

We were delighted that Robert Prechter agreed to fly over from the US to address the STA in February. Not surprisingly, the meeting was a sell-out as Robert has established an international reputation for his work on Elliott Wave analysis and the development of Socionomics. In this talk he reviewed how Elliott Wave Analysis had fared in predicting the twists and turns of the oil and US stock markets. Going forward, he was extremely bearish about the outlook for the markets and a summary of his talk appears in this issue of the journal. After the meeting, Deborah Owen made Robert a Fellow of the STA.

For the benefit of those members who did not secure a place at Robert's presentation or were for one reason or another not able to come, we arranged to have the talk videoed. This is the first time that we have videoed a meeting and it proved very popular, with 115 people having downloaded the presentation so far from the website. In view of this take-up, we have arranged to have all the monthly meetings videoed for the rest of the year. We will then review the usage before deciding on whether to make this a permanent facility.

The Society's AGM was held on 9th March. Guido Riolo was appointed to the board and Axel Rudolph, Karen Jones, David Watts and Mark Tennyson-d'Eyncourt were re-elected. At the meeting one member asked what plans the Board had for the Society's reserves. It is perhaps useful to restate the Board's policy with regard to our finances.

At the outset it should be pointed out that the subscription revenues from members fall well short of covering the cost of providing the Society's non-educational activities – such as the administration office, the monthly meetings and the journal. And it was not that long ago that the STA was in a very difficult financial situation. It was Anne Whitby's initiative to start developing educational activities that set the Society on a more positive economic path and the reserves have been generated solely as a result of these activities. There are three streams of revenue – the foundation and diploma courses, marking IFTA's CFTe 1 and 2 exam papers and the Home Study Course (HSC).

These revenue streams are not as robust as they might appear to be from a superficial look at the accounts. For example, in the last

year IFTA has computerised the CFTe 1 exam and so in future we will not derive any income from this source. IFTA is also looking at ways of reducing the costs of marking CFTe2. The number of people attending the courses has held up well during the downturn but educational courses are vulnerable to what is happening in the economy.

The loss of revenue from marking CFTe1 has, to a large extent, been offset by sales of the HSC. As many of you are aware, this project took years to develop and since it began there has been a quantum leap in the technology available to enhance teaching programs. A considerable sum from the reserves will therefore go to developing a revised version of the HSC.

As a result of the income from our educational activities, the cost of a subscription to the STA has not risen for 11 years – there is probably no other society in the UK that can boast that it has held its rates for over 10 years.

It is a long term goal of the Board that the STA should eventually have its own premises but we are still a long way from having sufficient revenue streams to support such an acquisition. In the meantime we are continuing to look at ways that we can increase benefits to existing members. A good example of this is the videoing of STA talks which we hope will be of particular interest to those members who do not live in the south-east and therefore cannot attend the meetings. We are making sure that we have the right systems in place to ensure the smooth running of the Society and to this effect we have bought a new management accounting software program and have upgraded the website. We are also looking to raise the profile of the STA and so, for example, the names of successful diploma exam candidates were published in the *Financial Times*.

Finally, it should be pointed out that the surplus from education would be nothing like the size that it is if the people involved in these activities did not either give their time at no charge or were paid very modest amounts. We would like to take this opportunity of thanking them all and in particular John Cameron who has for more years than we can remember spear-headed the STA's educational activities.

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FOR YOUR DIARY

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| 6th July | STA Summer Party will be held at Bloomberg
Speaker: Bill Hubbard, MIG |
| 14th September | The BNP Paribas Currency Bias Indicator
Speaker: Ian Stannard, BNP Paribas |
| 12th October | Phases and Cycles
Speaker: Ron Meisels |
| 23rd September | STA Annual Dinner |
| 9th November | Speaker: Jeff Hochman,
Fidelity Investment Services |
| 14th December | STA Christmas Party
Speaker: Robin Griffiths, Cazenove Capital |

Networking

WHO TO CONTACT

CHAIRMAN

Deborah Owen: editorial@irc100.com

VICE-CHAIRMAN

Axel Rudolph: axel.rudolph@commerzbank.com

TREASURER

Simon Warren: warrens@bupa.com

PROGRAMME ORGANISATION

Axel Rudolph: axel.rudolph@commerzbank.com

Mark Tennyson-d'Eyncourt: deynvest@hotmail.co.uk

LIBRARY

John Douce: jdmjd@tiscali.co.uk

EDUCATION

John Cameron: jrlicameronba345@btinternet.com

Axel Rudolph: axel.rudolph@commerzbank.com

Guido Riolo: guidoriolo@bloomberg.net

Adam Sorab: adam.sorab@cqsm.com

IFTA LIAISON

Robin Griffiths: robin.griffiths@cazenovecapital.com

MARKETING

Clive Lambert: clive@futurestechs.co.uk

Karen Jones: karen.jones@commerzbank.com

MEMBERSHIP

Simon Warren: warrens@bupa.com

Ron William: rwilliam1@bloomberg.net

REGIONAL CHAPTERS

Scotland – Alasdair McKinnon: AMcKinnon@sit.co.uk

Ireland – Robert Reid: robertreid64@gmail.com

COMPANY SECRETARY

Mark Tennyson d'Eyncourt: deynvest@hotmail.co.uk

STA JOURNAL

Editor, Deborah Owen: editorial@irc100.com

WEBSITE

David Watts: DWattsUK@aol.com

Simon Warren: warrens@bupa.com

Deborah Owen: editorial@irc100.com

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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STA Diploma Results

Distinction

Adam Finn

Nicholas Frappell

John Miller

Vasileios Oikonomitsios

Pass

Laith Y Y Abohijlih

Gada Alhilli

Abdulla Al-Shammari

Jonathan Barnes

Mark Bellman

Luca Belpassi

Benjamin Coleman

Christopher Cox

Mark Dear

Stephen Eigbe

Jamie Fairest

Jeffrey Ginns

David Goodman

Andrew Gygax

Tengku Zahaimi Tuan Hashim

Urvesh Kotecha

Eoghan Leahy

Nick Littlebury

Low Teng Lum

Nurrul Liyana Mahmud

Foong Chee Mann

Omar Yousef Mansour

Ching Swee Meng

Robert Munro

Alexander Newman

Azrul Amin Rahim

Oli Rees-Jones

Lauren Rosborough

Katy Rose

Dmitri Savin

Philip Sexton

Mohd Azuwan Mohd Shahrom

Adrian Slack

Ashwind Guinness Soonarane

Mark Stuart

Peter Suddes

Monika Szapirko

Ross van Poortvliet

Manraj Virdee

Jason West

Andrew Wilcox

Oliver Woolf

Thomas Wright

ANY QUERIES

For any queries about joining the Society, attending one of the STA courses on technical analysis or taking the diploma examination, please contact:

STA Administrative Services (Katie Abberton)

Dean House, Vernham Dean, Hampshire SP11 0LA

Tel: 0845 003 9549 Fax: 020 7900 2585 www.sta-uk.org

For information about advertising in the journal,

please contact: **Deborah Owen**

PO Box 37389, London N1 0WE

Tel: 020-7278 4605

Real-time application of the Elliott Wave Model

This article is edited from a talk given to the STA on 8 February 2010

By Robert R Prechter Jr FSTA

After a brief explanation of the Wave Principle and how the waves are structured, we will investigate how Elliott wave practitioners have fared with reference to the US stock market. Finally, I will discuss the next likely direction for stocks and gold.

What you can do with the Wave Principle is unique. Most market watchers extrapolate trends; they expect the market to continue moving in whatever direction it has been moving. Knowledge of wave structures can give you a hint that a turn is at hand, something that eludes just about everyone. It certainly eludes economists, who study lagging indicators and as a group tend to be surprised when the trend changes. Many economists recently have admitted that their approach cannot anticipate recessions or depressions - trend changes, in other words. So, mostly they stay bullish. Even theorists who have proposed the efficient market hypothesis and other exogenous-cause models have said, "We can't really predict changes, because our model says that everything responds to information, and you can't predict information, so you can't predict the changes". However, the history of using Elliott wave analysis to predict major moves in the stock market is very convincing that prediction is possible with this model. I do not believe there is another approach - whether it is economic, fundamental or technical - that has this kind of history. The record includes a lot of errors along the way, but it is way better than what most other approaches allow.

A review of the Elliott Wave Model

For the benefit of non-practitioners, I will briefly explain the Elliott wave model. I am going to start by reviewing what a fractal is and the types of fractals there are.

A fractal is an object that is self similar in terms of its roughness at different scales; some fractals are self identical. An example of a self identical fractal is heated silicone oil. At a certain point it coagulates into little hexagons, and their arrangement continues to build larger and larger hexagons. There are not many examples of self similar fractals in nature. Most of nature's fractals are indefinite fractals, such as clouds and sea coasts; in others words, there are no specific, repeated patterns there to discern.

There is another type of fractal found in living systems. In my book *The Wave Principle of Human Social Behaviour* I called it a robust fractal. A tree is a robust fractal. It is not self-identical, because all the branches differ. Nor is it indefinite, because it grows according to a certain pattern: Branches come out of trunks, and branches come out of branches. Certain things are always true about the form. For example, the branch that comes out of another is always lesser in diameter. You could call that a "rule" of tree formation. Other aspects of trees are true most of the time but not all the time, such as that branches tend to point upward toward the sun. There are exceptions, so you could call this a "guideline" of tree formation.

Animals' bodies are full of this type of robust fractal. The air passages in a lung, the circulatory system and the nervous system

Chart 1: A tree is an example of a robust fractal



are all branching fractals. The Elliott wave model is similar to these branching systems in being a robust fractal.

In 1930, when Ralph Nelson Elliott studied stock charts, he had no preconceived idea of what he would find. He did not create a model in an ivory tower or formulate a grand theory of how prices should move. He was an empiricist who wrote down over a period of several years what he saw, and these observations eventually gelled into an overall model.

Chart 2: Elliott Wave model

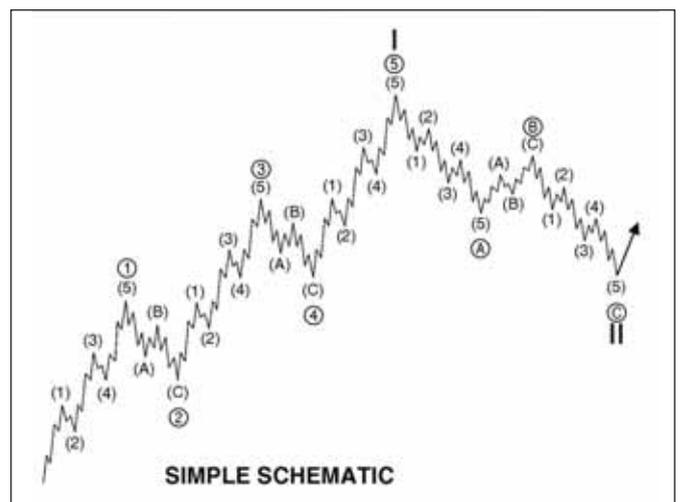
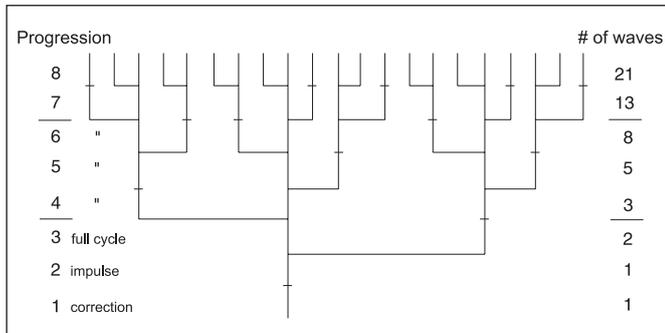


Chart 2 shows the Elliott wave model as a simple schematic. Elliott's essential discovery is that prices, when moving in the direction of the next larger trend, sub-divide into five waves according to certain rules and guidelines, and when moving against the trend they sub-divide into three waves or a combination thereof. Some people shorten this principle by saying "five up and three down", but, as Chart 2 shows, sometimes there are five waves to the downside, when that wave is part of a larger three-wave structure. When

iterated, the simple idea of five waves in the direction of the one larger trend and three waves against it produces Elliott's model.

Even though the Elliott wave model differs from branching fractals, it can be expressed as a branching fractal. If the number of waves in corrections, impulses and full cycles are plotted, a tree pattern emerges.

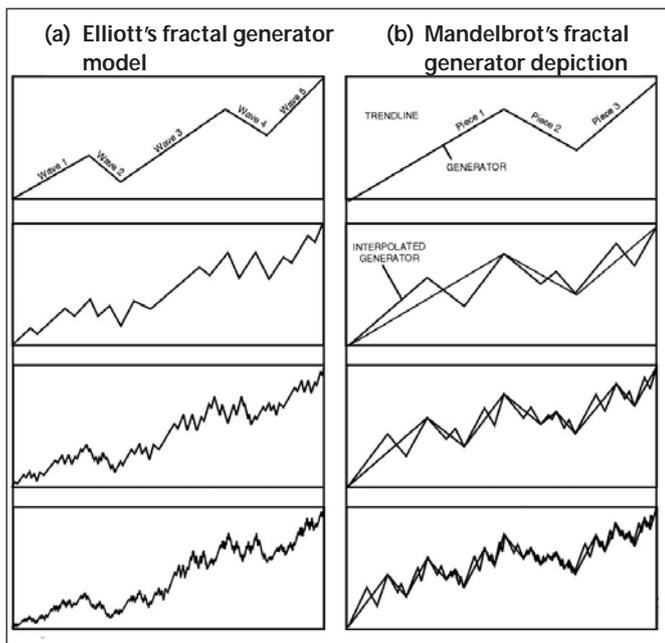
Chart 3: Number of Waves in the WP Model



The idea that markets have a fractal form used to be considered esoteric. But that has completely changed, due largely to Benoit Mandelbrot's work, culminating in *The Fractal Geometry of Nature*, 1982.

In an article in Scientific American in 1999, Mandelbrot showed how the market could be conceived of as a fractal in terms of what he described as "pieces." As Chart 4 shows, Elliott's model first proposed this idea. Mandelbrot's model does not say that the market will move in three waves in all directions; he described his drawing as a "cartoon" giving an impression of how market movements subdivide. He is adamant that there is no actual pattern.

Chart 4:



I believe Elliott's model is more sensible both theoretically and empirically, because if a market is moving via five waves in one direction and three waves in another, the process naturally develops into a trend. Absent arbitrary limits, three waves in both directions would simply produce a cycle. Elliott's model is more consistent with what happens in the real markets.

In 1978, AJ Frost and I wrote a book called *Elliott Wave Principle* that laid out the rules and guidelines of how waves develop. A central tenet of the book is that the stock market operates on the same mathematical basis as many natural phenomena. We wrote, "In its broadest sense, the Wave Principle suggests the idea that the same law that shapes living creatures and galaxies is inherent in the spirit and activities of man en masse."

In the opening sentence of his article in Scientific American, Mandelbrot wrote, "The geometry that describes the shape of coastlines and the patterns of galaxies also elucidates how stock prices soar and plummet." We said it first, and I believe our formulation has an important advantage over his. We used the words "living creatures," whereas he used the word "coastlines," and that is a very important difference. Living creatures and systems exhibit these robust fractals; they are not indefinite, and they are not random. They take certain forms, and the Wave Principle is within that family. That is very different from describing the market as a coastline-type fractal. This is a very clear line in the sand, because the analysts who are pursuing the mathematical basis of fractals in nature are convinced that the stock market is basically random. In his book *Chaos and Order in Capital Markets*, published in 1991, Edgar Peters made the point that "coastlines are good examples of random fractals and stock prices are comparable to coastlines." Mandelbrot agreed in his book *The (Mis)Behavior of Markets: A Fractal View of Risk, Ruin, and Reward*, saying, "I agree with the orthodox economists that stock prices are probably not predictable in any useful sense of the term." He means that, as with a coastline, you will not discern any repeated patterns, and therefore you cannot predict the market's movements. Elliott's model counters this view, and its utility - as we will shortly see - bears out the validity of the model.

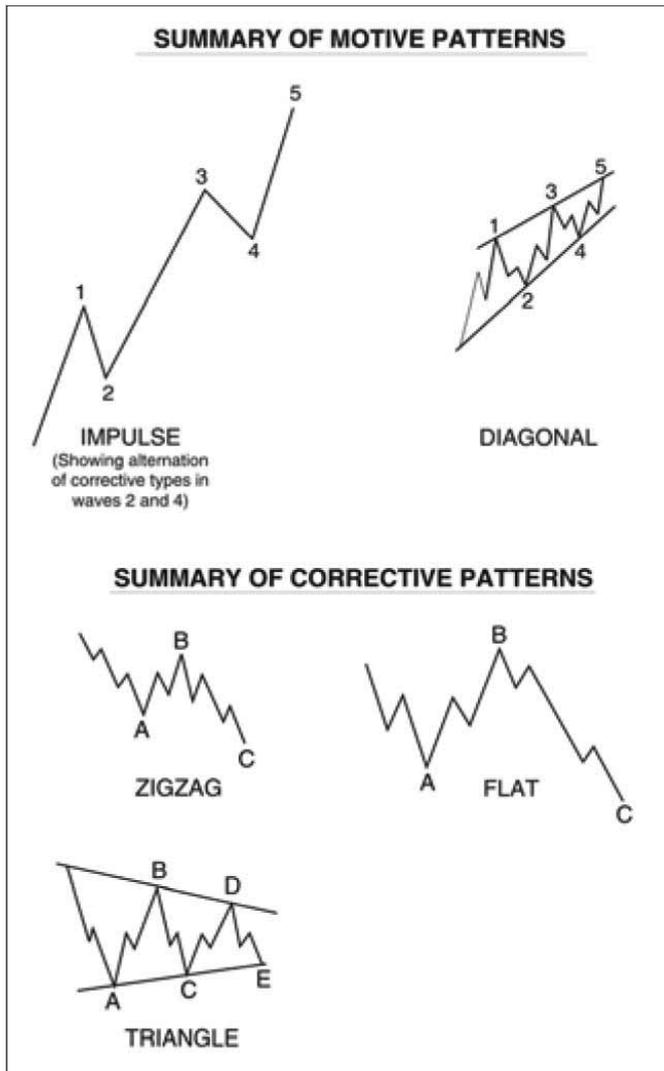
The five patterns that Elliott recognised form the basis, in my view, of all pattern-based technical analysis. Flags, pennants, triangles, wedges, head and shoulders, saucer bottoms and all kinds of traditional technical patterns are better understood as artifacts of the Elliott wave model.

Technicians need a model as a base. When interpreting indicators of sentiment and momentum, it is crucial to understand what degree of trend is likely to be in force, because some overbought conditions indicate a "top", whereas other overbought conditions will continue on for weeks or months at a time. So it helps to know what degree of trend is in force, and that is one reason why the Elliott wave model is such a helpful starting point for analysis.

The upper left of Chart 5 shows the most common form - the five-wave "impulse", as we call it - and underneath are the three types of corrective patterns. Very often the five-wave sequence and sometimes even the "zigzag" type of ABC correction will adhere to a parallel channel.

Chart 6 demonstrates how many types of markets adhere to Elliott's channels, which implies that markets are independent of news. I have long argued that wave structures are endogenously regulated, natural events. Changes in social mood produce these waves. They have nothing to do with outside information. In fact, it is the waves of social mood that are producing the very information that people pay attention to all day long. So, news is a lagging result of changes in social mood that have already happened.

Chart 5: Summary of motive patterns



It is not possible to give a detailed description of wave construction, but there are two guidelines worth highlighting. One is that the third wave in a five-wave sequence tends to be longer than the others. This is not always the case, but it is a tendency. The other is that the two corrective processes, waves two and four, tend to take a different shape. We call it the guideline of alternation.

Applying these two guidelines, Chart 7 shows a single iteration on the left hand side, where the third wave is the longest and waves two and four take different shapes. If we iterate this structure twice and then three times, it begins to get a little bit more complex and starts to look like an actual stock market. If we go to six degrees of iteration and add a few additional guidelines (Chart 7b), you start getting a picture that many of you will recognise as looking quite a lot like moves in the stock market. Elliott's model, given the quantitative variability that it allows, is extremely rich and robust in reflecting how the stock market actually behaves.

Chart 7:

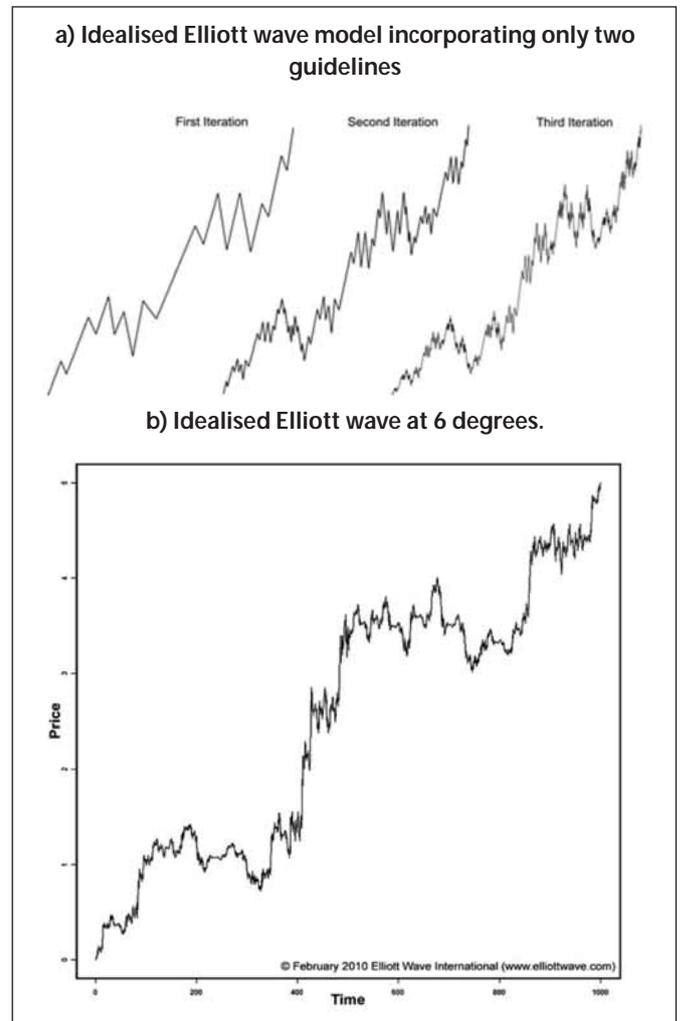
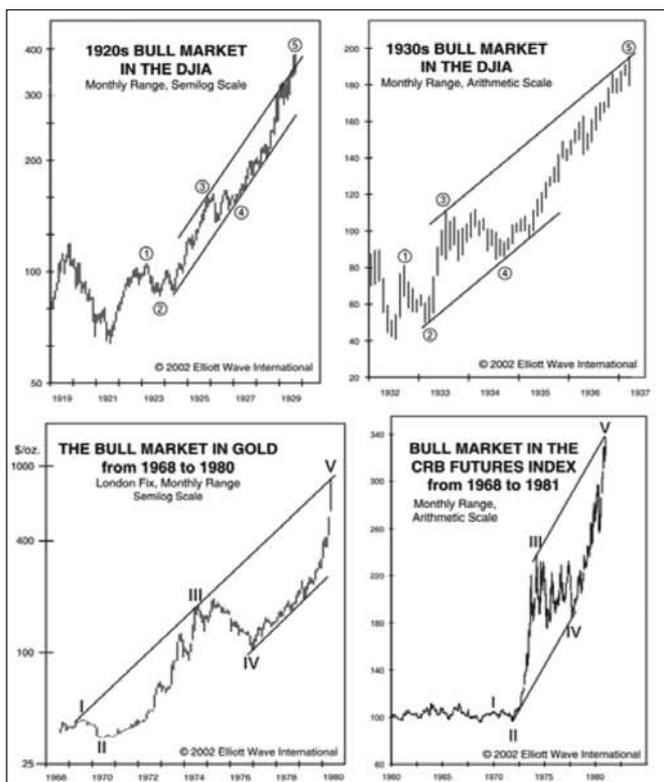


Chart 6: Sample Elliott Wave Channels



Real time Elliott-wave analyses of the US stock market

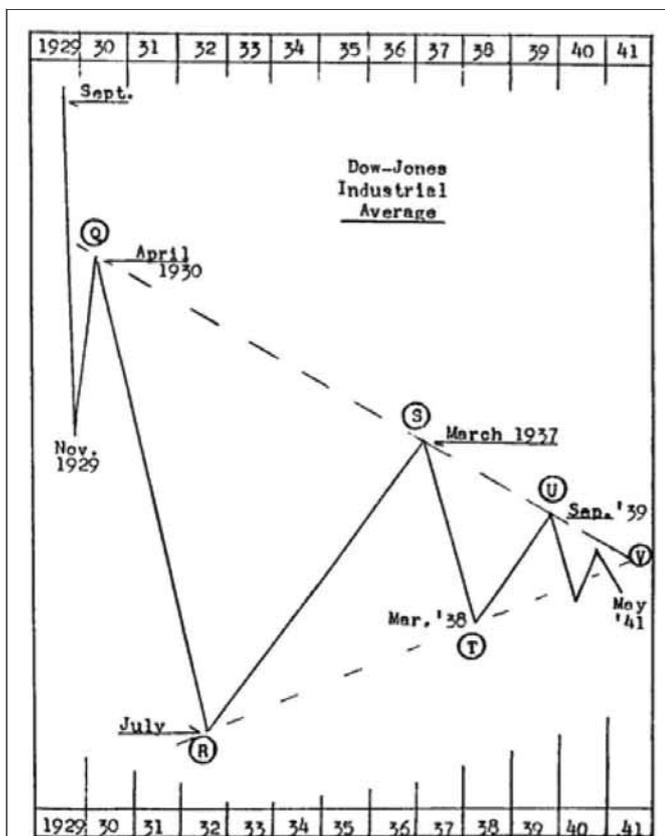
I am now going to review the stock market going all the way back to the 1940s and show you what Elliott wave analysts were saying, in real time, at each major turning point.

Elliott wrote his first comment about stocks in a private letter to Charles Collins in 1934 in which he essentially forecasted, in general terms, the 1937 high and the collapse that occurred afterwards. But, as it was not placed on the public record, I am not going to include that in my review.

It is convenient for our review that during each successive time period there was only one major practitioner of Elliott wave analysis. My review starts with Elliott himself. When he passed away in 1948, Hamilton Bolton took over. After Bolton died, the baton then passed to Charles Collins in 1966. A. J. Frost took over from him through 1970, and then Richard Russell carried on through 1974. As mentioned previously, Frost and I wrote a book in 1978, and I have been carrying the torch for better or worse ever since.

I am going to review what these Elliott wave practitioners were saying at the major turns. There were a few times when the practitioner was wrong in between, but the question we are pursuing here is, did he recognise the completed pattern, and therefore the market's turning point, when it was in front of him at the time?

Chart 8: April 1942 Bottom, R.N. Elliott.



"[This] should mark the final correction of the 13-year pattern of defeatism. This termination will also mark the beginning of a new Supercycle wave (V) (composed of a series of cycles of lesser degree), comparable in many respects with the long [advance] from 1857 to 1929. Supercycle (V) is not expected to culminate until about 2012. (See dashed line in the graph.)"

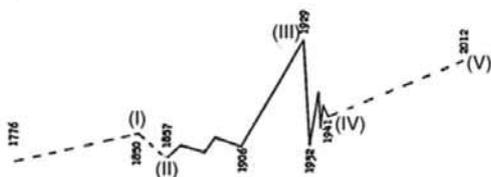


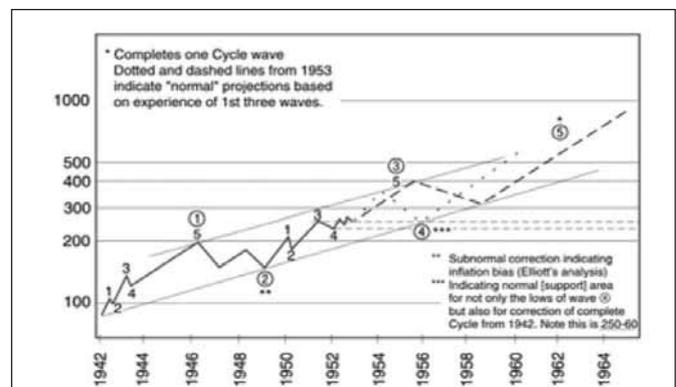
Chart 8 shows Elliott's drawing in 1941, anticipating the 1942 bottom. He said essentially, "We have seen a period of depressed psychology since 1929, and it is coming to an end. The market is going to reach a bottom very soon." He also made a remarkable

prediction, saying in essence, "This is a Supercycle degree bottom, and the markets are going to go up for a very long time, interrupted only by declines smaller than that of 1929-1932." At the bottom of Chart 8 he noted, "Supercycle wave five is not expected to culminate until about 2012." So he was predicting seven decades of advance with moderate bear markets along the way - but nothing like 1929-1932 - which is exactly what has happened.

In saying, "about 2012," he was estimating the duration of his predicted advance by equating it to the one that ran from the 1859 low up to the 1929 high. An equivalent run of 70 years would take prices up from 1942 to 2012. These waves are not quantitatively fixed, so in talking about this many decades, the margin of leeway could easily be plus or minus a decade or two. It being the pre-computer era, he was drawing charts by hand, so his illustration is way out of proportion in terms of price. But he meant to imply that stocks would keep going to new highs into the next century, and that basically is what has happened.

Elliott died in 1948, and Ham Bolton took over in 1953. His first prediction was, "If we take RN Elliott's projection" - and he agreed with the long-term picture - "it means no major depression of the order of the 1929-32 variety is on the cards in our lifetime." That was his perspective in 1953. If you read the history of the time, many economists after World War II were extremely worried about the possibility of a post-war depression. But the Elliott wave model was very clear: A depression is unlikely because the market is in a new, long-term uptrend of Supercycle degree.

Chart 9: Ham Bolton's Forecast in 1953



" it looks like the 1960s before we face a correction to the whole rise from 1942 and anything approaching a major depression in stock prices."

Bolton knew that before we would see a major top, the waves had to sub-divide properly at Cycle, Primary and Intermediate degrees, and his "wave count" suggested that the next Cycle-degree peak would not occur until the 1960s. He also projected that the Dow in that run would get to just about 1000, and that is exactly what happened. As with Elliott's drawing, he provided a visual representation, and it gave a very good perspective of what was to come.

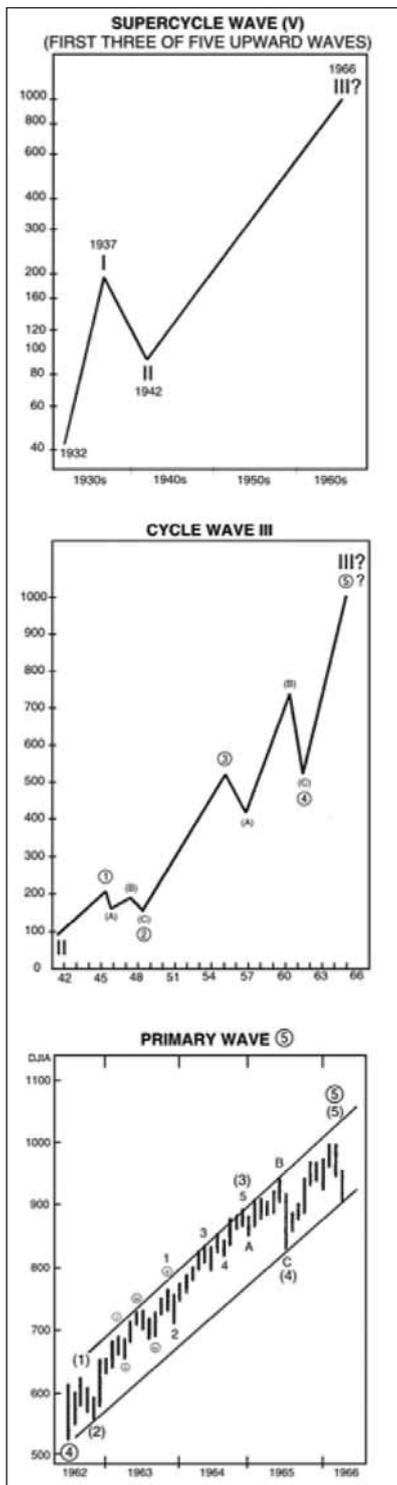
The market went up and completed its Cycle-degree wave in February 1966. The next month, Charles J Collins, who brought RN Elliott to Wall Street back in 1938, published the following charts (Chart 10).

Collins recognised that the Dow was right at the end of the big move up from 1942, the one that Bolton had been tracking on a

wave-by-wave basis. As his charts show, the 1937 high was wave one, the low in 1942 was wave two, and the market had just finished a full five waves from there, completing wave three of Cycle degree. He showed his views of the sub-divisions and predicted that the correction would be akin to that of 1937-1942 in terms of extent. To give perspective on the price potential, he made this forecast:

"The terminal point of the fourth Primary wave of Cycle wave III was established in 1962 at 524 on the Dow. Purely as a speculation, might not the "A" wave of Cycle wave IV carry to the 770-710 area, the "C" wave to around the lower 524 point, with a sizable intervening "B" wave?"

Chart 10: Charles Collins, February 1966 top



In other words, he expected a three-wave decline, down-up-down, with specific target areas for the two lows. It turns out that these numbers were very close to what actually happened. The low of wave "A", which bottomed in October 1966, was at 744.31 - right in the middle of his range for the initial drop. Stocks then rallied twice and ultimately bottomed at 577.60 eight years later. This is the kind of perspective that the Elliott wave model can provide years in advance.

AJ Frost, who had been an associate of Bolton's, published three annual Elliott wave outlooks in supplements to the *Bank Credit Analyst*. In 1970, he projected where he thought the "C" wave of the correction would end. Applying a Fibonacci-ratio relationship that Elliott discovered years earlier, he predicted the market would bottom out at 572.

This prediction was made in 1970, so there is one aspect of this projection that is precisely correct and another that is not correct. Frost knew that the market was in wave "C", but he did not

realise that it was wave "C" of a triangle, which meant one more rally and one more decline. But he did get the target exactly right - the hourly low was 572.20 in December 1974.

Chart 11: A.J. Frost 1980 forecast

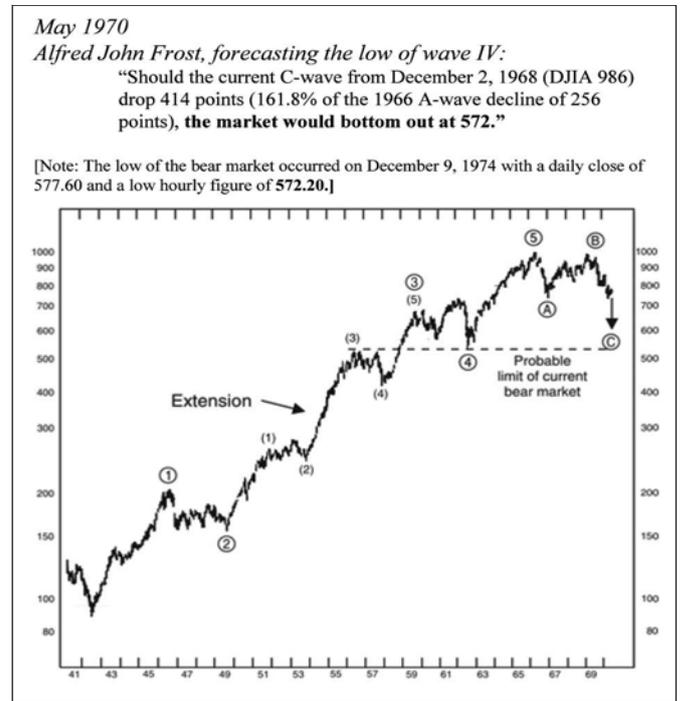
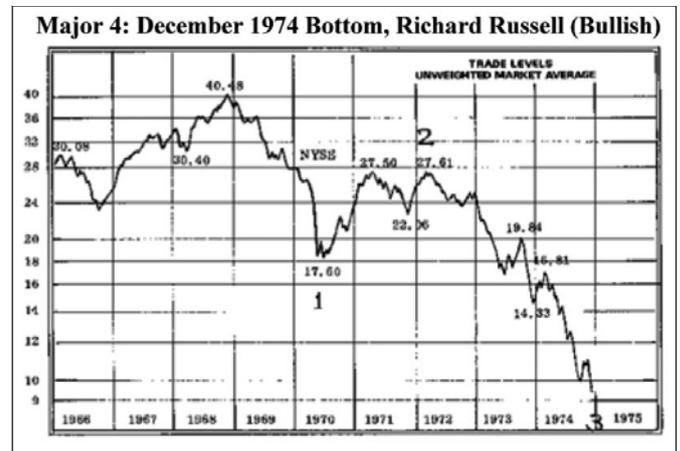


Chart 12: Richard Russell, 1973 and 1974 forecasts

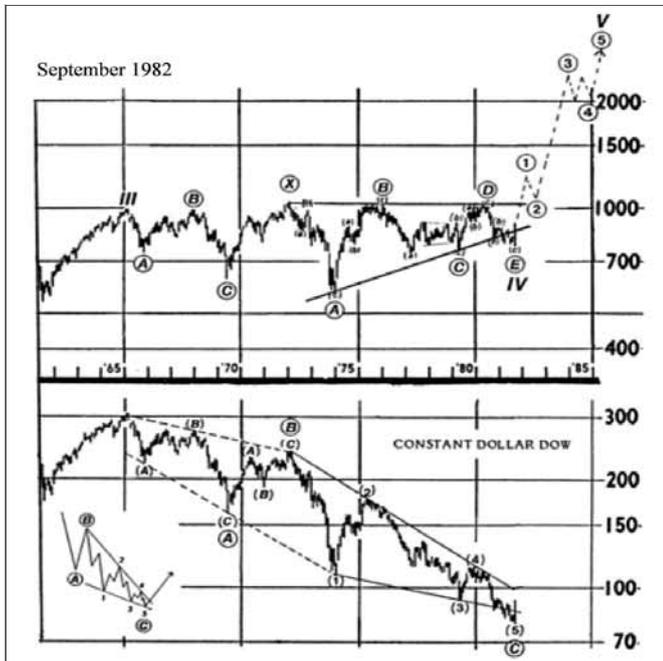


It became clear - at least to Elliott wave analysts - that the rally from the 1970 low was another bear market rally. Richard Russell, writing in 1973, put a "B" at the top of the 1973 high, indicating an intra-correction peak. That was the famous January 1973 high, when *Barron's* ran a cover reporting that amongst all of the experts on its panel, there was "Not a Bear among Them". The Wave Principle was clear, however; the corrective process had not yet run its course. The market had to come down one more time. Russell 'baby-sat' the entire decline, and then at the low in December 1974 he ran a chart (Chart 12) showing, "I can count three waves down. It's over." The market lifted off from precisely that point. It traded sideways during much of the 1974-1982 period, but it never revisited the 1974 low in nominal terms.

In real terms, however, during that period stocks were losing considerable value. In September of 1982, I recognised that the constant-dollar Dow, the Dow adjusted for inflation, had finally

bottomed out. The nominal Dow bottomed in 1974, but the constant-dollar Dow bottomed in August 1982. I even showed a wave count indicating that this juncture could be the end of the corrective wave from 1966. I also showed the established labelling, with the orthodox low in 1974, and this is the one that I prefer using to this day.

Chart 13: August 1982 bottom, Robert Prechter



At this kind of juncture, your confidence about the market's future path can go way up. By October 1982, the market still had not broken through the 1000 barrier, but I wrote, "Surveying all the market's action over the past 200 years, it is comforting to know exactly where you are in the wave count." Simply put, the market needed a fifth wave up in the structure from 1932. Observe also that this requirement was anticipated from Bolton through Collins, Frost and Russell. None of these Elliott wave analysts ever changed this basic view of how the long term wave that RN Elliott anticipated back in 1941 was sub-dividing.

This wave pattern was the basis for the forecast in the book that I wrote with AJ Frost in 1978. We predicted a very big bull market, one of Cycle degree. The last time there was a fifth wave of Cycle-degree was the 1920s; this is why we expected a period similar to that of the 1920s. In early 1983, I got even more specific. Because the bull market would be a fifth wave of a larger fifth wave - whereas in the 1920s it was only a fifth wave of a third wave - it was going to be an even bigger mania that people experienced in the 1920s:

"Cycle wave V is the fifth wave of a fifth Supercycle wave. Thus, as the last hurrah, it should be characterized, at its end, by an almost unbelievable institutional mania for stocks and a public mania for stock index futures, stock options, and options on futures. In my opinion, the long term sentiment gauges will give off major trend sell signals two or three years before the final top, and the market will just keep on going. In order for the Dow to reach the heights expected by the year 1987 or 1990, and in order to set up the U.S. stock market to experience the greatest crash in its history, which, according to the Wave Principle, is due to follow wave V, investor mass psychology should reach manic proportions, with elements of 1929, 1968 and 1973 all operating together and, at the end, to an even greater extreme."

The Elliott Wave Theorist, April 6, 1983

My projection that the Dow would go to as high as 4000 seemed crazy to many people at the time - yet it ended up going to 14000! The rally was three times as long as the 1920s and went three times as far on a percentage basis. Talk about quantitative variability. Even so, you can see the difference between an Elliott wave perspective and a conventional economics-based perspective, which looks out only a few months by extrapolating lagging data. There is no comparison.

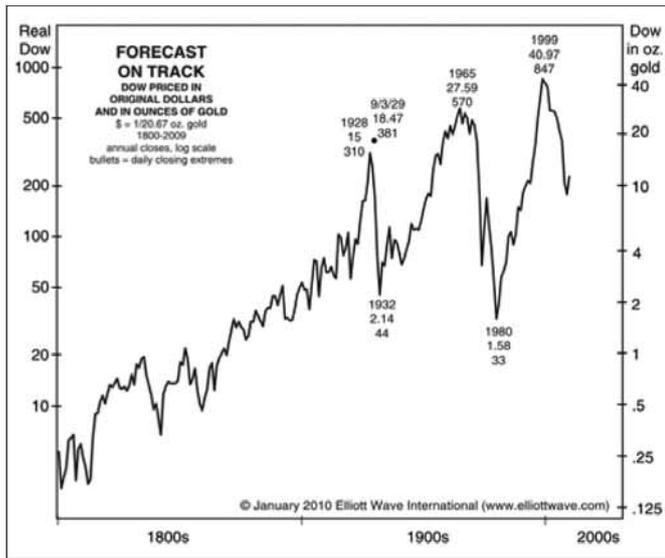
Chart 14: 1999-2000 top, Robert Prechter



I became bearish way too early, but in 1999 I saw the Dow had reached the top of a long-term channel and suggested that we had a "throw over" situation developing. As in 1982, I focused on the constant-dollar Dow and predicted it to top out between February 6 and July 18 of 1999. The Dow/gold ratio topped on July 15 and has never looked back. At the end of 2000, I put out the second edition of a book called *At the Crest of the Tidal Wave* with an extra chart forecasting that the Dow/gold ratio would go all the way back to where it was at the 1980 low, when the Dow and an ounce of gold were worth about the same. In 1999 the Dow was worth over 40 ounces of gold; it is currently worth about 10 ounces of gold. So it's well on its way.

From the very top to the bottom so far, there has been an 84% decline in the true value of US stocks. Most of it has been hidden because of all the inflation. But I think that the monetary environment is changing, too, being in the early stages of a great deflationary period. I took the risk in 2002 of putting that forecast on the record. I say "risk" because deflations are incredibly rare; most economists even today think that deflation is impossible because we have fiat money, which authorities can manipulate at will. I believe this idea will be proven wrong. Depressions are also rare, and in the 1998-2006 period economists wrote articles saying that we would never again have a serious recession, much less a depression, because central banks know what they are doing and are controlling everything just fine.

Chart 15: The Dow Jones Index in gold terms



I think my book *Conquer the Crash* was pretty well timed when you look at the inflation-adjusted Dow. The so-called bull market of 2002-07 barely shows up on the inflation-adjusted chart. Neither does the 2009 rally. In real terms, these were hardly rallies at all. This is one reason why I think that the best Elliott wave interpretation is still that the orthodox top - that is, the end of the five-wave advance from 1974 - occurred in early 2000. In real terms, stocks have done nothing but collapse ever since.

Chart 16: October 2007 top, Robert Prechter



October 23, 2007

"I use a model of the market called the Wave Principle. Generally, bull markets occur in 5 steps: an up, down, up, down, up sequence; and after that comes a bear market. We labelled this bull market as completed in January 2000, when the Dow made its high at that time. That was the real-value peak for stocks, so we think our model is accurate in saying that we are in a bear market period even though nominal prices are at a new high. With this labeling [see chart], the next move is to the downside."

Prechter, Jr., Robert R. (2007, October 23). Speech to the New Orleans Investment Conference.

Was the word "depression" too strong? In a century of records, this is the first time that we had back-to-back negative earnings quarters in the US. The employment figures are on a par with those seen in the 1930s, which was a depression period. Despite the stimulus packages and a recovery in GDP over the last couple of quarters, the percentage of the population employed continues to plummet.

We did get a new high in the nominal Dow in 2007, when all that credit was being created. Chart 16 shows the way I labelled this phase of the market. The 2002 low ended wave "A"; the October 2007 high ended wave "B"; and that, of course, portended a very strong decline for wave "C". You can call 2007 the peak of wave five if you like. The internal wave sub-divisions certainly allow it, and I may have to adjust what I think is the better count later on. Regardless, both counts call for the same thing initially, which is a very powerful five-wave decline.

To conclude this review of the stock market, applying Elliott wave analysis enabled a succession of practitioners to call all the major turns correctly¹ and to apply the Elliott wave model at each juncture to give a fairly accurate picture of what lay ahead. I am ashamed to say that a couple of the incorrect counts on the intermediate moves were mine, but I feel very much back in the saddle, so I am hoping to make up for those miscalls.

Chart 17: Track record of Published Opinions at Stock Market Turning Points Based on the Wave Principle Model



Current outlook for key markets

The stock market

I believe the stock market is in a serious bear market. It completed a five wave advancing structure going back to the late 1700s. The South Sea bubble, which topped out in 1720, is the corresponding peak in terms of degree. Back then it was a society-wide speculative mania, probably the biggest stock mania ever until we eclipsed it in the last 15-20 years.

The Elliott wave model is a fractal, so there are countless counter-trend moves to negotiate. On February 23, 2009, I made the following assessment:

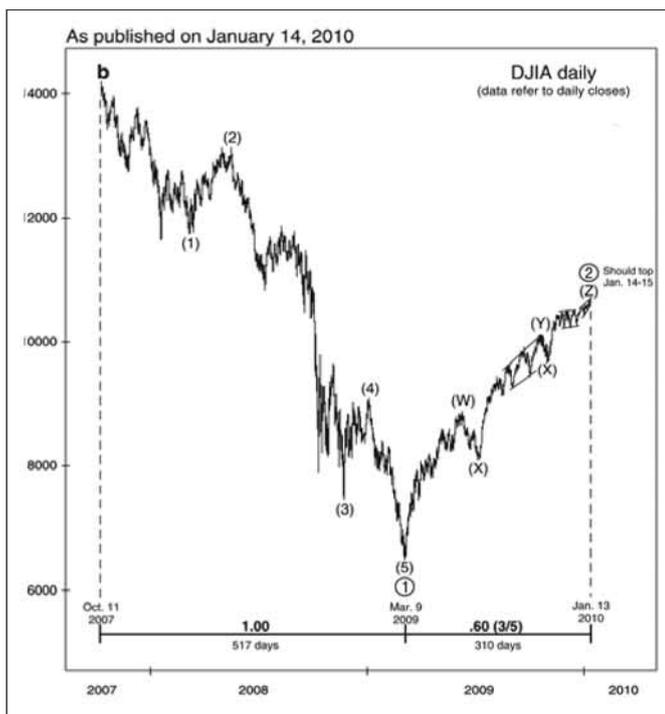
¹ The entire report, which not only covers these major turns but also the intermediate turns along the way, is available at: elliottwave.com/wave/trackrecord.

“Wave five of one, if that is what it is, is approaching a minimum downside target. The wave count is not quite finished, and ideally the S&P should continue down into the 600s. [It was in the lower 700s at the time.] But the market is compressed, and when it finds a bottom and rallies it will be sharp and scary for anyone who is short. I would rather be early than late. I recommend covering our short position at today’s close.”

There were also three subtle signs of decreasing downside momentum – which we cited at the time - even as the level of fear was reaching new extremes. Two weeks later the S&P bottomed at 667. In this environment of panic, in March 2009, we predicted the Dow would rally all the way back to 10000. We also said that the rally, regardless of extent, would peak out amidst substantial feelings of optimism, and by its end investors would be convinced that the bear market was behind us. This would occur right before the onset of wave three, the steepest portion of the steepest wave, which will see the most intense stock selling in nearly 300 years.

The market has rallied back 10000 plus, and many people say that this is the start of a new bull market. What do we see that is different?

Chart 18: Wave 2 is over or nearly so



There are three zigzags in the rally, labelled W, Y and Z. The market retraced a little more than a 50% of the preceding decline, and in January the market had rallied for 60% of the time of the decline. There are no guarantees on things like that, but when you see your indicators showing a loss of upside momentum and the sentiment indicators showing extreme optimism, you put it all together to form a pretty good case. [Note: On April 26, 2010, the Dow had retraced 61.8% of Wave 1.]

One of the indicators telling us that the long term outlook for a continuing bear market is still well in force is the dividend yield. At every major bottom of the 20th century, the Dow’s dividend yield got up to around 7%. In 1932 dividends paid as much as a 17% annual yield. At the 1929 high, it was 2.8%. Today the payout is back in the 2.8-2.9% range, which is an extremely low dividend yield.

Chart 19: Stock market vs dividend yield

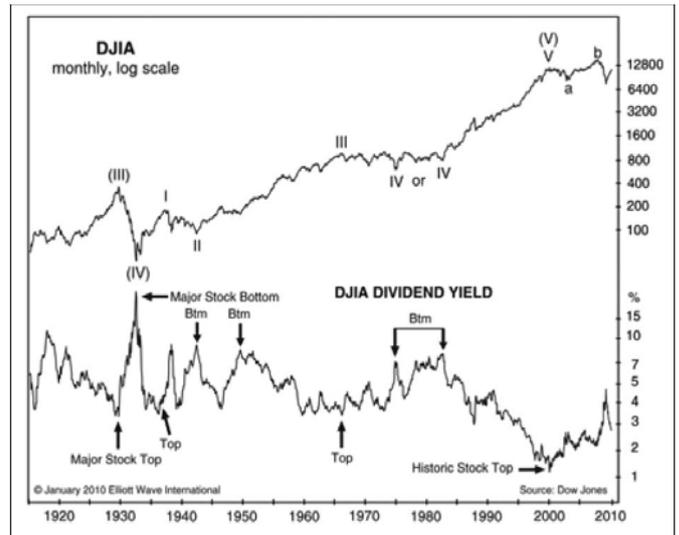


Chart 20: Major trend confirmation signals from p/e ratio



The price/earnings ratio is no better. At the major bottoms of the 20th century the multiple of price to earnings was usually around 6 or 7. Recently, it has risen to triple digits on a trailing four-quarter basis. Even if we put it in the 20s based on optimistically projected earnings, it is still well above the normal range for a major bottom.

By these important measures, there is no value in the market. People are still historically bullish on stocks, and they are willing to overpay for earnings and dividends. A range of additional measures, such as price-to-book value, the bond yield/stock yield ratio and sentiment indicators all suggest that investors are still way too bullish.

To sum up, I think we have had three major tops in the past 10 years - in January 2000, October 2007 and here in 2010. I believe we are tracing out the right shoulder of a large head and shoulders pattern. One indicator that confirms this assessment is volume. In a true head and shoulders pattern, the right shoulder occurs on lessening volume, and this entire rally from March 2009 forward has been on lower and lower volume, month after month, all the way up.

Gold

Gold is another asset that people are interested in today. They were completely disinterested in gold in 2001. At that time, I pointed out

that the extreme negativity on the market signalled some kind of bottom. Everyone - traders, investors, economists and the gold industry itself, which had just put on hedges - said there was no reason for gold to go up. I quoted an observer as saying, "Unfortunately there is nothing positive on the horizon." And we know what that means: the outlook all the way to the horizon is positive. At the time I thought this low was going to lead to only an intermediate move, perhaps a 40% gain in the metal. It turned out to be "the" bottom. Eight-and-a-half years later, gold is so popular that you can buy it out of vending machines.

Chart 21: Major reversal likely in the precious metals

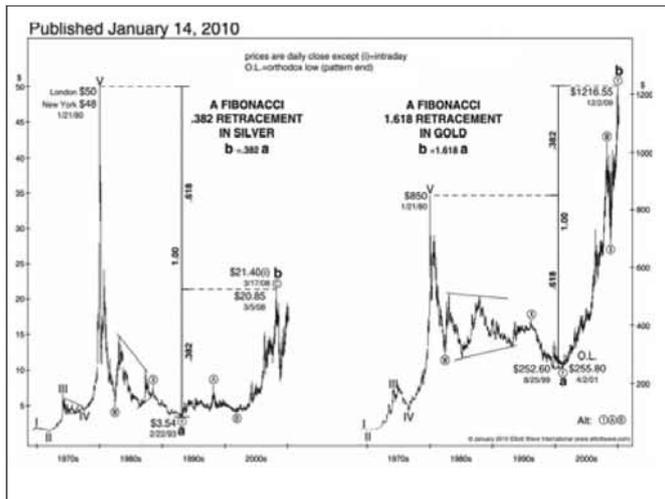


Chart 21 shows what is happening in Elliott wave terms. It goes back to the time of fixed prices in both silver and gold. Silver has made a 38.2% retracement of the entire bear period from 1980 to 1993. Gold has also made a Fibonacci retracement, but in this case the distance from the low in 2001 to the December 3, 2009 high is 161.8% of the decline from \$850 to \$253. So, within the same period, the two metals have achieved very different Fibonacci relationships. Looking at momentum indicators, the last three peaks that gold made, dating from 2006, occurred on a lesser upside rate of change. I think this loss of upside momentum is evidence of an important turn. It is also significant that silver has not exceeded the March 2008 high, thus creating a non-confirmation against gold. I think this top could lead to a very deep decline in gold. Less bearish wave interpretations might project gold down only to the \$600 area or not even that far. But the main message is that gold is probably going to fall more than most people expect over the next few years.

Some people talk about the so-called fundamental value of gold. If you look at the purchasing power of the US dollar, it has lost so much that it is worth just four cents today relative to where it was in 1913. But gold has gone up 59 times, which is a much greater change. It appears to have out-run the destruction of the dollar at this point, allowing for a bear market from a valuation perspective.

If gold is coming down, it is worth considering when it is likely to bottom out. Gold has been a great market for Fibonacci time spans. All of the moves since 1967 had occurred over a Fibonacci number of years, so on that basis, in *At the Crest of the Tidal Wave* I predicted New Year's Day 2001 - plus or minus a month - would mark the end of the bear market in gold. The orthodox low occurred in February 2001. It is interesting that gold has gone up for eight years from the orthodox low in 2001 to the orthodox high

in 2009. Thirteen years from the bottom of 2001 would take you to 2014, and that also happens to be 34 years from the top in 1980. So, for these two reasons I think 2014 is a good forecast target year for the eventual bottom in gold, whatever level it reaches.

Oil

Chart 22 shows the Elliott wave labelling for the oil market from 1998. From the bottom of wave "A" at \$33.50 a barrel, it has had a substantial rally. I think this is a "B" wave.

Furthermore, if gold and silver are in wave "B", if oil is on wave "B", and if the stock market has just finished wave 2, it is very suggestive that the markets are about to reflect a severe bout of deflation.

These are not the only markets pointing to a deflationary period. In October 2009, I published Chart 23, showing the Dollar Index heading into a fifth-wave bottom. The fifth wave kept sub-dividing, but it finally bottomed in November. I think the Dollar Index has finally made the turn that we were looking for.

I figured that once the dollar bottomed, stocks and metals should be very close to a peak. If you look back here, you can see that the metals topped in March 2008, and oil topped in July 2008, a few months after the dollar's low. The metals seem to have topped on the test of the low in the dollar index on December 3rd, and stocks appear to have peaked around the bottom of wave two of this new upward in the US dollar. So, these different financial markets appear to be building tops, while the value of money is starting to go up. And that is going to surprise many people.

Chart 22: Bear market in crude oil

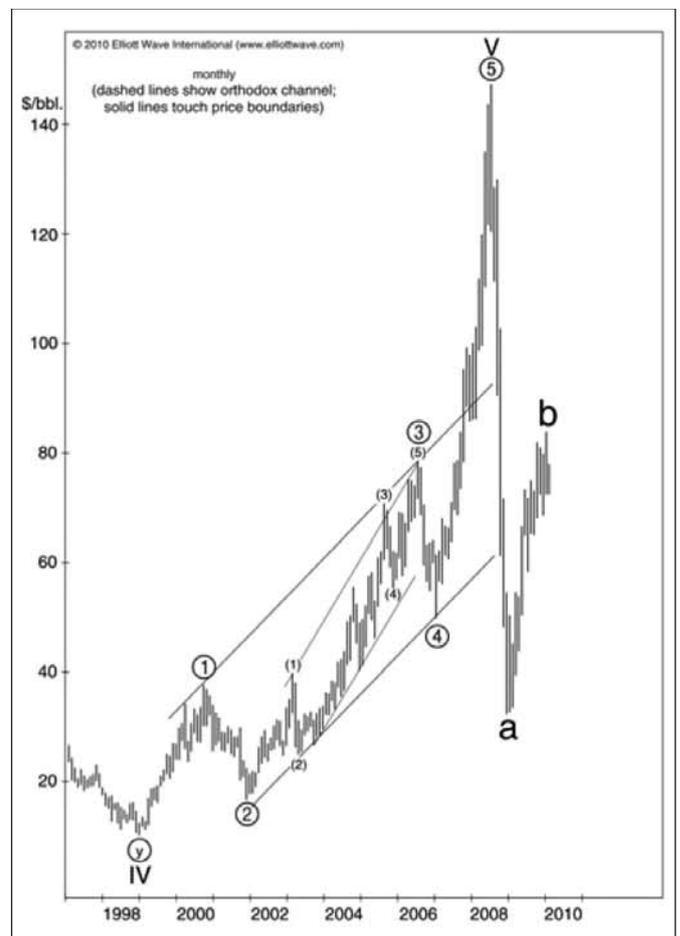
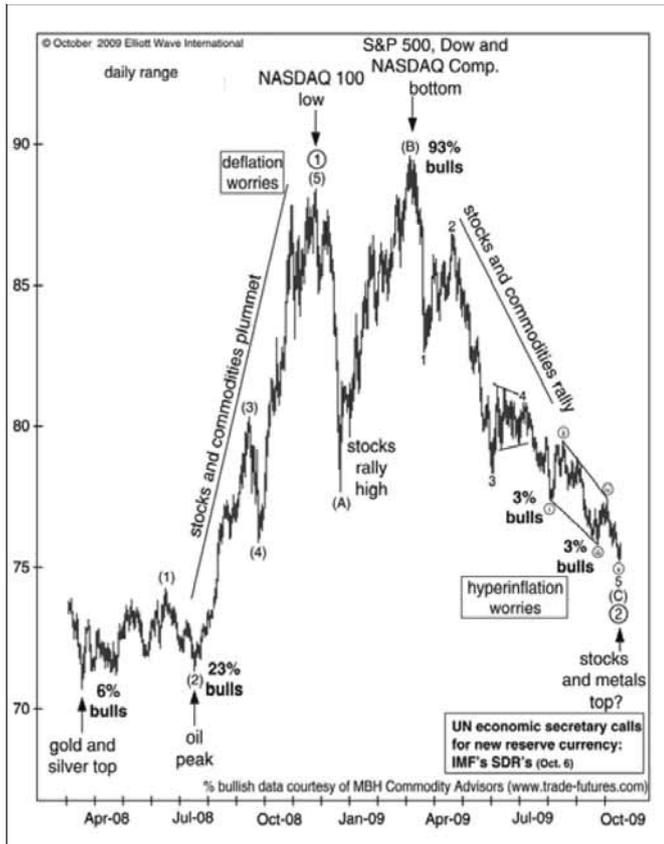
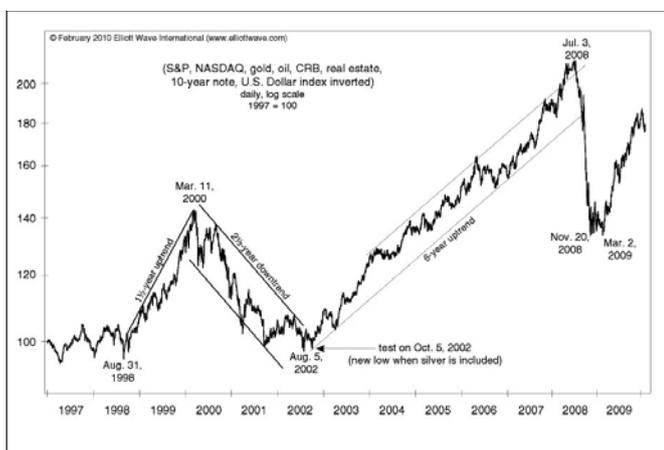


Chart 23: The US dollar bottomed in November



In *Conquer the Crash* I introduced a theme called “all the same market”. Liquidity is the driving factor for all the financial markets in this monetary environment. So, housing, S&P 500 stocks, precious metals and various commodities are all moving roughly together. People keep thinking that commodities are going to be a hedge against the stock decline and so on, but the overall picture is that the markets are ebbing and flowing at roughly the same time. Even in this environment, however, markets do not move precisely simultaneously, which throws a lot of people off. But overall, the correlations are getting tighter and tighter as we get close to the centre of the deflationary trend.

Chart 24: The All-the-same-market composite Index

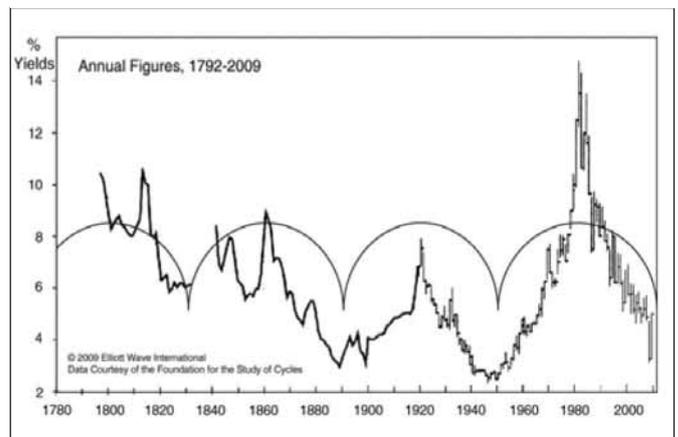


We keep an index of these markets plus the dollar inverted (chart 24). There has been a rebound in the all-the-same-market index, but it looks as if a top is forming, which will be a prelude to the next decline.

The reason for deflationary market risk is that there is too much debt. The incredible optimism of the 1980s, 1990s and 2000s created a belief amongst debtors that they could pay off their debts, while creditors naively assumed that debtors would pay, despite there being more debt in existence than at any other time in history. But increasing pessimism will lead to debt retirement and default, which will bring about the deflationary trend.

Markets and the economy have had a partial recovery in 2009. It has been a reflationary period, when credit loosened up. But if wave three downward in stocks is beginning, we are heading for another credit crunch, as in 2008.

Chart 25: Kondratieff cycles as reflected in T-Bond yields



The Kondratieff cycle is a very useful tool. Normally at the end of a Kondratieff cycle interest rates on triple-A bonds are very low, which is what I have been forecasting. But, at same time, I have called for interest rates on weaker debt to shoot up. This already happened to the sub-prime loans. Now the market is trying to figure out whether the debt of the biggest sovereign governments is going to stay triple-A. The question is, have governments taken on so much public debt and guaranteed so much private debt that they have put themselves in the same position as the corporations and the banks - which is basically insolvent? This risk is one of the reasons why I have consistently recommended 100% safety. If you are going to own any government debt at all, hold only short-term bills, because if rates do rise due to default fears (it won't be because of inflation), you will earn the new rate on every roll-over. If you are stuck in 30-year bonds under such a scenario, you will lose money on price. Last week, Moody's warned the US Government that its triple-A bond rating could come under pressure in the future if it does not change its behaviour. By the way, it is becoming very difficult to find safe institutions in which to hold safe instruments. If you are interested in the mechanics, the second half of *Conquer the Crash* is a manual on how to do it.

Robert R Prechter Jr, CMT is President of Elliott Wave International and Executive Director of Socionomics Institute. He is also a Fellow of the Society of Technical Analysts.

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60 year intervals and October panics

By David McMinn

Annual one day rises and falls are exceedingly important in financial patterns, a finding strongly supported by numerous correlates (McMinn, 2006, 2009). What are these events you may well ask? An annual one day (AOD) rise or AOD fall is taken as the biggest % one day rise or fall in the year commencing March 1. They represent the extremes in investor sentiment during a given year. In this assessment, the interval of 60 years has been intimately linked with historic October panics (McMinn, 2009).

Adding or subtracting 60 years to the dates of major October AOD falls for the Dow Jones Industrial Average (DJIA) consistently produced corresponding AOD falls between August 19 and December 20. This finding was repeatable for the DJIA AOD rises, while 60 year intervals also showed up between 19th century US October panics. Importantly, the 6 October AOD falls (=> -3.60%), occurring from 1910 to 2000, formed a very neat grid in Table 1. The six events happened before the full Moon and before the new Moon, producing a precise pattern that would be very unlikely to occur by chance.

Why the interval of 60 years was so important in the timing of October panics remains unknown. It clearly has something to do with Moon Sun cycles, but the financial pattern remains very enigmatic.

Background: The time assessed was 12 Noon US Eastern Standard Time on the day of the panic or AOD rise/fall, with no adjustment being made for daylight saving time. E° is the abbreviation used to denote the degree on the ecliptical circle, whereas A° is used for the angular degree between the Moon and Sun (lunar phase). This was to prevent confusion between two very different concepts. For the period 1885 to 1896, the 14 Stock Average and the 12 Stock Average indexes were used, while the DJIA was utilised post 1896.

October AOD Falls 1910 - 2000

Between 1910 and 2000, major DJIA October AOD falls (=> -3.60%) were experienced in 1927, 1929, 1937, 1987, 1989 & 1997. They yielded a precise grid based on 2-8/60 solar years (see Table 1), with lunar phase in very narrow ranges 150 – 165 A° (before a full Moon) and 320 – 330 A° (before a new Moon). The AOD October falls were followed a few days later by a DJIA AOD rise, with one anomaly on September 6, 1927. (NB The term 2-8/60 years may be broken down as follows: 2-8 years are the intervals horizontally in the grid in Table 1 - 1927 +2 1929 +8 1937, as well as 1987 +2 1989 + 8 1997. 60 years gives the intervals down in the grid – 1927 +60 1987; 1929 +60 1989; 1937 +60 1997.)

The 2-8/60 year grid may be extended on the right hand side by adding 11 years. This gave the October 15, 2008 AOD fall (-7.75%) during Black October. Subtracting 60 years from this date gave the November 3, 1948 AOD fall (-3.85%), when Truman's surprise victory in the presidential elections sparked stock market tremors.

Table 1 OCTOBER AOD FALLS & THE 2-8/60 YEAR GRID

Solar Year Intervals and Lunar Phase – AOD Falls

1927		1929		1937
Oct 08	+ 2 yrs	Oct 29 (a)	+ 8 yrs	Oct 18
-3.65%		-11.73%		-7.75%
150 A°		326 A°		164 A°
+ 60 yrs		+ 60 yrs		+ 60 yrs
1987		1989		1997
Oct 19	+ 2 yrs	Oct 13	+ 8 yrs	Oct 27
-22.61%		-6.91%		-7.18%
324 A°		164 A°		320 A°

(a) The 1929 AOD fall happened on Monday Oct 28, although the following day, Black Tuesday, has been used in the table.

October AOD Rises and Falls 1885 - 2009

Since 1885, some 10 major DJIA AOD falls (=> -3.60%) occurred between September 10 and October 31. Adding or subtracting 60 years to each of these dates gave a corresponding AOD fall (=> -2.45%) between August 19 and December 20, with NO EXCEPTIONS (see Appendix 1). Major autumn AOD falls could be expected in 2015 and 2046 by extrapolating from this trend.

Sixty year intervals were also evident for the 11 major DJIA AOD rises (=> +4.00%) happening between September 24 and November 5 since 1885 (see Appendix 2). By adding or subtracting 60 years, most of these rises had a corresponding DJIA AOD rise (=> +2.50%) between August 20 and December 30. The anomalies took place in 1914 when there was no DJIA data between July 30 and December 12, as well as in 1948 when no AOD rise over +2.10% was recorded. In 1914, the US stock market was closed for about 4.5 months following the outbreak of WW I. Presumably, a security rally would have taken place, once the US Government confirmed that it would remain neutral in the conflict. The stock market rose +7.65% on September 5, 1939, when President Roosevelt announced that the USA would not enter into WW II.

A summary can be given as follows:

AOD Falls (=> -3.60%) between Sep 10 and Oct 31.

All AOD Falls in Appendix 1 occurred between Aug 19 and Dec 20

AOD Rises (=> +4.00%) between Sep 24 and Nov 05.

All AOD Rises in Appendix 2 occurred between Aug 20 - Dec 30

Good correlates with the 60 year intervals could only be established for major DJIA AOD rises and falls greater than +4.00% and -3.60% respectively. Anomalies arise using AOD rises

or falls less than these values. For example, the October 25, 1982 AOD fall (-3.52%) minus 60 years gave 1922, which experienced an AOD fall on June 12 (-2.65%). The latter did not occur within the time frame established for all examples in Appendix 1. The 1982 AOD fall also occurred after the 1st quarter Moon, whereas all other October panics happened around a full Moon and a few days prior to a new Moon. Additionally, DJIA AOD falls over -4.50% from 1910 to 2008 nearly always occurred between the 1st quarter Moon and a full Moon, as well as between the 3rd quarter Moon and a new Moon (ie: two quarter segments diagonally opposite in the angular circle). For AOD falls less than -4.50%, this lunar phase effect did not hold (McMinn, 2006). Extreme AOD events produced the greatest significance in relation to Moon Sun cycles.

Historical October Panics

60 year intervals were also important in the timing of 19th century panics taking place between September 20 and October 31.

1839 US panic (Oct) +60 1899 DJIA AOD fall (Dec 18).

1847 British panic (Oct 23) +60 1907 US panic (Oct 22).

1857 US banking panic (Oct 14) +60 1917 DJIA AOD falls (Nov 1 & 8).

1869 US Black Friday (Sep 24) +60 1929 US Black Tuesday (Oct 29).

1871 US Chicago fire panic (Oct 09) +60 1931 DJIA AOD fall (Sep 24).

The 1907 US banking panic (Oct 22) was anomalous, as 1967 had no DJIA AOD fall over -2.00%.

1873 US Black Friday (Sep 19) plus 60 years gave the July 21, 1933 AOD fall. This was about a month out compared with AOD falls in Appendix 1, all of which timed from August 19 to December 20.

Moon Sun Cycles

Major October DJIA AOD falls (\Rightarrow -3.60%) in Appendix 1 happened consistently with lunar phase around the full Moon (150 – 205 A°) and before the new Moon (300 – 350 A°). This also applied to the early historical US October panics in 1857, 1871 and 1907. The only date available for the 1839 panic was October 9 banking panic in Philadelphia, with lunar phase at 023 A° which was anomalous. Interestingly, the non-October events in Appendix 1 showed no similar restricted distributions for lunar phase.

For all 12 October DJIA rises in Appendix 2, lunar phase always occurred around the full Moon (160 – 200 A°) and after the 3rd quarter Moon to after the new Moon (280 - 015 A°). This gave a similar distribution for the major October AOD falls in Appendix 1.

DJIA October Events	No	Lunar Range	No	Lunar Range
AOD Falls (\Rightarrow -3.60%)	4	150 – 205 A°	5	300 – 350 A°
AOD Rises (\Rightarrow +2.50%)	3	160 – 200 A°	9	280 - 015 A°

Moon Sun or Jupiter Saturn?

W. D. Gann commented on the importance of the 20 year cycle of US financial disasters, which he attributed to Jupiter Saturn cycles. The interval between successive oppositions (180 A°) between these two planets was about 20 years when major economic upheavals occurred – 1871, 1892, 1911 and 1930. Every 60 years,

the same opposition was associated with a major depression 1810's, 1870's, 1930's (but not repeated in the 1990's). Gann called this 60 year cycle the "master time cycle." However, the author regarded the planets as having no meaningful impact on financial trends. After years of personal research and assessing traditional astrology, no valid links could be established between the planets and market activity. In contrast, the Moon and Sun produced numerous excellent correlates with key market events. These luminaries are hypothesised to influence mass physiological cycles of a human population (there are many scientific studies to support this), which caused the mass mood to fluctuate in varying cycles of optimism and fear. This in turn is believed to be the prime driver of financial cycles.

A 20 year cycle or 246.5 lunar months and a 60 year cycle of 742 lunar months have been established in Moon Sun finance (McMinn, 2009). These are the proposed alternatives to W D Gann's 20 year and 60 year Jupiter Saturn cycles. Interestingly, 742 lunar months is the fundamental cycle of the 60 year Chinese lunar calendar.

October Panics and Odd Ended Years

Another notable curiosity was the propensity for October panics to take place in years ended in odd numbers – particularly 7 – 1857, 1897, 1907, 1927, 1937, 1987 & 1997 (McMinn, 2009). In fact, 2008 was the only even-ended year containing a major US October panic or DJIA AOD fall. This trend was quite remarkable, but no explanation can be offered as to why it manifests in financial history.

Conclusions

The interval of 60 years can be linked strongly to October panics over the past 170 years. However, it could not be associated with panics and AOD falls occurring at other times of the year. The term 'interval' was used because the 60 year effect was so variable, whereas the term 'cycle' would imply something with a far more regular timing. From historic trends, another autumn panic could take place in 2015. December 18, 1895 (AOD fall) +60 September 26, 1955 (AOD fall) +60 Autumn 2015. As always, only time will tell.

The timing of US October panics was strongly influenced by Moon Sun tidal effects, about which little is known. The positions of the Moon and Sun on the ecliptical circle are exceedingly relevant, but little else can be stated with a high degree of confidence. The findings support the view in technical analysis that markets are mathematically structured and past performance is indicative of future outcomes. They completely contradict the random walk - efficient market hypothesis that was the dominant paradigm in traditional economics in the late 20th century. Fortunately, Moon Sun finance is slowly becoming mainstream. Since 2003, numerous academic papers have been published on a lunar phase effect in stock market activity. Alas, full acceptance of the Moon Sun paradigm is many years away.

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Appendix 1

**60 YEAR INTERVALS AND AUTUMN DJIA AOD FALLS
Over -3.60%**

Time Spans: 1895 – 1926 & 1955 – 1986

1895	1897	1903	1926
Dec 20	Sep 21	Aug 19	Oct 15
-6.61%	-3.95%	-4.07%	-2.73%
051 A° + 2	299 A° + 6	336 A° + 23	104 A° + 1
	Oct 12	Oct 19	
	-3.90%	-4.17%	
	202 A°	348 A°	
+ 60	+ 60	+ 60	+ 60
1955	1957	1963	1986
Sep 26	Oct 21	Nov 22	Sep 11
-6.54%	-2.48%	-2.89%	-4.61%
118 A° + 2	339 A° + 6	070 A° + 23	095 A° + 1

Time Spans: 1927 – 1937 and 1987 – 1997

1927	1929	1931	1937
Oct 08	Oct 29	Sep 24	Oct 18
-3.65%	-11.73%	-7.07%	-7.75%
150 A° + 2	326 A° + 2	157 A° + 6	164 A° + 4
+ 60	+ 60	+ 60	+ 60
1987	1989	1991	1997
Oct 19	Oct 13	Nov 15	Oct 27
-22.61%	-6.91%	-3.93%	-7.18%
324 A° + 2	164 A° + 2	102 A° + 6	320 A° + 4

Time Spans: 1941 – 1986 and 2001 – 2046

1941	1948	1955	1986
Dec 8	Nov 03	Sep 26	Sep 11
-3.50%	-3.85%	-6.54%	-4.61%
234 A° + 7	032 A° + 7	118 A° + 31	095 A°
+ 60	+ 60	+ 60	+ 60
2001	2008	????	????
Sep 11	Oct 15		
na + 7	-7.75% + 7		+ 31
281 A°	192 A°		

This table gives all DJIA AOD falls over -3.60% happening between Sep 10 and Oct 31 for the period 1885 to 2008.

Appendix 2

**60 YEAR INTERVALS AND AUTUMN DJIA AOD RISES
Over +4.00%**

Time Spans: 1897 – 1918 and 1957 – 1978

1897	1903	1914	1918
Aug 31	Oct 16	(a)	Oct 30
+2.97%	+5.11%		+2.67%
314 A° + 6	308 A° + 11		315 A° + 9
+ 60	+ 60	+ 60	+ 60
1957	1963	1974	1978
Oct 23	Nov 26	Oct 09	Nov 01
+4.12%	+4.50%	+4.71%	+4.46%
007 A° + 6	120 A° + 11	282 A° + 4	011 A° + 9
+ 9			

Time Spans: 1927 – 1937 and 1987 – 1997

1927	1929	1931	1937
Sep 06	Oct 30	Oct 06	Oct 20
+2.95%	+12.34%	+14.87%	+6.07%
116 A° + 2	338 A° + 2	294 A° + 6	191 A° + 4
+ 60	+ 60	+ 60	+ 60
1987	1989	1991	1997
Oct 21	Oct 16	Aug 21	Oct 28
+10.17%	+3.43%	+3.02%	+4.71%
347 A° + 2	197 A° + 2	139 A° + 6	330 A° + 4
		Nov 23	
		+3.00%	
		204A°	

Time Spans: 1941 – 1974 and 2001 – 2034

1941	1948	1957	1974
Dec 30	(b)	Oct 23	Oct 09
+3.50%		+4.12%	+4.71%
167 A° + 7		007 A° + 17	282 A°
+ 60	+ 60	+ 60	+ 60
2001	2008	2017	2034
Sep 24	Oct 13	????	????
+4.47%	+11.08%		
093 A° + 7	165 A° + 9		+ 17

This table gives all DJIA AOD rises over +4.00% between Sep 24 and Nov 05 for the period 1885 to 2008.

- (a) Due to the outbreak of WW I, the New York stock market was closed on July 30 and not reopened until December 12.
- (b) No DJIA AOD rise over +2.10% was recorded during the year.

The 2008 financial panic: a retrospective perspective

By Tony Plummer, FSTA

The 2008 financial panic seems to have had something of a 'black swan' effect on academic economists. The sudden appearance of a major financial meltdown has caused them actively to ask questions about the validity of their economic models. These are largely based on John Muth's rational expectations hypothesis and Eugene Fama's efficient market theory which incorporate the assumptions that investors do not consistently make mistakes, markets do not misprice equity values or misallocate risks, and recessions and bear markets are created by exogenous shocks.

The fundamental errors underlying this approach have occurred because what should have been simplifying assumptions that could be used to test various hypotheses somehow morphed into statements about reality. Consequently, it has been assumed that investors do, indeed, make their decisions independently from one another, that news is always assigned its true value, and that equity price movements are random. There is little or no allowance for market contagion, for prices being driven well away from equilibrium values, or for the creation of massive endogenous risk.

This is not just a question of theoretical nicety because it has posed a major problem for policy-making. Western governments have operated in the presumption that economic fluctuations (ie, shocks) can be minimised and wealth creation maximised by enlightened changes in monetary and/or fiscal policy. Instead, the evidence has been that government intervention runs the risk of increasing the amplitude of financial and economic fluctuations.

Bubbles and crashes are a good case in point. Governments presume that they learnt enough from the 1929-32 disaster in the US to ensure that the same thing does not happen again. Yet, not only do they recur, they contain the same basic footprints. The first chart shows the 1921-32 US equity bubble and subsequent 'Crash', and compares it with the 2005-09 Chinese equity bubble and crash. And the three following charts show that something similar happened in the FTSE in 1986-1987, in the NIKKEI in 1989-92 and in the NASDAQ in 1994-2002. The time and price dimensions are different, but the patterns are all-too similar. There seems to be a common process at work.

Human beings have a built-in tendency to herd together: we know that we do not know everything, so we watch what others are doing in case we miss something; we know that we cannot form judgements purely on the basis of logic, so we use feelings to inform our decisions; and we are vulnerable to fear, so we seek security by ensuring that our views are not at odds with those of others. Neuro-scientific research findings in the last few years actually show that we

Chart 1: US Market 1921-32 and Chinese market 2005-09

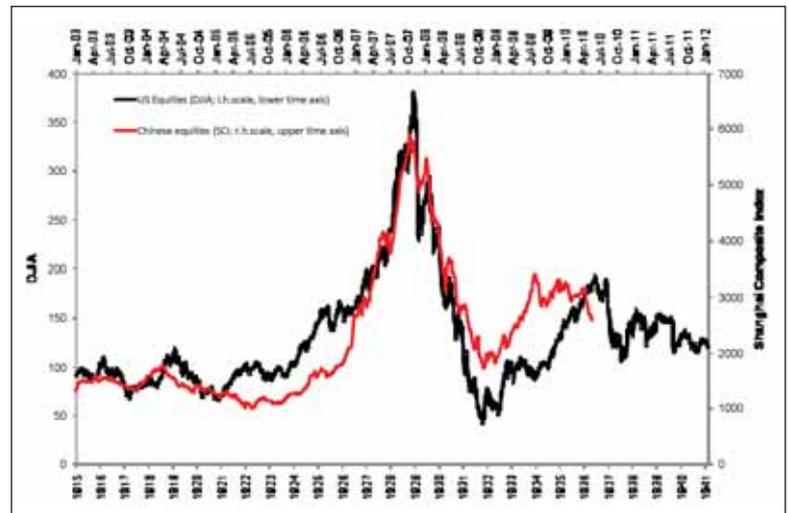


Chart 2: US Market 1921-32 and FTSE-100 index 1986-87



Chart 3: US Market and Japanese market 1989-92



are literally programmed to imitate and resonate with others. Consequently, group behaviour – with common moods and common beliefs – becomes inevitable when there is some serious action going on in financial markets.

But even apparent group madness seems to be organised by natural laws. There are two main ratios that control market corrections – namely 38.2:61.8 and 50:1. First, a broad market index will not retrace more than 38.2% of a prior impulse wave unless the fundamentals relevant to that impulse wave are themselves reversing. What this means is that a 38.2% retracement forms the boundary between a technical correction within a trend and a fundamentals-led reversal in the trend itself. In the case of an absolute fall of 38.2%, a market will come into contact with the evolution to date of very long-running structural fundamentals.

Sometimes, of course, the 38.2% boundary is broken, and the next support level comes in at a 50% retracement. It seems that this retracement is at its most powerful when absolute movements are involved, rather than relative movements. Indeed, markets do have a tendency to double and to halve. If a broad market index halves, the issue becomes not just one of economics, but also of politics. The fall normally triggers pro-active government (or government-supported) intervention. It is only if such intervention is not applied, or fails, that a falling equity market will lock into a fundamental re-structuring both of the real economy and of political attitudes. This is what happened during the Great Depression.

The final chart shows all the bears of more than 20% in the Dow Jones Industrial Average since 1900. The 38.2% boundary operated (with some flexibility) in 1916-17, 1968-70, 1987 and 2000-02. The 50% boundary on the other hand (and, again with some flexibility) applied to 1906-07, 1919-21, 1929, 1937-42, 1973-74, and 2007-09. Importantly, the halving of prices during the 1929 Wall Street Crash did not trigger an appropriate government response. In particular,

Chart 4: US Market and Nasdaq Index 1994-2002

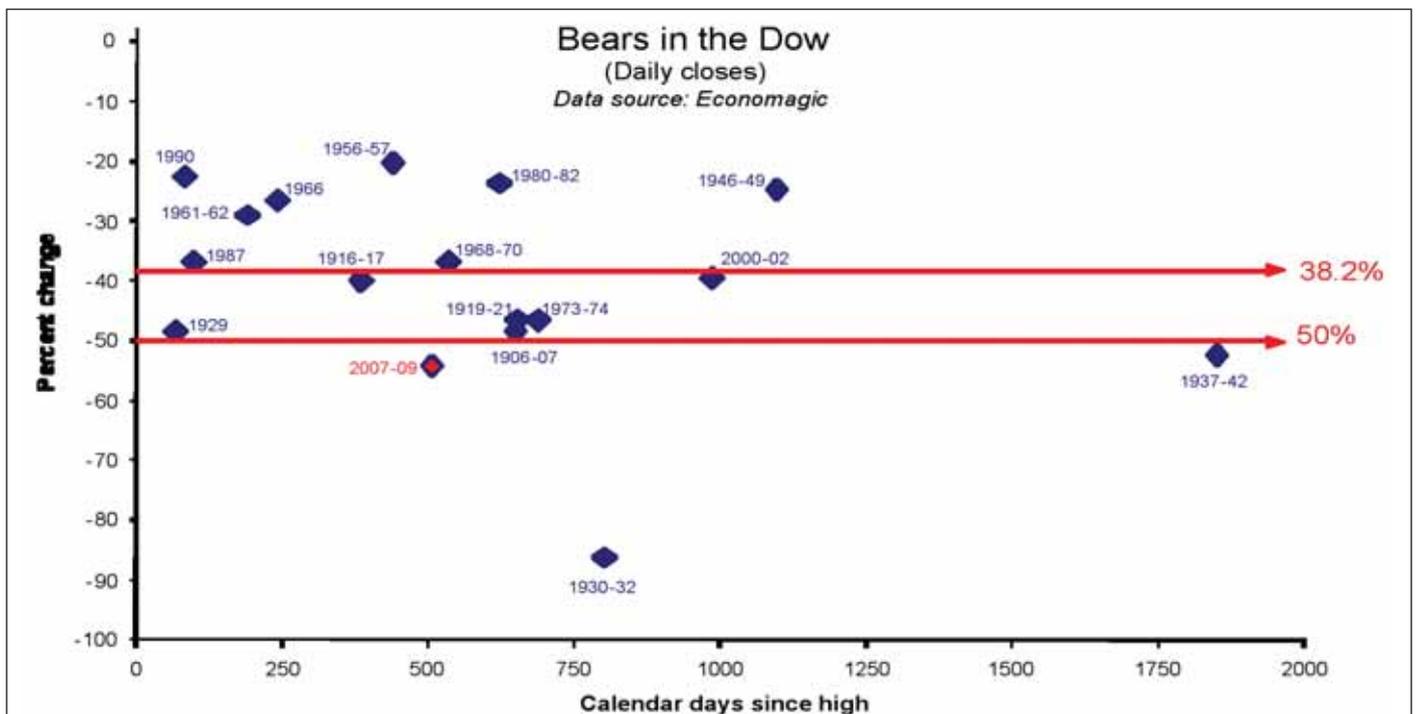


money growth was subsequently allowed to contract. So, after a 50% rally in 1929-30, prices collapsed by 86% between 1930 and 1932.

The 50% fall in US (and UK) equities in 2007-09 triggered government intervention to support banks and financial markets. It is arguable that governments helped to create the problem in the first place by providing an unnecessary monetary and fiscal stimulus and by failing to regulate leverage. And it is arguable that government may undo some of the benefits of intervention by penalising banks and interfering with the structure and mechanics of markets. But, eventually, the critical issue will be whether they can keep the financial system viable in the face of debt defaults.

Western markets are experiencing an unprecedented deflation, which will likely be ratcheted upwards every time debt defaults are seen to threaten the system. The impact effects could produce extraordinary changes in asset prices; the second-round effects, however, could produce deep-structure changes in our society.

Chart 5



Private trading

This article is a summary of a talk given to the STA on March 2010

By Malcolm Pryor MSTA

STA members who trade their own accounts

There is a subset of STA members who trade their own accounts, and whose interest in technical analysis has a particular focus: which concepts are useful to them in their own trading? Malcolm Pryor used the STA study program back in 2002 to provide him with some short cuts to useful trading concepts, and this coincided with his transition to private trader. His library of trading books has subsequently grown to 300.

The importance of beliefs

Technical analysis is based on a range of beliefs and assumptions. What is useful to the trader depends to a great extent on the beliefs of the trader. To trade successfully the trader needs to trade in line with his or her beliefs. A good trading / business plan for a private trader needs to include documentation of beliefs about the trader, about the markets, about trading and about trading systems.

Depending on the trader's beliefs, technical analysis can be used to assist with a range of trading tasks, such as:

- assessing current trading conditions
- establishing an objective trading edge
- establishing appropriate risk: reward relationships
- establishing logical rules for specific actions such as entry and exit, and thereby helping to counteract fundamental emotional issues (such as fear and greed).

Here are some examples of trading beliefs and assumptions about the markets and about trading, extracted from Malcolm Pryor's trading / business plan:

- markets and prices are driven by crowd emotions and psychology
- group emotions and psychology tend to cause crowds to behave in similar ways in similar situations and leave similar imprints on prices
- crowds swing from euphoria to capitulation in all time frames
- euphoria is a good time to sell, capitulation is a good time to buy
- certain price patterns have predictive power (playing the odds not specific predictions)
- fundamentals are already in the price
- markets trend
- markets do not usually trend in a straight line, they zig zag
- technical analysis can help identify trends
- the force behind a price move varies during the move (momentum)
- technical analysis can measure momentum
- certain patterns in momentum have predictive power
- momentum divergence has predictive power
- price displays areas of support and resistance

- support once broken tends to become resistance
- resistance once broken tends to become support
- technical analysis can provide an edge (don't trade without having a system that gives an edge)
- technical analysis can provide methodology for stop placement (stops are essential)
- nothing in technical analysis is certain, we only deal in probabilities
- technical analysis alone will not guarantee success. For example,
 - it is imperative to set objectives, plan and monitor trades
 - bet size is critical to success (how the trader achieves objectives)
 - personal psychology and discipline are vital

Finding strategies that match the trader's beliefs

There are a range of different trading styles that can be used by private traders and these strategies can be classified according to various criteria. The range of strategies might include for instance trend-following, counter trend / reversion to mean, delta neutral, patterns, arbitrage, trading on news.

Taking trend-following as an example, several sub-classifications might be useful when aligning the trading style to the trader's beliefs, such as:

- by speed of entry / exit
 - get in early (eg momentum divergence, price breakout, volatility breakout, pattern)
 - or get in late (pullback, mini breakout, micro pattern)
 - get out early (take a small piece)
 - or get out late (try to get most of the move)
- by length of trade (eg: weeks, 2 – 20 days, 1-5 days, intraday)
- by the characteristics of trade samples
 - distribution of R multiples (Dr. Van K Tharp, see reading recommendations below)
 - expectancy / standard deviation
 - percentage of winners
 - size of average win versus size of average loss.

The following table shows the characteristics of five styles of trading:

- first style, wins 75% of the time, average win divided by average loss 1.0
- second style, wins 60% of the time, average win divided by average loss 1.5
- third style, wins 50% of the time, average win divided by average loss 2.0
- fourth style, wins 40% of the time, average win divided by average loss 2.75
- fifth style, wins 25% of the time, average win divided by average loss 5.0

Style type	Expectancy	Standard deviation	Exp / STD
75/1.0	0.5	0.87	0.57
60/1.5	0.5	1.23	0.41
50/2.0	0.5	1.51	0.33
40/2.75	0.5	1.85	0.27
25/5.0	0.5	2.61	0.19

Although each style has the same expectancy (0.5) the standard deviation of each is different and the psychological requirements to trade each are different. For instance, the fifth style, which might be a long term trend-following style, requires stamina to tolerate the high number of losers and patience to ride the winners to grow them to be five times the average loss. Expectancy divided by standard deviation is a useful measure for assessing trading styles and extensive work has been done on this by Dr Van Tharp.

Matching technical analysis tools to trading tasks

A trading strategy should consist of a set of rules which are, in effect, pre-planned approaches to the various tasks of trading, and minimum requirements for documentation can be identified along the following lines:

- beliefs and methodology
- filters and set up
- trigger
- entry
- initial stop
- trade size / position sizing
- exit techniques
- re-entry
- trades in combination

Technical analysis offers a large tool kit to assist with the various tasks of trading and it is important to select the right tools for each task.

Using the example of trading pullbacks in a trend, here are some possible matches of technical analysis tools to some of these trading tasks:

- **Filters:** classifications of market type (eg up / down / sideways, age of trend, wave methodology, quiet / volatile); relative strength (see Note 1)
- **Set up – trend identification:** directional movement; moving average configurations; point and figure; 3 line break; Kagi; trend line techniques; patterns (eg higher highs and higher lows in up trend)
- **Set up – pullback:** geometric patterns (eg flags, pennants, triangles); patterns of open high low close; oscillators (eg oversold / overbought)
- **Trigger:** geometric patterns (eg breakout from flag, pennant, triangle); patterns of open high low close (eg after a pullback in an uptrend, price breaks, most recent high); oscillators (eg specific patterns in the oscillator itself)
- **Initial stop:** support and resistance (eg below support if long); average true range (eg pre-determined ATR distance away from current or previous open high low or close); indicator based (eg mid-point of a banded oscillator).

Using the example of trading a counter trend, technical analysis tools which could be used to identify set ups and triggers include:

- **Support and resistance** (horizontal lines, curvilinear line eg moving averages, candlestick patterns as support and resistance)
- **Specific Bollinger band techniques** (eg a penetration of the band followed by smaller penetration or near touch of the band)
- **False breakouts** (Wyckoff springs and upthrusts) the key belief here being: when price breaks up or down from a range and then fails to continue, this can provide a good opportunity for a trade in the opposite direction
- **Oscillator divergence** (eg in the case of a long trade the set up is price makes a new low and the oscillator makes a higher low, various techniques for identifying the trigger are possible based either on price action or on oscillator action).

One useful technique is to combine timeframes, looking for a trend on the higher timeframe and then trading counter trend on the lower timeframe in line with the trend on the higher timeframe.

Note 1: filter for going long in UK stocks (going short is opposite)

Both the stock's sector and the stock itself have to pass five tests:

1. relative strength versus overall market >5% over last three months
2. above 200-moving average
3. 13-26-52 moving average combination in uptrend mode (13 above 26 and 26 above 52)
4. Kagi chart in Yang mode
5. 3 line break chart in an uptrend

As at the end of February, FTSE 350 stocks were reduced to 35 potential longs in 12 out of 39 sectors, and to 18 potential shorts in 5 out of 39 sectors.

Recommended Reading

On beliefs and the psychology of trading:

Trading in the Zone by Mark Douglas (2000)

Super Trader by Dr Van K Tharp (2009)

On developing trading strategies:

Technical Traders Guide to Computer Analysis of the Futures Market by Charles LeBeau and David W Lucas (1992)

On position sizing:

Definitive Guide to Position Sizing by Dr Van K. Tharp (2008)

On intra-day trading (but relevant to all timeframes):

Reading Price Charts Bar by Bar: The Technical Analysis of Price Action for the Serious Trader by Al Brooks (2009)

IFTA conference 2010

The 23rd IFTA conference will be held in Berlin, Germany on October 7-9 2010.

For further details or to book, please go to www.ifta.org

Annual percentage rate-of-change

By M.I.C. Bain MSTA

The common measure of “momentum” is an overbought/oversold oscillator. This indicator is calculated by dividing the latest closing price by the closing price on a previous date, for example, 21 days earlier. Specifically, $A \div B = C$ where A is the latest closing price, B is the previous closing price (for the period chosen) and C is the percentage Rate-of-Change (or “Momentum”). I call it my AMI (Annual Momentum Indicator).

I have seen the Rate-of-Change (ROC) for periods of up to 63 days calculated, but not longer. However, in my experience, using an *annual* percentage (%) Rate-of-Change is very useful for picking up major trend changes. Why should this be?

Year-on-year percentage rate of change is commonly used by statisticians and economists as an annual yardstick of results. There is a propensity in the human spirit to consider a calendar year important – even in the financial markets. It is, after all, the time it takes for the Earth to circle the Sun, for a complete cycle of change in the seasons.

Applying an annual % Rate-of-Change to charts of financial markets is intriguing, as inspection of the charts below show. It appears that the markets pay sub-conscious attention to this time period.

It is easy to apply this indicator to markets using Uptada's Momentum program (and other technical analysis packages will probably include it). These charts use 255 market days. A calendar year varies between 247 and 258 market days. Additionally, using a 1 x 3 scale point and figure chart presents the data more clearly – even for those not familiar with p and f charts.

As with all forms of financial analysis, the annual percentage Rate-of-Change does not give correct signals all of the time and needs some practice. But read it like a chart and look ahead of the Divisor. When the Divisor (B) makes an extraordinary and rapid change, the ROC (C) spikes. This happened in the case of the extreme falls in the banking sector – with stocks like RBS for instance – but do not let such “tsunamis” put you off.

For the S&P500 and many other main market indices, the divisor (B) bottomed 9 March 2009, so from then on the Divisor (B) reversed its decline. A falling divisor (B) exerts an upward effect on the current ROC (C) and vice-versa. So the rising tidal flow of “B” is now broadly depressing the ROC line (C). A divisor dip starts 1 June, removing the depressor until 12 June.

If you have a momentum indicator in your technical analysis system, I suggest that you screen a daily line chart from January 2007 onwards of any market that interests you. Then put up a 252-256 days (or 52 weeks if using a weekly chart) % ROC chart on the same screen.

The Dow, the FTSE-100 and other indices have %ROC charts that look very similar to the S&P500 chart shown here. As you know what the divisor (B) did last year, you can apply $B \times C = A$ by producing a list of last year's closing prices from the current date onwards ahead and multiply each by +17% to give you an advance warning of (C) falling through that base – which looks inevitable.

On the basis of the past relevance of the %ROC shown here, and on many other charts, any break of a sizeable ROC pattern combined with a break of a valid trend line has to be taken as a sign that the subject price is likely to move in the same direction.

