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THE ARMS INDEX (TRIN)

INTRODUCTION

The Arms Index was invented by Richard W. Arms, Jr. in 1967. This easily calculated index has, since then, become one of the most widely watched tools of technical stock market analysis. It appears in <u>Barron's</u> every week and <u>The Wall Street Journal </u> every day. It is carried on virtually every quotation system, sometimes as "ARMS" and sometimes as "TRIN". It crosses the CNBC ticker every few minutes. It is a simple calculation that compares the number of up stocks to the number of down stocks at a given time, and relates that comparison to the advancing and declining volume at the same instant. It serves to ascertain if the advancing stocks are receiving more or less than their fair share of the volume. In that way one is able to sense the internal pressures of the market. Used in various ways it becomes a valuable tool for predicting probable market direction over a wide range of time spans.

THE CALCULATION

With so many sources providing the calculated index most users will never need to make the calculation themselves. However, in order to appreciate the significance of the index one should be familiar with its derivation. The Formula is:

THE ARMS INDEX

$$\frac{(ADVANCES \;/\; DECLINES)}{(ADV.\; VOL. \;/\; DECL.\; VOL.)} = THE\; ARMS\; INDEX\; (TRIN)$$

EXAMPLE

ADVANCES   1024
DECLINES   2030
ADVANCING VOLUME   299,790,000
DECLINING VOLUME   786,830,000
1024/2030 = .504
299790/786830 = .381
.504/.381 = 1.32

At any time we can retrieve the numbers showing how many stocks are up for the day, how many stocks are down for the day, the volume on the advancing stocks and the volume on the declining stocks. Plugging them into the above formula we end up with a single number, the Arms Index for that instant.

The above example has produced a somewhat bearish index. An index of 1.00 is a standoff, indicating that both the advancing stocks and the declining stock received their share of the volume. A value over 1.00 is bearish, indicating that the declining stocks are receiving more than their share of the volume. An index lower than 1.00 is considered bullish, since the up stocks are receiving more than their fair share of the volume. Normally the index will fluctuate closely around 1.00. We have seen days end with an index as low as .19 and other days with an index over 10.00, but these were rare

occurrences, where the traders were reacting to extremes in euphoria or fear. Normally the index will be somewhere between .65 and 1.75.

THE REASONING

At any time the Arms index is telling us whether the up stocks are getting their share of the volume or not. If the index is over 1.00 the down stocks are overpowering the up stocks. (Remember, under 1.00 for the raw number is good, and over 1.00 is bad. It is counter-intuitive, but that is the way the index was first calculated, and it's late to try to change now. If that really bothers you, invert the calculation and it will be more intuitive, but you will be out of step with everyone else using the index. You will see, when we look at charts, that inverting the scale can solve the problem.)

The index is dealing with comparing two ratios, so it is commonplace to have a market that appears to be bullish because of there being more stocks up than down, but is actually under pressure, in that those up stocks are not getting their share of the volume, and the index is bearish. Similarly, we can have more stocks down than up, but have a bullish index because the up stocks are getting more than their fair share of the volume. The Arms Index is measuring the internal dynamics of the market; dynamics that may not be otherwise readily apparent. A bullish Arms Index in a slumping market may be telling us that there is accumulation going on, under the guise of a down market.

USING THE INDEX

The index was originally developed as an intraday timing tool, and it still is valuable in that role. There are two things to look at, the actual reading and the way it is changing during the day.   The actual level is tending to reflect the current condition, so that sometimes a bullish reading in a declining market or a bearish reading in a rising market makes the move suspect. More often the value will be in line with the current market activity. But watch for the big extremes. Not always, of course, but often, the index will go too far in one direction, and suggest the move is overdone. It is reflecting those times

when reason is being abandoned and a blind panic or a feeding frenzy is dominating the trading. A very high or a very low index can be a sign it is time to be a contrarian.

The other intraday use is watching for change, rather than just the actual value of the index. Often the index will change direction before a reversal becomes apparent in the averages. A bearish index in a bearish market that suddenly starts to move toward lower (less bearish) levels may be a warning the market is about to turn up. The same is true for bullish numbers that start to get higher; suggesting a downturn may be developing.
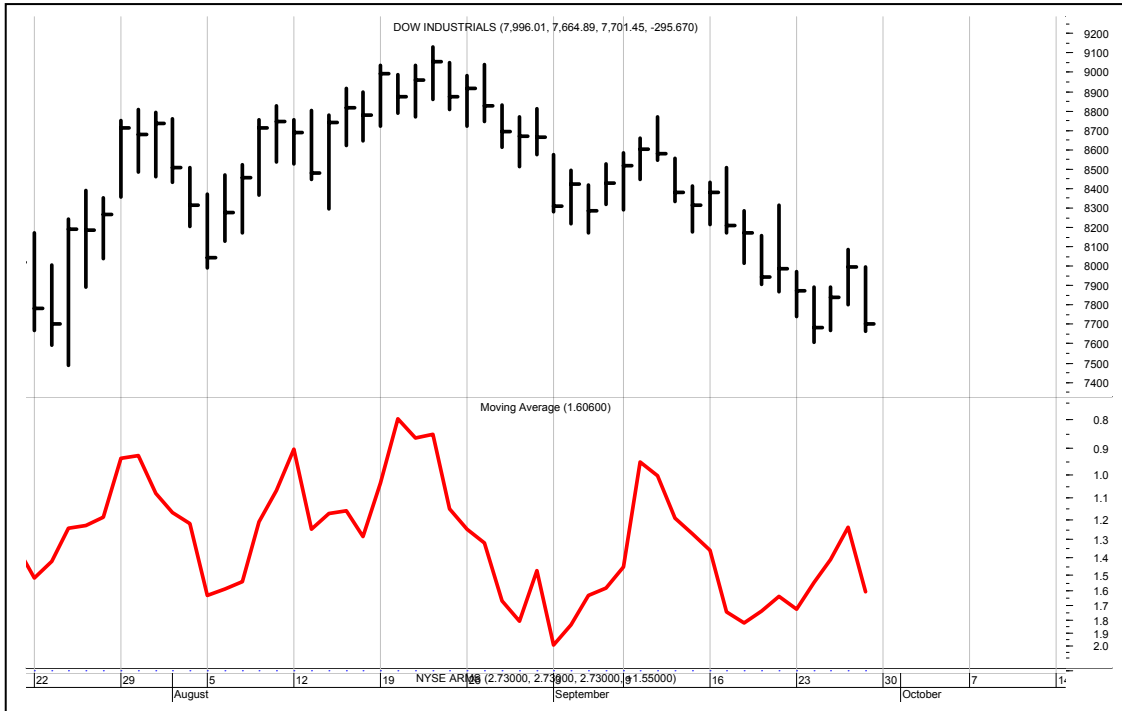
Most often, though the index is now used on a longer-term basis. The most common use is a simple 10-day moving average of the closing daily numbers. That tends to be a good indicator for market moves lasting a few weeks. For short-term trading I like the 5-day moving average. In order to get a feel for longer-term trends I use a 21-day and a 55-day. The big market moves can be recognized by using very big moving averages, such as the 200-day. On each of the charts that follow we are looking at simple moving averages of the Arms Index, on an inverted scale. The red line is the index and the black line is the market.

Because the scale has been inverted for the index, the lows on the red line tend to coincide with low points in the market. Similarly peaks in the index coincide with the market tops. I have chosen different time intervals on each of the charts below, since the longer-term moving averages are used for longer-term predictions. I have not given any hard-and–fast numerical levels as buy and sell signals, because we need to look at the index in the context of the current market. Buy signals in a bear market are at more oversold levels than they are in a bull market. Extreme peaks and troughs, compared to what has been seen recently, tell when it is time to become a buyer or a seller
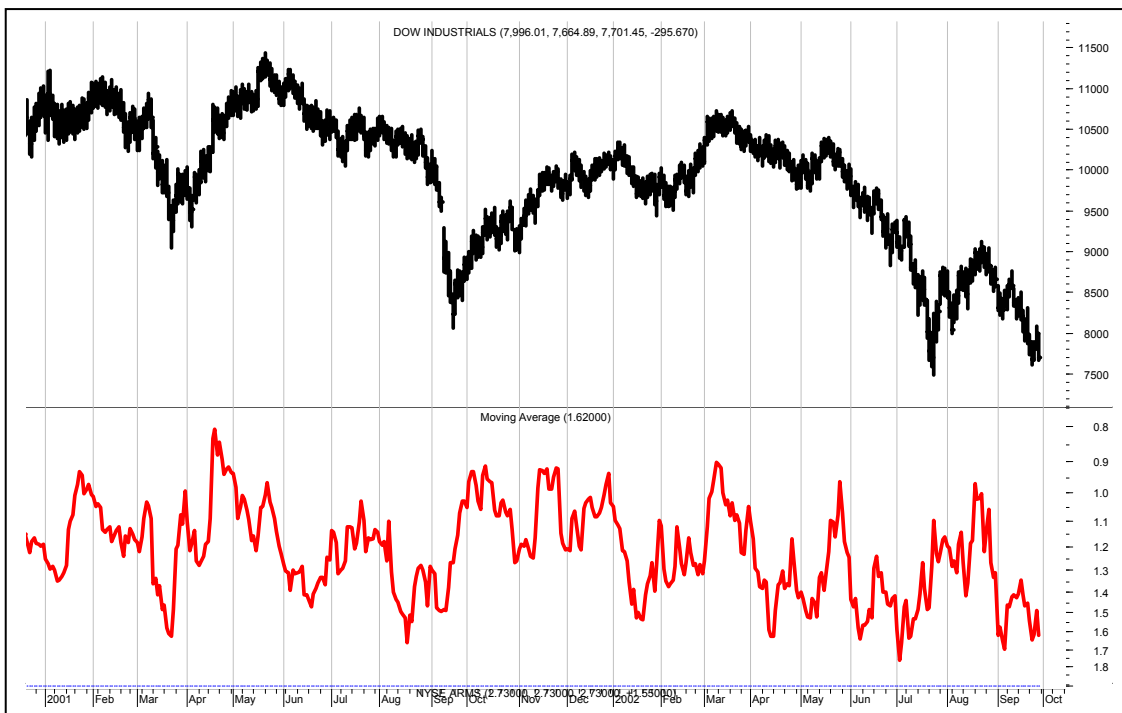
These are only a few applications and examples. Immense amounts of work, using many different methods, have been done over the years since the index was first made public. Anyone wishing to know more is referred to the various books by Richard Arms.

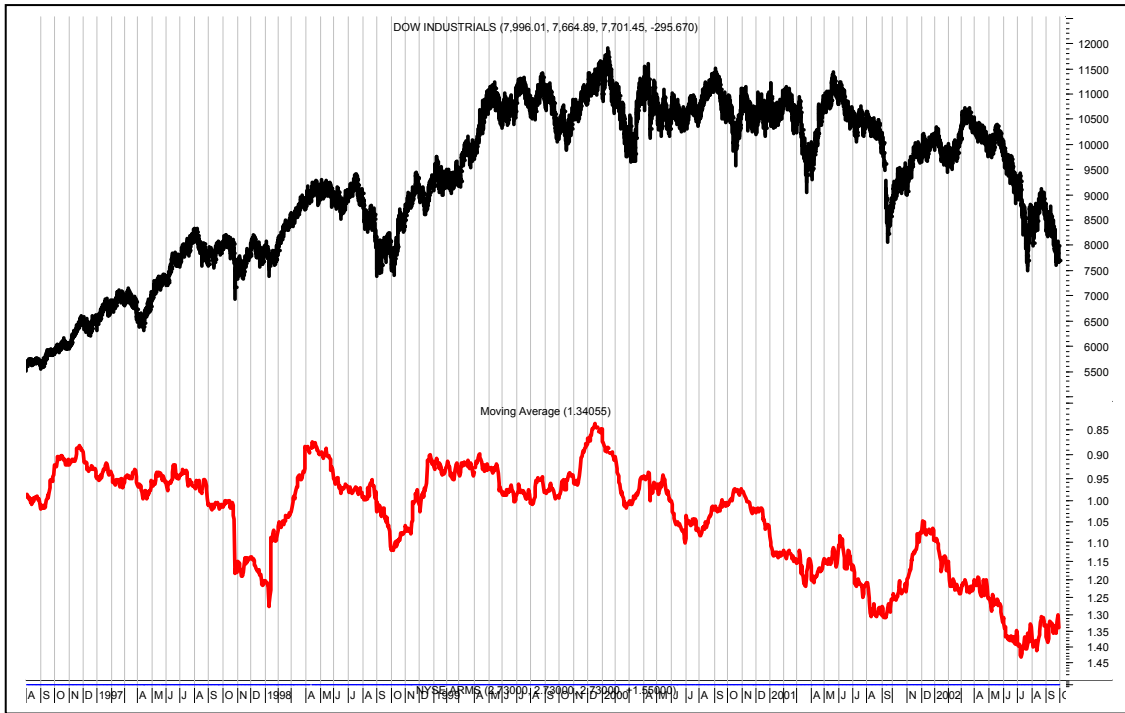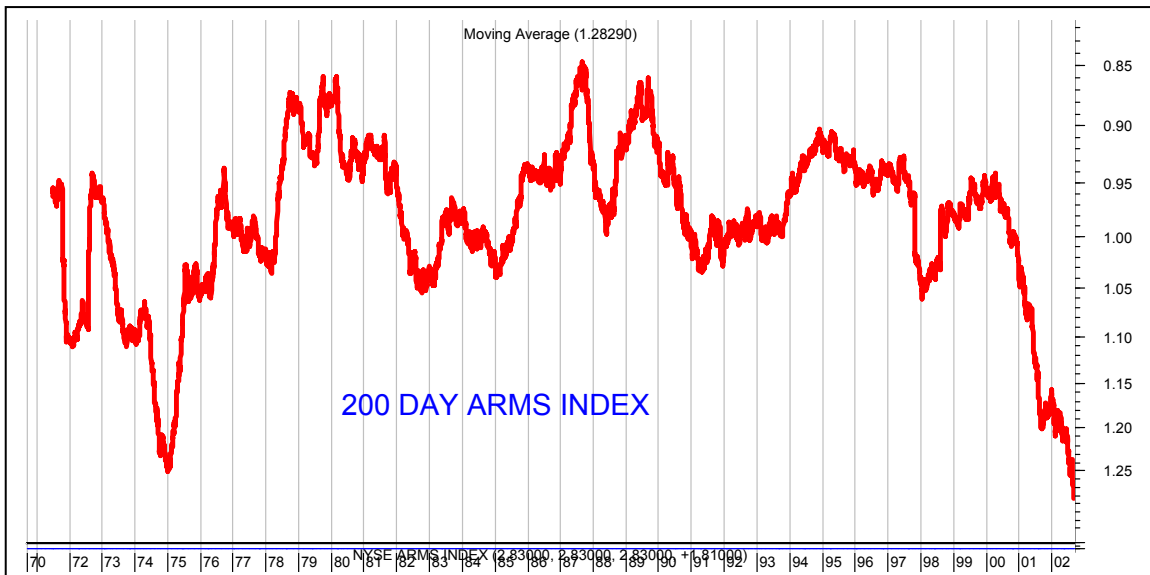# CHARTS POSTED TO INCLUDE TRADING OF <u>September 27. 2002</u>

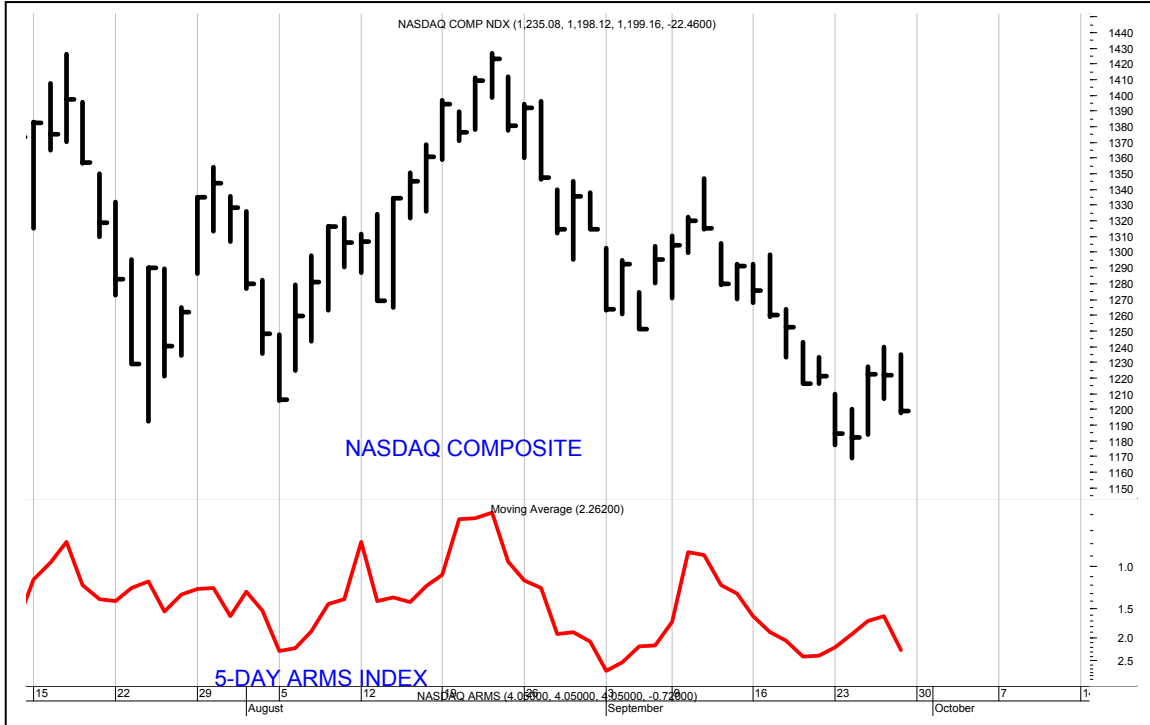## 5 DAY NYSE

10 DAY NYSE

55 DAY NYSE

DOW INDUSTRIALS (7,996.01, 7,664.89, 7,701.45, -295.670)

Moving Average (1.34055)

200-DAY NYSE

Moving Average (1.28290)

200 DAY ARMS INDEX

NYSE ARMS INDEX (2.83000, 2.83000, 2.83000, +1.81000)

5 DAY NASDAQ

NASDAQ COMP NDX (1,235.08, 1,198.12, 1,199.16, -22.4600)

NASDAQ COMPOSITE

Moving Average (2.26200)

5-DAY ARMS INDEX

NASDAQ ARMS (4.05000, 4.05000, 4.05000, -0.72000)

10 DAY NASDAQ

NASDAQ COMP NDX (1,235.08, 1,198.12, 1,199.16, -22.4600)

NASDAQ COMPOSITE

10-DAY ARMS INDEX

NASDAQ ARMS (4.05000, 4.05000, 4.05000, -0.72000)