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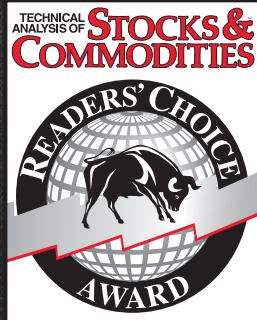
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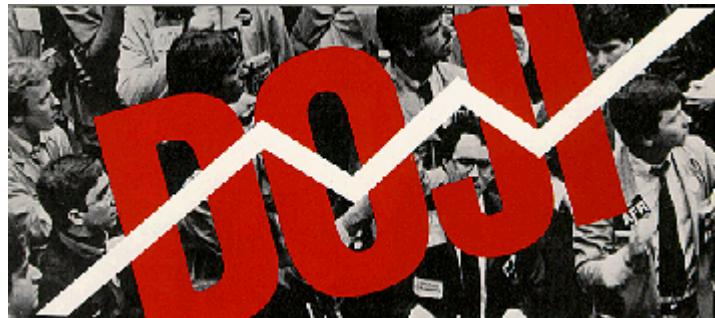
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Opening Range Breakout

Part 3

by *Toby Crabel*



In the opening range breakout technique, the heralds of an upcoming trend day are often inside days, narrow range days and hook days (see *Stocks & Commodities*, September and October 1988). I also have run across a new concept that categorizes price action and generally produces trending activity the next day.

I call it Doji Lines. Doji is a Japanese word describing a comparison between the open and the close of the daily session. It is described in a book, *The Japanese Chart of Charts* by Seiki Shimizu.

A Doji Line is a day that shows a very small difference between the open and closing prices (Figure 1). "Very small" is a relative term but, through observation, I have attached quantities to this open-to-close difference to meet the need for definition.

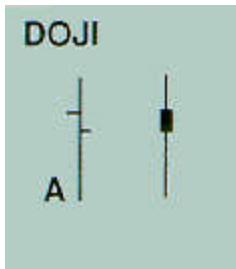
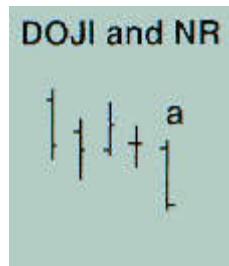
In Figure 1, the left-hand bar is what a Doji Line looks like on a vertical bar chart; the right-hand bar is how it is displayed by Shimizu. In this case, the close was less than the open, so the open-to-close range is displayed in black. If the close had been above the open, the box would have been clear.

Figure 2 displays the Doji with a hypothetically defined narrow range day at point "a." We'll define narrow range day in a moment, but for now suffice it to say that the action following point "a" represents a trend day.

Market tests

The Doji Line is said to indicate market indecision. It is said that these lines precede market turning points. A trader should look closely at the movements that follow the Doji Line and be ready to enter the market aggressively once subsequent price action gives a clear indication of the market's direction.

Logically, the opening range breakout technique discussed in the September issue of *S&C* would seem a valid means of determining the direction of price action after a Doji. A Doji also is similar to a neutral or non-trend day in the Market Logic principles. In fact, Peter Steidlmayer, formulator of the Market Logic school of thought, suggests after a non-trend day to go with initiating activity much like the suggestion for strategies after a Doji Line. I suggest taking opening range breakout trades after various congestion

**FIGURE 1****FIGURE 2****Bonds 1978-1986**

| | # Trades | % Profit | Avg. Win | Avg. Loss | Win/Loss Ratio | Gross Profits |
|--|----------|----------|----------|-----------|----------------|---------------|
| 8 TICK DOJI; Open Minus 16 Ticks; Sell | 203 | 71% | \$343 | \$289 | 1.18:1 | \$32,985 |
| 7 TICK DOJI; Open Minus 13 Ticks; Sell | 220 | 65 | 366 | 277 | 1.37:1 | 31,836 |
| 5 TICK DOJI; Open minus 8 Ticks; Sell | 240 | 62 | 362 | 243 | 1.48:1 | 31,253 |
| 5 TICK DOJI; R1 Less Than 20; Open Minus 8; Sell | 154 | 64 | 285 | 203 | 1.40:1 | 16,534 |
| 8 TICK DOJI; Open Plus 16 Ticks; Buy | 195 | 66 | 328 | 356 | 0.92:1 | 18,911 |
| 5 TICK DOJI; Open Plus 8 Ticks; Buy | 240 | 60 | 311 | 289 | 1.07:1 | 16,464 |
| 7 TICK DOJI; Open Plus 13 Tics; Buy | 230 | 54 | 364 | 345 | 1.02:1 | 7,346 |

FIGURE 3**Soybeans-1970-1988**

| | # Trades | % Profit | Avg. Win | Avg. Loss | Win/Loss Ratio | Gross Profits |
|--|----------|----------|----------|-----------|----------------|---------------|
| 3 Cent DOJI; Open Minus 5 Cents; Sell | 444 | 65% | \$311 | \$284 | 1.09:1 | \$46,251 |
| 5 Cent DOJI; Open Minus 10; Sell | 284 | 67 | 335 | 309 | 1.08:1 | 32,850 |
| R1 Less Than 10; Open Minus 5; Sell | 573 | 68 | 265 | 216 | 1.22:1 | 64,500 |
| R1 Less Than 10; Open Minus 10; Sell | 179 | 73 | 339 | 265 | 1.27:1 | 31,125 |
| DOJI 5; R1 Less Than 10; Open Minus 10; Sell | 147 | 76 | 346 | 322 | 1.07:1 | 27,575 |
| DOJI 3; R1 Less Than 10; Open Minus 5; Sell | 316 | 69 | 294 | 247 | 1.19:1 | 40,019 |
| DOJI 3; Open Plus 5; Buy | 513 | 63 | 263 | 275 | 0.95:1 | 32,261 |
| DOJI 5; Open Plus 10; Buy | 274 | 64 | 320 | 323 | 1.00:1 | 23,505 |
| DOJI 3; R1 Less Than 10; Open Plus 5; Buy | 376 | 61 | 224 | 253 | 0.88:1 | 16,011 |
| DOJI 5; R1 Less Than 10; Open Plus 10; Buy | 157 | 62 | 272 | 312 | 0.87:1 | 8,305 |
| R1 Less Than 10; Open Plus 5; Buy | 657 | 59 | 222 | 234 | 0.94:1 | 23,449 |
| R1 Less Than 10; Open Plus 10; Buy | 198 | 62 | 264 | 309 | 0.85:1 | 9,293 |

FIGURE 4

patterns.

I have tested T-bonds, S&P and soybean markets using a definition for the Doji Line and a subsequent trade taken a given amount off the open. Figures 3, 4 and 5 show these results along with a comparison of price moves off the open on days when a Doji may or may not be present.

I also have defined the narrow range day by the particular open-to-close point values (R1) listed in Figures 3, 4 and 5 rather than a relationship to the previous day's range. This allows a comparison between the results of a Doji Line and the results of narrow range day.

Results were impressive and confirmed the conclusion that a Doji Line precedes reversal action or trend-type action. In some cases, percentages increase by 20%-30% in favor of a trade after a Doji Line.

The tests of narrow range day defined by a particular point value also were conclusive. I chose the point value for the narrow range day by observation, which is different than categorizing congestion by identifying a day in which the range is narrower than any of the previous six days — an NR7 day in my terminology. Defining a narrow range by point value allows for entry on a day that is not necessarily narrower than the preceding day.

The abbreviations used in Figures 3, 4 and 5 follow a common format. For example, in Figure 3 the left-hand column reads: 8 tick Doji; Open minus 16 ticks; Sell. This means the difference between the open and close of yesterday is less than 8 ticks (8 tick Doji); today the market dropped 16 ticks below the open (Open minus 16 ticks) where a sale was taken (Sell) with an assumed exit on the close of the same day.

The results in this particular case show 203 trades, 71% of which were profitable. The average winning trade was \$343 and the average losing trade was \$289. The ratio between the average winner and the average loser was 1.18-to-1, with gross profits before commissions and slippage at \$32,985.

Note that in the fourth pattern in Figure 3 the definition for the narrow range reads as "R1 less than 20." This means yesterday's range was less than 20 points. Throughout the figures, I also designate a Doji with a point value such as "7 Doji" or "50 Doji."

As you look through the figures you will see many very profitable trading systems. Remember that slippage and commission were *not* calculated in the results, so an immediate systematic implementation of these techniques could be disappointing. As in any breakout system, the slippage will be greater than other techniques because the order is executed with the momentum of the market. Other stops could be present at the time of entry and cause bad fills.

My premise is that one's judgment has to enter into the trade and the way to do this effectively is through practice and logical integration of market knowledge.

Implementation

I am attempting to define the market's nature so as to trade effectively. I am not a system trader. My premise is that one's judgment has to enter into the trade and the only way to do this effectively is through practice and a logical integration of the market knowledge at hand. The Doji Line tests provide objective

| S&P 500 1982-1988 | | | | | | |
|--|----------|----------|----------|-----------|----------------|---------------|
| | # Trades | % Profit | Avg. Win | Avg. Loss | Win/Loss Ratio | Gross Profits |
| 50 Point DOJI; Open Plus 100 points; Buy | 162 | 58% | \$671 | \$551 | 1.21:1 | \$25,625 |
| 50 Point DOJI; R1 Less Than 200 Pts.; Open + 100 Pts.; Buy | 88 | 63 | 507 | 346 | 1.46:1 | 16,470 |
| 50 Point DOJI; R1 Less Than 200; Open + 160; Buy | 55 | 60 | 453 | 430 | 1.05:1 | 5,474 |
| 50 Point DOJI; R1 Less Than 200; Open - 100; Sell | 100 | 64 | 479 | 294 | 1.62:1 | 18,550 |
| 50 Point DOJI; R1 Less Than 200; Open - 160; Sell | 57 | 67 | 419 | 351 | 1.19:1 | 9,249 |
| R1 Less Than 200; Open - 100; Sell | 198 | 59 | 470 | 409 | 1.14:1 | 21,925 |
| R1 Less Than 200; Open - 160; Sell | 104 | 63 | 418 | 414 | 1.01:1 | 11,849 |
| R1 Less Than 200; Open + 160; Buy | 106 | 58 | 534 | 352 | 1.51:1 | 16,724 |
| R1 Less Than 200; Open Plus 100; Buy | 178 | 63 | 504 | 320 | 1.57:1 | 36,199 |

FIGURE 5

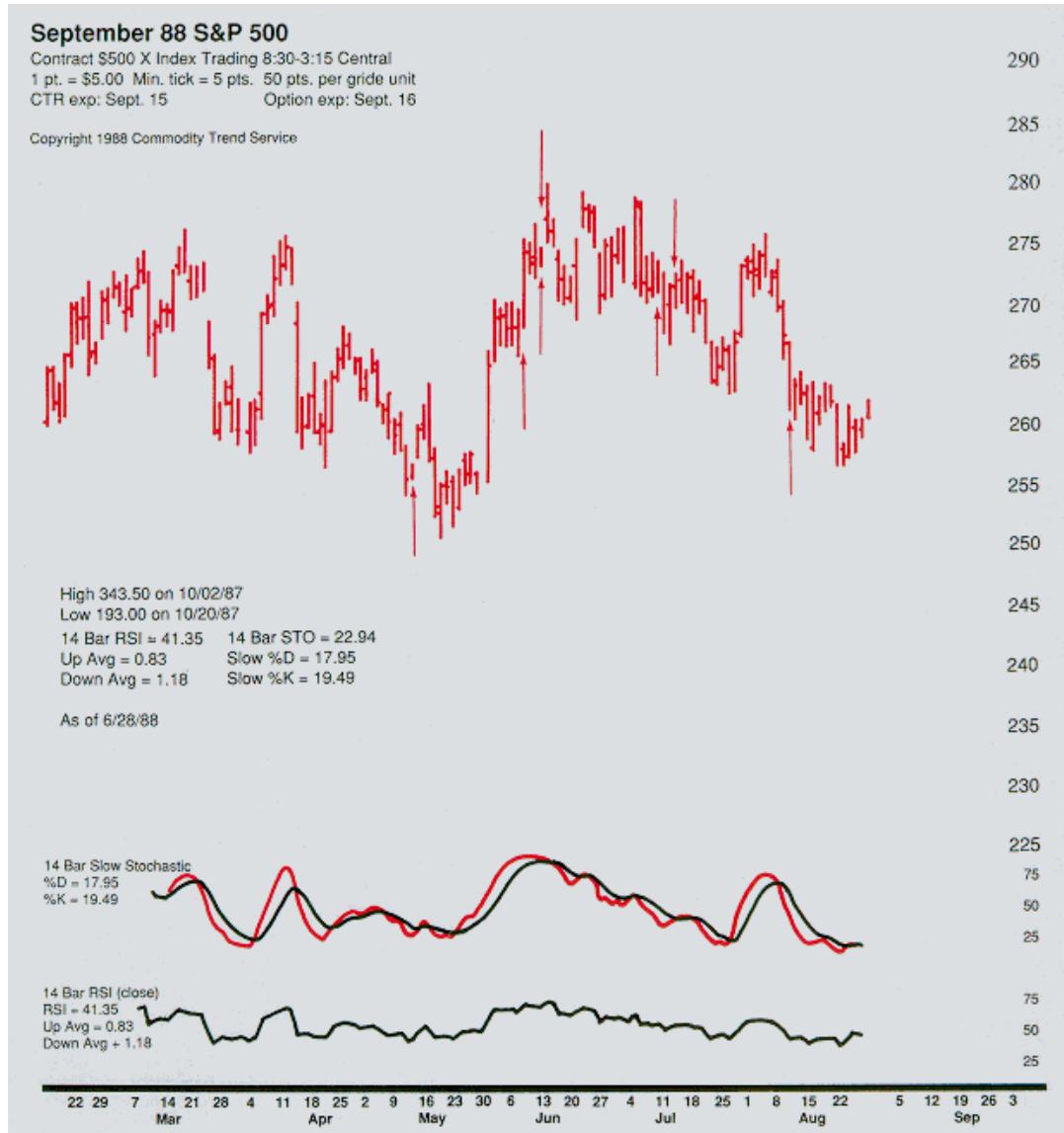


FIGURE 6

information over long time spans.

In Figure 6, points 1 thru 7 illustrate seven, 50-point Doji Lines followed by 100-point moves above the open the following day. It is apparent from the chart that some days are more successful than others. Profit-taking techniques and an excellent understanding of intraday market action are necessary to get the best the results.

Comparing percentage profits for days preceded by a Doji and narrow range with that of a normal day without a Doji and narrow range proves interesting. A complete study of T-bond moves away from the open on every day during ten 28-year test periods showed that on a normal day, a sale 16 ticks below the open was 56% profitable; with Doji 8 it was 71% profitable. On a normal day, a buy 16 ticks above the open was 60% profitable; with a Doji 8 it was 66% profitable.

On any day in the S&P that a buy was taken 160 points above the open, the trade was 58% profitable; with a Doji 50 and open-to-close range (R1) less than 200 it was 63%. On any day, a sale 160 points below the open was only 49% profitable; with a 50 Doji and RI less than 200 points a sale was 67% profitable — quite an improvement.

The soybean market provided some of the most startling results. On any day that a buy was taken 10 cents above the open it was 60% profitable. With a Doji 5 it was 64% profitable. On a sale any day 10 cents below the open it was 63% profitable; with a Doji 5 it was 67%. A Doji 5 with the daily range less than 10 cents improved the success rate to 76%.

In an effort to adequately define trend days, I always look for other ways to define price action. The Doji Line and narrow range day are excellent additions to existing indicators. These little-known market concepts reiterate the need for an open mind and an understanding of all available market concepts that can help the trader. As you can see by the test results, Doji Lines and a defined narrow range day are logical additions to market concepts.

Toby Crabel is a CTA and AP with RB&H Commodities and a principal in Toby Crabel & Associates. A former trader at the CME and CBOT, he now edits Market Analytics, 30 S. Wacker, Suite 1912, Chicago, IL 60606, (800) 621-2503, ext. 1410.

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