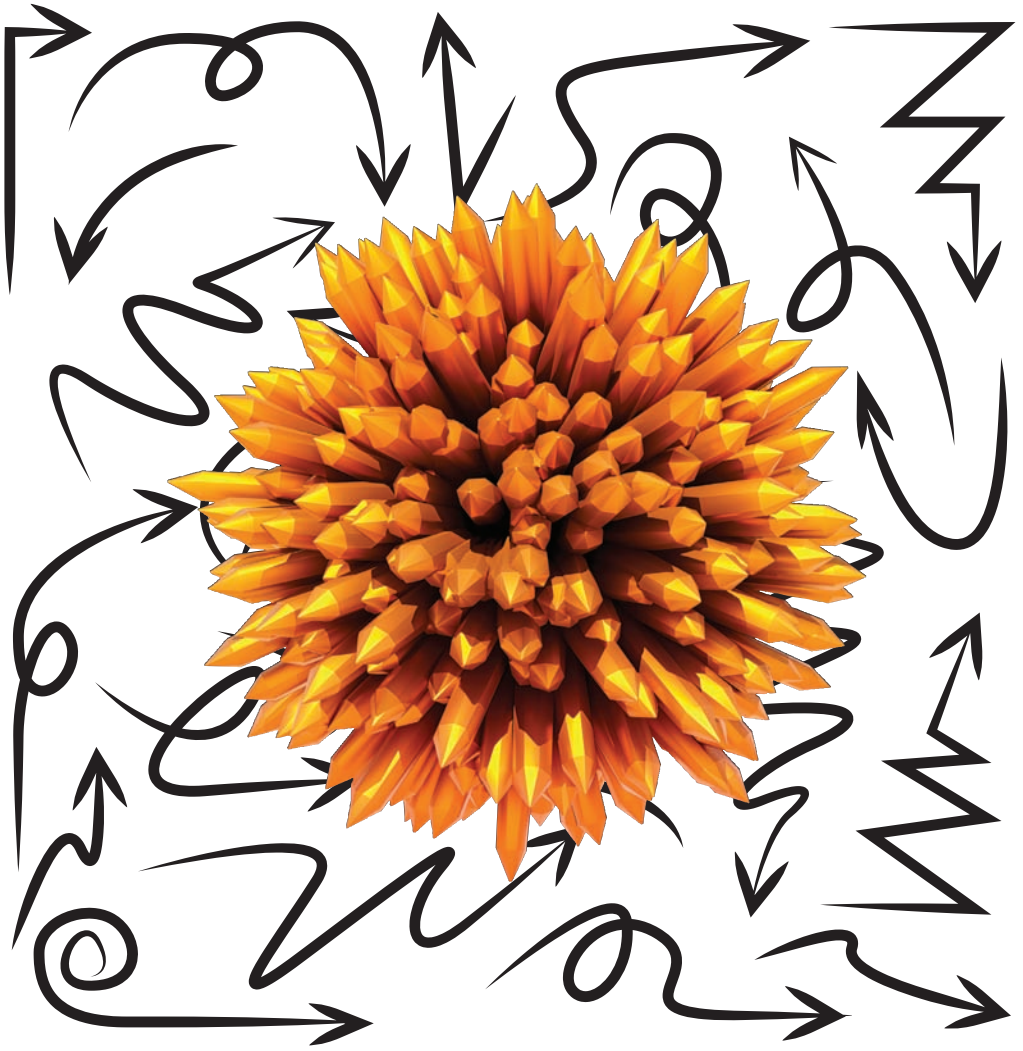

Thoroughly Modern Pivots

RSI & Livermore Pivotal Points

Knowing when to sell and take a profit on a successful trade is a difficult skill to master. Sometimes you may get out of a trade too early, other times you can't tell if prices are moving in an uptrend or downtrend, and sometimes you just don't know when to exit. Here's how you can combine a classic indicator with a classic technique and come up with a sensible exit strategy.

by Mark Jahn

There are so many choices when it comes to indicators. Which ones do you use? That's a question most technical analysts face. For example, many of the better relative strength index (RSI)–based techniques will get you out of a trade with a good profit, but sometimes this profit-taking will cost you a big win by getting you out too soon. Jesse Livermore's classic *pivotal point* technique is one I like to use for identifying the precise moment to buy or sell, but it can be difficult to determine whether the market is in an uptrend or downtrend. Worse, sometimes the stock will turn without ever giving you a clear exit signal. But if you combine the smoothed RSI with a simplified version of Livermore's pivotal points, it will often tell you almost exactly the right time to sell an asset and take a profit.

ONE STEP AT A TIME

I will first go over Livermore's techniques and some of the common issues that arise in practice when attempting to apply them. I will then show how these issues are resolved by using the smoothed RSI with simplified pivot points to decide when to sell. I'll use the smoothed RSI *strategically* to determine when an asset is in an uptrend and simplified pivotal points *tactically* to attempt to determine the exact right time to sell given that the asset is in an uptrend. The natural approach is to consider the smoothed RSI first, then consider simplified pivotal points, and finally, combine the two techniques.

LIVERMORE'S MARKET KEY

Jesse Livermore was one of the greatest traders of all time. The method I present here is only a relatively easy-to-interpret

ARROWS: ARTHIMEDES/GOLD PENCILS: ARSGERA/SHUTTERSTOCK/COLLAGE: NIKKI MORR

adaptation using modern tools and techniques. This is in keeping with Livermore, who emphasized that traders should follow their own guides. These are guides that I developed based on Livermore's methods, and I hope that you will be able to use them to develop or improve your own interpretation of Livermore.

Easily, the most frustrating aspect of Livermore's *How To Trade In Stocks* is trying to determine if you are in an upward or downward trend. If you were to literally apply Livermore's market key, you would have to go back and consider the entire price history of the asset, working out each and every pivotal point to determine when the trend switched so you can figure out the current trend. There are many times when it is obvious to anyone that the market is going up or down, and Livermore stresses in the main text that the whole point of the system is to determine when the trend changes. I believe Livermore looked at prices that were in an *obvious* trend and then used his methods to determine the exact time that the trend changed.

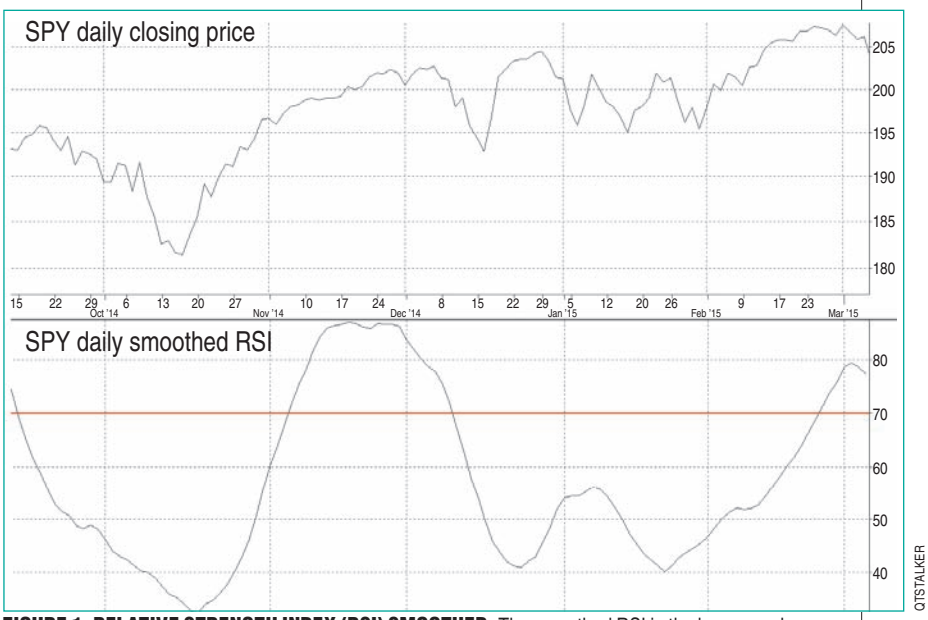

FIGURE 1: RELATIVE STRENGTH INDEX (RSI) SMOOTHED. The smoothed RSI in the lower graph moves up and down with the price of SPY in the upper graph. Trends are easier to see because the smoothed RSI operates on a constant scale.

Today, we can all easily compute the RSI, which takes into account the entire price history of the asset, and frequently we can use it to label "obvious" price movements. I use the term "obvious" here because what is obvious in retrospect is seldom obvious at the time that it occurs without using an objective, numerical signal.

Livermore's description of when a pivotal point occurs is also somewhat vague and subject to interpretation. Some of this is by design. Livermore clearly talks about several different types of pivotal points. The pivotal points given in the Livermore market key are defined somewhat more precisely, but there is still room for interpretation. I have found that William O'Neil's analysis of double-bottom price patterns is applicable to Livermore's pivotal points. Pivotal points should cut through, just as the second bottom should undercut the first in a double-bottom pattern. According to the Livermore market key, you may find a pivotal point even when the price only comes close to undercutting (or overcutting in the case of selling). While this sometimes occurs, it appears to be less reliable, and the simplified pivotal points that I use in this article require a full cut.

SIMPLIFIED TECHNIQUE

I will use the smoothed RSI as an indicator that the asset is in an uptrend and you should begin looking for a pivotal point. The smoothed RSI is easily obtained by taking a simple moving average of the RSI technical indicator. I generally use a 10-day simple moving average of the standard 14-day RSI, but different values may work better for others. An example of RSI with 10-day smoothing and the corresponding stock chart can be seen in Figure 1. Notice how the smoothed RSI is much less jumpy than the standard RSI you see in Figure 2. If you look at it over a period of time, the smoothed RSI indicator usually tells you when the price of the asset is in an uptrend or downtrend. Like RSI, the smoothed RSI over 70

FIGURE 2: THE STANDARD FLAVOR. The RSI shown in the lower graph is far more volatile than the smoothed RSI shown in Figure 1. Although RSI is also on a constant scale, its higher volatility makes it less suitable for determining trends.

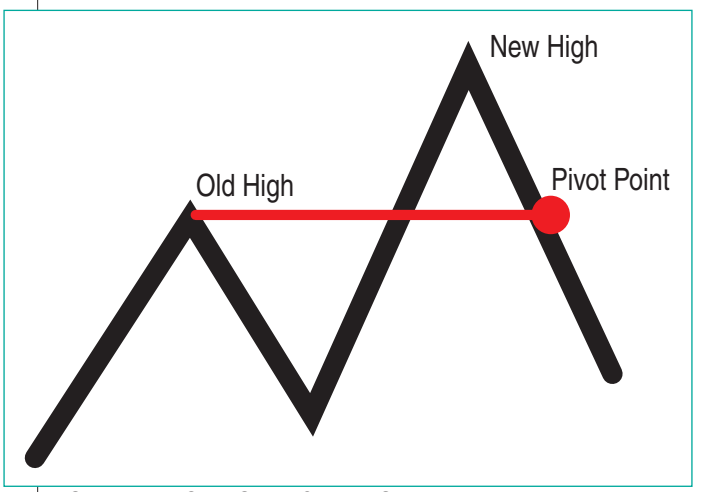

FIGURE 3: THEORETICALLY SPEAKING. When an old high is replaced by a new high, draw a horizontal line from the old high forward in time along the x-axis. When the price of the asset falls below the horizontal line, a cut is made and a pivotal point is created.

is considered high. However, it is usually not the best time to exit a trade.

Livermore's pivotal points often signal the right time to exit a trade if you know where to look for them. A simplified pivotal point occurs when the price of an asset reaches a new high and then falls below the old high. Figure 3 shows how this should work in theory, while Figure 4 shows an example of a trade I made with iShares 20+ Year Treasury Bonds (TLT) in 2015. Also note that a simplified pivotal point does not occur if additional highs are made in the interim. Another important point to remember is that this is a signal to get out

Combining the smoothed RSI with a simplified version of Livermore's pivotal points will often tell you almost exactly the right time to sell an asset and take a profit.

rather than to go short. You can see in Figure 4 that TLT hit several simplified pivotal points before falling. The first simplified pivotal point is only a signal that the uptrend has come to an end. Major movements in the market generally take time to fully play out. Knowing the end of a trend is valuable information for option traders and others with limited time horizons. Moving averages and other simple technical indicators only signal a downtrend after it has begun and time decay has taken its toll.

Putting it all together, you can say that there has been an uptrend whenever the smoothed RSI is over 70 and that the uptrend ends when a simplified pivotal point occurs. You should not start looking for a simplified pivotal point until the smoothed RSI has increased substantially. Livermore only considered *lively, active stocks*. Attempting to use these pivotal points in a flat market will only lead to a bad case of whipsaw.

Returning to Figure 4, you see that there are several pivotal points before the actual reversal. There is generally plenty of time to exit the trade after the first simplified pivotal point. However, it is possible that a reversal will occur without any pivotal points.

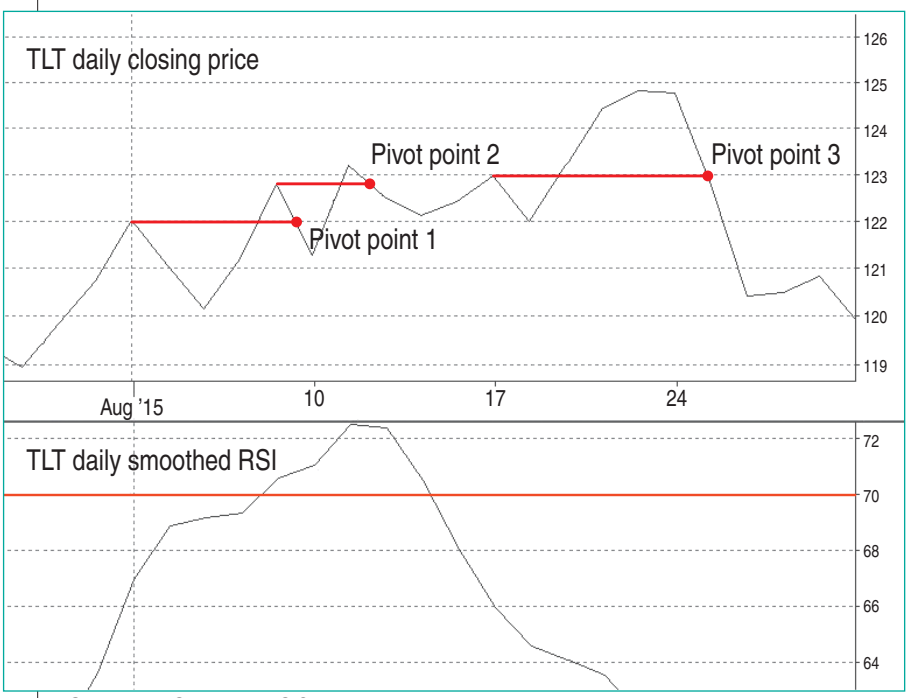

FIGURE 4: KNOW WHEN TO SELL. Pivotal point 1 was the first pivot point made after the smoothed RSI went above 70 and indicated the correct time to sell. Two subsequent pivot points were made as the price of TLT peaked.

You could use a downward turn in the smoothed RSI as a type of failsafe signal to get out if a simplified pivotal point does not occur earlier. This will allow you to take some profits, but the best time to get out will have slipped away. A good example of a situation where the market turned without giving a simplified pivotal point can be seen in Figure 5 where you see another TLT trade I made in early 2016. You can see that this exit was slightly after rather than slightly before the optimal time to sell.

There are some other limitations to the usefulness of these techniques. As all traders familiar with RSI know, there is no guarantee that RSI will go over 70. Naturally, there is also no guarantee that the smoothed RSI will go over 70 and you must use another strategy for deciding when to abandon a trade as unprofitable.

The technique I have presented in this article is also applicable to individual stocks and commodities. I've mostly been taking profits in TLT of late, as bonds have been much kinder to bulls in recent years. It should also be noted that in theory the procedure can be reversed and used by bears as a signal to buy back assets that they have sold short or sell back puts that they have purchased. In actual practice, I have not had success with the procedure as a bear. This is probably because bear markets are more volatile and there is not enough time for a proper signal, at least not at the daily level. Daytraders and others willing to watch stock and commodity prices minute by minute may have better luck reversing these methods in bear markets.

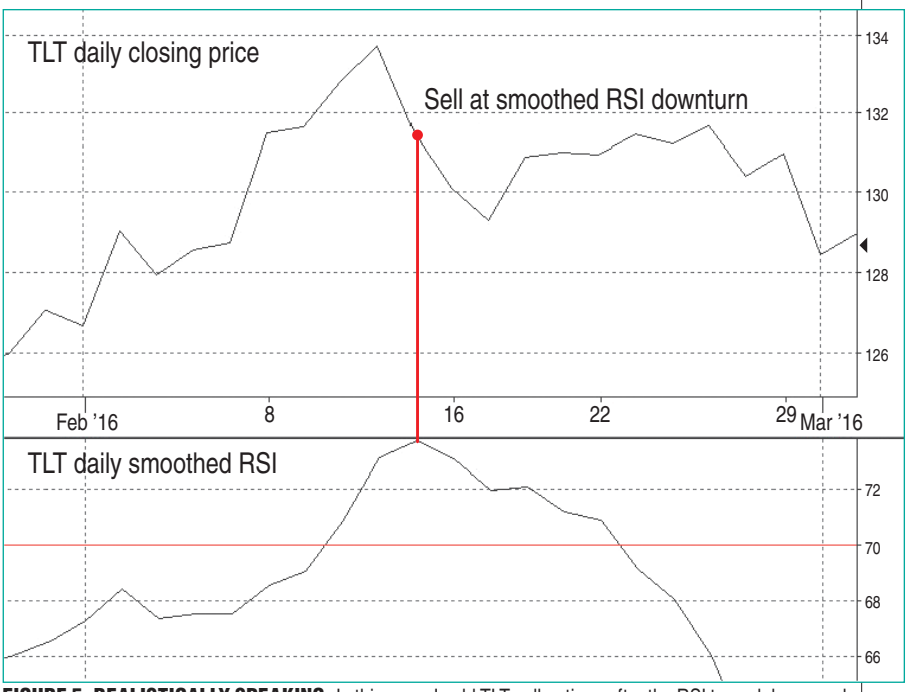

FIGURE 5: REALISTICALLY SPEAKING. In this case, I sold TLT call options after the RSI turned downward because no pivotal points occurred earlier. The sell point shown here is where you should theoretically sell. The price of TLT when I sold the options was closer to $130 because of time delays.

WHEN TO SELL

It is often a good time to sell when the smoothed RSI goes over 70 and a simplified pivotal point occurs. The smoothed RSI is just the 10-day simple moving average of the RSI, while simplified pivotal points occur when the price of an asset reaches a new high and then falls below the old high, as shown in Figure 3. There is certainly room for expanding this modern simplified treatment of Jesse Livermore's methods. In particular, it may be profitable to develop a system where the uptrend is determined by a significant increase in the smoothed RSI. An increase in the smoothed RSI by 20 points or more might be a better indicator of an uptrend than the smoothed RSI going over 70. Remember, the best systems are the ones that you redesign for yourself to suit your own purposes and no system should ever be taken literally to the exclusion of common sense.

Mark Jahn is a freelance writer with an MA in economics from Michigan State University and a BA in economics from Western Michigan University. He worked in accounting and business law for several years before taking up writing. He can be contacted through his website at www.markjahn.net.

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†See Traders' Glossary for definition
‡See Editorial Resource Index