Introducing the MIDAS Method of Technical Analysis (5) by Paul Levine

This is the fifth article in a series. Click here to go to the **first**, **second**, **third**, or **fourth** article.

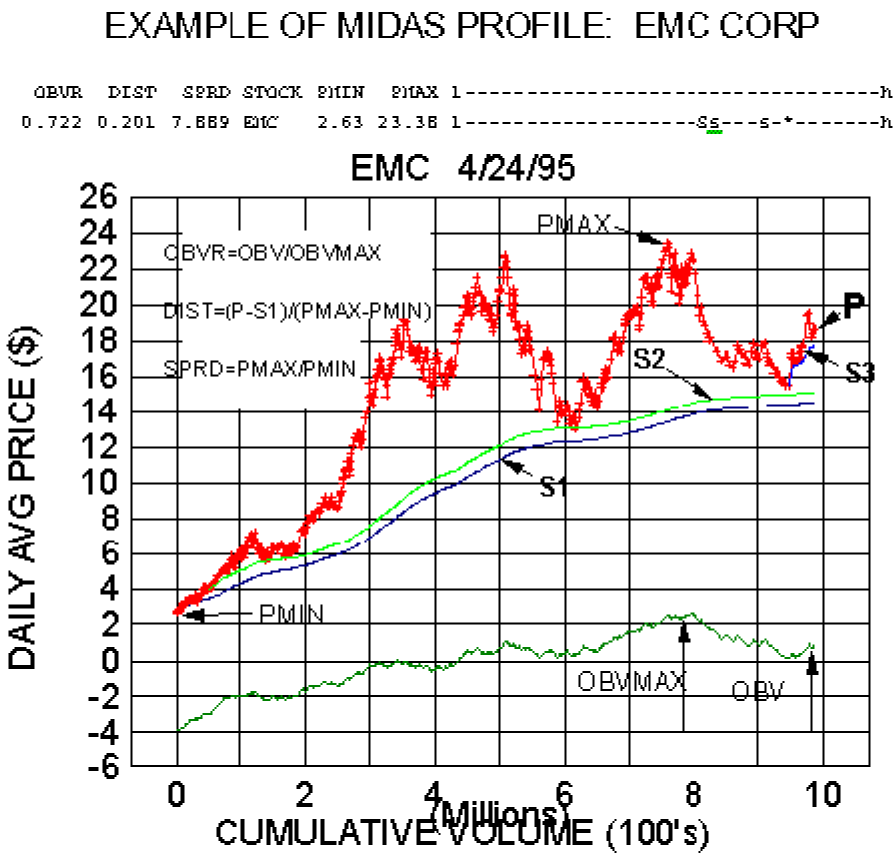
In the previous article we emphasized that our primary goal with the MIDAS method is to provide a means of characterizing price behavior which is based on underlying realities rather than ad hoc empiricism or numerology. This is fundamentally a scientific question, quite apart from the tactical matter of utilizing such knowledge for trading advantage. In a broad sense we may thus distinguish between what might be called the scientific and the engineering aspects of MIDAS, where the former encompasses the quantitave "laws" which give rise to the S/R hierarchies, and the latter refers to practical trading rules and techniques based on this understanding.

We made a start on the engineering side by showing how the "foothills" could be recognized and used as a low risk/high reward entry point for intermediate term long positions. Here the window of opportunity is quite wide in time since the foothills have a typical time scale of the order of months and it is merely a matter of scrutinizing a sufficiently large number of stock charts to find some likely candidates. Once one gets used to spotting foothill behavior in the gentle undulations of conventional bar charts, a few hours each month leafing through a book of daily basis stock charts will suffice to identify at least 30 or 40 such candidates justifying further analysis using quantitative MIDAS methods.

The reversal of a long consolidation or bear leg within a primary bull move, via a bounce from S1 or S2 provides an even better trading opportunity since the gains come much more quickly and the price objectives are well defined. (At a minimum one expects to reach the nearest resistance level, usually an R1 or R2. If this is penetrated then the next objective is the previous high.) The window of opportunity is however much shorter, typically a few days to a few weeks. Furthermore, for any given stock there may only be one or two such opportunities per year.

Thus while MIDAS methods could be used on single stocks to determine good entry points for long positions suggested on fundamental (as opposed to technical) grounds, the trader will monitor many stocks (of the order of hundreds) in order that sufficient opportunities will be found to keep capital off the sidelines. To facilitate the application of MIDAS to a large universe of stocks in real time, we have developed some interesting techniques for compressing a fairly complete MIDAS characterization of a given stock into a few ascii characters.

This is illustrated in the first figure which contains a Midas chart of EMC Corp. By now this should be so familiar that no commentary is required. (Although one cannot refrain from marvelling at how well the trend reversals are anticipated!). Above the chart is a single line of ascii characters and its associated legend.



Note the line of dashes bounded by an "l" (for low) and an "h" (for high). This represents a price range extending from 2.63 to 23.38 in this case. The capital "S" denotes the relative position within this interval of the primary support level S1. The corresponding positions of the secondary and tertiary supports are indicated by lower case "s"'s. The asterisk is the average price for that particular day. Thus this so-called MIDAS Profile shows the number of S/R levels (resistance levels use "r" instead of "s"), their relationship to each other and to the latest price, as well as where they all stand in relation to the high and low for the historical period in question.

Two further features may be simply added to convey even more information. If a given S/R level is particularly well "validated" (i.e. it has successfully predicted several trend reversals with little porosity), we can underline the symbol as we have done for S2 (or it could be made boldface if the software and printer permit). In addition, if the asterisk should happen to coincide with an S or an s, we can replace it with a >> or a > (or << or <) respectively. This has the effect of immediately calling attention to the fact that the price is at an S/R level and perhaps ready to bounce.

In addition to this pseudo-graphical technique, we generate the three ratios defined in the graph. OBVR is an obv ratio measuring how far the obv has retreated from its peak value. The closer OBVR is to unity, the more bullish the outlook. DIST (standing for "distension") is a normalized measure of how close the latest price is to S1. SPRD (for "spread") measures the volatility of the stock over the historical period of study.

Trading rules can be developed based on these three quantities. For example, one can only enter long positions when OBVR exceeds a certain threshold, DIST is less than another threshold (i.e. close to S1 and ready to bounce) and SPRD is greater than a third threshold (to weed out stocks that are not volatile enough to have a sufficient potential reward). Now a neural network trained on these inputs might have some hope of success!

For a group of stocks, one would then generate each day a table such as that shown in the second figure. With a little practise one can thereby review a few hundred stocks in a matter of minutes to identify interesting opportunities.

TABLE OF MIDAS PROFILES FOR A UNIVERSE OF STOCKS

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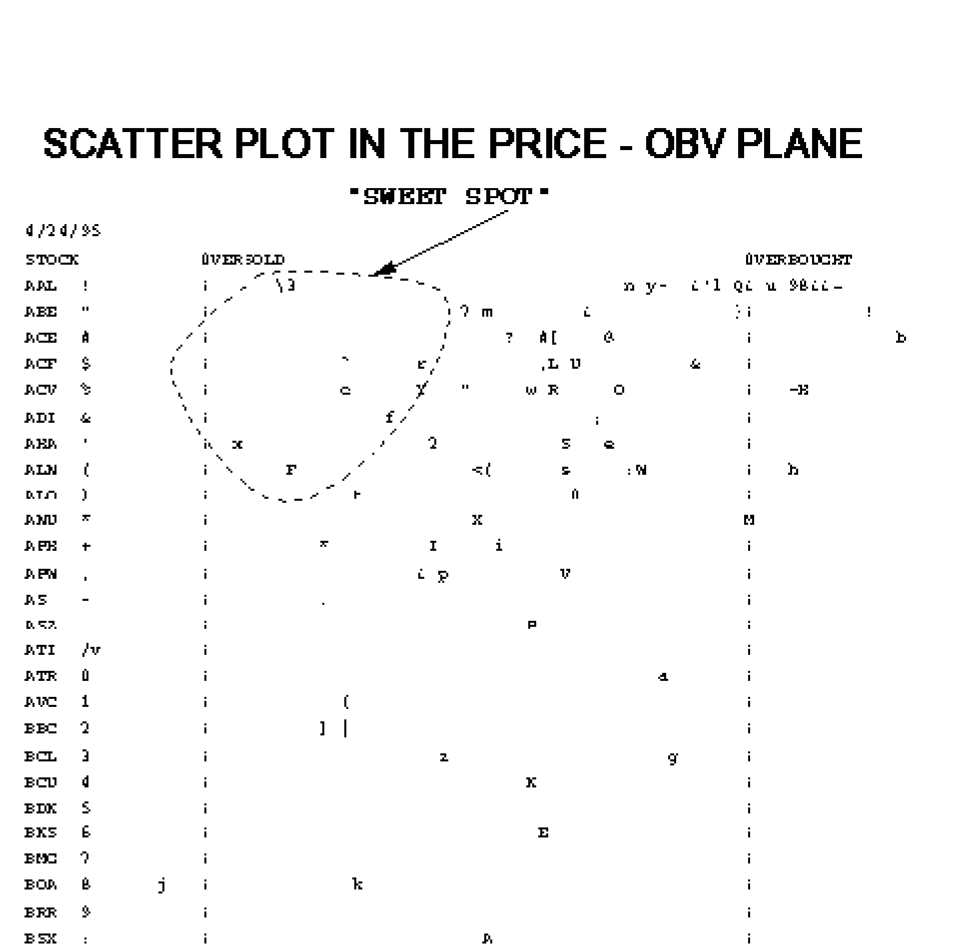
4/24/95
 OBVR  DIST   $PRD STOCK $MIN  $MAX 1----------------------------------h
0.987 0.610 0.733 AAL   14.13  24.5 1--------------S-s--------s--------*
0.953 0.243  1.71 ABE       3  8.13 1----------------------S---r---s*--h
0.978 0.315 2.129 ACE    6.63 20.75 1---------------------Sss---s-r--*-h
    1 0.573     3 ACF    2.25     9 1--------------S----------s--------*
    1 0.503 0.582 ACV   19.75 31.25 1----------------S----ss-s---------*
0.969 0.454 3.130 ADI    6.75 27.88 1----------------s---s----------*--h
    1 0.466  3.46 AHA       3 13.38 1----------------S----s-s--------*-h
0.924 0.262 0.804 ALN   14.13  25.5 1------------------S-----s--*-s----h
0.982 0.351 0.826 ALO      13 23.75 1-------------------Ss----s-----*--h
0.897 0.117 1.937 ANU       4 11.75 1------------------S-s-*-r-r-------h
    1 0.574 1.709 A$H   10.75 29.13 1---------------S------------------*
0.964 0.311 0.703 A$W   15.63 26.63 1--------------------S-----s----*--h
    1 0.422 0.593 AS     4.63  7.38 1--------------------S-------------*
0.873 0.116 1.103 ASZ    7.13    15 1------------------S---*--s--s-----h
0.473 -0.06 0.493 ATI   20.25 30.25 1-----------------*-S-s------------h
0.918 0.344 0.481 ATR   20.25    30 1-------------------S-----------*--h
0.458 -0.08 0.640 AVC    8.38 13.75 1------------------*--S-----r------h
0.937 0.218 1.017 BBC      14 28.25 1--------------------S--s---s*-s---h
    1 0.087 2.072 BCL   11.88  36.5 1------sR--*-----------------------h
0.558 -0.14 1.914 BCU    8.88 25.88 1-------------*-sr-rS--------------h
    1 0.458 0.765 BDK   17.13 30.25 1-----------------Ss-------s------*h
0.148 0.006 0.573 BKS    20.5 32.25 1-------------------->-------------h
0.983 0.248 1.576 BMG       5 12.88 1-------------------S----s-s-*-----h
```

Another visual technique is the scatter plot shown in the third figure. Here, each stock is assigned an ascii symbol which is then positioned in the plane according to its OBVR and DIST coordinates. DIST is the horizontal axis, where we have placed "oversold" corresponding to DIST=0, and "overbought" when DIST=.5. (The reason for the latter choice will emerge when we develop the equation for an S/R level).



Since we wish to easily spot situations when a stock is close to S1 with a high OBVR, we need merely watch the region marked "sweet spot" and then have a closer look at the MIDAS charts for those stocks which show up there.

On a more sophisticated level, one can program customized trading systems based on MIDAS for inclusion in one of the many commercial trading software packages to do such scans automatically, aided perhaps by additional filtering using other tools of conventional technical analysis. I'll give some examples of this in a later article.

[Return to Investment Research]

Paul Levine first became interested in technical analysis when he was a "runner" on Wall Street as a high school student. After graduating from MIT and gaining a PhD in theoretical physics from CalTech, he took a fresh look at the problem some thirty years ago and stumbled upon what has now evolved into the Midas method. Following retirement as Chief Scientist and a co-founder of Megatek Corporation in 1981, he developed further elaborations of the method and is now in his fourth year as a professional trader. He can be reached at: **winmidas@winmidas.com or visit the [WinMidas website].**
