

Day-traders'

Doom:

Whipsaws and how to avoid them



WHIPSAWS OFTEN OCCUR when traders don't trade the proper bar length. Many err by trading too short-term. Selecting the proper compression is further complicated when multiple time frames are watched, a recommended practice.

Proper bar length For day-trading, two bar lengths should be used — a smaller one for timing and a larger one for monitoring, once the trade is profitable. This allows you to stay on a shorter time frame until a confirmation on a longer-term chart makes it safe to accept more risk. For intraday trading, monitor a fifth to an eighth of a day bar on the larger scale, and use one-third that length for timing. Cut this down by a factor of three again for day-trading. Thus, $\frac{1}{4}$ of a day bar length should be used for monitoring and $\frac{1}{2}$ of a day bar length for timing.

"Pick your tick" (right) shows the September 1999 S&P 500 contract with a tick bar that encompasses the whole day. Calculate the average number of ticks per day, then divide by 24 or 72, accordingly. For 24 bars a day, we'll have about 162 ticks per bar, and one-third requires 54. The closest Fibonacci numbers are 144 and 55, so we will use those.

Three spot checks ensure these lengths are suitable. First, the shorter length must be more than five ticks. Otherwise, market illiquidity becomes a factor. Second, the shortest period bar should be three minutes or longer. Keeping to no more than about 72 bars per day works, then, for markets trading three hours, 45 minutes or more. Third, ensure the bars are of sufficient range to absorb typical slippage and commissions.

To account for slippage and commissions, first calculate the average absolute tick difference over 100 bars. (The absolute tick difference is the price change between each consecutive

A whipsaw is a trade entered too late or exited too soon. But while the ruin of many traders, whipsaws can be reduced. There are four basic methodologies you can use: 1) trade the proper bar length, 2) trade conservative entries, 3) use properly sized stops and 4) exit on turn signals.

tick.) Multiply this average by five — assuming two ticks each way and a tick for commissions — to get the lower range value, 0.80, in "Range required" (page 18). Then multiply the average tick difference by the average ticks per minute — on July 19, 1999, this was 10 — to get the higher range value, 1.60, in "Range required." On this day, our 55-tick bar has a range of about 1.70 points per bar, so it passes this test.

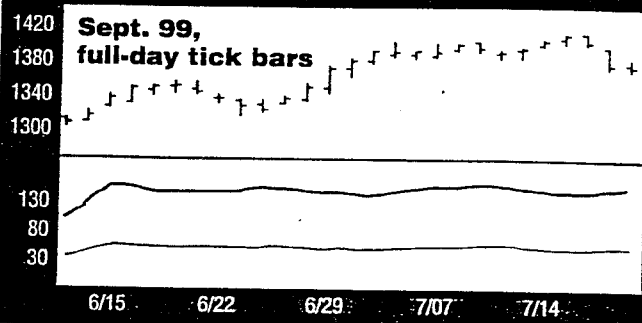
The values 55 and 144 meet all our requirements, so we will use those to continue this illustration.

Conservative entries No entry is a sure thing, but some techniques are more reliable than others.

Begin with sensitive indicators that do not lag (such as stochastic %K and %D crosses). To make such strategies more conservative, confine trading to consecutive signals in a given direction. That is, once the signal is generated, if a >

Pick your tick

You can estimate how many ticks to chart per intraday bar by examining the number of ticks in recent days.

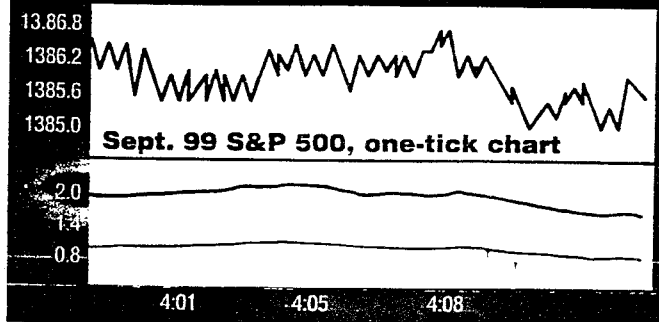


B Y C Y N T H I A A . K A S E



Range required

If our smallest bar covers a greater range than our two guidelines, it should be large enough to absorb transaction costs.



modest pullback holds the previous low (in the case of a buy) and the next signal is in the same direction, take it. If the previous low is broken after the first signal, the watch starts anew.

Filtering trades in a higher time frame also makes an entry more conservative (see "Simplified Momentum Filters Improve Trading," *Futures*, December 1993). If the higher time frame agrees, only one rising (for a buy) bar is required. If not, three rising bars are necessary.

"Tick for tat" (below) shows a 55-tick bar and a proprietary entry system. It shows downward activity early in the day with three declining bars with a "3" below. This indicates the longer time frame did not agree, and that three declining bars were required for a bona fide signal. The bar labeled "1" agrees with the higher time frame; thus, only one declining bar is required. At 10:28 a.m., following a renewed sell signal, this proper second signal triggers at an S&P 500 level of 1423.00. This is confirmed two minutes later on "Double check" (page 20), the 144-tick monitor chart.

It's also important to consider the position you would be in if trading were taking place on the higher time frame. For example, if you would be long based on the higher time frame chart, wait to receive an exit signal on that theoretical position before going short on the shorter-term chart.

Patterns developing in the higher time frame also are helpful. On July 18, the day before our example, bearish candlestick patterns were forming. Here, we could have taken the second sell signal, regardless of a pull back, shown as the "1" bar in "Tick for tat." If taken, we would have sold at about 1424.80 rather than 1423.

Properly sized stops Most new traders are taught to set stops based on what they can afford. While this is preferable to not setting stops at all, the market does not care a hoot about your pocket book.

The key to good trading is to let your profits run and to cut losses. One difficulty with trading too short a bar length is that a market becomes choppy as bar length gets closer to the tick level. Once we have the proper bar length, we solve the problem of erratic behavior and are left to determine the proper magnitude for our stops.

Range is risk. Thus, stops must be set proportionally. The true range is one measure that helps determine proper stop placement. The true range is the largest absolute difference

between: A) Today's high and today's low, B) Today's high and yesterday's close or C) Today's low and yesterday's close.

The development of the true range (and trading systems based on it) led us to the use of range-scaled stops. We then found it preferable not only to consider the average range, but the distribution of range and the skew of that distribution. This is how the Kase DevStops were developed (see "Putting The Odds On Your Side," *Futures*, April 1996).

Kase DevStops also examine range distribution and analyze the probability of being stopped out at certain standard deviation points. As shown in "Double check," we use four sets of stops. The dashed line, called the warning line, is the ATR — the 50% probability point. The other three stops are those reflecting one, two and three standard deviations from the mean, corrected for skew.

Points on a distribution curve can be tied to probability. We can know approximately — not exactly, because distribution curves are skewed chaotically and skew is variable — the probability of being stopped out at a particular level. At one standard deviation from the mean, a stop kicks us out on noise about 15% of the time, at two standard deviations, only 2.5% of the time, and at three, less than 1% of the time.

As an example, see "Double check." For the entire move to the down side on July 19, DevStop3 was never hit. DevStop2 was hit only on the high of the last bar of the day.

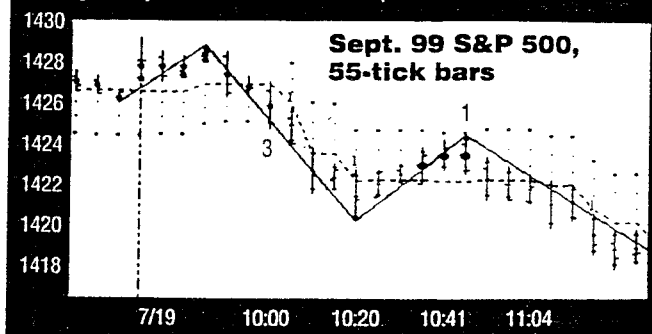
Exit using turn signals The use of stops for exits creates "hard landings." Stops are a safety net for catching missed market turns. The net catches the exit as marked-to-market losses mount. (Losses should always be calculated against the most profitable point.) It's always preferable to exit before these losses grow to any degree. Thus, seek to exit on signals and to make a "soft landing."

To make "soft landings" we need to anticipate that an exit may be warranted. We do this by using momentum indicators.

One type of signal that momentum indicators generate are of the overbought and oversold variety. These occur when market velocity hits an extreme unlikely to be sustained. Traditional momentum indicators include stochastic, moving average convergence-divergence and the relative strength index. We use the proprietary Peak Oscillator and KaseCD (see "Multi-Dimensional Time Trading," *Futures*, May 1996). ➤

Tick for tat

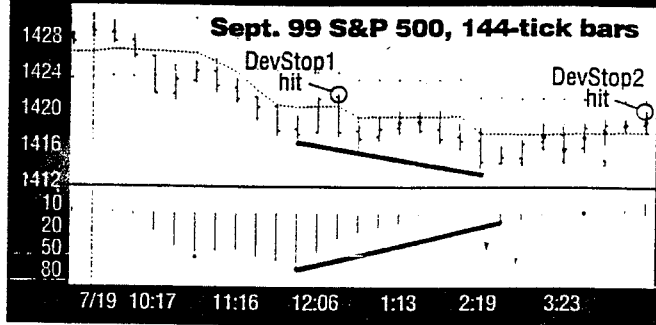
If the longer time frame agrees with our shorter-term signal, we require less rigid entry criteria on the lower compression chart.





Double check

Monitoring the larger time frame also is important to see what a theoretical position would be on that level.



The KaseCD, shown in "Double check," looks like the MACD. Unlike the MACD, the Kase CD employs serial dependency statistics as opposed to moving averages. So, it is much more accurate in its identification of divergence and smoother and less choppy in its formation and crossovers than traditional indicators.

Bearish momentum divergence occurs when a market makes a higher high and upwardly biased divergence indicators do not, or visa versa for bullish signals. In our example, the market hits a new low, while divergence indicators do not.

So, at 2:42 p.m., at 1416.2, a KaseCD bullish divergence completed, generating an exit signal. Had we waited for stops, we would have done much worse. Conversely, had we decided to exit at DevStop1 or the warning line, we would have liquidated our trade too soon. Keeping our stops at DevStop3, provided no turn seemed imminent, and exiting on divergence was clearly the best strategy. In addition, a later buy signal would have been missed if we hadn't previously exited.

Beyond the keys discussed here, becoming familiar with your market's intangibles is a vital finishing touch. S&P 500 traders know it is treacherous to trade when Greenspan is on CSpan, and that special care is needed upon contract rollover. Natural gas traders are always cautious in front of storage reports and are wise to avoid soon-to-expire contracts.

Certified Market Technician and Commodity Trading Advisor Cynthia Kase is winner of the MTA Best of the Best award in momentum, author of Trading With The Odds, and developer of the statistical software StatWare. Reach her via www.kaseco.com.