The Use of Multiple EBB in Trading

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In *Ralo24*, as you know, we have an EBB envelope, where "EBB" stands for *extreme* Bollinger Bands. In standard Bollinger Bands, the average is based on 20 periods and the envelope is based on 2.0 standard deviations from the EMA (exponential moving average) of the 20 periods. The exponential moving average was John Bollinger's original definition of central tendency and the one he still uses today and the one that is typically built into most charting programs.

A few years ago at a meeting I asked John if he had ever studied Fibonacci values in constructing his bands. At that time I had been doing so. John said no and basically because he does not use Fibonacci values very much in his various methods.

As you know, I use Fibonacci values a great deal in the methods I talk about and generally try to utilize them in everything in one way or another. There are many reasons for this you know well enough by now so we do not need to go into those reasons now.

Bollinger was attempting to operationalize the meaning of the oft-used concepts "overbought" and "oversold." He used exponential moving averages in order to weight recent values more heavily than earlier values; he used the 20-period average because it was one of the most common moving averages used by US technicians; and, he used 2.0 standard deviations because this is the rounded version of the "t" value in statistics which is 1.96. This value is generally considered the necessary degree of "extremity" in order to consider something that far away from the central tendency as having a high probability of being "something else." In this case, this "something else" is the concept of "overbought" or "oversold." It was a natural choice.

My problem with the standard Bollinger Bands was that this extreme limit was hit too often and that this then led to a lot of "subjectivity"

entering into an indicator that was designed to eliminate subjectivity. Since I use the second degree growth factor in the Fibonacci growth spiral as the limit of the projected Wave 5 in a standard pricetime box, it seemed natural to me to set the Bollinger Band to this same limit. This is why the EBB that we use in *Ralo24* is set at 2.618 standard deviations.

But when I first started studying Fibonacci bands, I actually used 3 bands and the reason for this was my usual reliance on the *Rule of Three.* But in UGT, when I introduced EBB to the members, having 3 bands seemed unnecessarily complicated—particularly when my methods were already seen as too complicated. So that is why I limited my discussion and use of EBB to the 2.618 value band.
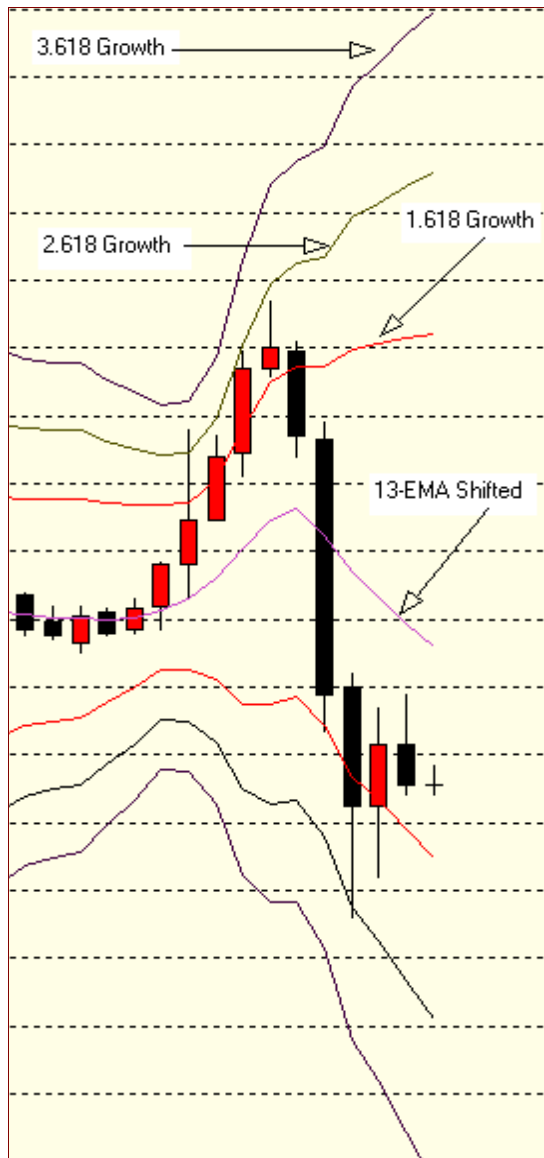
Recently, I have gone back and started to look again at the value of using the three-band approach. So it is this that I want to begin an initial discussion of today with more to follow in the future.

I am going to show you three illustrations today and point out a number of things. But what I really would like is for you to set up a three-band chart on something you trade actively and begin to watch what you see for markets that you know and to report on this. I'll go into the details of how to do that in just a little while.

First, let's look at *Figure 1* so that you can see what I'm talking about. Here we see the three bands and the 13-S. The 13-S, remember, is the 13-period exponential moving average *shifted* forward 3 periods. In *Ralo24,* we have the 13-S as well as the 2.618 bands, so what is different in this *Real*

Tick chart is the appearance of the 1.618 and the 3.618 bands.

To set this up in realtick, you define the first band as 1.618, the second as 2.618, and the third as 3.618, all related to the shifted EMA of 13 periods. Keep in mind that once you set this up and make it a default, it will appear on all charts and in all time periods. The values are fractal to all markets and times.[1]

Now this chart shows some things of which the trader should be aware. Note first, that the bands tend to narrow down and then to expand. The difference between the bands is called the *EBB differential.* This is a very important value. We know that in different markets and in different time frames, there are specific levels of the EBB differential that are crucial. In general, as the differential tends toward a *minimum,* we know that the probability of a major movement is increasing. And, when the differential escalates toward a *maximum*, we know that the probability is increasing that this state will be followed by compression. This knowledge alone can be of extreme value to the trader.

To know that the probability of increased volatility is coming puts a premium on the value of any volatility-sensitive method. So the second aspect of attending to EBB bands is in conjunction with the application of good volatility methods.[2]

Another observation we can make from this chart is that during this sequence, the 3.618 EBB is never touched. Generally, the trader will find that the 3.618 band is not touched very often *except* under two very specific conditions: (1) when the market is thrusting out of a compressed state, and (2) when the market reaches a very extreme move in a very short period of time.

Another general observation is that the more extreme the market moves the more extreme the reaction tends to be. That is, hitting a 2.618 band generally leads to more reaction than hitting the 1.618. This can be

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1 Note that the present chart does not display the 3-period EMA shifted *backwards* in time. This is typically used as a "fail safe" exit value once the target EBB has been reached. It will be shown and discussed in the second seminar on multiple EBB methods.

2 In the next seminar I will explore this link between EBB differential state and various volatility-sesnsitive trading methods.

seen in *Figure 1*. Note in the large down candle, how it hits the 1.618 band and the bounce up from there is fairly small before continuing lower. But when it hits the 2.618 band, the bounce up is considerably stronger. This is a regular feature of market behavior.

There is an old maxim among technicians that markets "remember" extremes. Look in *Figure 1* at the first red candle to penetrate the 2.618 band. Now imagine a line projected into the future at the point where that candle crosses the 2.618 band. This horizontal line is considered the *memory trace* of that volatility extreme. That memory trace weakens by degrees as time goes on and for this reason its importance lessens. One way of thinking about this is that as soon as a *future* candle high penetrates the 2.618 limit then it is *that* memory point that becomes foremost in importance, so you would draw a line from that new point.[3]

Now you will see that these volatility memory trace lines will be significantly related to important features of the price chart. In this case, you can see that the market is unable to *close* above that point in this thrust upwards. As you may already have discerned, knowing the EBB band info begins to give you a "probability boost" in terms of when to enter the counter trade—that is, the short side after hitting the EBB-2.618.

The market structure high here is a higher probability trade because the upside volatility keyed by that volatility price point cannot be overcome on a *closing* basis. That is an additional context basis for taking that market structure high short trigger when it is released. As you can see, the fall was dramatic.

Now look at that low point and draw a line across from there. You can see the strong bounce and the close above that line in that candle and in the next, and the market continued to move higher following this "volatility" signal.
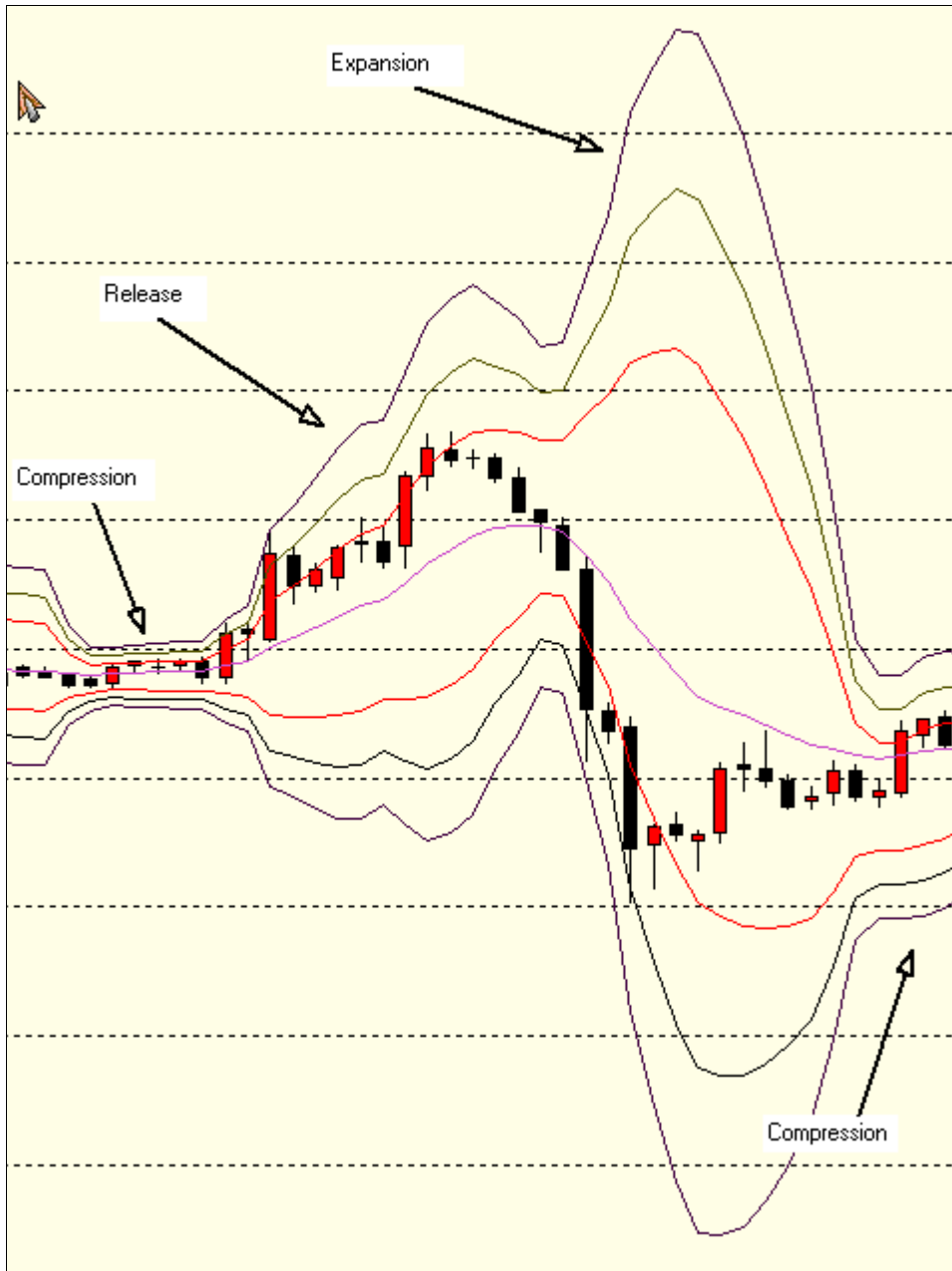
Anther point can be made before leaving this chart. If the 1.618 band offers a lot of resistance, the trader should begin to look for short entries; if it offers a lot of support, look for longs.

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3 It would be ideal for a chart to display the most recent memory trace point as a "strong" line and prior memory trace points as increasingly "fading" lines. As far as I know there is no charting system that has enabled such a feature.

These are just some basics that we can see from an initial look.

Now let's look at *Figure 2*. This figure illustrates what I call the *EBB Cycle.* This is not an invariant cycle, but it is the most common one and one that needs to be paid attention to. The EBB cycle begins with compression. Compression is followed by what I call the *release phase*. In the release phase we often see the market hitting the 3.618 EBB in the *early* portion of the move as can be seen here. During the release phase, the market may travel along the EBB - 2.618 for several periods. In this example, we see a market that initially is quite strong with the 3.618 extreme but settles back a bit before making new highs of the move. However, the most important

thing to observe here is that prices do *not* recover the EBB -2.618 extremes that are more typically seen in the release phase. This state is to be taken as an "early warning"
that the market is not as strong as "it appears."

Figure 2. *The EBB Cycle.*

This is one of the chief uses of the relationship between price position and the EBB lines.
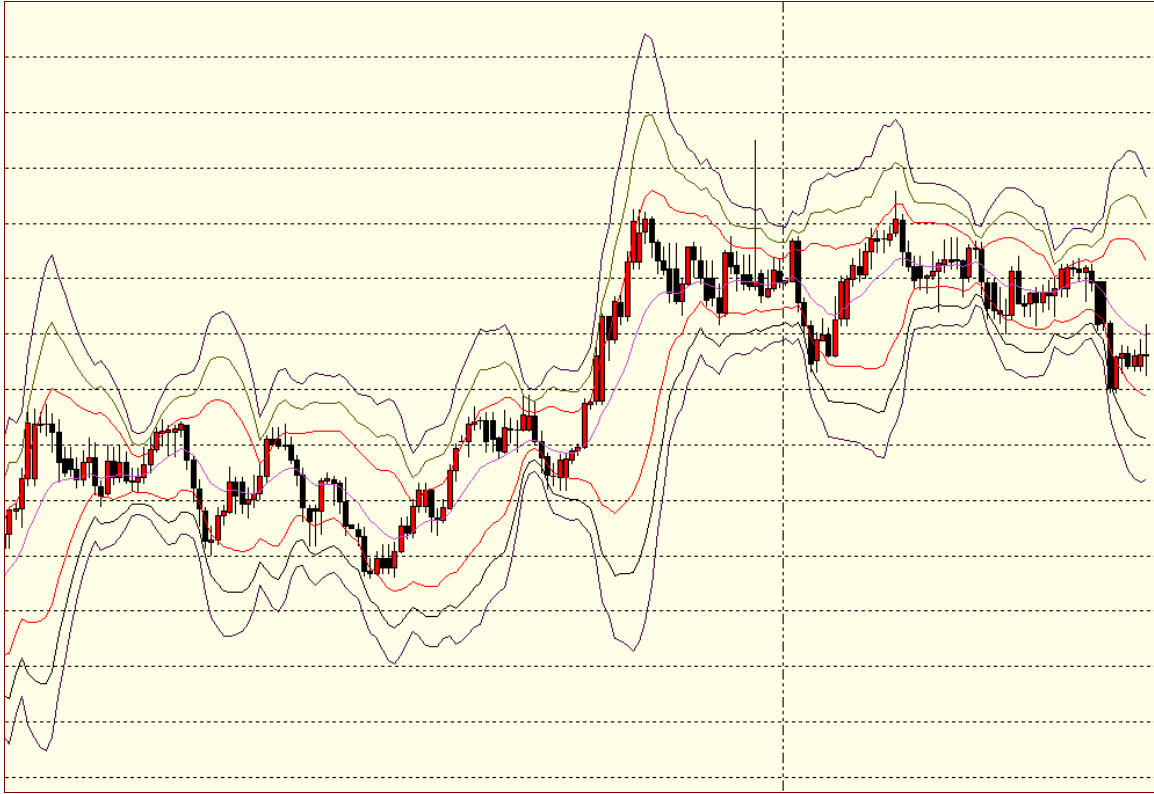
The next phase is what I call "expansion" and I am specifically referring to the expansion of the EBB differential. This may happen in two ways: (1) a very rapid decline following a release phase high as we see in *Figure 2*; or (2) a rapid rise from a "basing" high which we will see in the next figure.

Notice that the EBB Cycle is a *Rule of Three* pattern: compression, release, expansion. *Figure 2* is a good example of this pattern.

You should note the formation of a new compression period beginning following the decline of the expansion phase of the cycle. It will pay you to study these pictures and for you to ask questions about the various features you see.

Now look at *Figure 3*. At first this picture looks quite complicated and muddled. But if you begin to apply the ideas we have just been describing, you will begin to see "order."

In the next seminar, I'll go over some rules about how to use these methods in real time. These methods can be particularly useful early in the *Forex* sessions when the markets tend to exhibit the most volatility. Today I wanted to call your attention to this multiple EBB charting tool and begin to get an idea of how to use it. There are many details that are very important and when we do the next seminar on this topic I will show you what those are.

Figure 3. *EBB cycles over time.*