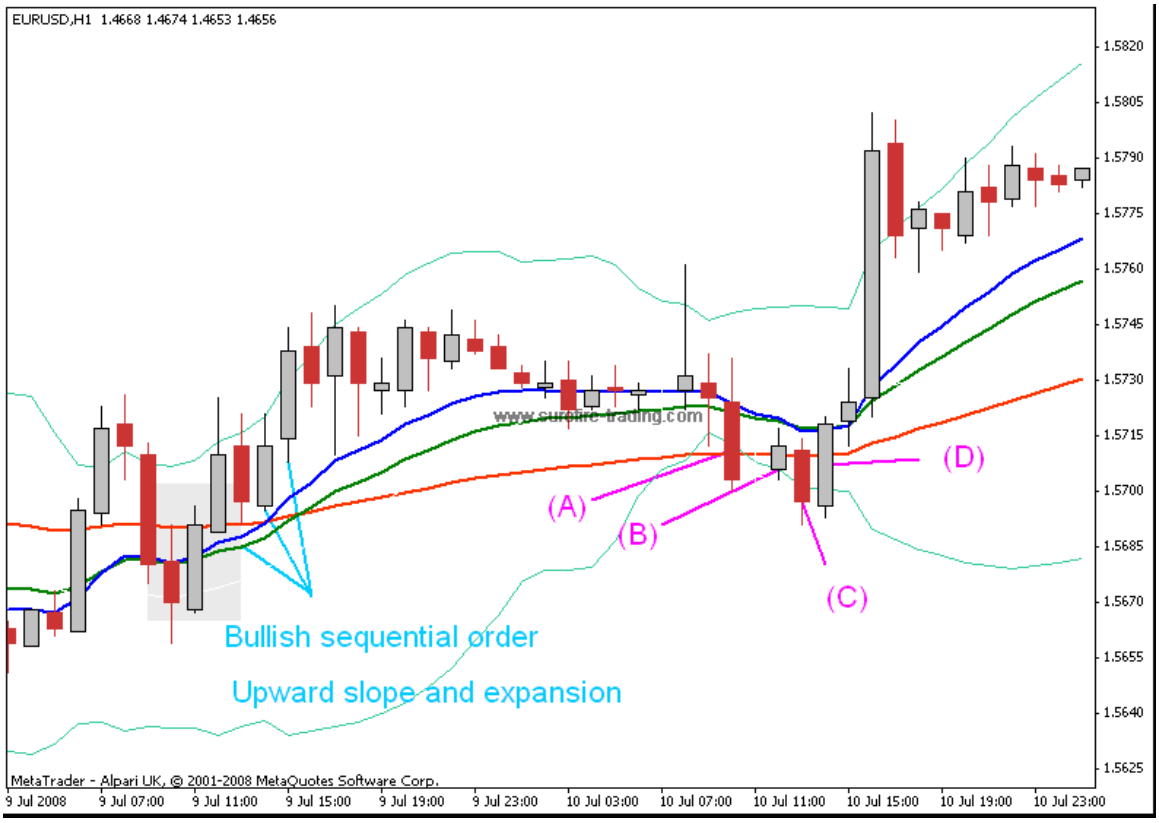
This can be accomplished by one of two ways:

Strategy # 1 (conservative)

On the chart below, I have placed a 13 EMA (blue), a 21 EMA (green), and a 60 EMA (red) of the closes providing us with three entry opportunities.



As the EMAs begin to cross in a bullish manner, we have only the beginning of the signal. Let's enlarge this chart and zero in on one of these trades.



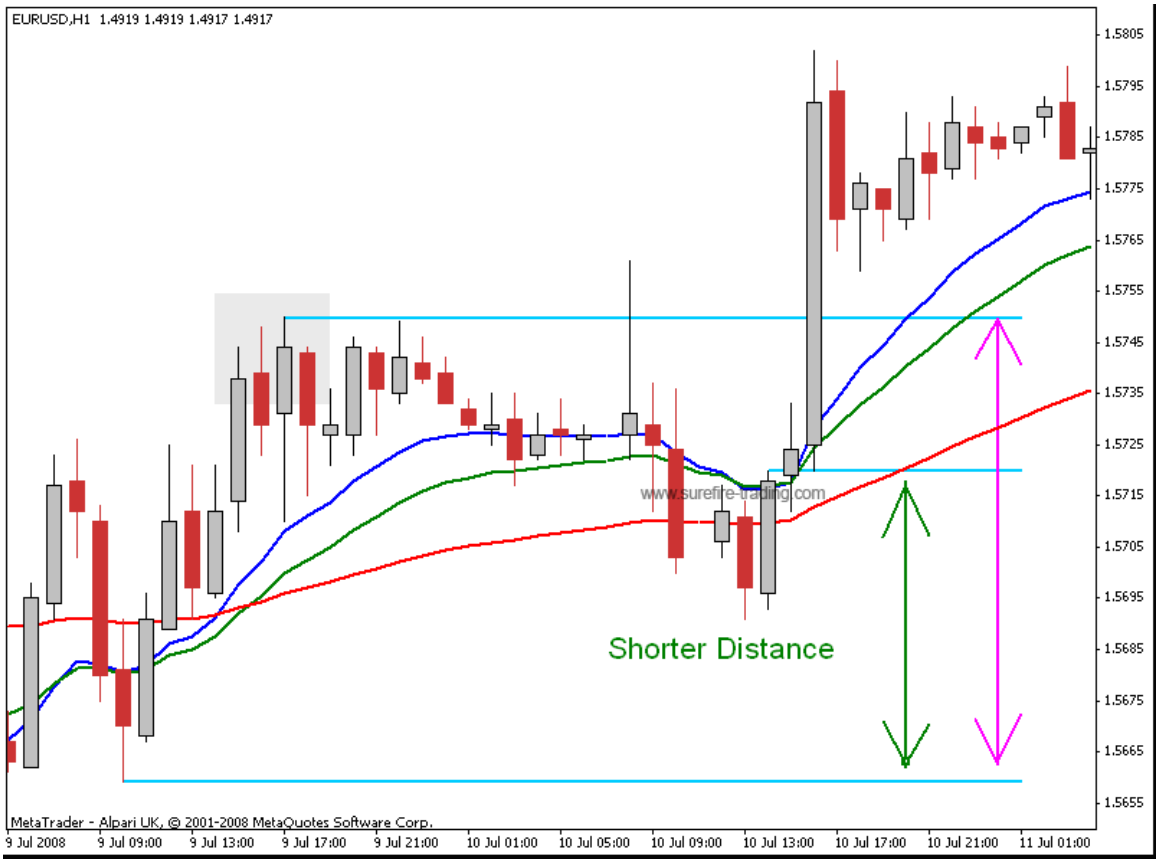
Since the EMAs are in a bullish sequential alignment and showing upward slope while beginning to expand, I'm looking for an opportunity to enter long on a retracement.

……Let's walk through this trade together:

- Candle (A) closes below the 60 EMA, while the 13and 21 EMAs remain above the 60 EMA.
- At the open of Candle (B), I place a buy/stop order to be triggered at the break of the high of Candle (A).
- Candle (B) rises and closes above the 60 EMA but does not break the high of candle (A) – no action is taken.
- At the open of Candle (C), I place a buy/stop order to be triggered at the break of the high of Candle (B).
- Candle (C) once again closes below the 60 EMA, with the EMA alignment remaining intact but Candle (C) fails to break the high of Candle (B) – still no action is taken.

- Since the EMA alignment remains intact, at the open of Candle (D), I place a buy/stop order to be triggered at the break of the high of Candle (C).
- Candle (D) breaks the high of Candle (C) and I am subsequently in the market on the long side.

As we look at the example below, take note of the fact that by entering on a retracement, we have reduced our risk by shortening the distance between our entry and our P/S. Had we entered after the initial cross (shaded area), we would have increased our risk by thirty pts.



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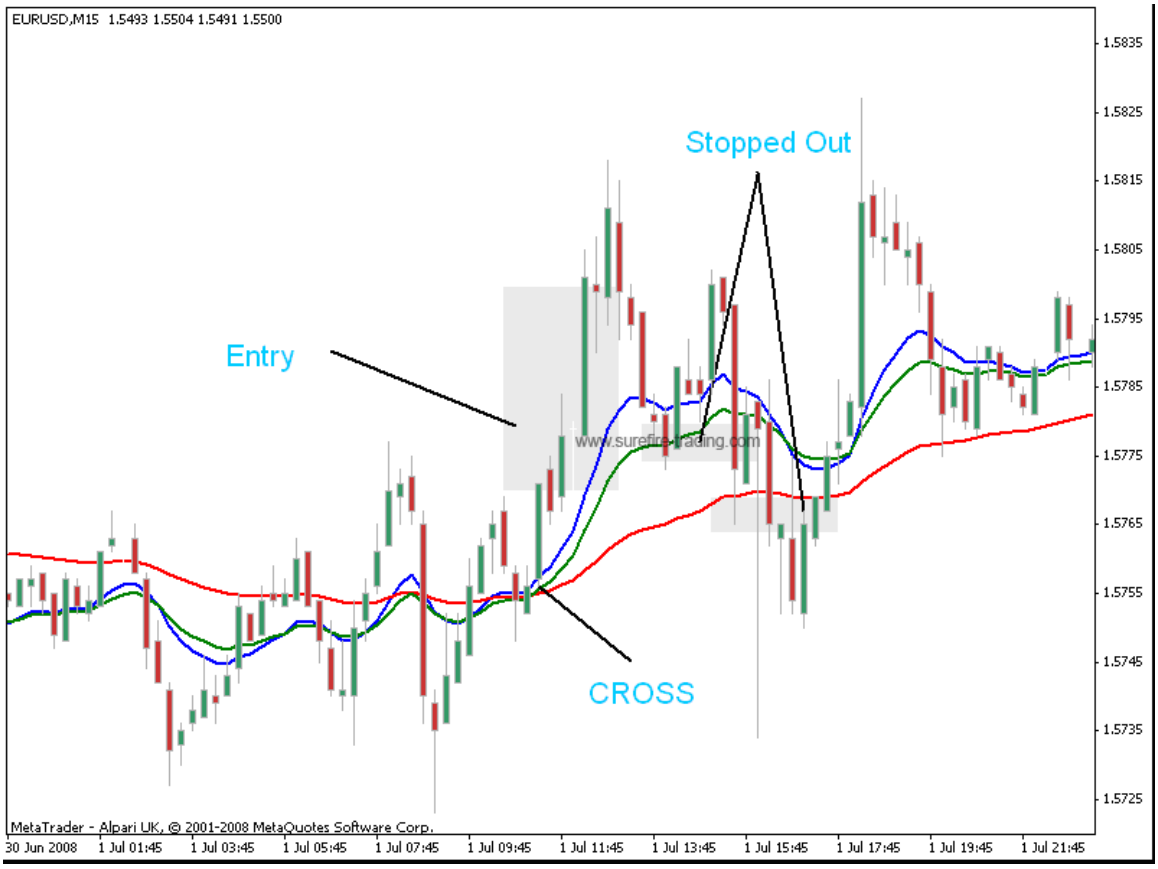
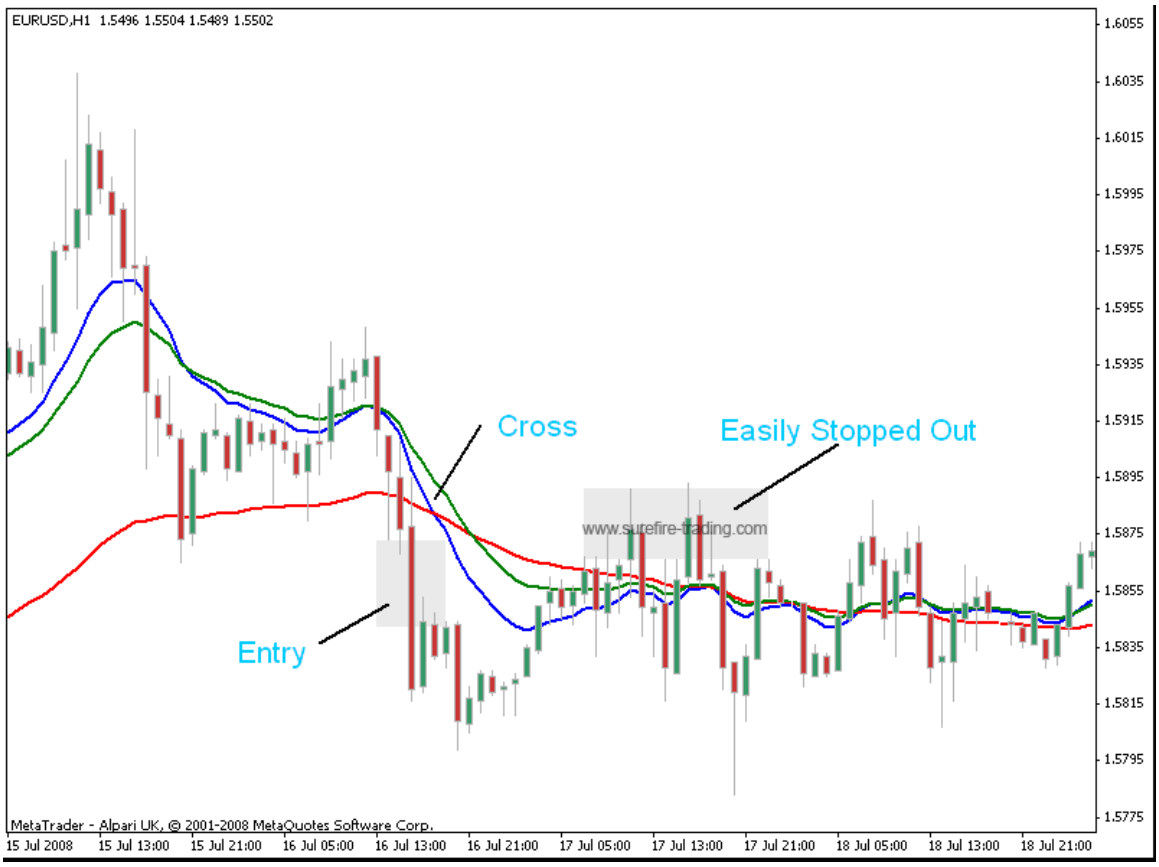
Let’s look at some more examples…….

On the chart below, an entry based on the crossing of the EMAs would have positioned us so high in the market that we would have easily been stopped out as one of our Protective Stops were triggered.



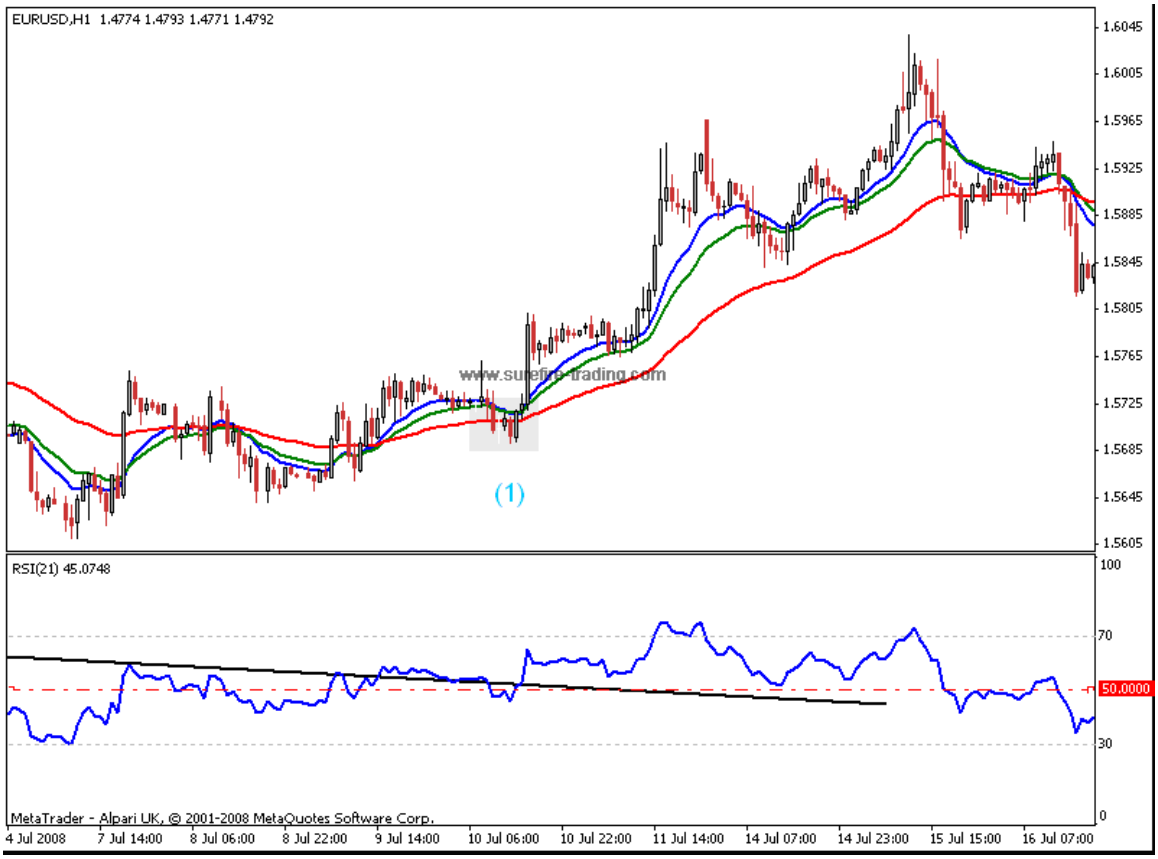
And likewise with this chart below.



By now, it should be obvious to you that entering on an EMA cross, though profitable at times, is not what I would consider a “high probability” trade.

So, let’s see what we have learned…….

So far I have shown the mechanics of the EMAs in the lower time frames; now let’s add an indicator, the RSI, as a confirming tool. As we take a look at the next four 60-min.charts, see if you can determine why the shaded areas are high probability entries?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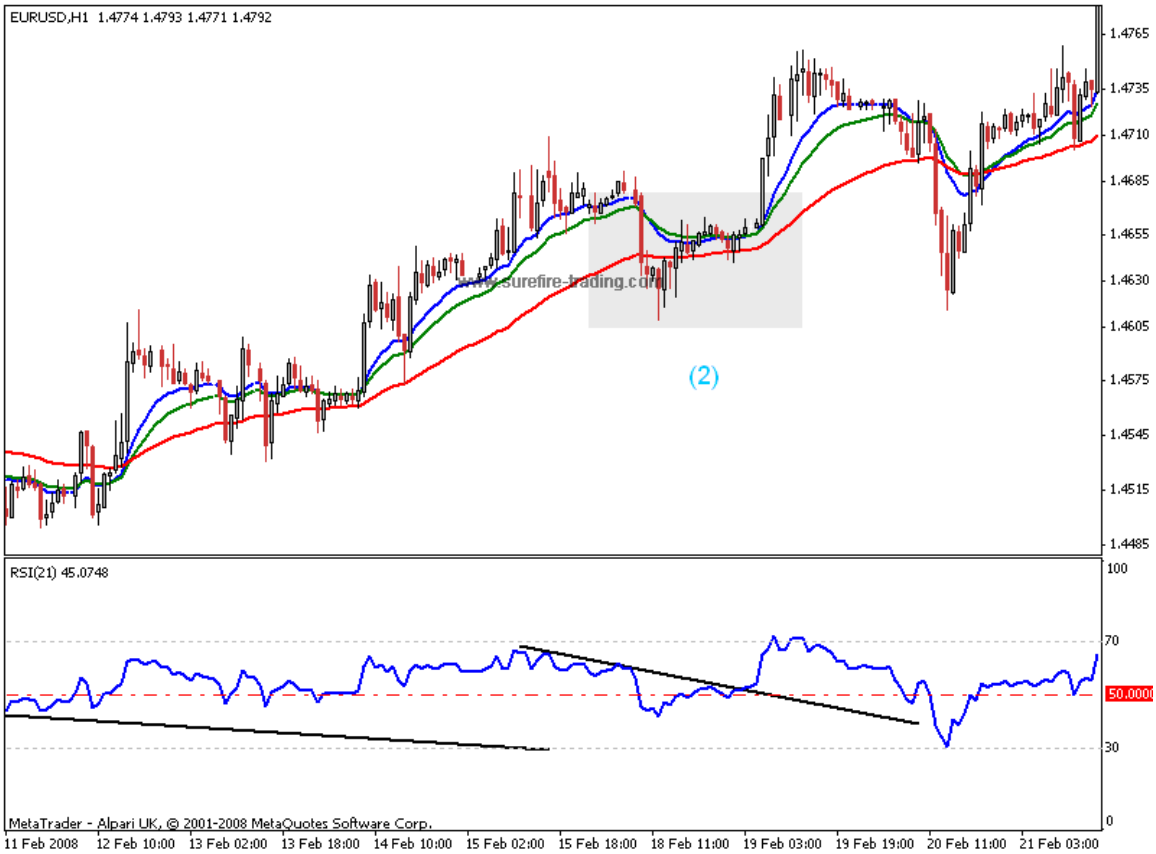
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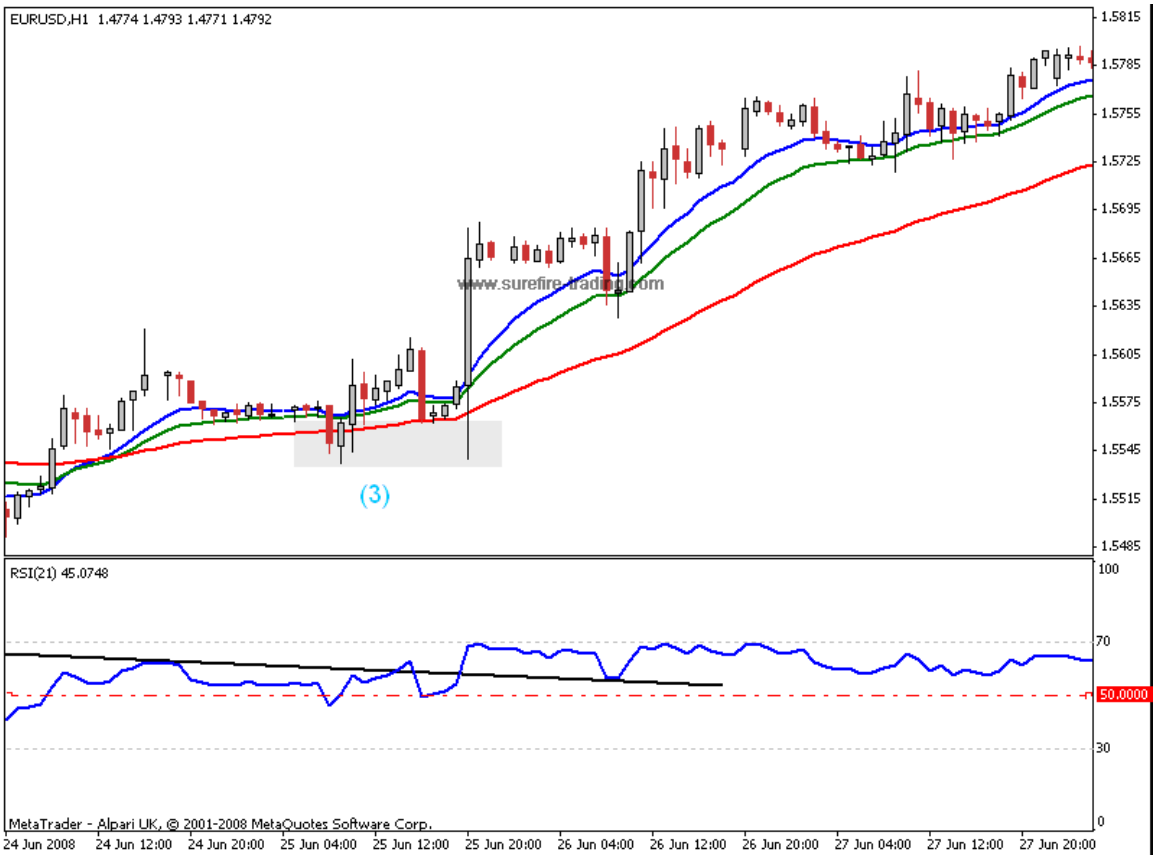
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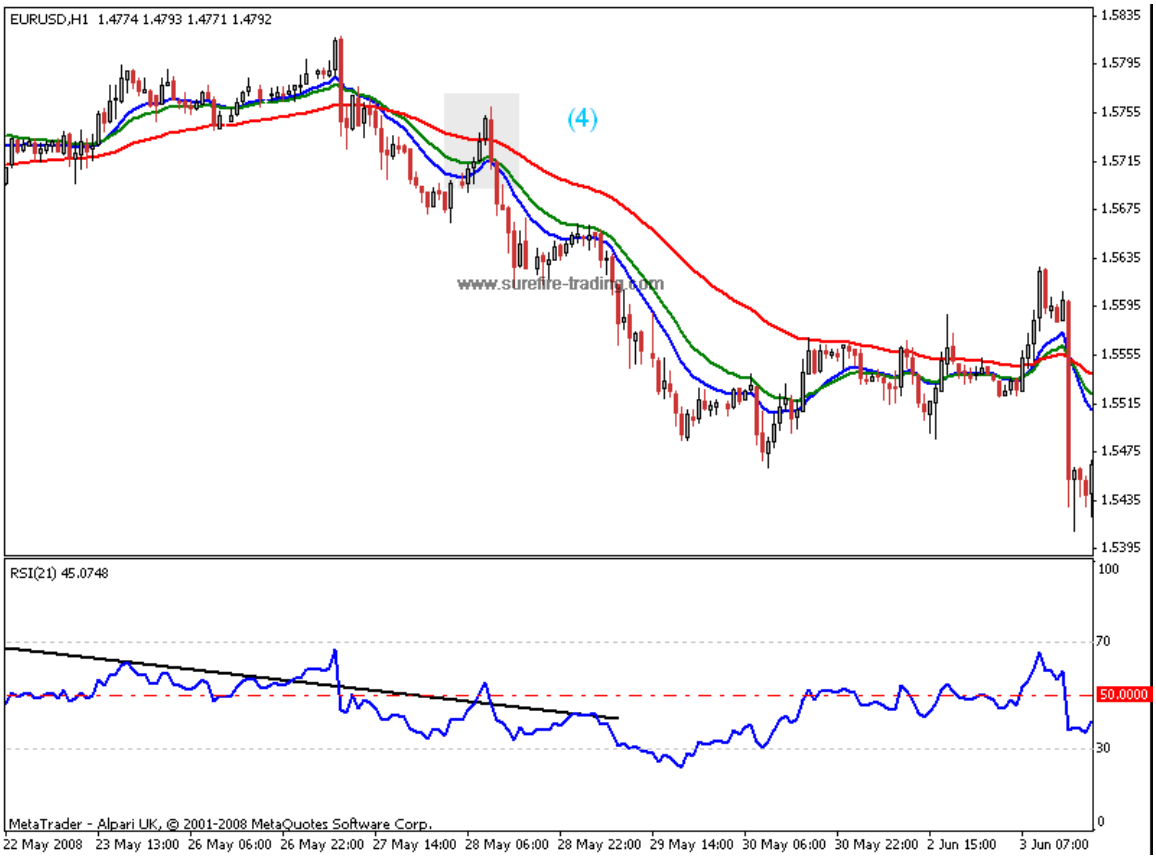
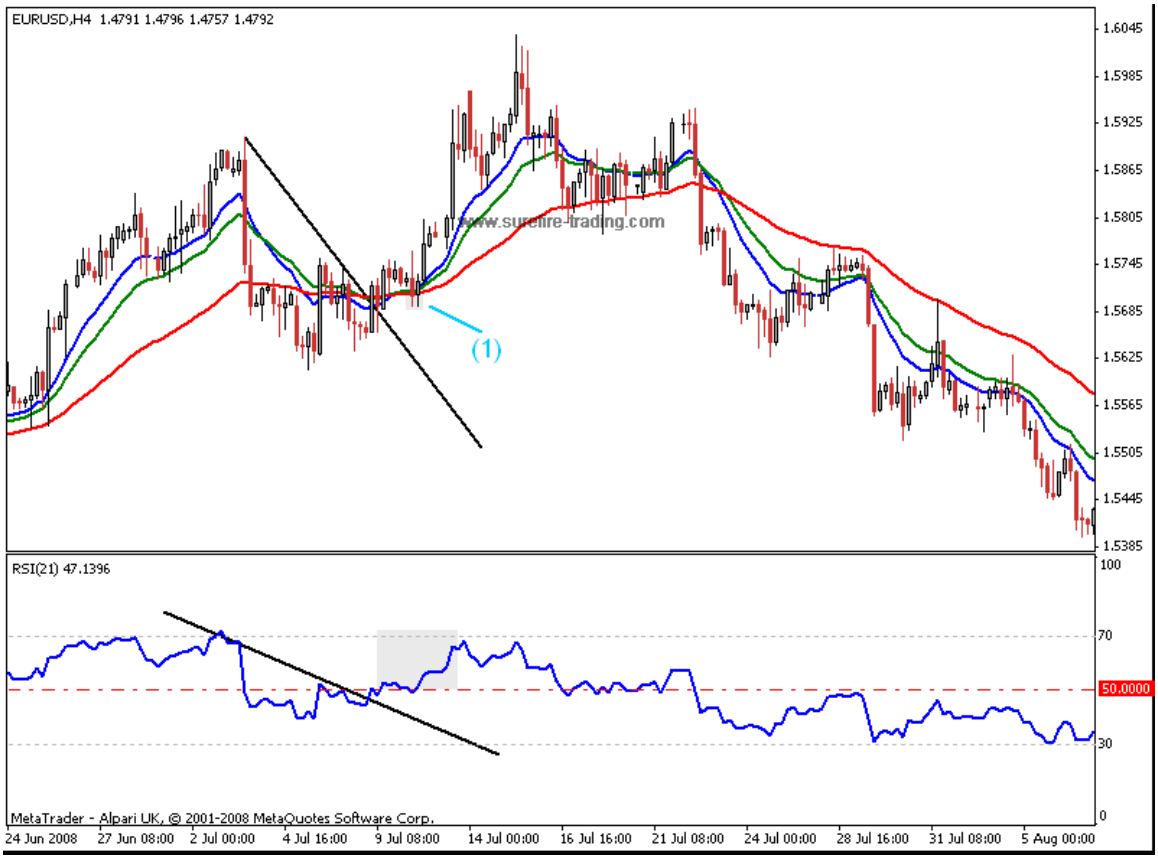


If you're thinking, "Entered on the retracement", you are absolutely correct.

And if you place your Protective Stops above/below the most recent high/low, your Stops will be much closer to your entries, which will minimize your loss if the market should move against you.

Now take a look (below) at the same coinciding areas but move up to the 4-hr. chart. What do you notice about the position of the EMAs and the RSI (or - use your favorite indicator for confirmation)?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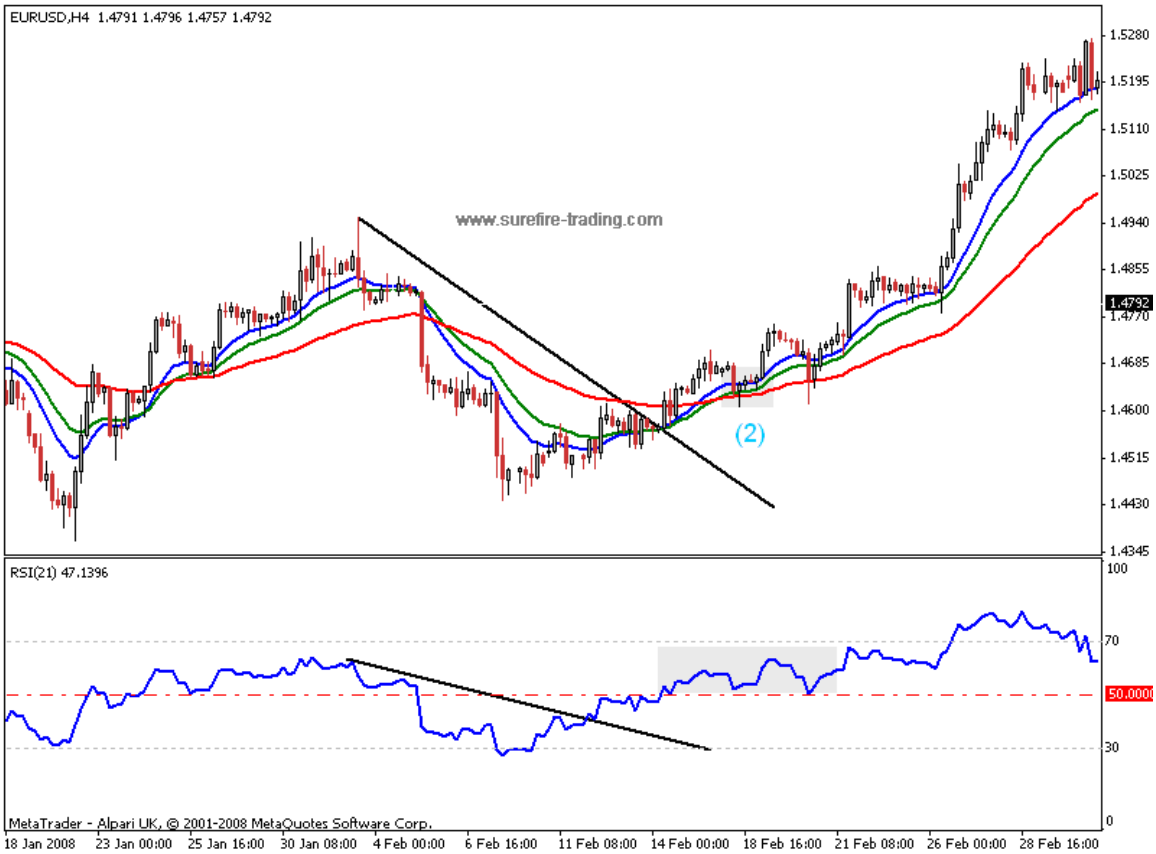
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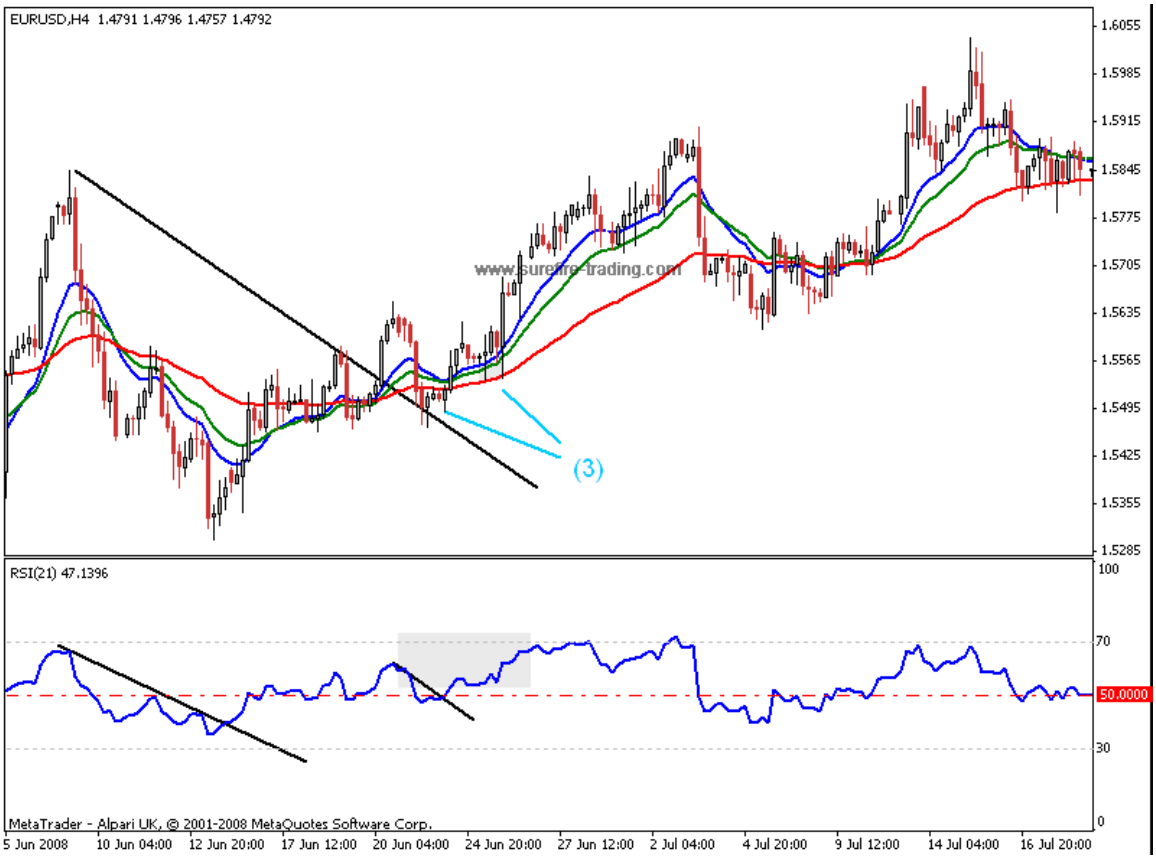
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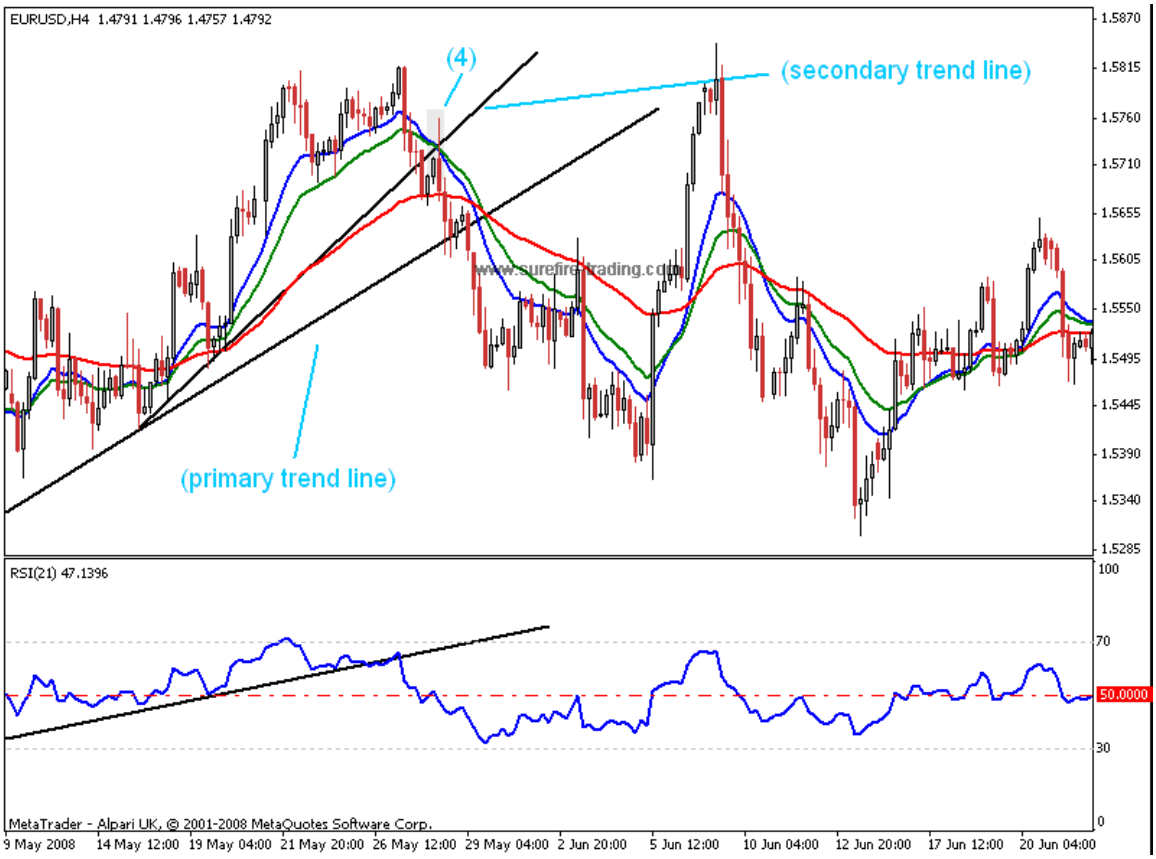

In each case, the RSI was either on the appropriate side of the 50-line or the RSI trend line had been broken – or both. And the EMAs were positioned with distinctive slope and sequential order.

However, did you notice how all three EMAs on the previous chart (entry 4) had not come into "full" alignment? I will deal with that in Moving Averages Part 2; check it out.

For Surefire-Trading.com, this is Ty Young, reminding you to "Read the Charts". ☺

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