

## TRADING TECHNIQUES

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# Identifying Powerful Breakouts Early



*High-powered breakouts occur with a strong surge of momentum in the direction of the price change. Such breakouts may be short-lived, however, occurring toward the latter stages of a long trend. Sometimes, such breakouts signal the end of one trend and the beginning of another. In either case, identifying such market action early is likely to be highly profitable. Here, Contributing Editor Tushar*

*Chande shows how you can use his original indicators, VIDYA and the dynamic momentum index, to find big market moves.*

*by Tushar S. Chande*

**T**aking advantage of a major breakout can be one of the most satisfying of all trades. However, there is no consistent definition of what a breakout is. Many price breakouts will not be decisive, because the market will enter another consolidation phase or reenter the previous region of price congestion; such weak breakouts occur when the markets lack strength. An even more difficult scenario for a trader is when markets break out in one direction with good momentum, only to reverse in a few days, and then break out in the opposite direction with even greater momentum. In such cases, the trader should reverse the initial trade but may lack the courage to do so, while others may simply be stopped out.

Given the ever-changing nature of markets, is there a consistent framework that can be used to analyze breakouts? There may be. Combining a variable-length moving average (VIDYA) and a variable-length momentum oscillator (dynamic momentum index, or DMI) may help identify high-powered breakouts early. (For more information on VIDYA, see sidebar, "Variable-length moving average.")

A combination of VIDYA and DMI may be used to identify when prices have broken out and when the breakout has occurred with great strength. To do so, a 1% band around VIDYA may be optimal. Whenever the market closes above the upper band or below the lower band, we can assume that prices have broken out in that direction. A close above the upper band implies that prices will move higher, while a close below the lower band implies prices will move lower. A more conservative criterion could be called for, such as multiple closes beyond the 1% bands, or insisting that the low be above the upper band (or high below the lower band) to recognize a breakout.

We can use the DMI to measure momentum, averring that the DMI rise above 70 or fall below 30 to confirm the presence of a powerful breakout. Once these criteria are met, you can contemplate a trade, plan for a possible failure of the breakout and hope for a massive followthrough.

The ideas underlying VIDYA and DMI were discussed previously in Stocks & Commodities articles as well as The New Technical Trader. Both indicators adjust their length of calculation using a market volatility index. With VIDYA, this means that the average moves faster when the volatility increases and it slows down when volatility decreases. The DMI is a variable-length relative strength index<sup>†</sup> (RSI); its effective length decreases when volatility increases, and the effective length increases when volatility decreases. If we use a 14-day RSI as reference, the effective length of DMI varies from as low as five days to as high as 30 days.

## **THE TOOLS**

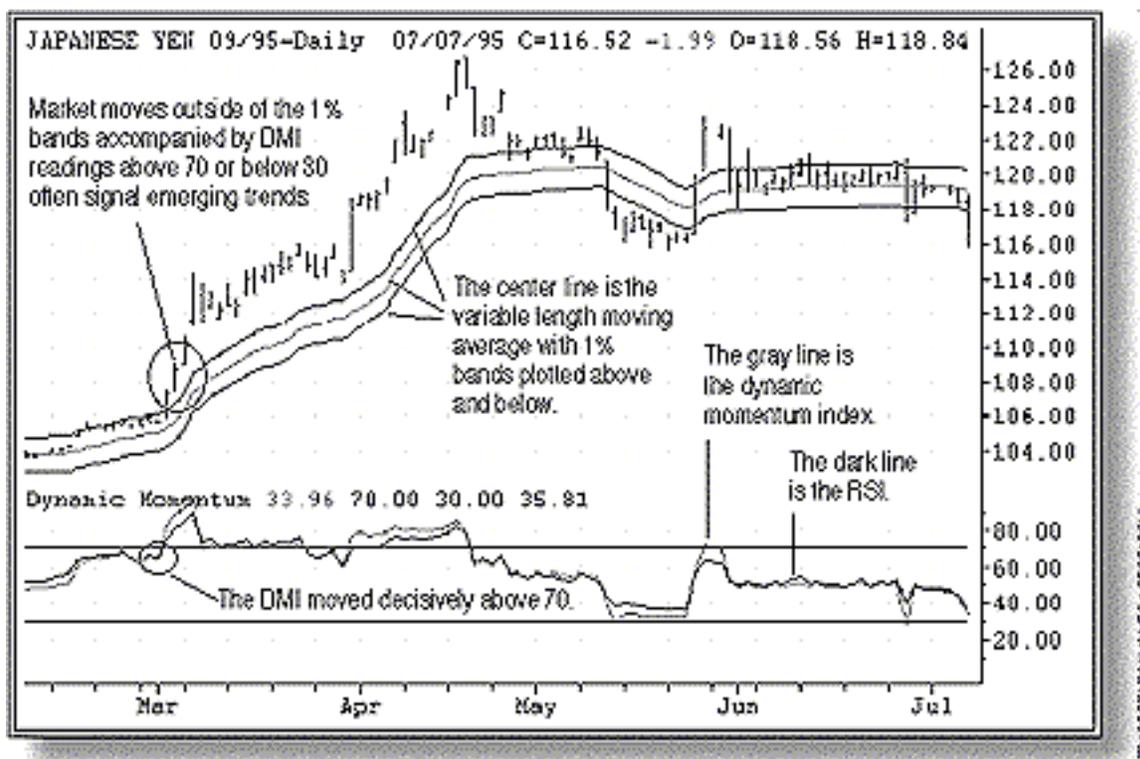
The specific combination I suggest is VIDYA driven by the Chande momentum oscillator (CMO), together with a 14-period DMI. Here, VIDYA is set up to be equivalent to a 12-day exponential moving average (Ema) driven by a nine-day CMO. The CMO is a pure momentum oscillator, similar in principle to the RSI but without internal smoothing. Further, we will use 1% bands around VIDYA to indicate that a price breakout has occurred in a given direction. On the 14-period DMI, we will allow the length to vary from as few as five days to as many as 30, and we will compare it to the 14-period RSI. When there is strong market momentum, the DMI will rise above 70 or fall below 30. The two lines will also separate as the DMI moves away from the RSI due to increasing momentum.

If the breakout occurs without these conditions being met, then the breakout will lack momentum. If a breakout does occur with momentum, a reversal will be defined when prices close beyond the 1% band in the opposite direction. As a result, an upside breakout will be reversed when prices close below the 1% band. The breakout will be considered suspect if prices retreat within the 1% band without actually closing beyond the opposite 1% band. In this case, the position can be closed or the stop tightened. The position will be reentered upon another powerful breakout.

A breakout may gather momentum several days after actually closing below or above the 1% band. In this case, the trade will be entered after the DMI criterion is satisfied. The working assumption is that the best breakouts have their price action entirely beyond the 1% bands, with the DMI beyond 70 or 30 for the duration of the momentum surge. If all this sounds complicated, perhaps it will become clearer with the examples below.

## CHART STUDIES

The September 1995 Imm yen contract (Figure 1) shows the explosive rally as well as the subsequent consolidation. I superimposed the VIDYA and its 1% band on the daily price bars and plotted the DMI below prices. All the major price moves occurred outside the VIDYA bands, whereas consolidations occur within the 1% bands. Particularly valuable is VIDYA's tendency to flatten out during market consolidations, as it did during June and July. Thus, in general, our approach of defining a breakout as a close outside VIDYA 1% bands seems reasonable.



**Figure 1: SEPTEMBER 1995 YEN.** During early March, the market moved decisively above the upper 1% band and the DMI moved well above 70. This was a sure sign of a powerful move. During May and June, the DMI briefly touched 70 and 30 but reversed, thereby indicating the market was not trending.

In Figure 1, you can see that when the yen broke out in early March, the DMI climbed rapidly over 70, indicating that this was a high-powered move. The DMI again rose rapidly over 70 in April during the momentum-packed second leg of the yen rally. Using our trading rules, you would be long around the 105-106 level and have been stopped out at the 121 level when prices reentered the bands. Conservatively, this breakout would have netted you a full 15 points, good for \$18,750 per contract before commissions. You would have made smaller but profitable trades when prices broke below the lower 1% band and whipsawed up and down again.

The DMI briefly touched 70 and 30, showing these to be powerful moves. There was little followthrough that would not have surprised you, however, since our trading approach allows for quick reversals.

The coffee market has recently packed some truly powerful moves, as can be seen in Figure 2. Note again how the major moves occur beyond the 1% bands, with their power shown by DMI. The current open trade, a short on the decisive close below the band at the 175 level, was good for another megatrade down to the 130 level, or more than \$16,000. The consolidation in May was signaled by VIDYA flattening out, and the subsequent breakdown was immediately evident.



**Figure 2:** September 1995 Coffee. During late April, the coffee market moved above the upper 1% band and the DMI moved above 70, but the rally stalled and the indicators quickly signaled the change. Then in late May the indicators turned negative, and the market has continued in a downtrend.

As the price chart shows, this breakdown took several days to develop, including a sizable correction back to the 161 level. However, a trend-following position set up on the initial breakdown was never in any danger of being stopped out. The rapid acceleration from 150 down to 120 was clearly picked up by DMI. The market exposure could have been varied as DMI weakened to increase profits further. Using both VIDYA and DMI, you could have identified this powerful breakdown relatively early.

Figure 3 shows an acceleration of an existing trend. The interest rate markets had been rallying for five months before a powerful upleg occurred in the rally during May and June. A significant price action in the September 1995 10-year Treasury note contract occurred outside the 1% band, and the DMI confirmed the power of the breakout early and throughout the \$7,000 move.



**Figure 3:** September 1995 T-Note. At the beginning of May, the market moved above the upper 1% band and the DMI moved above 70, signaling a trend.

If this up move were indeed part of a second upleg, we would expect the market to consolidate for several weeks. As VIDYA flattened out with an upward bias during June, the expected consolidation seemed to be under way, with the high near 112-16 offering resistance.

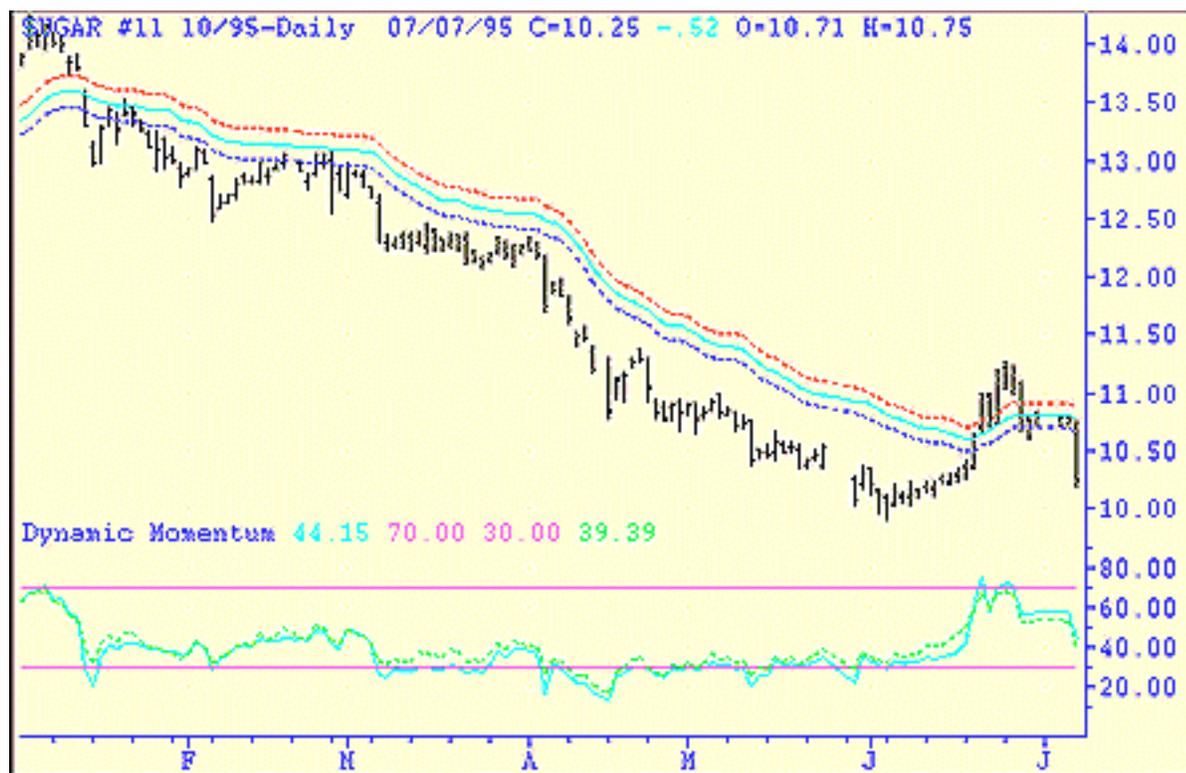
In Figure 4, the August 1995 heating oil contract also confirms our basic two-indicator approach, but without the same vigor. The breakout in April was confirmed by DMI values above 70. The resulting rally was tradable but choppy. The close below the lower 1% band quickly reversed the trend down, along with a DMI confirmation with values below 30. A weak rally back up to VIDYA, but not above, is visible on other charts as well, and is one final chance to short the market.



**Figure 4:** August 1995 Heating Oil. *This example shows that the two-indicator combination is not perfect. Here, heating oil rallied in early April and the two indicators turned bullish, but the market traded in a choppy fashion.*

The breakdown below 49.45 was powerful because DMI values sank below 30. Not every breakout correctly identified by the VIDYA-CMO combination moves as much as the examples in Figures 1 and 2.

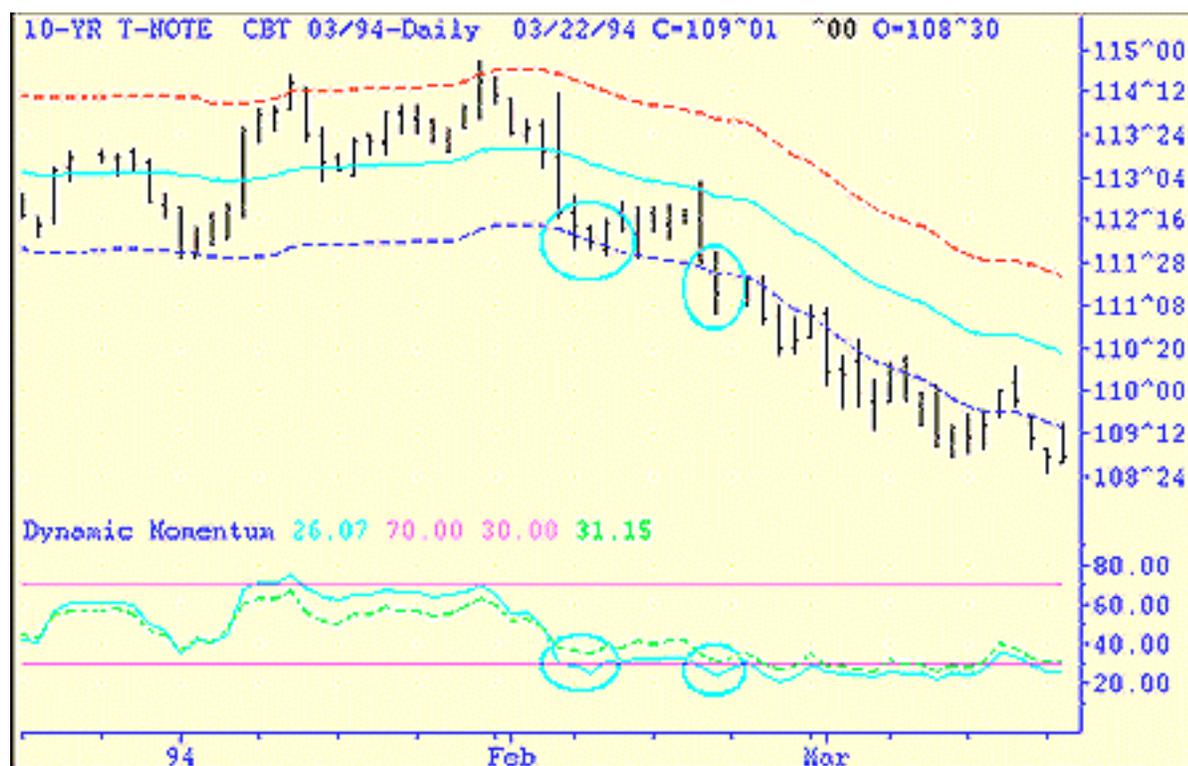
The initial breakdown below the 1% band is often followed by a rally back up to VIDYA, but without closing above it. This rally (or selloff for long trades) is a second chance to short the market (or go long). You can see this in Figure 5, in the November 1995 sugar futures contract. The initial breakdown in January spiked the DMI values below 30, confirming a shift in trend. A bounce back up VIDYA was an excellent low-risk shorting opportunity.



**Figure 5:** October 1995 Sugar. After the initial signals in mid-January from both the DMI dropping below 30 and a break of the lower 1% VIDYA band, there was a rally. However, the price did not close above VIDYA until the trend changed at the end of June.

The subsequent rally in March gave shorts another chance. If you did, you had a long and profitable short from 13.00 to the 10.50 area, without the prices ever closing back inside the 1% band. If you like divergences, note the bullish divergence from mid-April through June between DMI and prices. Using a simple trendline breakout, you could have picked up a good short-term trade off the June rally.

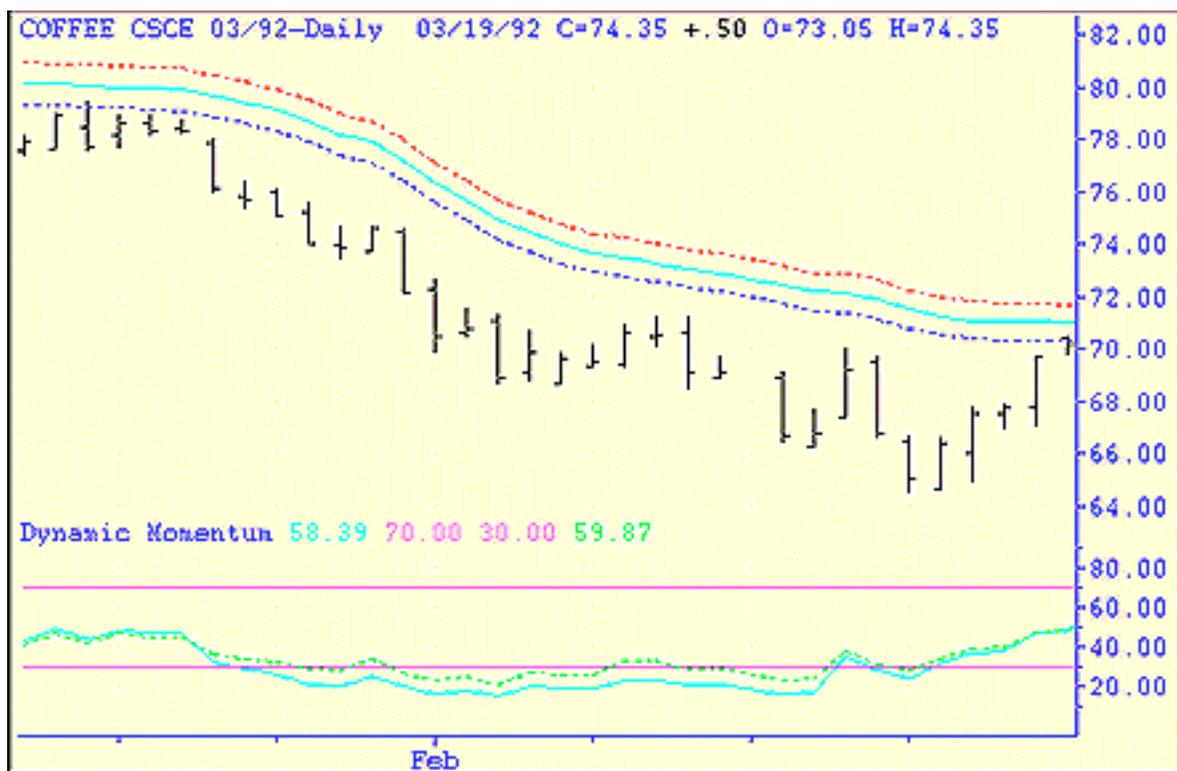
One of the features of the VIDYA bands is they are quick to signal trend reversals. If the reversal is accompanied by high or low values of DMI, then you have the possibility of momentum pushing your profits. Consider the breakdown in the interest rate markets in February 1994, shown in the 10-year T-note market in Figure 6. In January, prices closed above the upper band with DMI above 70, signaling a possible rally. However, prices failed immediately and dropped back to VIDYA. They tried to rally again, but this time the prices did not have DMI support in early February.



**Figure 6:** March 10-year T-note. VIDYA bands can quickly signal trend reversals. In January, both the DMI and 1% VIDYA bands signaled a rally, but it failed. On the second rally, the bears had control and prices never managed to close above the upper 1% band.

The T-note did not actually close above the upper 1% band on the second rally attempt. The bears were out in full force afterward, as prices broke sharply to close below the lower 1% band. I circled the first time they closed below the band to show that DMI values were also below 30, indicating significant market weakness. T-notes rallied back up to VIDYA without closing above it before failing decisively. This "key bar" is also circled, along with the corresponding low values of DMI. Prices then moved steadily lower, providing a low-risk short trade from that point. Again, the combination of VIDYA and DMI removes any doubt about the direction and strength of the down move.

We don't often get sustained high-momentum moves that pin DMI values below 30 or above 70. Should you see one developing, reassess your trading posture in that market. Figures 7 and 8 show moves that began weakly, only to roar back to life for fast profits. March coffee (Figure 7) had been drifting lower before accelerating to the downside, unmistakably moving the DMI below 30. Similarly, the initial breakout in the March 1992 bond market (Figure 8) was weak but pressed ahead, pushing DMI above 70 for the duration of the move. There was little doubt about direction since prices were beyond the 1% bands. DMI convincingly answered any questions about momentum.

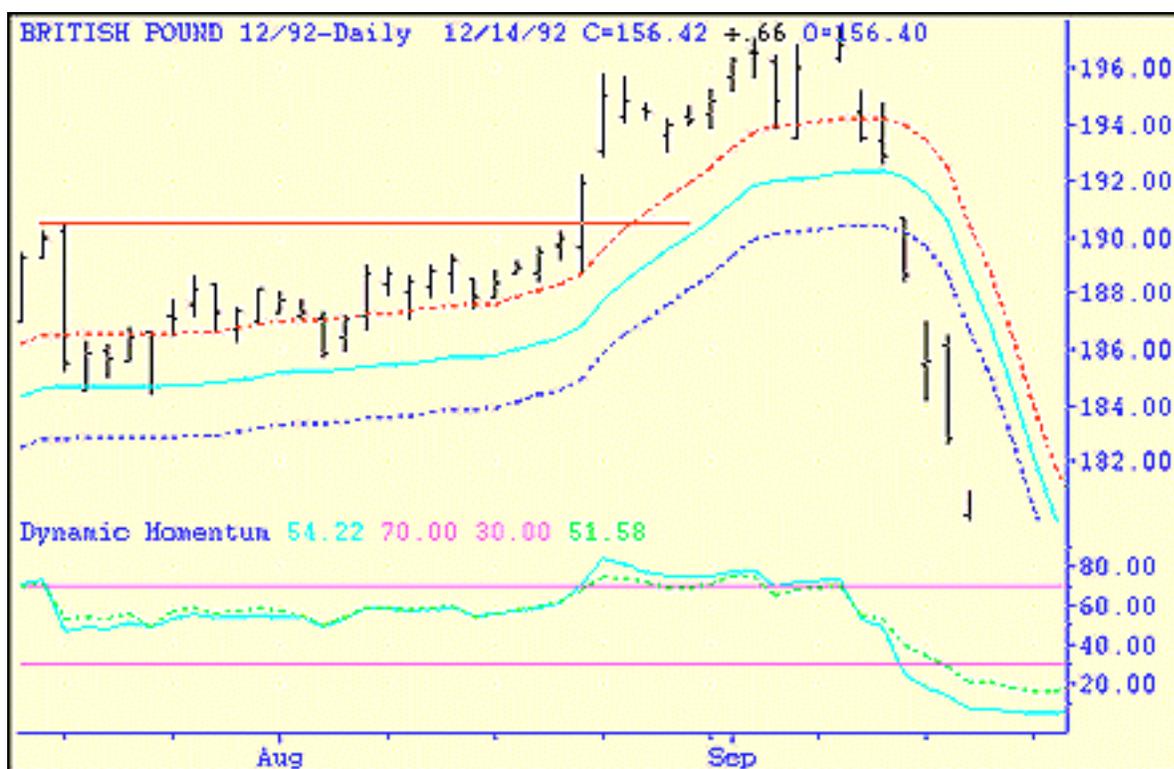


**Figure 7:** March 1992 Coffee. This is an example of the rare case where a move has enough momentum to pin the DMI below 30.



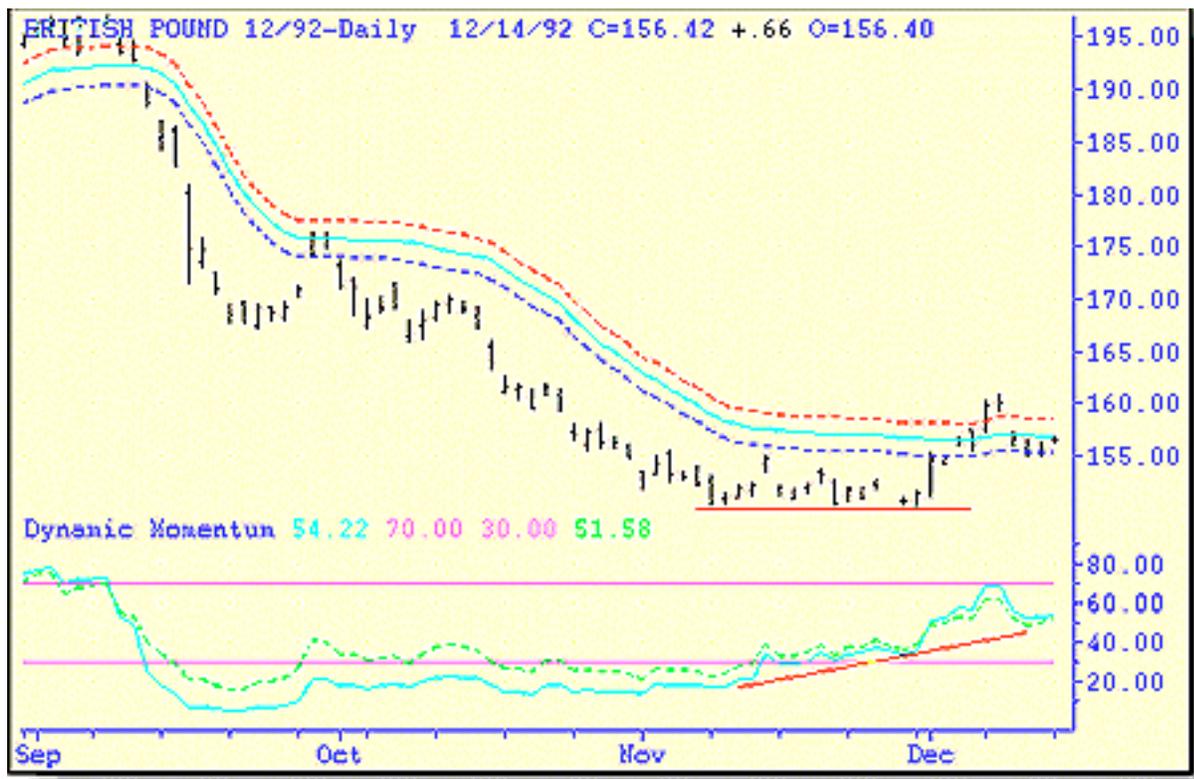
**Figure 8:** March 1992 Bonds. *This is an instance where the momentum was such as to keep the DMI above 70 for the duration of the move.*

The quick-reveRSIng feature of the VIDYA bands along with momentum confirmation was rarely as useful as in trading the British pound December 1992 contract (Figure 9). The power of the market seemed to catch the players by surprise, and few caught the entire move. The pound rose decisively above the previous intervention high in late August, with DMI values above 70. However, only 14 days later, prices closed below the lower 1% band, and the DMI values reversed to under 30. You certainly could have shorted around the 186-184 level for two thirds of the move after the initial signal.



**Figure 9:** December 1992 British Pound. *The market reversed direction from above the upper 1% band and the DMI above 70, and in two weeks the market fell below 1% band and the DMI dropped below 30. Traders could have taken the new signal to catch two thirds of the down move.*

As the European currency crisis intensified, the pound cracked under the strain, falling all the way down to the 150 area without once reveRSIng to the upside (Figure 10). With patience and pluck, you could have picked up 25 points, perhaps more. The DMI was well below 30 for the duration of the down move, climbing above 30 at almost the precise bottom. The momentum divergence clearly signaled at least a short-term rally, as did VIDYA flattening out. The pound was difficult to trade, as it moved choppily for the next three months into March 1993 (Figure 11). VIDYA flattening out and the one move of DMI below 30 would have helped develop an effective strategy.



**Figure 10:** December 1992 British Pound. *From the 184-186 area all the way down to the low near 150, both indicators remained bearish.*

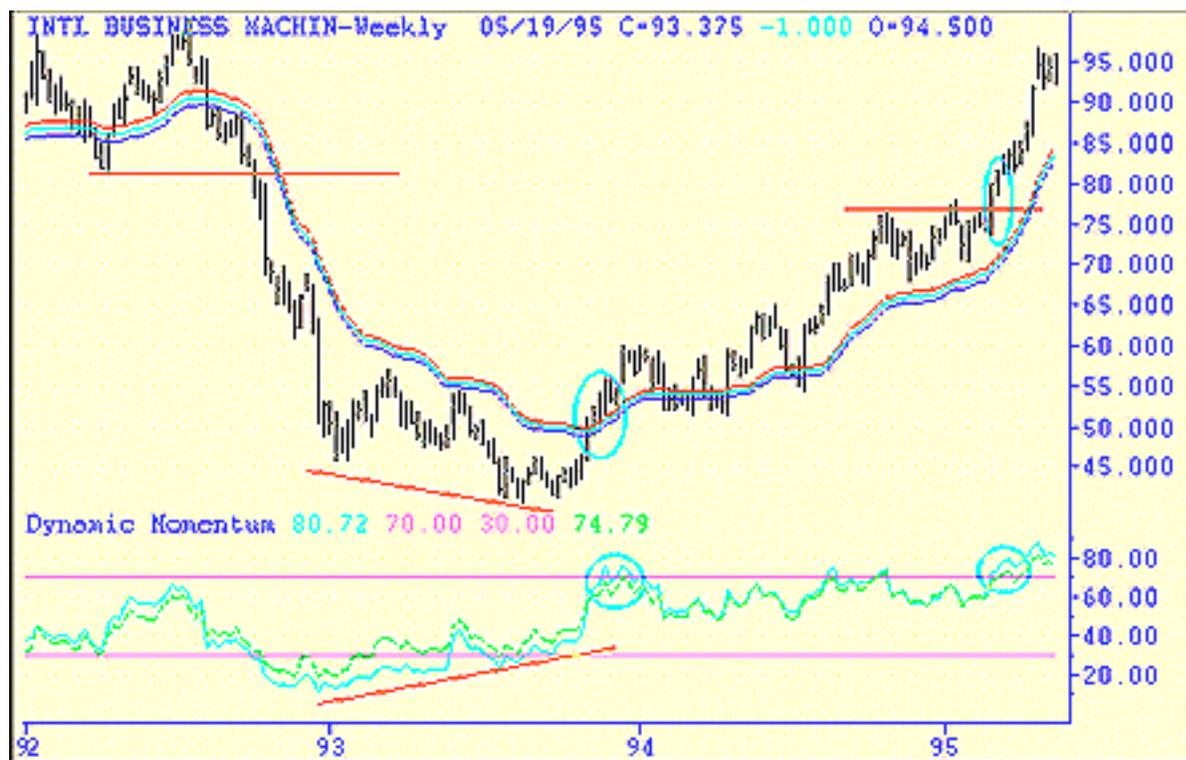


**Figure 11:** March 1993 British Pound. A choppy trading pattern was indicated, with the DMI staying between 70 and 30 until the last leg down at the end of January.

This combination of indicators can be applied to stocks or mutual funds as well. Figure 12 shows a weekly chart of Coca-Cola Co. (KO). The rally in summer 1994 was picked up by the first close above the upper 1% VIDYA band and confirmed by the DMI rising above 70. The second breakout at the 54.00 level was also confirmed by DMI moving above 70. The confirmation feature could be used to plot complex strategies using options. For example, look at the long-term weekly chart of Ibm in Figure 13. The initial breakdown was confirmed by both VIDYA and DMI; the long divergence led to the first decisive close above the upper 1% VIDYA band, accompanied by DMI values above 70. There could be little doubt about the rally out of the 75-76 area as the prices were well above VIDYA, pushing DMI values up toward 90.



**Figure 12:** Coca-Cola Co. A break of the upper 1% VIDYA band alerted a move that was confirmed by the DMI going above 70. The strength of the rally is again confirmed in March 1995 with another rise in the DMI to above 70.



**Figure 13:** IBM. This long-term chart shows VIDYA and DMI confirming the breakdown in late 1992 and the resulting reversal of fortunes late in 1993.

These examples show that breakouts can be confirmed relatively early using VIDYA plus DMI criteria. By themselves, however, they do not guarantee a followthrough by the market, nor do they assure that the markets will not reverse themselves. Different exit strategies and risk control measures should be used to develop a satisfactory trading plan.

## SUMMARY

This approach can be used with all financial markets, including futures, stocks and mutual funds. The 1% VIDYA bands can be used to signal price reversals, while DMI can be used to determine if the reversal is occurring with strong market momentum. When the two indicators confirm, they can tip the market participant off early to powerful market moves.

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## REFERENCE, RESOURCE, READING

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