

Appendix A: Advanced Technical Indicators*



This appendix introduces several more advanced technical methods that can be used by themselves or with other technical studies. As with any technical approach, it is always recommended that investors do their own independent testing and research before actually investing.

DEMAND INDEX (DI)

Most technicians will agree that volume analysis is an important ingredient in determining a market's direction. The *Demand Index* (DI) is one of the early volume indicators that was developed in the 1970s by James Sibbett. The formula is quite complex (see end of this appendix). The Demand Index is the ratio of buying pres-

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sure to selling pressure. When the buying pressure is greater than the selling pressure, the DI is above the zero line, which is positive. Greater selling pressure means the DI is below zero, which implies prices will move lower. Most traders also look for divergences between the DI and prices.

Figure A.1 is a weekly chart of T-Bond futures from early 1994 until late 1997. From April to November 1994, the DI was mostly below the zero line as bonds declined from 104 to the 96 area. While prices made lower lows (line A), the DI formed higher lows (line B). This is a classic positive, or bullish divergence, which suggested that bond prices were bottoming. The divergence was confirmed when the DI moved above the zero line at point 1. The DI reached its highest level for this rally in late May 1995 at point 2, and then dropped for the next six weeks before

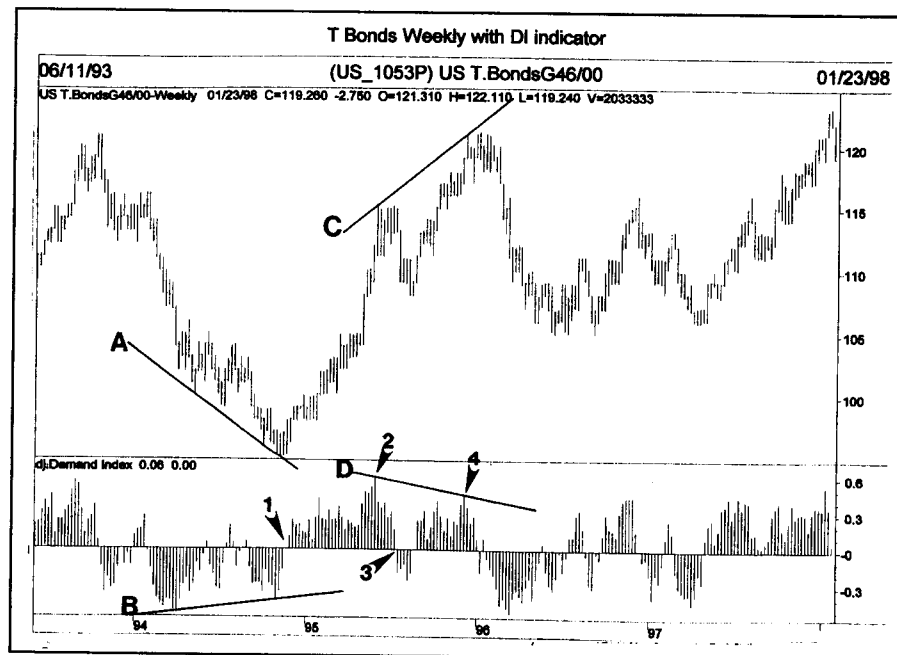


Figure A.1 The Demand Index (DI), which incorporates price and volume, is shown here as a histogram. Values above zero are positive; below zero they are negative. Notice the bullish divergence in late 1994 and the bearish divergence in late 1995. (Courtesy MetaStock Equis International.)

crossing below the zero line at point 3. It stayed negative for five weeks before it again turned positive. On the next rally the DI formed a significantly lower high in late November at point 4. While the DI was lower (line D), the bond contract was almost six points higher (line C). This negative or bearish divergence warned of a price peak.

This indicator can also be used with stocks. The weekly chart of General Motors (Figure A.2) shows the DI plotted as a line rather than a histogram. This allows for trendlines to more easily be drawn on the indicator. I have personally found trendline analysis of indicators to be quite valuable. Indicator trendlines are often broken ahead of price trendlines. This was the case in late 1995 as the downtrend in the DI (line A) was broken

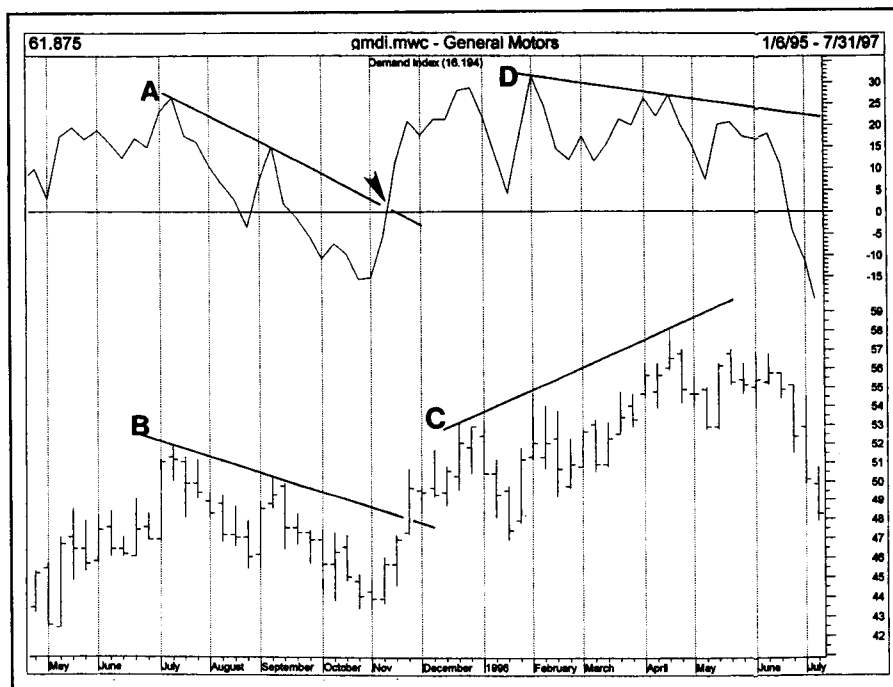


Figure A.2 The Demand Index (solid line) compared to a weekly chart of GM. Trendline breaks on the DI line often preceded trendline breaks on the price chart. Notice the negative (bearish) divergence in April 1996. (Courtesy MetaStock, Equis International.)

FORMULA FOR DEMAND INDEX

The Demand Index (DI) calculates two values, Buying Pressure (BP) and Selling Pressure (SP), and then takes a ratio of the two. DI is BP/SP. There are some slight variations in the formula. Here's one version:

If prices rise:

$$BP = V \text{ or Volume}$$

$$SP = V/P \text{ where } P \text{ is the \% change in price}$$

If prices decline:

$$BP = V/P \text{ where } P \text{ is the \% change in price}$$

$$SP = V \text{ or Volume}$$

Because P is a decimal (less than 1), P is modified by multiplying it by the constant K.

$$P = P(K)$$

$$K = (3 \times C)/VA$$

Where C is the closing price and VA (Volatility Average) is the 10 day average of a two day price range (highest high – lowest low).

$$\text{If } BP > SP \text{ then } DI = SP/BP$$

The Demand Index is included on the MetaStock charting menu.