Weekly high/low moving average

by Peter Aan

General description: Trend following; always in the market; a seldom-used variation of the popular moving average.

Originator: Unknown.

Rules and formulas: Moving averages are used to smooth prices and are widely used in various ways in technical analysis. To compute a simple moving average of five prices, for instance, add the five prices together and divide by five.

Most moving averages of price are based on the closing price (see "Simple moving average crossover," *Stocks & Commodities*, June 1989), but the weekly variation computes moving averages of the weekly highs and lows, based on the most recently completed calendar week.

This is a very simple system; you only have to compute the average high and low once a week (Figure 1) and if, for instance, your current position is short, you will be concerned only with the high average.

Both the high and low averages are plotted on a weekly bar chart (Figure 2). When weekly prices cross or "break" through either of the moving average levels, it is a signal to buy or sell (Figure 3). The rules of the system are straightforward:

- If short, reverse your position on an intraday buy stop placed at the *n*-week average of the highs of the most recent *n* calendar weeks.
- If long, reverse your position on an intraday sell stop placed at the *n*-week average of the lows of the most recent *n* calendar weeks.

For example, if the bond market has a 3-week average weekly high of 98-07 and a 3-week average low of 95-18, you would go long if the market trades above 98-07. Place your sell and reverse stop at 95-18. On Friday, recalculate the new moving average high and low and place your new stop and reverse at these levels for the next week.

Comments: Don't let the simplicity of this system fool you. It shares many of the advantages that other intraday trailing stop systems offer. Its greatest advantage is that it will be able to profit from every substantial, well-defined trend that occurs in the market.

This cannot be said of many systems that use pattern recognition, overbought/oversold indicators, cycles, wave analysis, and other techniques because all conditions might not be present before a major move starts. Also, because intraday stops are used, you cannot miss a dramatic intraday move while waiting for the close to obtain your signal or waiting for the next day's open for execution.

Because of the way they are computed, the buy and sell stops for a given week are a distance from each other that is approximately equal to the average weekly volatility for the period considered. This strikes a nice balance between many moving average systems, which can sometimes be whipsawed by rather small price movements to trigger signals and, therefore, usually require large dollar risks per trade.

Testing: I tested the weekly high/low moving average system over five-and-a-half years of data ending in June 1989, using Omega Research's System Writer Plus software (Figure 4) . I included $100 per trade for slippage and commissions and tested moving averages ranging from two to 20 weeks.

Peter Aan holds a master's degree from North Texas State University. He has been involved in the commodity markets for more than a decade, spending much of that time in analysis and research. He operates PWA Futures and is a registered broker with Dillon Gage, a Dallas-based brokerage.

References

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Payne, J.S. [1989], A better way to smooth data, *Technical Analysis of Stocks & Commodities*, October, p. 23.

Schmidt, Heidi [1988], Moving averages made simple, In "Technical Analysis of Stocks & Commodities, Volume 6: Market Timing," p. 90.

High/low moving average, 3-week

	High	Low	Avg. high	Avg. low
Week 1	7,800	7,710		
Week 2	7,790	7,655		
Week 3	7,630	7,568	7,740	7,644
Week 4	7,595	7,460	7,672	7,561

FIGURE 1: *To compute the average high, sum the highs for weeks 1 through 3 and divide by 3. Follow the same formula to compute the average low. The average high is the level at which you place a buy stop for the next week, and the average low is me level of your sell and reverse stop.*

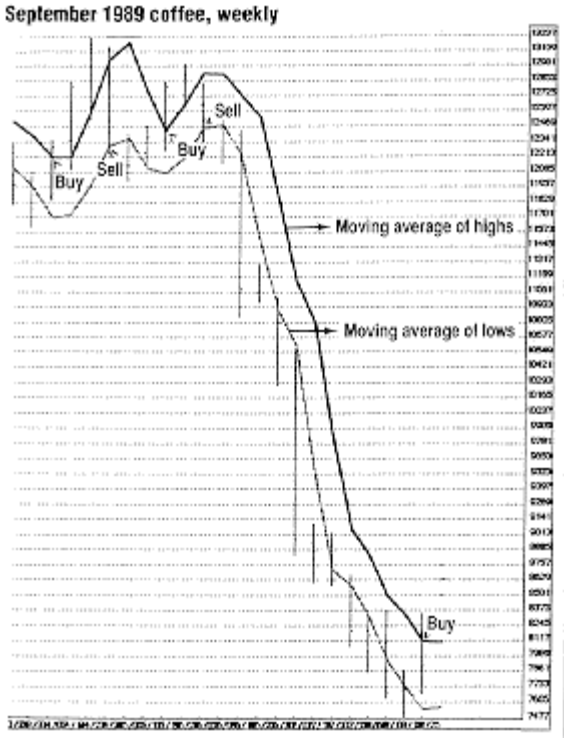

FIGURE 2:

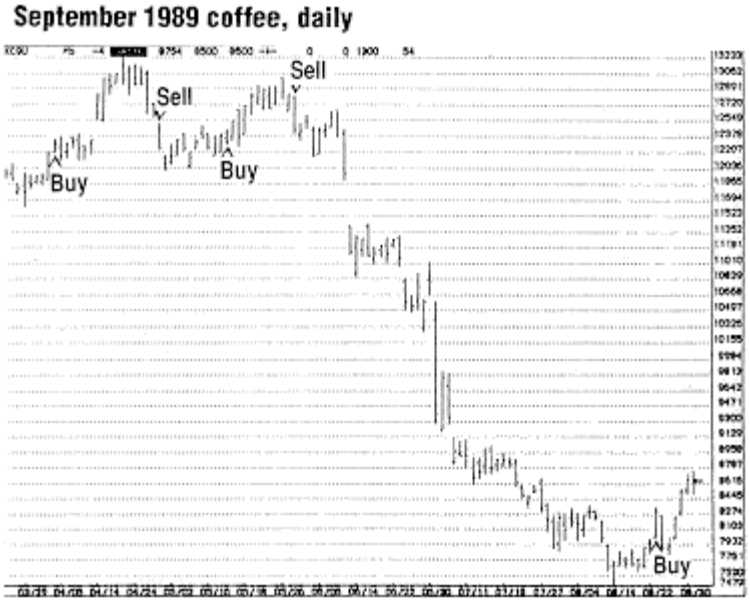

FIGURE 3:

Commodity	# Weeks	Total Profit	# Trades	% Wins	Average Win	Largest Win	Largest Loss	Maximum Drawdown	Closed Drawdown
Soybeans (7/83-5/88)	2	16,162	98	36	1,692	14,487	-1,812	-14,337	-14,118
Live cattle (6/83-6/88)	10	7,384	37	32	2,096	6,348	-1,428	-7,160	-6,800
Coffee (7/83-5/88)	2	71,828	91	34	5,027	35,052	-7,108	-15,083	-15,083
Sugar (5/83-5/88)	6	13,987	40	45	1,503	4,850	-1,455	-3,834	-3,733
Cotton (5/83-5/88)	20	21,975	22	36	4,674	22,155	-2,250	-6,870	-6,775
Silver (6/83-5/88)	3	-9,499	79	29	2,306	10,080	-3,028	-23,469	-23,469
Gold (4/83-6/88)	5	4,992	54	27	2,410	6,242	-1,886	-11,212	-10,780
Crude oil (2/84-5/88)	12	38,430	21	47	5,248	15,420	-1,880	-6,270	-6,270
Swiss Franc (6/83-6/88)	3	47,012	56	44	3,622	11,087	-3,737	-8,737	-8,737
J. Yen (6/83-6/88)	4	61,837	45	51	3,810	9,775	-2,062	-3,175	-2,575
T-bonds (6/83-6/88)	6	44,581	42	40	4,936	13,556	-3,850	-7,300	-6,893
S&P 500 (6/83-6/88)^	18	36,350	26	30	12,406	27,650	-6,975	-24,800	-23,475

FIGURE 4: *Coffee netted the greatest profits with a 2-week moving average, although yen had the greatest percentage of winning trades using a 4-week average.*