Staying the Course Through Rough Seas...& Knowing When to Turn Back

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The period from Spring, 2003 to late 2003 has been a particularly difficult time for investors in the commodities arena. Despite being smart by diversifying in terms of systems and markets, the majority of investors would probably say this has been one of the most difficult trading periods in memory because both short- and long-term systems have had losses in many cases. Such a period causes many to doubt their choices and to ask, "Is the system broken?" Beyond the emotional state that often elicits the question and sometimes colors its answer, there may be some objective ways to analyze the issue.

Typically and understandably a system catches our interest when it's on a streak. We want to join the winners, so we quickly sign up. Then, as if the gods of commodities have been carefully watching us in order to specifically foil our most intelligent choices, the system abruptly turns sour. We agonize about "making that mistake again," and decide to carefully watch the next few trades. Our inspection reveals imperfect trades, some losers, some winners. Ultimately we lose trust, and decide to part ways, vowing to be smarter next time. A few months later, hoping to justify our decision, we are disgusted to see that the system is making new equity highs.

I've certainly experienced this, both as an investor and as a developer. Here are a few tips that might help, if you're in the same boat.

1.) Allow time. It's difficult to be patient, both before I start trading a system and after. Once I've done my due diligence, I want to get going now. However, if I haven't watched the system operate for a while, I'm not going to have much understanding of its performance patterns, and I won't have developed much trust. Operating on faith, when the first troubles appear, I have little context from which to judge, and one of my first thoughts is that the system may be broken.

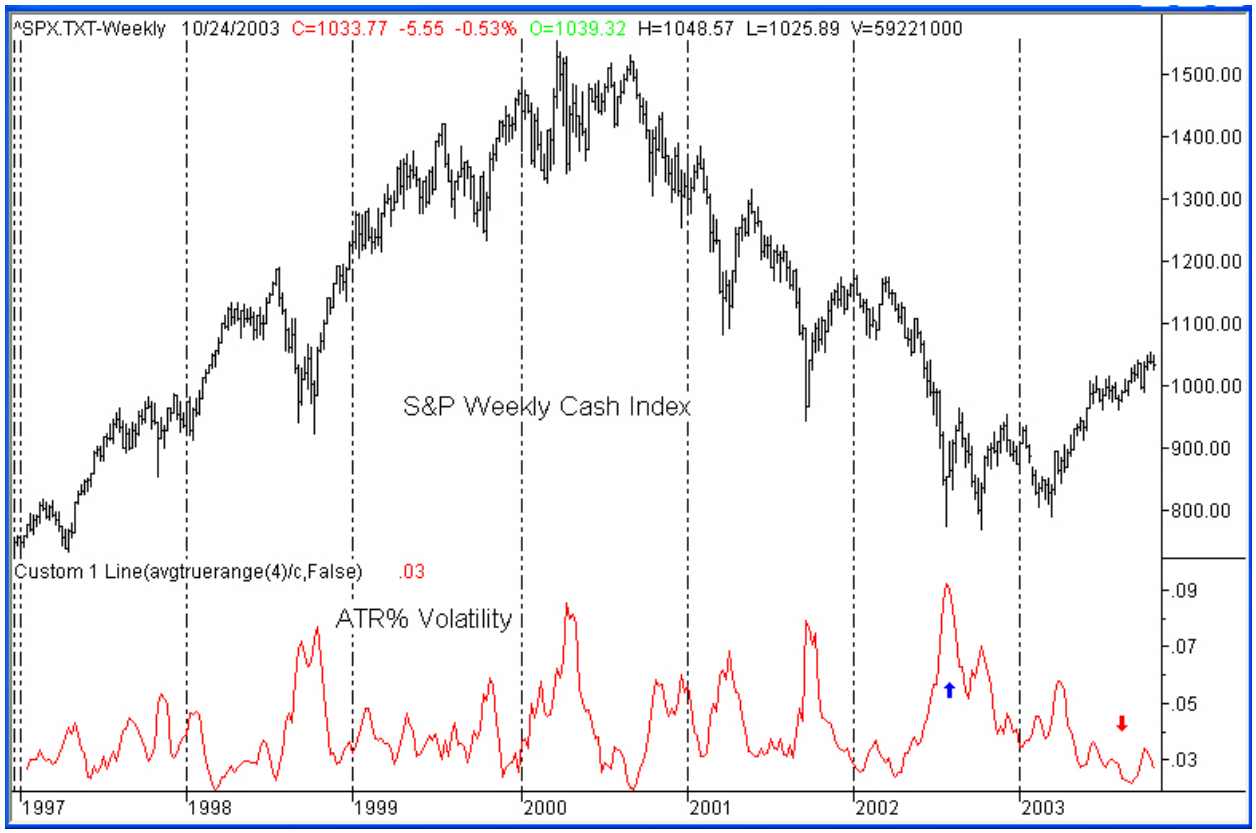
Seeing a several-year track record and the ups and downs of an equity curve is helpful, but there's nothing like a real-time experience with real money to fix one's attention and change a viewpoint. When I look at an equity curve, no matter how much I train myself, I'm looking at the profits. When I'm trading real-time, I'm much more sensitive to the drawdowns. Where it took a few minutes to look over the drawdown stats of the past, living through one warps time, cruelly slowing it down.

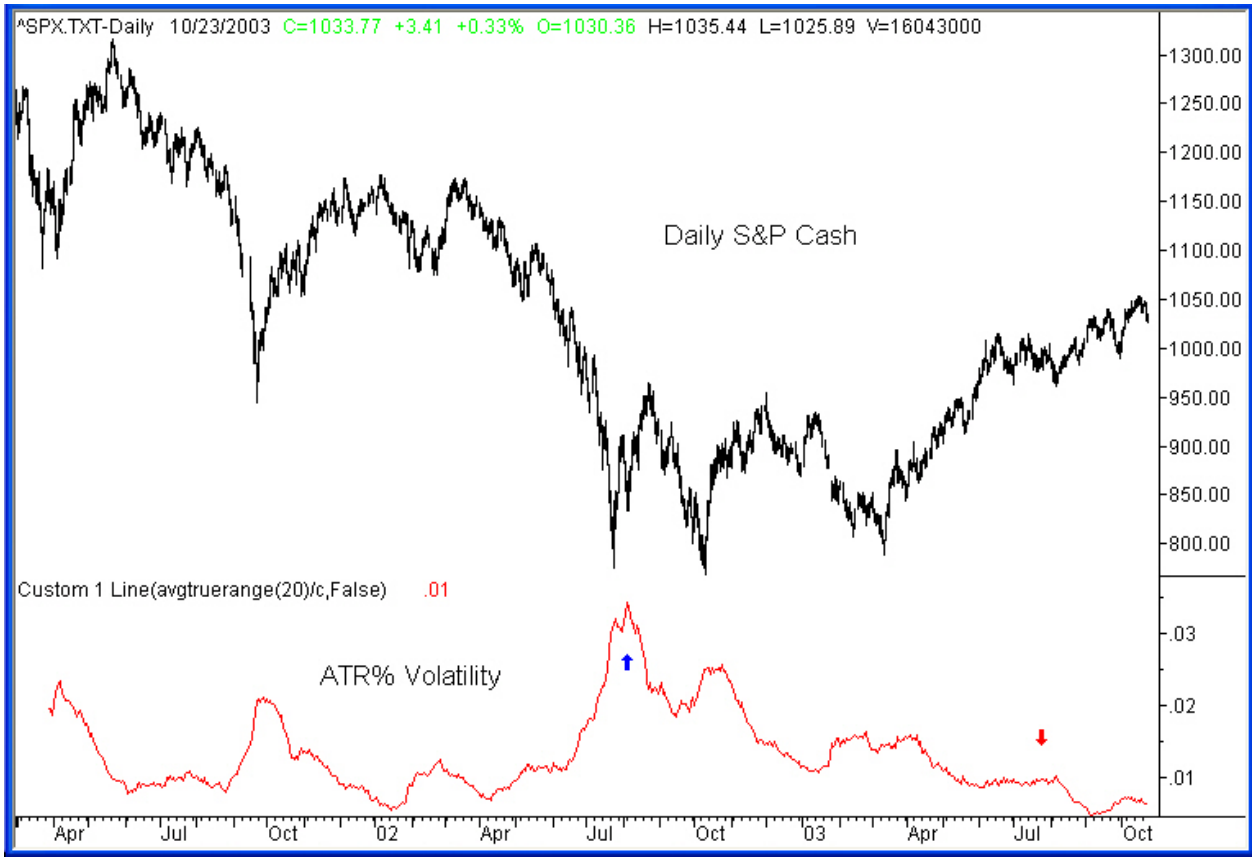
To get a perspective on a system, it's necessary to look at the context of how the system has performed in the past. Only allowing a few weeks or months is usually not enough time to make a fair judgment. The shorter the window of time, the more likely it is that I'm seeing random events. Generally, I'd say that 6-12 months of real-time observation (either actually trading the system or actively watching it) is necessary to have a perspective. Ideally, this amount of time will allow the market and the system to live through a variety of cycles.

2.) Compare peer performance. Because markets are cyclical, the results of systems that trade them also tend to be cyclical and correlated with each other. This is especially true of day trading systems, which depend so much for results on intraday volatility (see below). Therefore, it pays to look at how the peers of a particular system have been performing. If many or most of them are performing poorly, then the poor performance of the system you're trading might be explained more by market conditions than the system itself. If, however, your system is performing poorly and many/most others are doing fine over a period of months, there is cause for concern, and additional analysis is necessary to try to determine the cause.

3.) Recognize cycles. Just as the markets move in cycles, so do systems. No system operates well under all conditions. For example, most day trading systems require a certain amount of intraday volatility and directionality. Without this, there are just not the sustained moves for a system to capture. Generally a system is set to take a portion of a swing, and stops must be set to protect from a reversal. If the swing moves far enough, a profit can be made; if the swing is abbreviated, we get a loser. When a market like the S&P is stuck for several months with reduced intraday ranges, few systems can operate profitably: there's just not enough movement to exploit. Consider the chart below to see how the S&P (I've used the weekly and daily cash index values for the sake of simplidity) 4-period average true range as a percent of

the index advances through distinct cycles, and how we have been in an unusually long period of low volatility. Because daily volatility almost always equates with intraday volatility, you can see why this period has been difficult for many day-trading systems.



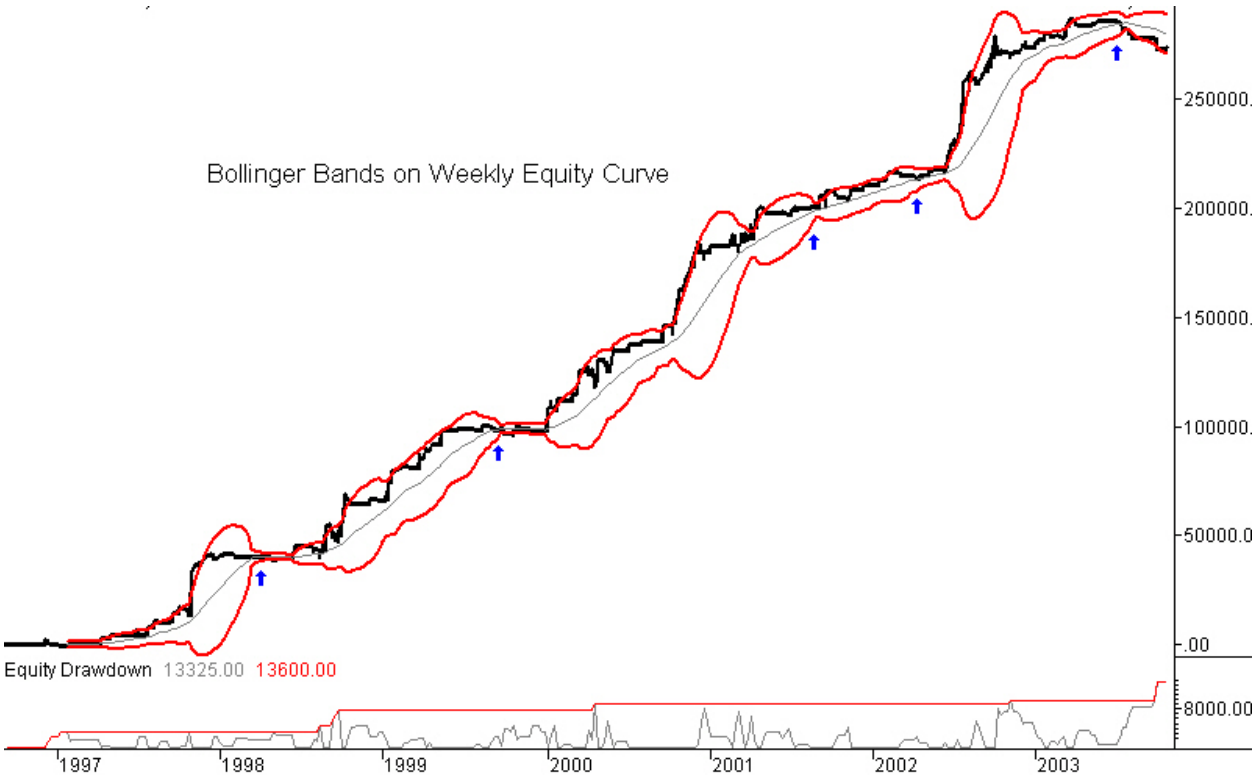


On the weekly chart, note how there is a roughly cyclical nature rhythm to the volatility and that we may have bottomed at about the same point as 1998 and 2000. The daily chart gives a finer take. Most of this year has been characterized by lower volatility, a more extended period than we've had for several years. For systems that like high volatility, which includes those from TradingVisions, this year has been difficult. I also put an arrow marking July of 2002. This high volatility period period was one of the most profitable 1-2 months for many systems in the last several years.

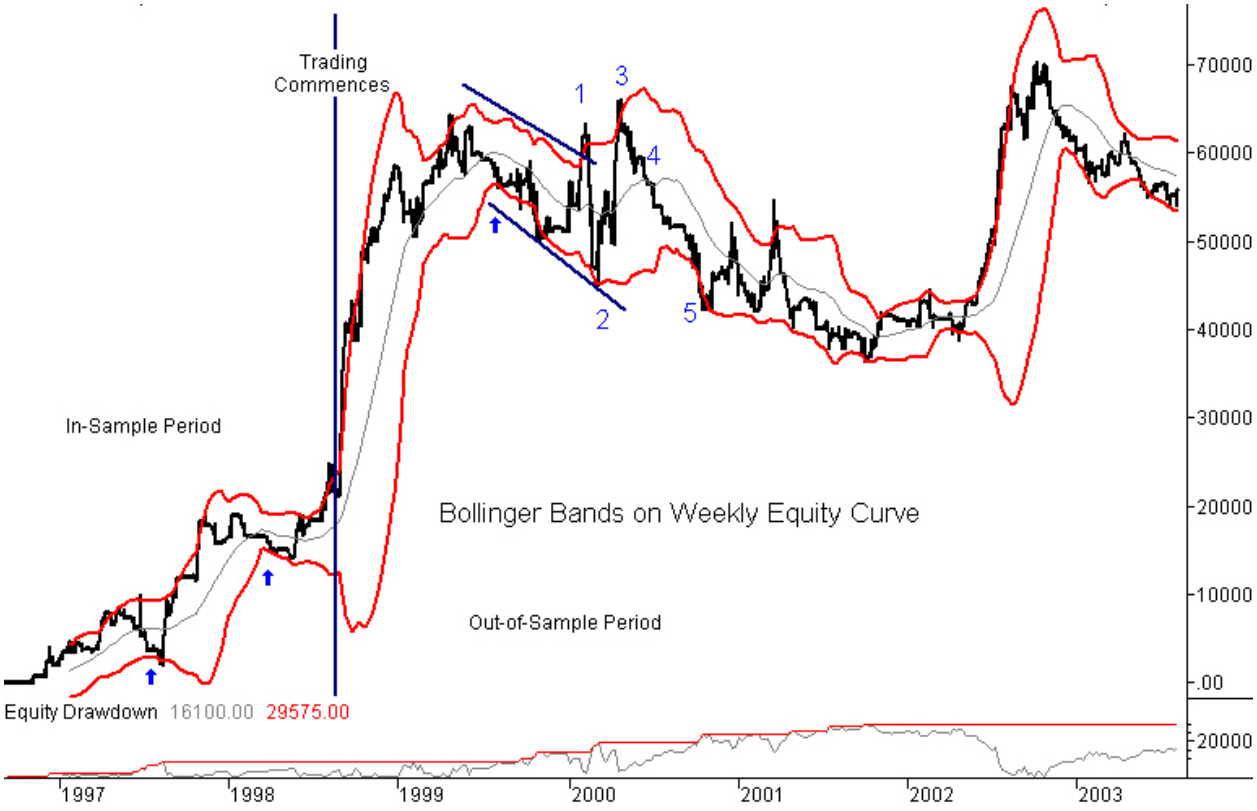
4.) Measure the patterns: Determine Health & Know When to Add. One way to concretely measure the health of an equity curve is to apply a Bollinger band to the equity curve. Because they are set at 2 standard deviations, Bollinger bands will capture about 95% of price movement. Because an equity curve is an "engineered" set of numbers--i.e. it is designed to go primarily in an upward direction--I believe the bands can't be applied and interpreted in exactly the same way as when using them with market prices. Specifically, the equity curve as it moves up should "hug" the upper band much more than a data set of market prices does, and a very healthy equity curve with little deviation will not touch either band as much as market prices will.

With a typically healthy equity curve, however, the lower Bollinger band does behave more typically, in that price will seek the lower band as support, frequently bouncing off that area to make new equity highs. If the lower Bollinger Band supports the equity curve, the system is behaving normally and healthily.

This phenomenon can in fact be used to identify higher-probability points to commence or increase trading. When the Bollinger bands contract and the equity curve approaches or pierces the lower band, it is often a rough signal of an impending upside breakout. The chart below applies 20-period standard Bollinger bands and 20-period moving average to the weekly equity curve of EarlyBird III. Notice how the equity curve comes down to touch or nearly touch the lower band and then tends to take off from there. I've found that using a rule of $4000-$5000 from the lower band provides a reasonable add-point (marked with arrows). Frequently the 20MA also provides support. (Using the upper band as an exit point does not work usually, because as can be seen, there can be extended runups of equity which continually hug or exceed the upper band.)

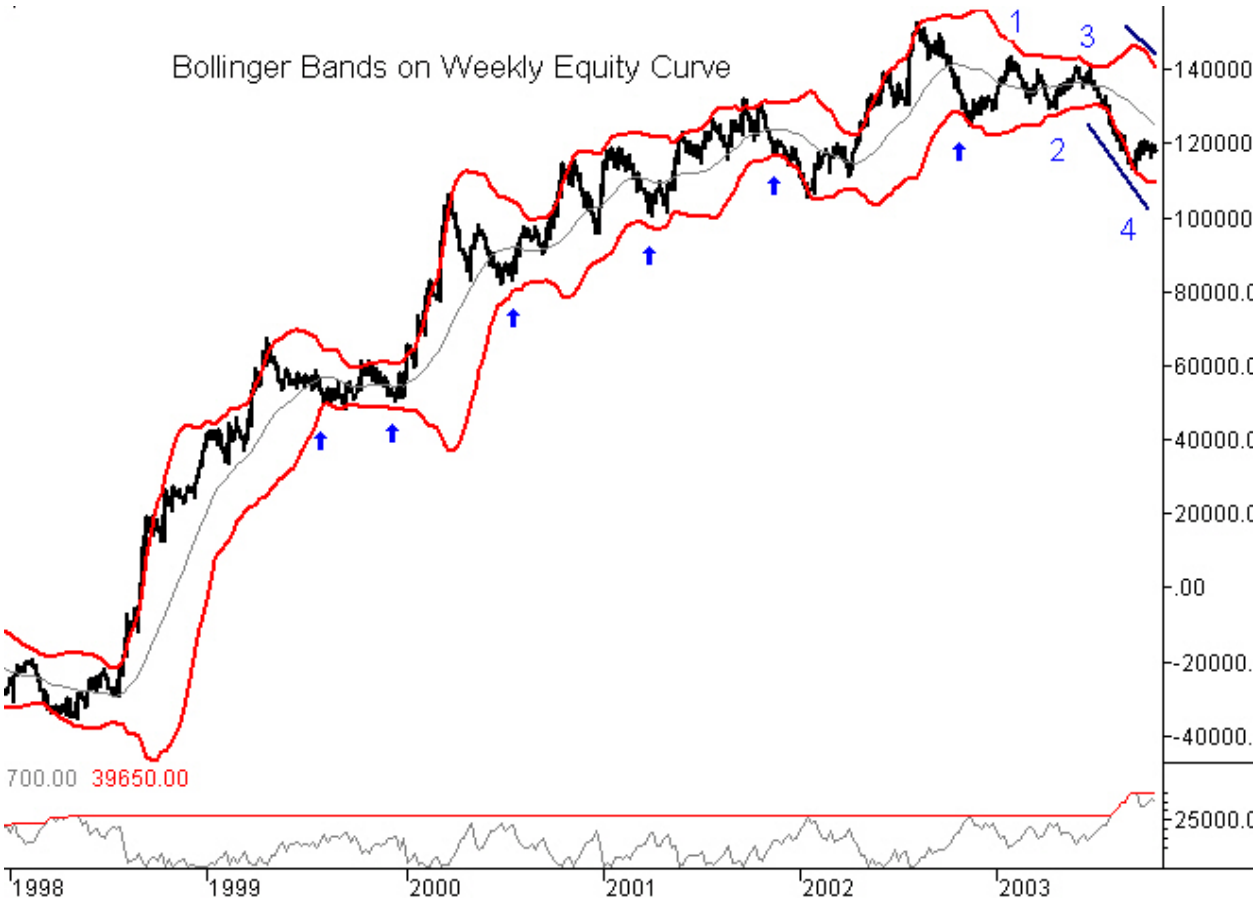


5.) Gain perspective by balancing real-time with hypothetical performance: Know When a System is Ailing. Additionally, the lower band can provide a warning: if the equity curve and the bands are heading down together over an extended period, and if the upper band becomes resistance, the system may be in trouble. If a system is overly optimized or if the market changes over an extended period, starting or adding at the pinch points of the bands is risky. One would expect that during the in-sample, study period of a system's equity curve, the lower band will provide excellent entry points. However, once a system is trading real-time, it will normally and expectedly have some deterioration in performance. Virtually no system will perform over time as well as it did during its in-sample period. Therefore, the matter becomes one of quantifying how much performance has degraded. Consider the chart below as an example of one way to help quantify system failure. The chart below applies 20-period standard Bollinger bands and 20-period moving average to the weekly equity curve of a system I co-developed and traded several years ago.



This is an example of how a system can look good in its study period (a too-brief period of 9/96-8/98), do well for a while in real-time, and then fail. The first concerns would be around September, 1999, when the slopes of the equity and both bands are heading down. By the time of point 1 in mid-February, 2000 there is more reason for concern because now the equity curve is bouncing off the upper band and retreating, rather than off the lower band, as a healthy equity curve should; it has also formed a lower price pivot than the equity high of 3/99. Point 2 now extends the drawdown to new equity lows, and both the upper band and the lower band are continuing their downward slope (due to trend, not increased volatility).Point 3 first establishes a new equity high, stirring hope that the system may recover, but once price quickly retreats below the upper band, confirming that it has become resistance, it appears that a reversal of fortune is imminent. Around early July (Point 4), when price pierces the 20MA and the upper band is again down-trending, it's a good time to stand aside. Point 5 again makes a new low and new extreme drawdown, confirming the decision. Although new equity highs occur in late 2002, the failure pattern repeats in 2003. Of course, a trader/investor hopes to be out of a system before having to wait several months to confirm a system's possible demise, and moving to a daily chart of equity with longer period Bollinger Bands can assist in this.

A final example presents a simple breakout system that is exhibiting both excellent add points and signs of failure.



This chart shows several excellent add points, marked with arrows. However, point 1 provides a warning because equity forms a lower pivot, and it bounces off the upper band. Point 2 does not confirm, since price forms a higher low pivot and bounces off the lower band. When I originally posted this chart in early August, I stated that, "Point [3] makes a lower pivot high than the prior one, but the bands are not clearly sloping down at the same time as price, so the failure is not yet confirmed. This may be a system that will pull back, but it needs to make new highs to justify continued faith." Since then, performance has worsened: price has broken previous lows, a substantially increased drawdown has occurred, and the bands are simultaneously trending down. The break of the previous pivot low was probably the point to quit the system, if one hadn't already done so basis a daily chart.

Bollinger bands can be very helpful in determining the norms of equity curve behavior. This, along with being patient and recognizing a system's--and the market's--cycles, can help keep a perspective on performance. The seas may not be smooth, but at least we can have a better sense of our bearings!