MARKET TECHNICIAN

The Swiss Association of Market Technicians will be hosting this year's IFTA conference in Lugano from 26-28th October. The theme – New Methods for Intermarket Technical Analysis – is particularly topical given that in May and June we witnessed what one analyst described as a 'five standard deviation event' when almost all asset classes from blue chip stocks to emerging markets, bonds and commodities were falling together. It will be interesting to hear what John Murphy, one of the prime movers behind Intermarket Analysis, has to say on this curious development. Other speakers will include John Bollinger, Robin Griffiths, Perry Kaufman, Martin Pring and Hank Pruden. For further information about the conference go to www.samt-org.ch or www.ifta.org

The Futures and Options World (FOW) conference took place on June 21st-22nd 2006 at its new venue at the Queen Elizabeth II Conference Centre in Westminster. These conferences give the STA a good opportunity to raise its profile amongst the professional community as well as to teach technical analysis to a wider audience. They also give STA members who may struggle to come to the evening seminars the chance to attend a day time session on the subject.

The STA organised two speakers for the FOW conference. The talks were based upon the theme of technical analysis and trading in the futures markets. Technical analysis has become increasingly integrated into main stream investing, and we thought it would be interesting to ask analysts what studies they find most useful for predicting market trends. The speakers discussed how they use technical analysis to formulate trading ideas and also analysed the main themes emerging for the second half of 2006. Tom Hobson – head of EMEA fixed income strategies at Merrill Lynch – gave a talk on the application of technical analysis in fixed income and

discussed the main techniques he applies to this market. Our other speaker was Tim McCullogh – founder of Quando analysis. His talk focused on Tom De Mark's TD sequential and TD combo. He discussed the rationale behind these indicators, their construction and how to use this form of analysis for trade entry and risk management. We are grateful to both speakers for representing the Society at this event. Tom Hobson and Tim McCullogh have recently spoken at our monthly meetings and articles based on their talks are included in this issue of the Journal.

The Diploma exam this spring was a difficult one. While 45 candidates passed, 26 failed and there were only two Distinctions. Even so the average mark was 63%, which was the same as last year and marginally better than the long term average of 61%. From the examiners' reports it emerged that failure to annotate charts professionally was a common problem. Three senior professionals have joined the marking team and their contribution together with those of the regular stalwarts is greatly appreciated. The standard of the exam is demanding and successful candidates (whose names are listed on page 2) should be proud of their achievement.

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FOR YOUR DIARY

N.B. Unless otherwise stated, the monthly meetings will take place at the Institute of Marine Engineering, Science and Technology, 80 Coleman Street, London EC2 at 6.00 p.m.

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Please keep the articles coming in – the success of the Journal depends on its authors, and we would like to thank all those who have supported us with their high standard of work. The aim is to make the Journal a valuable showcase for members' research – as well as to inform and entertain readers.

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Spring exam 2006

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An exploration of the nature of bull market tops

By Paul F. Desmond

Almost every investor harbors the secret wish of being able to sell out on the exact top day of a bull market. The bragging rights would last a lifetime. But, exactly how does an investor identify the top day? An easy answer might be that it is the highest level reached by the Dow Jones Industrial Average (DJIA) before a major market decline. This is probably a reasonably good answer for historians studying the long term trends of the stock market, but it is not a practical, working answer for investors, since it can only be known long after the top occurred. Another answer might be that the exact top of a bull market is the point at which the vast majority of stocks reach their highest price levels for many years to come. More than a few investors would say that the first answer and the second answer are synonymous; that the majority of stocks reach their peaks at the same time as the peak of the DJIA. But, is that actually the case? Do most stocks reach their price peaks in unison, and do they do so simultaneously with the major price indices? Does what seems so logical match actual experience?

There is a dearth of information about the nature of major stock market tops, and the sparse information that does exist is more theoretical than statistical. Stock market guru, Joseph Granville, once surmised that one-third of stocks reach their final bull market price peaks in advance of the DJIA's peak, one-third reach their highs in unison with the DJIA's peak, and one-third reach their peaks after the DJIA's peak. However, the sheer simplicity of Granville's theory suggests that it was based more on guesswork than on hard statistical analysis.

One thing that investors have known, if only in a very vague sense, is that major market tops are not the same as major market bottoms. Much more work has been done in defining the nature of major stock market bottoms than in understanding the nature of bull market tops. A 2002 Lowry study titled *Identifying Bear Market Bottoms and New Bull Markets,*[1] showed that major market bottoms can often be identified by evidence of panic selling in which investors dump stocks with abandon. (Panic selling is defined as one or more 90% Downside Days i.e. days on which downside volume equals 90% or more of the upside plus downside volume and on which points lost must equal 90% or more of the sum of points lost and gained over the day.) Then, when the desire to sell has been exhausted, buyers suddenly rush in to snap up the bargains (and cover short positions), resulting in a 90% Upside Day. The combination of panic selling across a broad spectrum of stocks, followed quickly by broad, enthusiastic buying, produces what might be described as a classic "V" pattern of prices at major bear market bottoms.

Bull market tops, on the other hand, tend to develop gradually over a long period of time. The reasons for this gradual process are easy to understand: It is the Law of Supply and Demand at work. Just as bull markets result from strong, persistent investor demand for stocks, bull market tops evolve when investors gradually stop buying. Some investors simply run out of new money to invest. Others begin to see individual stocks as being overvalued, and begin to hold back on new purchases. Whatever the reasons, the stock market cannot continue to advance

without demand exceeding supply. The evolution of investor psychology from strong buying enthusiasm for stocks to passivity or complacency does not occur suddenly. Thus, bull market tops are commonly diffuse, possibly lulling most investors into inaction. Perhaps it is the slowness of the entire process that makes it difficult to recognize a bull market top.

However, beyond this vague and somewhat hypothetical supposition, little or nothing more is known about the nature of bull market tops. Despite our almost total lack of understanding of the subject, the end of a bull market and the simultaneous start of a new bear market is undoubtedly one of the most important moments in time for any investor. Many investors have experienced the frustration and anguish of making big stock market gains in a bull market, only to watch the gains turn into big losses during the subsequent bear market. Thus, the ability to avoid capital losses is, in many ways, a more important objective for investors than making big gains. Perhaps it is our almost total lack of understanding about the end of bull markets that is responsible for investors' almost universal inability to avoid bear markets. A greater understanding of investor psychology near bull market tops might emit warning signs in the making, and allow at least some alert investors to be able to take defensive actions in advance of the devastating losses that typically occur in the subsequent bear market.

There are several helpful tools that technical analysts have used for many decades to warn of impending stock market tops, such as the Advance-Decline Line and the number of stocks recording New 52-week Highs. History shows that these indicators often top out and begin to contract, as individual stocks fall by the wayside, months in advance of the final top in the Dow Jones Industrial Average. Therefore, it would not be a surprise to find that all stocks do not reach their peaks simultaneously or in unison with the DJIA. But, it is the degree and the intensity of the divergences of individual stocks from the DJIA that had never been measured before – until now.

Discoveries in science are frequently the result of happenstance rather than great scientific detective work. The discoveries to be related in this paper regarding bull market tops began in exactly that fashion. My firm, Lowry Research Corporation, had purchased rolls of microfilm of the Wall Street Journal covering the period from 1920 through 1930. Being able to step back in time, if only in recorded history, is a special experience. The first frame to be viewed in the microfilm reader, purely out of curiosity, was the page containing the New York Stock Exchange trading of September 3, 1929 – the absolute top day for the DJIA prior to the 1929 Crash. It is ironic that 1929 is undoubtedly one of the most important dates in stock market history, and so little is known about the forces of supply and demand at work in the market during that period.

In simply looking around at the trading data from that day – at the many unfamiliar names of the companies traded, at the volume of trading, at the highest prices for each stock – it became apparent that some stocks had traded that day at prices below their 1929 highs. Some stocks were considerably below their

Fig 1: Stock prices for September 3, 1929

Source: Wall Street Journal

yearly high. That seemed strange for a day on which the DJIA was at the absolute highest point in history and at a level that would not be seen again for the next 20 years. Upon closer examination, it was difficult to find stocks that were at their highs on that fateful day.

Intuitively, something seemed to be very wrong. On a day when common sense would dictate that most stocks should have closed at their all-time highs, it was determined that very few stocks had closed at, or even near, their 1929 highs. Many stocks were down from their highs by 20% or more (Last price was lower than 1929 High price). Thus began a detailed examination of the trading of September 3, 1929. The results were most surprising.

Table 1: Examination of Trading on September 3, 1929

BULL MKT TOP DAY	% STOCKS @ NEW HIGHS	% AT OR < 2% OF NEW HIGHS	% OFF 20% OR MORE	% OFF 30% OR MORE
09/03/1929	2.30%	15.62%	31.84%	18.77%

On the day on which the Dow Jones Industrial Average reached its absolute high for the 1920s bull market, the percentage of stocks making new 1929 highs that day was not 80% or 75% or even 70%. It was 2.30%. Out of 826 stocks that were traded on the New York Stock Exchange that day, only 19 stocks made their highs. Equally surprising, only 15.62% of all issues traded on the NYSE were either at, or within 2% of their 1929 highs. In other words, about 84% of all stocks had topped out and had begun to decline at some time prior to September 3rd. In fact, it was determined that, on the same day that the DJIA reached its all-time high, 31.84% of the stocks traded on the NYSE had already declined by 20% from their 1929 highs. 18.77% of stocks had declined by more than 30%. Stocks at, or within 2% of their highs were dwarfed by the number that had already lost 20% or more from their 1929 highs. Thus it became apparent that the absolute top for the vast majority of stocks had probably occurred months – perhaps many months – before September 3, 1929. And yet, there had been no single, outstanding day of rally prior to September 3rd that investors could identify as the ideal point at which to shift portfolios to a more defensive composition.

The pressing question was whether the 1929 case was a total anomaly, or whether somewhat similar conditions would be found at other important bull market tops throughout history.

Therefore, we expanded our study to include each of the fourteen major bull market tops, based on the Dow Jones Industrial Average, from 1929 through 2000. Our basic assumption was that most stocks reached their highest prices in unison with the Dow Jones Industrial Average. But, our examination of each stock traded on the New York Stock Exchange, comparing their bull market highs to their closing prices on the peak days of the Dow Jones Industrial Average, showed an unexpected picture.

Table 2: Examination of Trading at Fourteen Peaks in the Dow Jones Industrial Average

BULL MKT TOP DAY	% STOCKS @ NEW HIGHS	% AT OR < 2% OF NEW HIGHS	% OFF 20% OR MORE	% OFF 30% OR MORE
09/03/1929	2.30%	15.62%	31.84%	18.77%
03/10/1937	6.05%	21.34%	5.94%	1.06%
05/29/1946	8.59%	30.44%	6.30%	0.86%
04/06/1956	5.32%	23.36%	1.92%	0.42%
01/05/1960	1.60%	5.83%	23.25%	7.67%
12/13/1961	3.56%	11.83%	25.29%	11.60%
02/09/1966	9.66%	19.04%	9.52%	2.68%
12/03/1968	9.43%	20.12%	9.51%	2.36%
01/11/1973	5.30%	11.82%	34.22%	20.51%
09/21/1976	10.97%	22.88%	21.65%	10.09%
04/27/1981	7.09%	15.18%	28.01%	9.39%
08/25/1987	6.23%	15.23%	17.37%	7.44%
07/16/1990	5.35%	18.11%	37.31%	22.74%
01/14/2000	3.54%	6.31%	55.33%	32.45%
AVERAGE	5.98%	16.88%	21.97%	10.54%

These findings defy the conventional wisdom about the nature of stock market tops. In each case, 11% or less of stocks (average 5.98%) were making new highs along with the new high in the DJIA – a generally accepted proxy for the broad list of stocks. Further, in nine of the 14 cases covered in this study, a significant number of NYSE-listed stocks (average 21.97%) had already dropped in price by 20% or more before the DJIA had reached its bull market peak.

The primary conclusion to be drawn from these fourteen cases is that the vast majority of stocks reached their bull market highs well before the peak of the Dow Jones Industrial Average. If a portfolio manager had somehow been able to sell out on the absolute top day of the DJIA in each of the fourteen cases studied
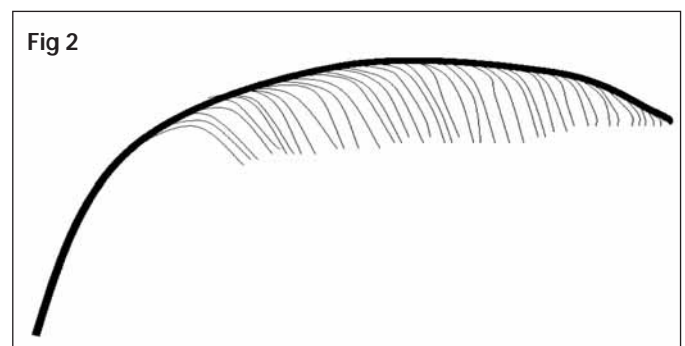
Fig 2

Table 3: The Dow Jones Industrial Average components as of September 3, 1929

DJIA Components	1929 High	Sept 3, 1929 Close
Allied Chemical	354 $\frac{3}{4}$	354
American Can	184 $\frac{1}{2}$	181
American Smelting	129 $\frac{1}{8}$	128 $\frac{1}{8}$
American Sugar	94 $\frac{3}{4}$	81 $\frac{3}{4}$
American Tobacco	205	200
Atlantic Refining	77 $\frac{7}{8}$	65 $\frac{5}{8}$
Bethlehem Steel	140 $\frac{3}{4}$	136 $\frac{3}{4}$
Chrysler	135	71 $\frac{7}{8}$
Curtis Wright	30 $\frac{1}{8}$	29
General Electric	403	391
General Foods	81 $\frac{3}{4}$	71 $\frac{7}{8}$
General Motors	91 $\frac{3}{4}$	71 $\frac{3}{4}$
General Railway Signal	126 $\frac{1}{2}$	123 $\frac{1}{2}$
Goodrich	105 $\frac{3}{4}$	73
International Harvester	142	140
International Nickel	72 $\frac{3}{4}$	54 $\frac{1}{2}$
Mack Truck	114 $\frac{3}{4}$	97
Nash Motors	118 $\frac{7}{8}$	84 $\frac{5}{8}$
National Cash Register	48 $\frac{3}{4}$	125 $\frac{3}{4}$
North American	186 $\frac{3}{4}$	184 $\frac{1}{8}$
Paramount	74	72
Radio Corporation	114	98 $\frac{1}{8}$
Sears Roebuck	181	171
Standard Oil N. J.	73 $\frac{7}{8}$	70 $\frac{3}{4}$
Texas Corporation	71 $\frac{3}{4}$	68 $\frac{1}{2}$
Texas Gulf Sulphur	85 $\frac{1}{4}$	72
Union Carbide	137 $\frac{7}{8}$	135 $\frac{3}{4}$
U. S. Steel	261 $\frac{3}{4}$	257 $\frac{5}{8}$
Westinghouse	295 $\frac{5}{8}$	285 $\frac{7}{8}$
Woolworth	100 $\frac{7}{8}$	99

of the 30-stock Average, the price weighting of the components was producing an undue influence on the movements of the DJIA. However, the bigger issue is that the evidence drawn from all fourteen cases suggests that the highest price levels for the vast majority of New York Stock Exchange listed stocks have tended to occur well before the final peak in the DJIA.

The final days of a bull market are substantially different than the final days of a bear market. At most bear market lows, because fear and panic are the dominant emotional drivers, the vast majority of stocks tend to bottom in unison. At most bull market tops, where investors have been lulled into complacency, the vast majority of stocks seem to top out on an individual basis. This is not much different than observing that a farmer usually plants all of his seeds at the same time in the Spring. However, not all of the fruit reaches the point of peak ripeness at the same time. The ripe fruit must be picked individually, rather than all at once. In the same way, investors must commit to buying stocks quickly after a major market bottom, but must sell stocks one by one, as they reach their individual peaks.

This simple study of bull market tops should have far-reaching implications for all investors. The conventional wisdom of what a major market top looks like must be completely revised. Every portfolio manager must create a new strategic plan as to how and when to take defensive action. And, new indicators must be devised to eliminate the current guesswork of where individual stocks are within the primary trend. Investors must be able to see, and have time to react to, the gradual deterioration of market breadth that precedes periods of substantial stock market losses. We will leave it to other researchers and analysts to determine all of the various reasons why so few stocks have reached their bull market highs in unison with the Dow Jones Industrial Average. Our principal concern, at this point, is to alert investors to the conditions that have consistently occurred at important stock market tops. Future studies will address the need to develop new indicators and a new portfolio management strategy to deal with the challenging conditions revealed in this study.

Paul F. Desmond
Lowry's Reports, Inc.

Paul F. Desmond is the President of Lowry's Reports, Inc., the oldest technical investment advisory firm in the Nation.

[1] Reprints are available at http://www.lowrysreports.com/ research_studies.cfm

here, in most instances the portfolios would have already lost a considerable amount of value by that time. Investors who may have thought themselves lucky enough to sell all of their stocks on the exact top day of the DJIA could have actually suffered significant losses. The amazing similarity of the statistics in these fourteen cases suggests a pattern of deterioration at major market tops that investors cannot afford to ignore. In searching for a way to describe this phenomenon of market deterioration – the gradual process of hundreds of individual stocks rolling over into their own bear markets, one by one, over a period of many months – the picture of a feather emerged (as shown in Fig 2). We think that image is just about right.

Our study appears to show that the Dow Jones Industrial Average is a less than ideal proxy for the broad list of stocks. For example, as shown in Table 3, above, in the 1929 case, none of the thirty component stocks were making new highs along with the Industrial Average on September 3, 1929. This is due to a large extent to the reporting of closing numbers for the Average on a theoretical basis.

The study also suggests that, even at that early time in the history

Market timing in trend exhaustions:
an introduction to TD sequential™ and TD combo™

This article is a summary of a talk given to the Society on 10th May, 2006   By Tim McCullough

Introduction

The majority of popular technical indicators are designed to measure trend and momentum and so naturally lag the price action, with the inherent consequence that the "tops and tails" of trends are missed. This is acceptable for many investors, particularly in liquid markets, but can have significant impact where trends exhaust with dramatic peaks or troughs. In these instances such a significant proportion of the overall trend can be missed before confirmation of a trend reversal by lagging indicators, as to make the overall risk / reward ratio of trading that move relatively unattractive. Unfortunately slippage can exacerbate the situation. In a strongly rising market, liquidity on the bid is never an issue, but the initial phenomenon in many trend reversals is rarely a sudden rush of sellers from nowhere, but usually the unexpected disappearance of buyers, even as sentiment remains strongly bullish. As prices start to falter and trend followers start to take profits, the lack of liquidity on the bid can very quickly cause alarming degrees of slippage, causing downside gaps to appear in the price action. When this happens fresh sellers can emerge to exacerbate the illiquidity on the bid. Unfortunately not only those with large positions face this problem when trading trend reversals; if a hedge fund suffers slippage when liquidating a large position, the same price gaps created by that fund will affect the trader with even the smallest position. So while the benefit is obvious of taking profit on a long position as close to the peak of a trend as possible, it is also far preferable to time this moment to find deep liquidity when doing so. The same naturally goes for timing entry into a fresh short position at such a peak.

Tom DeMark understood this problem of timing market entry and exit over 30 years ago. In the days before widespread access to computer software, he literally drew manual comparisons of price patterns on thousands of charts. His observations led him to devise a wide range of market timing indicators which challenge some popular methodologies, such as by drawing trendlines from right to left and measuring overbought / oversold conditions in terms of time as well as in price.

My principal aim is to describe perhaps his two most famous indicators (TD Sequential and TD Combo), which measure the extent of a trend and indicate a zone in which it is most likely to finish. Not only does this help time profit-taking in an existing trend, it also provides low-risk opportunities for entering contrarian positions without suffering the slippage described above. I shall describe the purely mechanical nature of their initiation, their dynamic development and the specific nature of their conclusion. These features have all been devised by Tom DeMark (who owns their patent), but I shall add a couple of personal observations of my own about utilising them. Unfortunately as Tom DeMark has written three books on these and other indicators, this short introduction cannot cover thoroughly common but detailed issues such as recycling (where a reversal indication can be superseded by a sign of a reinforced trend), cancellation of Sequential or Combo patterns prior to

completion, overlapping patterns, reversal targets or the importance of true opening levels. The examples provided here demonstrate how applicable both Sequential and Combo are across all asset classes, assuming reliable data. Although these examples concentrate on medium-term charts, the more recent widespread availability of intraday data has revealed that both indicators can be as valuable even where sufficient 1 minute data are available as with charts from daily to annual timeframes

TD Setup™ and TDST™

Both Sequential and Combo require the preliminary formation of Setup. This is a minimum pattern which demonstrates that the early stage of a trend has formed. In the case of a rising trend, a sell Setup is initiated by a bar closing below the close 4 bars earlier, followed immediately by a bar closing above the close 4 bars earlier. This is known as a price flip and because it is so easily observable it eliminates the need for any subjectivity about when to start observing a Setup pattern. This price flip is counted as bar 1 of the sell Setup (typically coloured blue or green in most software) and must be followed by a minimum of 8 consecutive bars, each with a close above the close 4 bars earlier. If at any stage this sequence is interrupted by a bar closing below the close 4 bars earlier, a price flip occurs to the downside, all the numbers so far counted in the sell Setup are disregarded and the count of a buy Setup is initiated in the opposite direction.

The reverse is required for a buy Setup in a declining trend. A bar closing above the close 4 bars earlier is followed immediately by a close below the close 4 bars earlier to produce a price flip lower. This is counted as bar 1 of the buy Setup and must be followed by an uninterrupted sequence of at least 8 more bars closing below the close 4 bars earlier.

In itself a Setup can lead to a trend reversal. It should at least be followed by a consolidation or mild correction before the trend continues into the full Sequential or Combo.

Nasdaq 100 Index (monthly chart). TD Setup buy and sell patterns identify most of the major reversals and consolidation points between 2000 and 2006.

The likelihood of a Setup leading to a reversal or merely a correction in a stronger trend can often be assessed with TDST.

TDST is a fixed support / resistance level, mechanically generated when a Setup reaches a minimum of 9 bars. In the case of a sell Setup in a rising market, the bar within the Setup with the lowest level is selected. Its true range is identified, ie if it gapped higher from the previous bar, then use the close of the last bar not to have gapped. The true range is subtracted from the low of that bar to give the level of the TDST support. As a guide, if a Setup completes a minimum of 9 bars without closing beyond the TDST of the previous Setup in the opposite direction, then the new Setup is more likely to indicate range trading and less likely to develop into a stronger trend which can be measured by Sequential or Combo (below).

EUR/HUF (weekly chart) shows a period of range trading following the downtrend in 2004 (coincidentally ending with a Combo 13 buy pattern). The lowest level of the sell Setup in early 2005 generates the TDST support at 242.68. When the next buy Setup completes in Aug 2005, it has held above the TDST, making a deeper reversal more likely than a mere correction. When the new TDST resistance generated from this buy Setup is broken at 250.92, a prolonged uptrend becomes more likely.

TD Sequential™

Once a minimum 9 bars of Setup are completed, the second part of Sequential (known as TD Countdown) can commence, but Countdown cannot form in isolation without a prior Setup. From bar 9 of Setup onwards, a fresh pattern should be observed. In the case of a rising trend a sell Countdown is initiated by the first close equal to or higher than the high 2 bars earlier. This is noted as bar 1 of a Countdown (typically red 1 in most software). The same pattern is recorded up to bar 12, but this time not necessarily consecutively.

By this stage the price action should be demonstrating at least a recognisable form of uptrend, but it may be that the trend has been gradual, with the numbered bars appearing only intermittently in an otherwise shallow uptrend. This could mean that the final required bar of Countdown (red 13), may be nowhere near the peak of the trend so far, which would make it

an unattractive indicator for timing trend exhaustion. To reduce this likelihood, a standard parameter is incorporated into most software which defers bar 13 if the high of 13 is not equal to or higher than the close of bar 8. So long as a potential bar 13 meets the minimum requirement of having a close equal to or higher than the high 2 bars earlier, it can be shown by an alternative mark on the chart to indicate that this final termination count of Countdown has been postponed until it meets the condition relative to bar 8. It is also considered optional to postpone bar 8 until the high of 8 exceeds the close of bar 5.

The final option in relation to bar 13 is to compare the open rather than the close of bar 13 with the high 2 bars earlier. Apart from an impact on calculating the risk level (see below), my personal view is that this is inherently neither more conservative nor more aggressive than using the close of bar 13, but that it is important to be consistent in your choice of this termination count.

Once bar 13 is finally recorded, a Sequential pattern has been completed and an exhaustion of the uptrend should now be expected, occasionally immediately but usually within 12 price bars. Such a price reversal could also start at any level between where the 13 is marked and a mechanically generated risk level, thus creating an exhaustion zone. This risk level is created by identifying the bar with the highest level from the beginning of Setup to the end of Countdown. This bar is examined for its true range, ie if it has gapped from the previous bar, its low is counted from the close of the last bar before a gap was observed. That true range is added to the high of the bar and the resulting level becomes the risk level for that Sequential sell pattern. As the risk level appears simultaneously with bar 13 of Countdown, selecting the option of using the open of bar 13 in the termination count (see above), would mean that the risk level worsens between the open and close of that bar if fresh highs are reached before the close of the bar, which is why some users prefer to use the close rather than the open of bar 13. There is not the space here to examine in detail the various ways of treating this risk level in terms of risk management, as not all users choose to adopt the precise methodology of Tom DeMark, but most standard software should reflect his standard settings and continue to display the risk level until it is broken according to those criteria. In a crude manner the calculation of the risk level reflects some of the volatility during the lifetime of the same trend which is now expected to exhaust.

Even after bar 13 and the trend exhaustion zone is identified, there are various procedures available to fine tune the trading opportunity, depending on how aggressive a trading style is used. These vary from trading the moment bar 13 is identified to using a variety of other short-term TD indicators which cannot be described here, while some conservatively prefer to wait for the next price flip to start a new Setup. I personally also use shorter time frames of the same chart for this purpose (see later example of GE below).

In the case of a buy Sequential in a declining trend, just reverse all the criteria for the Sell Sequential, ie from bar 9 of a buy Setup, mark bar 1 of Countdown where a bar closes equal to or below the low of 2 bars previously, with the low of bar 13 being equal to or lower than the close of bar 8 and use the true range (adjusted for any gaps) of the bar with the lowest level in the entire sequence to calculate the risk level.

Dow Jones Industrial Average (yearly chart), with a TD Sequential sell pattern indicating the exhaustion of the uptrend between 1932 and 1972, just before the oil crisis of 1973/4. Note that another sell pattern completed in 2004.

EUR/NOK (weekly chart), showing 4 buy and 2 sell TD Sequential patterns. Apart from catching the major low in Jan 2003 and the major high in Feb 2004, it caught interim rallies in Nov 2004, Sept 2005 and May 2006. Only the Dec 2003 sell pattern proved false.

Intertek Group (daily chart), with an example in the second

Sequential buy pattern of bar 13 deferred until its low is below the close of bar 8. Note that a red cross appears under any preceding bars which otherwise meet the countdown condition of closing below the low of 2 bars earlier.

TD Combo™

Despite its invaluable use as a market timing tool, two drawbacks with Sequential became apparent over time. On occasions bar 13 occurred just before a significant trend reversal finally got under way, but not at the high of the trend so far, while the frequency of recycling (where a fresh Setup reinforces a trend shortly before a Sequential pattern reaches 13) could become frustrating at times. To counteract these issues, Tom DeMark devised Combo as an additional indicator. There are many similarities, since it is designed to identify the same trend exhaustion zones, but the differences are sufficient to allow it to be used in its own right. I have no preference between the two, but shall outline later how effectively they can be used together.

As with Sequential, Combo requires Setup as a preliminary pattern, so that it cannot commence without it. However the Countdown element of Combo has significantly stricter criteria than Sequential, which have the effect of reducing the instance of recycling and most importantly ensuring that bar 13 occurs at the high of the trend so far (note that "so far" is not necessarily the same as "for sure"!).

The Setup component is initiated and constructed in the same way as in Sequential, but the first difference is that once Setup has reached a minimum of 9 bars, Countdown can start right back from the beginning of Setup. In the case of a sell Combo in a rising trend, the three separate countdown criteria are as follows. Each close is equal to or higher than the high 2 bars earlier, each high is higher than the high of the previous bar and each close is higher than the close of the last numbered Countdown bar (except bar 1). The reverse naturally applies for a buy Combo in a declining trend.

These represent two criteria more than in the Countdown of Sequential, so many users now use a slightly relaxed version, in which for bars 11, 12 and 13, the only criterion is that each close is equal to or higher than the close of the last numbered Countdown bar.
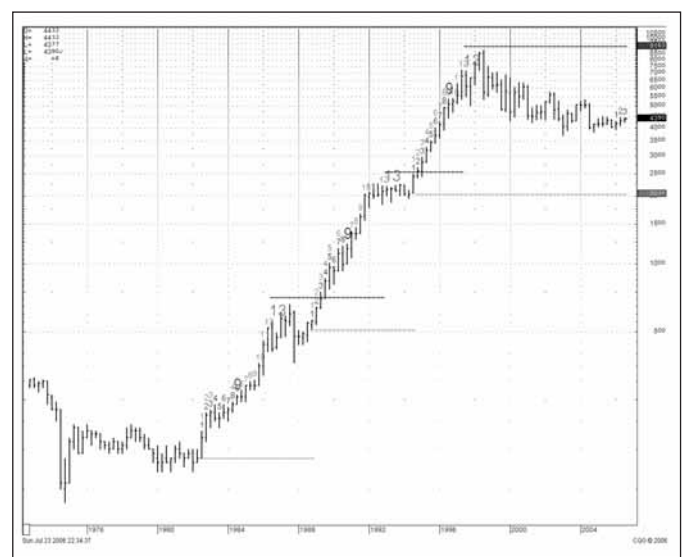

Coca Cola (quarterly chart), with TD Combo identifying both major corrections in the uptrend since the 1980 low. Eventually it correctly times the major exhaustion zone.

One effect of these criteria is that bar 13 is always at the extreme of the trend thus far, but perhaps an unexpected result is that Combo often completes shortly before Sequential. Depending on the timeframe of the signals and the relatively aggressive style of the trader, this feature can often be traded profitably.

The risk level is calculated in exactly the same manner as in Sequential, while the precise trading opportunity can similarly be fine tuned further with other TD Indicators and time frames, depending on the degree of trading aggression.

USD/JPY (daily chart), showing first a TD Combo sell pattern in Dec 2005, followed by a series of TD Setup buy and sell patterns which caught interim peaks and troughs, culminating in a TD Combo buy pattern in May 2006.
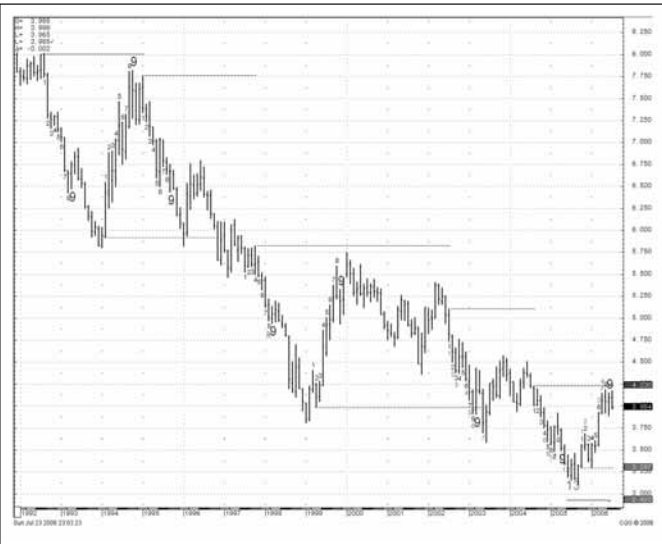
Bund yield (monthly chart), demonstrating the dynamic nature of Sequential and Combo.

The various buy Setups during the decline in yield would each have initiated Countdown patterns, but most of these failed in turn to complete due to the various rules of cancellation and recycling (not covered in detail here). This leaves just the final pattern so far, which notably combined Combo and Sequential buy patterns completing on exactly the same bar.

Some personal applied uses

The inherent problem with using only contrarian indicators is that a

trend may continue to reinforce itself, despite intermittent corrections. This is the case in the quarterly chart of Coca Cola above, where two Combo patterns identified interim exhaustion zones, but in each case the trend picked up again and only the third Combo pattern identified the real trend exhaustion zone. An obvious solution is to start analysing a long-term chart to identify what sort of overall trend or range the security is in. This can help determine if a Sequential or Combo pattern on a shorter-term chart is part of a bigger trend reversal or just a correction within a major trend.

Combining Setup, Sequential or Combo can in itself however be beneficial.

For example as already mentioned, when Combo is completing, Sequential can be close behind. Depending on the time frame of the chart and how aggressive the style of trading, this can offer trading opportunities before a trend reversal finally gets under way.


Crude Oil, CLU6 (daily chart), showing a Combo sell pattern completing, when a Sequential sell pattern is on bar 11. A final rally to complete the Sequential does not always happen, but a variety of trend-following indicators and short-term TD Indicators after the Combo can help assess the probability. Note how the Sequential completes below the risk level of the Combo.

Although long-term charts can show major trends and their exhaustion points, trading these can be impractical without

GE (annual chart)

refining the market timing further. This can easily and quickly be done with these TD Indicators as the same parameters can be used for all time frames.
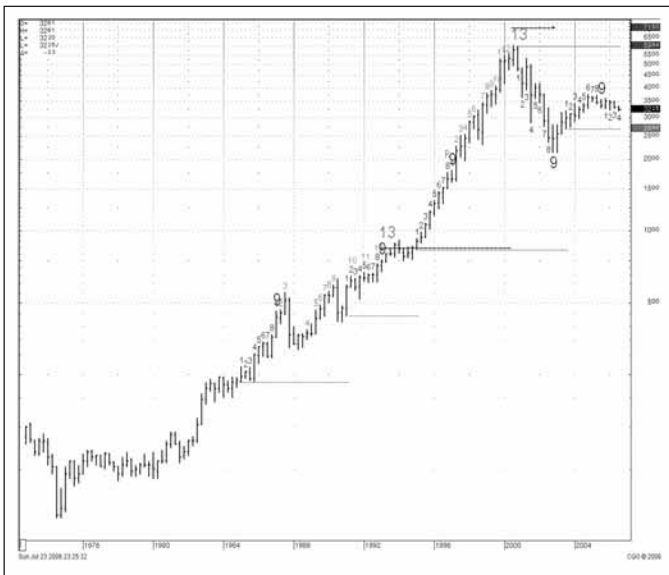
GE (quarterly chart)

GE (monthly chart)

A major trend exhaustion in GE can be identified from the annual chart, then refined for timing using a quarterly, then monthly chart etc ......

I personally find the contrarian nature of Setup, Sequential and Combo can also work well with more traditional trend-following indicators. For instance while it is likely that the first indication of a upside trend exhaustion may come from a contrarian TD Indicator, it may not be immediately clear if the reversal will take out the trend support on the chart of the same or a higher timeframe. If this happens, then the reversal following the TD Indicator should be deeper than a mere correction. Using trend support and resistance levels on higher timeframe charts can thus give more realistic reversal targets (in addition to other TD Indicators such as Absolute or Relative Retracement). Where a reversal is failing to break initial trend support / resistance levels, using Setup, Sequential or Combo on shorter timeframe charts can then help time re-entry to the underlying trend.

USD/ZAR (quarterly chart), combining TD Sequential with a trend-following discipline (Ichimoku). Following the Sequential sell pattern, the reversal has sound support after a Setup buy pattern. Users of Ichimoku will recognise how closely the uptrend between 1980 and 2001 held to the trend support lines, while the subsequent reversal has failed to break cloud support, the lagging span remains above the price 26 bars earlier and the recent rally has already broken above the conversion line resistance.

In summary, TD Indicators provide a technique for timing market entry and exit strategies, which is transferable across asset classes and time frames, enabling rapid assessment of a wide range of markets. Their contrarian nature requires careful discipline, since trend following indicators would not normally show any sign of reversal and market sentiment is likely to remain strongly in favour of the existing trend. In my opinion TD Indicators can however be used effectively across multiple timeframes as well as with trend-following indicators in higher timeframes. They require further study to appreciate some of the details not covered in this article, but the effort is well worth it.

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A survey of technical analysis charting

By David Watts

Introduction

The vast array of technical analyst packages can be overwhelming to the new technician and just keeping up to date can take a considerable time even for seasoned analysts.. This survey is, therefore, intended to inform the reader of just of what is available on the market and to provide a reference source for further investigation. The tools and level of service that technical analysts require will vary enormously but these tables aim to provide a starting point.

The services range from small one-off charting packages to expert systems and software packages for the home technician or trader right up to multi-client professional updated charting programs. Many are old favourites such as Metastock or the new recent additions such as Updata TA. The general packages often allow the flexibility to add on expert specialist programs at a later date or write your own indicators and systems.

If you intend to install the software on both your desktop computer and your laptop it would be wise to check that there are no restrictive security measures that will prevent more than one installation. A few of these programs still come with a 'Dongle' and a protective plug in chip must be installed in order to use the program.

It is vital to fully evaluate any software system before buying it and the best vendors are happy to demonstrate their system or provide a trial period. It is useful to speak to past users or visit the user group or forum sites to get some feedback. Generally, the quality of software is now very high with many packages having been re-issued a number of times but, if you buy a recently released package (either version 1 or 2), be aware that it may still have numerous bugs that need to be resolved.

Free web services

Charting-web-based services: For UK services such as www.advfn.com, www.FT.com and Reuters at http://today.reuters.co.uk are all excellent sources of charts and information.

For the US – http://www.marketwatch.com/ provides one of the best services and incorporates the bigcharts service or for stockcharts it is worth visiting www.Stockcharts.com .

Subscription web-based services

My favourites include the cut priced www.Iqcharts.com and the standard-bearer www.quote.com that was one of the first professional web-based charting services available. Now many professional services offer a web-based package such as CQG, Esignal or Tradermade.

Entry Level Software packages

At the entry level the UK 'Sharescope' and US 'TC2000' by Worden are both low cost excellent services and these packages come with a data service. At this level it is possible to get a basic charting package free (such as Gann Lite) and download quotes via the Yahoo server to monitor a small portfolio. There are a number of Yahoo quote downloaders that can provide this facility

for a small cost, one of the best is 'MLDownloader' with an extensive directory listing.

System testing

There are several new packages on the market now and increasingly validation of a specific trading system can be obtained with a little programming ability. Systems such as TradersStudio, Wealth-lab Developer and SmartQuant are offering a wider range of facilities than the older standard 'Tradestation'. Also a number of companies offer click and point system development such as PATS systems.

Professional level services

At the professional level, timely and accurate data are all important and the premier services are, in this respect, in a league of their own. Increasingly the technology equalizes the quality of the software but not data delivery and where a few seconds count the professional services still have the edge. Commodity Research Bureau still exists and continues to provide those great Reuters Bridge looks to offer great value via the Internet, but with the attendant risks should the Internet ever fail.

At the individual professional trader level such services as PATS, Ensign and Realtick are very popular.

Professional Dealing Room Packages

Information System	Web Address	Packages Available	Comment
Bloomberg	www.bloomberg.com	Various. Primarily known for their support to bond traders.	Mainstream US service provider. Popular with bond desks. Extensive web services including Bloomberg Radio and TV.
Reuters Bridge Channel	http://channel.bridge.com	Reuters Bridge Channel still available to subscribers.	Web-based services with very competitive pricing for the trader, analyst or investor.
Commodity Research Bureau. Now owned by Logical Systems, Inc. of Chicago	www.crbtrader.com	Known for their chart books and historic data, they offer a range of data packages. Also the Trend Analyzer. An extensive collection of chart books and Commodity data is available.	Known for their commodity chart books since 1934. Also provides long-term wall charts. Extensive Commodity database available. 'SystemMaker' no longer appears available.
Commodity Quote Graphics	www.CQG.com	An excellent TA charting front end that also interfaces a wide variety of TA software. CQGNet is the web-based service.	An established supplier to the commodity trading community. Now with 'Tradeflow' charts which shows price bars depending upon the bids or offers being hit.
Datastream Thomson Financial	www.Thomson.com	**Datastream Advance** Publishes the famous Extel surveys.	Provides Stockbroker information, the old Datastream Service provider.
Reuters	www.reuters.com www.reutersdatalink.com	Now with **Metastock Professional** as a front end TA package. Data packages cost from $25 per month.	Long established as a premier provider to the forex market. The US service Reuters datalink offers US/ Asian/ European data packages

Information System	Web Address	Packages Available	Comment
Tradermade International Limited 0208 313 0992.	www.Tradermade.com	**Tradermade Workstation & Web** are just two of the available products. Web package enables easy chart distribution. Extensive range of services.	Another long established TA data provider for the professional. Online service also available with training and UK support.

Stand Alone Technical Analysis Software PC

Technical Package	Web Address	Packages Available	Comment
Esignal 8.0 Plus Advanced Gann and Elliott Wave Trader now an add in package.	www.Esignal.com www.trendsignal.co.uk	**Esignal 8.0** package now includes a Ta front end package to the data service. Also the **AGET** package at $3995.0	Esignal provides a low cost and extensive charting package. AGET is a respected charting package with a wave count system included.
AIQ Systems	www.aiqsystems.com UK email: sales@aiqsystems.co.uk	**TradingExpert Pro TradingExpert EOD** Monthly plans available from: $59 for delayed data or $79 for RT (+exchange fees).	Good sector and volume analysis TA package with the proprietary AIQ expert trading system. If you want to look at sector analysis this is the package. UK support available
Equis International. Tel: 001 800 882 3040	www.equis.com Reuters Metastock Profession.	**Metastock Pro FX** from $99 per month. **MetaStock Pro** $1695. **Metastock EOD** $499 Quotecenter $135. per month for UK data.	Metastock, is a long time favourite with technicians, due to a robust program, good support and the range of TA studies. Reuters Professional Package now available.
Nirvana Systems Omnitrader. Visual Trader.	www.omnitrader.com	**Omnitrader** is an expert system with automatic signal generation from a number of studies. Stock version $495.0 Futures $695.0 Real time $995.0 Visual Trader. $295.0 Visual Trader RT $995.0	Now with an extensive number of systems. Optimised indicators etc. Visual Trader gives a display of sector rotation.
ShareScope	www.sharescope.co.uk or email orders@sharescope.co.uk	Membership Fee of £79.95 **Gold. EOD** Monthly subscription of £14.0. **Pro. RT** £84.95. Demo available.	A popular award winning charting and data package used. Sharescope keeps getting better with good clear charts and UK support.
Tradestation Securities Tel.: 001 800 808 9336 Or 001 888 853 9741	www.tradestation.com	**Tradestation securities online** with various data packages and a tied in brokerage. **Tradestation Real Time and EOD** both allow system testing. Now a web-based broker service. Free if the brokerage is enough to cover the fees.	Tradestation is now online. Still with the original 'easy language' TS200i is still supported in the UK via www.scapler.co.uk.
Stratagem Software Int Tel: 001 (504) 885-7353	www.stratagem1.com	**SMARTrader 4.01** $299.0 **SMARTrader RT 4.01** $995.00 **QuickCharts** $99.00 **RT package interfaces** with Quote.com	SMARTrader – the upgrade path for Computrac users. A Computrac for Windows. It has all the standard Computrac indicators plus more. US support.

Technical Package	Web Address	Packages Available	Comment
Synergy Software Tel: 01582 424 282	www.synsoft.co.uk	For the professional and dealing room: **Perfect Analysis PA Desktop PA Online. Portfolio Advantage** £395 + VAT per annum	Both investor and professional packages. The ease of Relative Strength charting has always been a strength of the Synergy software packages. UK Support.
Updata Tel: 020 8874 4747	www.updata.co.uk	**Updata Technical Analyst** $69 per month. **Updata TA Trader** $89 per month	Technical Analyst is an Excellent TA product with extensive UK service. The best P&F charts available. UK support.
WaveWise Market Spreadsheet. Tel: 001 908-369-7503	www.members.aol.com/jtiware/	**Waverwise** costs $299.00	A spreadsheet interface and good charts make this a flexible data handling and charting package. For the spreadsheet lover.
Worden Brothers Telechart 2007.	www.worden.com	Free software but tied to their data services. $29.99 or $99.99 per month. Covers US equities.	Well known US software package for tracking US equities. Famous propriety indicators – Balance of Power and Time Segmented Volume.

Technical Analysis Toolbox Software Mac. OS

Technical Package	Web Address	Packages Available	Comment
Spiffycharts	www.bhld.com	Free charting for the Mac and Linux.	One of the few free cross platform TA packages, uses CSI data.
Investor RT Charting Tel: 001 800 546-6842 or 001 404 733-5733	www.linnsoft.com	**Investor/RT** From $39 to $99 permonth	Excellent package with backtesting and system Development.
ProTA by Beesoft (Online ordering and support)	http://www.beesoft.net	**ProTA** $59 **ProTA Gold** $199	Extensive studies for a competitive price. With a wide range of data formats supported including, Metastock. US Support.
Trendsetter Analyst Tel: 800-825-1852 U.S or 001 (714) 997-9775	www.Trendsoft.com/	**Personal Analyst** $259 **Personal Hotline** $495 **Pro Analyst** $59 per month	An extensive range of Software. The Pro-Analyst package Includes a day-trading Pivot based trading system. US Support.

Pattern Matching Software

Technical Package	Web Address	Packages Available	Comment
Dynamic Trader	www.dynamictraders.com	**Dynamic Trader V4** $1700.00. Plus RT datafeed fees.	Classic time and price Analysis. Gann and Elliott Package by Robert Miner.
Pattern Search	www.Tradingpatterns.com	**Automatic Pattern Search with code generator** $1195.0	Automatic Pattern Search test and scan for pre-defined patterns. US support.
CP Finder	www.Cpfinder.com	One of the new pattern trading programs.	Excellent pattern matching one of the best of its kind programs available.
MTPredictor	http://www.mtpredictor.com	**MTPredictor** Cost: $2290 RT V 4.0 $1795 EOD V5.0	Able to recognize certain Elliott wave setups and propriety time-price patterns. With extensive email support and a trading "e" group you get much more than just the software. UK support.

Technical Package	Web Address	Packages Available	Comment
Prognosis Software Development	www.prognoss.nl	ELWave 7.7 is an Elliott Wave identification program. Module add in for Metastock now available. RT version is $540.00	For those who want automatic Elliott wave counts generated with projected wave targets. Another program to consider is Refined Elliott Trader at : http://www.elliottician.com

Portfolio Level System Testing

Technical Package	Web Address	Packages Available	Comment
Trading Recipes Tel: 410 263 0798	www.tradingrecipes.com	Trading Recipes $2295	Dated but flexible system testing software with a basic interface but this program incorporates portfolio analysis and money mangement. Basic language.US support.
TechniFilter Plus Tel: 919 856 9600	www.technifilter.com/	TechniFilter Plus V.8 $495 Excellent swing and volume tools now available for equity analysis. Now owned by BrightSpark Ltd.	TechniFilter is a reporting and system-testing package for Windows with only, basic charting but excellent fast scanning. A comprehensive, proprietary system testing language that can take some time to learn. Web-based support only.
WealthLab Developer V4.0	http://www.wealth-lab.com	Wealthlab 2.1 $650 Both EOD and RT. 30 day trial available.	Wealthlab combines TA charts with the ability to test a system across a portfolio. 'WealthScript' Programming language.

Internet Based Charting, Data or News Services

Technical Package	Web Address	Packages Available	Comment
Advanced Financial Network	www.advfn.com	Unlimited free real time prices. Extensive web based service with Java charts.	Now an extensive web-based chart service that can match the best. UK equity focus and free quotes.
FT.com	www.FT.com	FT investor services.	Charts and news. The charting service has been reduced but still a great site.
BigCharts	http://bigcharts.marketwatch.com/	Interactive charts and quotes. BigCharts is a FREE service.	A provider of charts to many other internet sites. Excellent UK share charts available.
Moneyam	www.moneyam.com	UK Web Service. UK and US equities from £5.00 per month.	Moneyam is the rival to Advfn, but is owned by the same cmpany that publishes Share Magazine.
Realtick	www.realtick.com	Townsend Analytics V.8.4 Realtick Analyst Costs from $150. per month.	Realtick offers professional charting and extensive analysis.
Qcharts by Quote.com	www.quote.com/quotecom/qcharts/	RT and Eod data service. Excellent charting interface. $95 per month plus exchange fees.	Great charts and user interface make this a popular real-time chart and data site. Now owned by IDC.
MarketSmart by Pcquote.com	www.Pcquote.com	MarketSmart Charting interface with a system testing capability from $9/month	Hyperfeed Technologies data transfer technology for fast internet access. Interfaces with a variety of real-time packages. US service.
Proquote.com	www.proquote.com	Proquote Service Owned by the LSE. Professional feeds from £100 per month.	Equity-based quotes and charts. Primarily UK professional service to equity traders and investors.
Quotes Plus	www.q.p2.com	QuotesPlus is a low cost supplier of data to many charting packages with a Metastock format type of data. From $25 per month.	Fast efficient service with Stock Picker Pro software also available.

Technical Package	Web Address	Packages Available	Comment
Siliconinvestor IQcharts	http://www.iqchart.com/iqchart/	From $35/month including exchange fees. For the price – if you want US – data it is the cheapest Web service.	Excellent charts and the competitive cost make this a great chart service for US stocks.
eSignal	www.esignal.com	"eSignal" provides the data feed to interface with numerous charting packages, such as the AGET real-time package.	eSignal provides a real-time data feed covering European exchanges.
Q- Data	www.q-data.co.uk/	Q data supply historic data and with a world wide database.	Supports in the UK Market Master for Worldwide charting.

Gann Charting

Technical Package	Web Address	Packages Available	Comment
CycleTrader	www.cycletrader.com/	CycleTimer $799.00.	CycleTimer by Bradley F. Cowan offers Time Price vectors etc. Extensive Cycle Research. The site offers long term data.
Gann Analyst.	http://www.gannalyst.com	Gann Analyst Professional V3 A $ 695.00 Gannalyst Extended $395.0 Gannalyst Lite – Free Free Data Downloader and Data Converter.	Classic Gann type charts and reasonable pricing make this package worthy of investigation. The Lite version is a free program. This a great introductory package. Web support
Market Analyst	www.market- analyst.com/	Gann analyst is the additional module to their Market Analyst product expensive at $1895.0	Flexible Aus. Package. Very good Gann Module.

Free Software

Technical Package	Web Address	Packages Available	Comment
Gannalyst	http://www.gannalyst.com	Gannalyst Lite. Basic charting	A free basic package just add a downloader to obtain the free quotes from Yahoo.
SpiffyCharts	www.bhld.com	SpiffyCharts 1.4.8 Basic chart package.	From the Behold software group. Supports CSI, MJK Dial Data format data.

Special Interest

Technical Package	Web Address	Packages Available	Comment
Financial Data Calculator	http://www.financialdatacalculator.com/	FDC V1.2 $995.0. Bloomberg supported.	The Parabolic prediction tool makes this an interesting program.
Market Master	http://www.easysoft-inds.co.uk	MarketMaster 2000 has great data handling and all the standard tools. MarketMaster was originally released in 1986 and hence has development history.	World market coverage and equity sector analysis make this an easy to use package for the analyst/fund manager/equity strategist.
PATS	www.patsystems.com	PAT systems offers Spread and Daytraders professional chart and data analysis packages.	Used by many Spread Traders -fast trading systems are produced with a point and click interface.

A technical assessment of global yield risks and futures profit opportunities

This article is an updated summary of a talk given to the STA on 15th March

By Tom Hobson

With global fixed-income markets approaching a critical juncture in relation to the 2003-06 cyclical bear trends, the opportunities to profit from year-end directional activities in the futures market is significant.

Explosive fixed income futures activity

Structural futures participation expansion: Since 2001 and 2002, US and European fixed-income futures markets have experienced explosive volume and open interest gains. While these data points have often been used for confirmation of directional movement by technical analysts, the uniformity of position expansion through a variety of directional environments has reflected structural growth in usage by investors. There are two primary factors driving this situation:

1. **Participants:** A growing number of institutions have increasingly used futures for risk management. However, probably a stronger contribution has been made by fund managers using a futures overlay as a profit-enhancing tool.

2. **Increased leverage:** The magnitude of liquidity forced into global capital markets during the 2001-03 deflation fight against severe equity losses has likely significantly increased the use of leverage, particularly from hedge funds.

With the number of participants and usage increasing, analysts have more aggressively searched for futures trading opportunities.

Chart 1: Monthly US 10yr futures contract

US 2yr over-extension and trend exhaustion

US Treasury securities have led a secular global move towards lower yields since 1981 (early 1990s in Japan and Europe), which culminated in the aggressive cyclical 2000-03 US short-end lower yield plunge. From a technical perspective, the US two-year yield breakdown below the 1981-2003 lower channel signalled over-extension and was a precursor to the exhaustion of structurally declining yields.

Chart 2: Quarterly logarithmic US 2yr yield

Normalisation: Global higher yield threat

With short-end yields tumbling to historical lows in 2003, many fixed-income market participants judged global funding rates to be at their lowest levels in as much as 100 years.

Chart 3: Quarterly US 2yr yield

**First surrender:** Having led the 2000-03 lower yield assault, the US two-year yield bottomed at 1.06% in Q2 2003 (see Chart 3 on previous page). The return to normalised higher-yield territory really began in April 2004 and was confirmed by the October 2005 breakout above the secular 1981-2005 lower yield trendline. This was further enhanced by the first quarterly moving average higher yield reversal since 1984.

European short-end normalisation: In a much delayed response in Europe, the two-year euro swap in Chart 4 was trading near a deflation level of 2% as late as July of last year. With the bullish technical Q3 2005 Japanese equity reversal, the threat of global deflation was essentially neutralised and European fixed-income markets began to react last September. For the two-year euro swap, 10 consecutive higher monthly yield closes also pushed the market above the 1992-2006 lower yield trendline and a likely H2 2006 reversal of the quarterly moving averages should provide final trend reversal confirmation.

Chart 4: Quarterly 2yr Euro swap yield
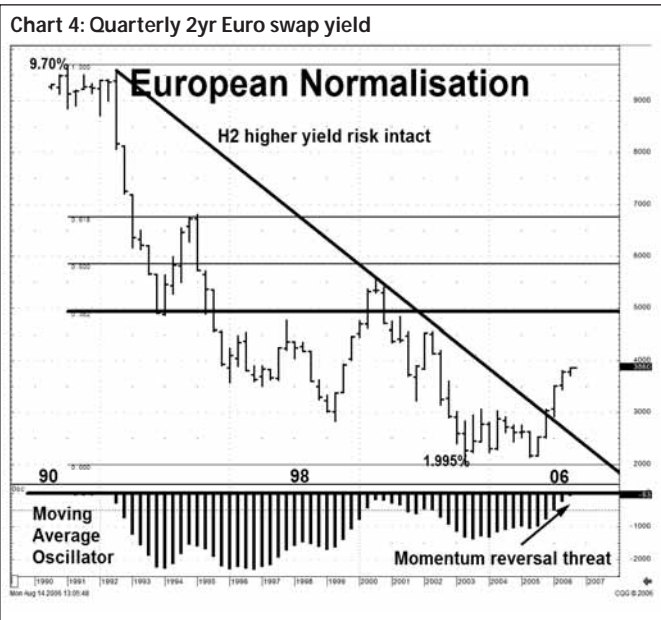
Multi-market confirmation: Could it be an accident that global short-end markets are simultaneously reversing longer-term lower yield trends? We think not. Within the spirit of Dow Theory, major trend reversals need multi-market confirmation, and European (also UK) activity enhances this global message. A JGB two-year move above 1% would complete the global signal.

Short-end higher yield prospects: From a technical perspective, we cannot identify a significant reason why two-year yields should not correct back towards their 38.2% secular retracement targets, near 7% for the US and 5% for Europe. The question will be whether this activity occurs within the current 2003-06 cycles.

## Global long-end fixed income securities on the precipice

Following global short-end surrenders, Q3 corrective recoveries highlight the precarious position of long-end securities. September/ June reflation higher yield losses drove global markets to critical support/higher yield barriers; their surrender would confirm the exhaustion of secular bullish fixed-income activity.

Europe: In Chart 5, the German 30-year yield has frequently challenged the 1994-2006 lower yield trendline since May and, up to now, the 30-year has not surrendered. However, Q3 recovery activity

has been meagre and the threat into Q4 will be for trendline and moving-average reversals that signal trend exhaustion.

Chart 5: Quarterly German 30yr yield

The H2 2006 oversold dilemma: While the global short end markets have previously surrendered their longer term lower yield trends, the wait for long end confirmations does present a dilemma for intermediate term positioning for Q3 2006 and into 2007. Q3 US 10yr lower yield consolidation: With the 05/06 reflation higher yield move, a number of trend momentum indicators related to the 1981/2003 lower yield trend have previously reversed. However, final confirmation remains dependent upon progress above 5.30%-5.50%. Conundrum: In addition, on the approach to the lower yield trendline near 5.20% in chart 6, the monthly stochastic has matched the four previous oversold extremes since 1981. In this environment, the Q3 lower yield consolidation has been a normal tactical reaction from a technical perspective. Trading tactics: While we anticipate tactical selling opportunities to emerge in late September, the strategic reversal of the secular US long end trend may await until 2007. Until then, investors should be cautious towards significant long exposure, and should attempt renewed short positioning when intermediate term weekly momentum indicators have moved into oversold territory.

Chart 6: Monthly US 10yr yield

Charting with volatility

By Valerie Gastaldy – MSTA
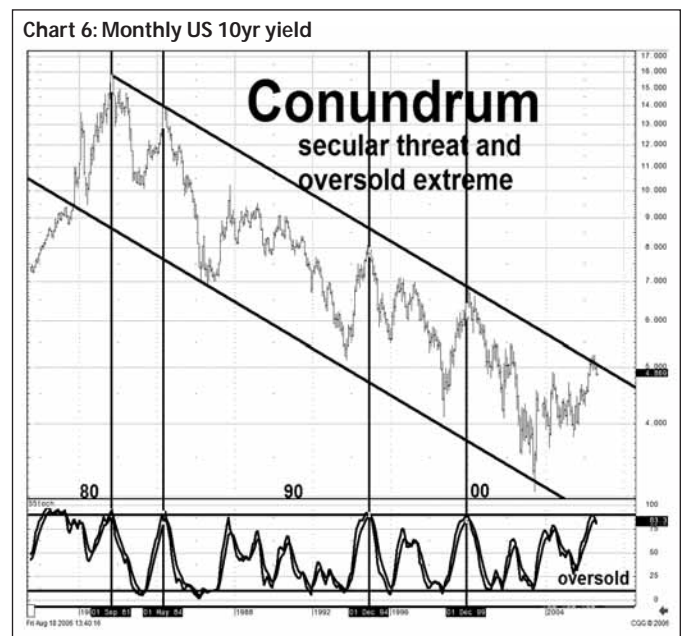
The major question a technical analyst wants to answer as early as possible is "has the trend reversed?"

I have been using several momentum indicators since the 1980s, and found they used to give me a very useful headstart. But technology evolves quickly, such tools are now widely available, and I began to notice in 2003 that they are not as predictive as they used to be. Furthermore, more "false signals" were being given than when I first started using them.

I, therefore, looked for other tools that would not be commonly used and, having been an option market-maker earlier in my career, I gave special thought to implied volatility.

Implied volatility as a measure of sentiment

Implied volatility is the price of an option, everything else being equal. Therefore, it is the price of insurance for your portfolio. If you have a strong conviction that the market is going to rise, you have little need for insurance so you will not be prepared to pay much for your option insurance. On the other hand, if you are worried that the market may fall, you will want to hedge your assets and the more worried you are, the more you will be ready to spend on insurance. As a result, it is commonly accepted that prices and implied volatility move in opposite directions.

But careful study of index charts and volatility charts show that this relationship does not always hold good. *It is more accurate to interpret a rise in implied volatility as a reaction to a surprising event, and a drop in volatility as the strengthening of convictions.*

Market turnarounds always happen when there is a widely-held consensus view about the future outcome. Uniformity is dangerous because it means that either all available cash has been invested – so no cash is left to buy into the market thereby sustaining the rally; or that all holdings have been sold, and no more sellers will be ready to trade at such prices.

Two rules on trading volatility:

1. Rising volatility is indicative of a market that is repeatedly being surprised, and reduces the risk of a reversal.
2. On the other hand, decreasing volatility signifies that a market is getting used to the trend and consequently the danger of a reversal is growing.

Finding a benchmark standard for sentiment

The only problem left is to track diverging or converging movements between prices and implied volatility and to assess how much confidence or fear is in the market.

Alas, just like love, confidence and fear are sentiments and there is no universal gauge for sentiments with an absolute scale of readings. We can only refer to what we have previously experienced, and qualify what we are going through relative to what we remember.

It is the same with volatility: to assess the level of confidence of the market, one has to track all actions and reactions and compare how quickly prices and volatility move in relation to each other.

Monitoring absolute levels of volatility is not as useful as comparing volatility elasticity for a given price variation at different times. But this is a time-consuming process and the signals are not always obvious. Over time, I have been able to spot a few regular patterns that work very well and will explain two of these – the "overlap pattern" and the "failed overlap pattern".

Using the "overlap pattern" to compare prices and volatility

The overlap pattern is to be found in a bullish trend, and as soon as spotted, it confirms that the trend is intact and the rally will resume above its previous highs.

Fig 1
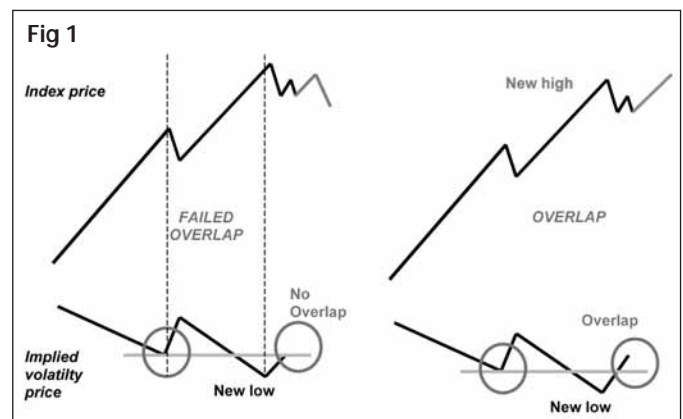
As can be seen at the top part of figure 1, there is an index price line. It is bullish, and we have already witnessed at least two troughs, and two peaks. As the index was reaching its second peak, implied volatility registered a low that was lower than the previous one.

Those are the necessary conditions for an overlap pattern.

From that point, we need to monitor the next drop to see how much volatility rises compared to its previous low. Whether volatility passes above or remains below its previous low makes a huge difference in our view of the market.

Overlap pattern giving rise to a new market high…
When volatility rises above its previous low, we have proof that the market is rather surprised by the drop. Volatility rises because options are being bought. Whether it is calls or puts does not significantly change the outcome: the market is prudent, and the trend will be able to develop further. There is still time to enter long positions and profit from the rally.

Failed overlap pattern signals danger- the market is over-confident…
By contrast, if volatility does not overlap its previous low, it means that the market surprise is lower than it should be. In this situation it is wise to check put/call ratios. Indeed, if volatility remains close to its lows, and put/call ratios are high, it confirms that the reason why volatility has not risen is because of excessive put-selling from funds. It is now wise to start looking for short entry points on any bounce.

Many more signals are available from implied volatility charts when read in conjunction with price charts, and the only limit to this methodology is the availability of volatility indices.