

Quorum

August 2009

A Method to the Madness – *An Interview with Richard Edwards of HED Capital – Part 2*

In Part 1 of our interview with Richard Edwards of HED Capital, Richard gave a summary of the theoretical basis for the work he does. There are a few comments that need to be made before we begin Part 2. Since mid-2007, Richard had been telling his readers that the bull market in equities would soon be over and that the fall would be steep and severe. In October of 2007, he warned his readers that the high point would be at any moment and then identified the absolute high of the Dow to within 24 hours. In July of 2008, Richard told his readers that the rise in oil prices was over, declines were imminent and in August 2008 he said the back of the oil market was broken. On March 9th this year, Richard advised buying stocks, adding two days later that a long-term bottom was being made. Stocks in most markets around the world did indeed make their post-crunch lows on either the 9th or 10th March. These are but a few of the prescient calls Richard has made over the years, based on the research work that he and his group have done over two decades.

In Part 2 of the interview, Richard will be sharing further details about the methodology and explaining some of the applications. Some of his comments will expand on the discussion in Part 1. Later in this interview, I will provide readers with the contents of Richard's commentary as it was made at the time. Each will be dated so the forward predictions of subsequent market events can be verified. On that note, I would like to welcome Richard back.

Richard:
Thank you!

Quorum:
How did this all begin? What got you started in this exploration, this particular path of inquiry?

Richard:
In 1988 I was working for one of the great old Wall Street firms that have now disappeared.

Quorum:
That doesn't narrow the field much.

Richard:
It was Lehman brothers. I was running one of the derivatives desks in London and was frustrated by the general uselessness of the various types of market analysis that were available and I was particularly irritated by their reactive nature.

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Quorum:

You mean they just followed the markets?

Richard:

Yes. Regardless of their claims, many fundamental and technical analysts were content to simply listen and watch the markets' constant unfolding narrative and adjust their comments according to developments. Many thought that this was just the natural relationship between the participants and the market but it seemed too passive to me. Where were the warnings of upcoming trouble? Why did stock analysts so often re-evaluate fundamentals just because the price had risen?

Quorum:

So analysts' estimates of true value mysteriously creep higher as a stock rises?

Richard:

Exactly! Technical analysis seemed often just as bad—especially in the hands of those who chose just to follow trends. The whole idea of “momentum investing” for example, in which an asset becomes more attractive as it goes higher, leaves a bad taste in my mouth.

That's not to say that there aren't good analysts—there are, but they seem to be those people who can bring a degree of imagination to the job of “reading” the market. They succeed in spite of the poor techniques available to them.

The idea of when to be a trend follower and when a contrarian takes a creative flair or insight and I often thought that some extra sensitivity was at work in the best analysts that had little to do with their chosen methods and tools. Most market folk get occasional insights into what will happen next but these flashes of illumination are rare. What was it that brought them about and how could we make more of them? I began to experiment with some of the things that might be possible using the new mathematics of the time.

Quorum:

So where did you see the first sparkle of insight?

Richard:

I noticed that properly seasoned players are drawn to the study of what the market is doing and how it reacts in response to developments, whether they think of it that way or not. The market is constantly responding to lots of different pokes and prods and provides clues every time it does so. This is what a lot of the pros watch. But remember what we discussed in Part 1 about the influence of all the different players in the market and all their different time horizons? This is part of the reason market movements are so hard to decipher.

As you know I have a background in maths. And for a time, it was thought that this tape-reading or crowd-watching, which is what it is really, could be rationalized and made measurable using the mathematics that sprang up in the late 1980s. But the maths was at an early stage and still needed

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further development. It was promising though—chaos theory and the like, all concerned with feedback. It seemed to me that it could explain things in the real world better than the older mathematics. From this there developed a distinct sub-branch of mathematics—the study of complexity. This seemed to be exactly what was needed!

Quorum:

This was about the time of Benoit Mandelbrot's book *The Fractal Geometry of Nature*, right?

Richard:

That's right and a bit afterwards. Mandelbrot and a few others hold that many of the basic assumptions of modern finance were not true. For example Fama's Efficient Market Hypothesis holds that in an ideal market, all relevant information is already priced into a security at a given time. Consequently, yesterday's price change does not influence today's; each price change is what statisticians call "independent" from the previous price change. It also assumes that price changes are normally distributed—the standard bell curve, where price moves of all different sizes are clustered around a mean.

Quorum:

Yes, the validity of this hypothesis is getting a lot of attention at the moment. I believe your friend Mr. Taleb has made a fair amount of money basically betting it is wrong.

Richard:

Nassim was an options trader and has spent a lot of time studying markets. All traders know that if prices make a large move up or down today, that there is a good chance that they will move just as strongly tomorrow. In fact, there are all kinds of "rules" or market aphorisms that traders have that in one way or another describe what is actually a reflection of price dependency. Today's price movements do influence tomorrow's price action. Traders also know that markets can move violently and with swings of large magnitude. This empirical evidence is contrary to the academic theory—large market moves happen with vastly greater frequency than would be predicted by the standard random walk model. In fact, under the standard theory, events that traders have routinely to contend with in markets should not happen in their entire life times.

One other point. As a trader, one spends a lot of time looking at charts, trying to figure out what the charts are saying about the next market move. It is a little like palmistry or reading tea leaves. However, if you look at the charts of a market, index, stock or currency, what you see is that they tend to look similar for lots of different time frames. We touched on this in Part 1.

This self-similarity is also sometimes called "fractal" when it occurs in geometry or nature. If you are shown a picture of a stick with some foliage on it, you often can't tell if it's a twig, a branch, a bush or a full tree unless there is something else of known size in the picture to give it scale.

Fractal means generally "a rough or fragmented [geometric shape](#) that can be split into parts, each of which is (at least approximately) a reduced-size copy of the whole," a property called [self-similarity](#). The term was coined by [Benoit Mandelbrot](#) in 1975 and was derived from the [Latin *fractus*](#) meaning "broken" or "fractured."

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There is a large body of mathematics which tells us that at the very heart of situations that produce such self-similarity are feedback loops.

Quorum:

Are you saying that fractals could be thought of as the visible traces of feedback in operation?

Richard:

Quite. Consequently, when I looked at market charts, I began to realize that what I was seeing was the footprints of feedback. It occurred to me that if one could discern the dynamics of the feedback loops, one may have a way to understand the market behavior. It turned out that this was being explored in other areas, such as seismology, weather, geophysics, and the like.

Quorum:

So did you come up with a blinding flash of insight? Were you bathing at the time or just running down the street naked?

Richard:

Neither, I wish I had been as quick as that, but no. An old friend introduced me to the real hero of this story; a young physicist and mathematician named Kris Kaufman, who was then working as a seismologist in Seattle. Kris had been trying to apply what he saw in his world of earthquakes and underground nuclear tests to the direction of stock markets and had made a couple of breakthrough discoveries. His early work had concentrated on cycles and that is the basis of our cycle work today. He was also looking at feedback and fractals, as were many others at that time. In particular, he was interested in the use of Hurst exponents to determine the persistence of trends.

Kris Kaufman, the president of Parallax Financial Research, has degrees in mathematics and physics, and spent 13 years as a geophysicist. Parallax has a web site with additional information at: www.pfr.com

We hit it off immediately and have had a productive working relationship ever since. Kris is kind enough to acknowledge my modest contribution to his continuing work but my real strength is in the application of the tools that we have developed. So while two of the ideas have my fingerprints on them, all of them have his. Kris is the real intellectual force behind what we do.

Quorum:

I remember meeting Kris. He is a really smart guy; so, since then?

Richard:

We have developed a set of unique tools and the proper ways to use them, as we talked about in the last interview. I have also tried them out. In a CTA venture in the mid-to-late 1990s, we tested out some real trading quite successfully and we started to advise other traders, fund managers and risk analysts in 2000. In 2002, we started to put our analysis and recommendations in an emailed newsletter that now has about 200 readers.

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Quorum:

You'll be pleased to hear that one of your long-term readers told me he regarded it as "a road map to the future." Another told me that you hold the record for the amount of profit in a single year made by a CTA—I'm told it was 1250%.

So all this has led to the development of analytical tools which allow the measurement of the impact of feedback loops on the random behavior of market prices.

Richard:

That is correct. There are two related areas where we see feedback in action—the trading crowd gets excited and starts responding to its own activity. This can push markets into self-sustaining price trends where rising prices cause more buying (in booms) and falling prices cause increasing gloom and more selling (in busts). This eventually creates what we call "extensions."

Conversely, at other times the mood of the crowd can get sullen and unresponsive, leading to prices that meander in mean-reverting trading ranges for prolonged periods, ignoring news and other developments. This leads to a condition we call "compressions."

Another feature of markets caused by feedback is the frequent occurrence of cyclical repetition. Prices often tend to move in cycles and these interact with each other. This interaction spawns more cycles but can also lead to the occasional disappearance of a cycle then its re-appearance later.

Quorum:

Starting with the first two, can you quickly refresh what you mean by them?

Richard:

Let me start with extensions. Remember, a lot of the price movement in markets is random, just like many business schools still teach. However, we know that prices are *not always* random, and when feedback loops start to reinforce some kinds of behavior, we pay attention. As we briefly discussed before, what we call extensions are a signal that shows when the crowd has gotten into a great state of agreement about the way the price will go and has pushed the price too far in a trend. Anyone who can buy has already done so and the price can't keep trending higher any more. It becomes extended. This happens in downtrends too, when a bearish consensus forms and the price drop gets extended at or near the low point of the move.

The opposite state is when the crowd is completely confused. There is no consensus at any level or time-frame and prices are probably trading in a range that may be getting narrow. When this reaches

Regression toward the mean is a principle in statistics that states that if you take a pair of independent measurements from the same distribution, samples far from the mean on the first set will tend to be closer to the mean on the second set, and the farther from the mean on the first measurement, the stronger the effect. This relies on random variance affecting the measurement of any variable; this random variance will cause some samples to be extreme. On the second measurement, these samples will appear to regress because the random variance affecting the samples in the second measurement is independent of the random variance affecting the first. Thus, regression to the mean is a mathematical inevitability: any measurement of any variable that is affected by random variance must show regression to the mean. – Wikipedia

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a critical level, we identify it by another signal called a compression. These show that the market is about to develop some conviction and burst into life—usually a new trend.

Quorum:

And it's feedback that causes this?

Richard:

Yes. The trading crowd is emotionally sensitive and responds to market developments in ways that lead to self-reinforcing or self-limiting behaviour. That is fertile ground for feedback loops to develop.

Quorum:

How so?

Richard:

Feedback can be positive or negative. When the crowd starts to get enthused about a market, positive feedback can get going enough so that it gets the bit between its teeth and higher prices just lead to more enthusiasm—that's positive feedback in action. The same thing happens in a market slide—lower prices spark more selling which pushes prices down more and so on. That's also a positive feedback loop.

Quorum:

So positive feedback loops move prices in a sustained direction, either up or down.

Richard:

Then negative feedback comes into play when the crowd is puzzled and the price movement is aimless. Higher prices bring selling, lower prices bring buying and a range gets established that can go on for a long, long time. This is more akin to the “equilibrium” that classical economic theory calls for except that it persists for too long. It may start by looking as though the market has reached a price that makes fair balance between supply and demand but that price can get stuck for a long time—that's a negative feedback loop.

Quorum:

So negative feedback loops cause prices to drift in a range.

Richard:

Without feedback of either kind, prices do indeed wander about in a so-called “random walk” where it is impossible to predict what's next. But that is not the case when positive and negative feedback loops exist. These two conditions are non-random both in their *cause*, because what already happened affects what will happen next, and in their *effect*, because the trends and ranges are too frequent and last for too long. There is “persistence” to their behaviour that we can analyze.

Quorum

Quorum:

Persistence, right, this brings us back to your friend Mr. Hurst whom you introduced in Part 1.

Richard:

Exactly, Hurst Exponents are used to measure the state of this process. Hurst (or just “H” according to our inspiration, Benoit Mandelbrot) is the basic building block for our signals. Hurst exponents are a simple mathematical device that measures smoothness and therefore a tendency to trend. They also, most importantly, measure the tendency of a trend to persist.

In [fractal geometry](#), the Hurst exponent, named H in honor of both [Harold Edwin Hurst](#) (1880-1978) and [Ludwig Otto Hölder](#) (1859-1937) by [Benoit Mandelbrot](#), is referred to as the “index of dependence,” and is the relative tendency of a [time series](#) to either strongly regress to the mean or “cluster” in a direction. H was originally developed in [hydrology](#) for the practical matter of determining optimum dam sizing for the [Nile River's](#) volatile rain and drought conditions. The values of the Hurst exponent vary between 0 and 1, with higher values indicating a smoother trend, less volatility, and less roughness. Wikipedia.

Quorum:

Doesn't Lipper use the same thing?

Richard:

I believe it does, in quite a simple way to measure the consistency of a fund's performance.

However, we have learned that a single Hurst measurement of say, the three-month trend of the market or maybe the 10-day trend, is of limited use. What is necessary is to try and capture the mood (and so the condition) of the whole market, which can't be done with a single number.

Quorum:

Again you are going back to your comment about looking at all market participants and all their different time frames.

Richard:

All crowds are creatures of emotion, not reason, and so it's a good idea to try and measure the ebb and flow of mood within the crowd as it swings this way and that—sometimes wildly. This is what many good investors and traders already do, perhaps without realizing it. The rush of the crowd in its excitement often overwhelms the so-called fundamentals of the situation. We can't measure the mood directly.

Quorum:

Not even by polling?

Richard:

You mean like the bullish consensus survey? Well, that means asking individuals what they think and requiring an answer even if they don't really know. Another problem is that a crowd takes on a different nature from its individual members. A crowd is a new organism with distinct characteristics. You would have to ask the crowd directly and that can't be done.

Opinions about a market are highly conditioned by that market's trend. There are more bulls when prices are rising and more bears when they are falling. This is plainly sensible most of the time but it

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applies even when (perhaps especially when) the trend is embedded and prone to sharp reversals. In other words, trend is a good proxy for mood.

Quorum:

Enter Mr. Hurst and his exponents, right?

Richard:

Yes. The best measurement of trend is a Hurst exponent, with the added benefit that it captures something of the persistence of that trend. The trick is to make sure that you capture *every* bit of mood, not just the jagged shifts of short-term news-driven traders.

Quorum:

So you use Hurst exponents to analyze the mood of all market participants, measuring the trend for all the different time frames of each participant. That should be a lot of exponents.

Richard:

It is. As we discussed in Part 1, the different views of people with different time frames all matter and they form those views at different rates. Participants within each time frame are influenced by their particular trend. We capture that by computing lots of different Hurst scores, using different lengths of data strings.

Quorum:

This is about the relationship between the frequencies of high and low Hurst scores.

Richard:

When every separate part of the crowd of every time frame is starting to move to the same rhythm and feel the same thing, we can detect some order. The feedback loops that make the crowd more bullish as prices rise start to tighten as the end nears. And because we calculate this vast array of Hurst scores we can see clearly when a critical point is imminent.

When everything is rushing in the same direction and when that speed gets critical because all the Hurst scores are high, we also identify some crucial ripples, the periodic occurrence of some low Hurst scores, in the array of all those high scores, as the feedback gets faster and faster. This is the critical moment when the market is about to stop.

Quorum:

So you can tell when “irrational exuberance” is coming to an end.

Richard:

Exactly. We are measuring the “animal spirits” identified by Keynes. The idea has become popular again today as a way of explaining why we’re in the current mess and why so few experts saw it coming. Until now, there has not been a good way to measure it.

Quorum

Quorum:

Now, what about cycles?

Richard:

This was where the whole thing got started by Kris Kaufman, back before I met him. Kris noted that cycles exist in all markets, as lots of people before him had realised. His contribution was to bring in the work that had been done on cycles in other areas, such as geophysics, and apply it to markets.

Before Kris' work, cycles had been difficult to use because they are ephemeral, they seem to form up, get noticed and then disappear. This is because they interact with each other in complex ways. He was able to make sense of this process by using some modern mathematics (a divide-and-conquer algorithm called a Walsh-Hadamard transform as we discussed in Part 1).

Quorum:

And the result is another way to predict the future!

Richard:

Why is it that you Americans, with your boundless optimism, are so eager to know the future?

Quorum:

It must be the Star Trek side of our psyche.

Richard:

Perhaps a little less Star Trek and a little more Yoda would be good for you.

Quorum:

I know, always looking to the future is this one, never to the here and now.

Richard:

(Laughs) We use our Hurst methods to examine the here and now of the markets' story as it unfolds, watching for the moment when things are about to change. The cycle analytical methods look ahead for dates in the future where highs or lows are likely to happen. We have learned that these tools combine well.

Quorum:

I am listening Obi Wan, please continue.

Richard:

We examine the price history in large, liquid, well established markets, going back through as much data as we can, looking for important highs and lows. We go through a lot of data to see what cycles there may be. For example, if a market *tends* to make high points, separated by 55 days, even if it's not *every* 55 days, that's a cycle.

Quorum

This analytical process always throws up evidence of cyclicity, often a lot of it. The longer the price history, then more evidence we find. There are for example, 17 different cycles operating in the Dow Jones industrial average with periods of less than a year.

Kris had a particular insight that is evident from other areas of science; that such a lot of cycles almost always stem from a small number of core cycles, which in turn interact to make all the others. This is as true in engineering and seismology as it is in music and we have found that it applies in markets, too.

Using that mathematical tool I mentioned just now, we deconstruct this complicated situation to find those core cycles. Then we re-assemble them to find out when important highs and lows should happen in the future.

Quorum:

“Should” means a reasonable probability, not a predictable certainty, right?

Richard:

Yes, everything we are discussing is within the realm of reasonable probability. Nothing we do yields results that are absolutely certain. Events can always trip us up.

Quorum:

I appreciate your clear disclaimer. However, your ability to identify important market highs and lows in advance has caused quite a stir in the last year or so and is starting to get some attention.

Richard:

It feels a lot less miraculous when you're the one doing it! We deal in probabilities so there is always some uncertainty. Nothing is written in stone but we have made some good calls. The combination of constant monitoring of current market condition using these Hurst techniques with warnings about the future from our cycle work isn't infallible but it is more effective than anything else we've seen or used.

Quorum:

So let's turn to how your methods have dealt with the markets in these stormy times.

As an aside, in the charts that follow, we should note that, pink indicates extensions, and blue indicates areas of compression. There is also a dateline indicating the date of the analysis you sent to your readers.

Richard:

First let me comment on some terminology. When we say daily, weekly or monthly, we simply mean the kind of data that we use to make the compression and extension signals. For weekly-scale signals we use weekly-scale data; the longer the data period the longer the result will last. In the case we are about to discuss, we mention a monthly-scale top extension. Signals on a monthly-scale should last (that is, continue to be important) for around 18 months. Weekly-scale signals, based on weekly-

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scale data, should last for approximately 18 weeks. It's the same for daily-scale signals that use daily-scale data; they last about 18 days.

Daily-scale signals occur more frequently and can be very useful for trading—lacking any long-term signal they will usually mark the point where a trend will pause or correct—that is prices will move against the trend for a while before that trend resumes.

Monthly extensions are rare, extremely important and not tradable on their own. They can occur two to three months prior to a market top or bottom. Within that time period there may be a number of daily extensions and a few weekly extensions. However, when monthly extensions happen, they indicate that an existing multi-year trend is coming to an end. Weekly extensions will then begin to occur and confirm that change.

Quorum:

Thanks! Let's begin by looking at the observation that you made on the 13th of February 2007. In that report you stated that the bull market in stocks was likely to be over soon, saying:

“We have been agitating about monthly extension tops, throughout the range of global stock markets that we follow, for the last several weeks. There have been so many of these that it may be useful to review them. The first of these happened in Japan in March 2006.”

(The following is an updated chart—the blue vertical line shows the moment when this analysis was printed to send out to Richard's readers. – Quorum)



“We have now seen many other monthly scale (top) extensions in every part of the world. The sheer volume of these signals permits only one conclusion: the four-year global bull market is over and that you should act defensively for many months to come. The median life of an extension is around 18 periods, which means a year and a half of trendless or falling markets — some will drop, others will

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range. Some may even rally to new highs but will find it hard to sustain those levels.” (February 13, 2007.)

Richard:

Yes, we were able to set the scene for an impending shift because we saw all these longer-term top extension signals in the run-up to the eventual highs. Remember, we don't take a these long-term signal as an immediate reason to trade—they aren't usually closely focused enough for that. Instead we regard them as a warning that we should start to look for some short-term signals on which we can actually take positions —perhaps at a daily or weekly scale.

Quorum:

And in that same edition on February 13, 2007, you also said that the boom in American real estate was overblown and that a bust was imminent.

Richard:

Yes, we had just seen a weekly-scale top extension in a real estate measure that we follow—the Dow Jones REIT Index (shown here).



It was clear that the bubble was about to burst. Actually we were surprised that REIT values had continued to rise because there had been a lot of press reports about falling real estate prices in the prior few weeks and months.

Quorum

Quorum:

You described it as a gift from God. It's also worth pointing out that in the same email you remarked that “...most big banking losses have historically been caused by write-offs on real estate loans, (so) this fits the overall picture” (Quorum emphasis). That may have been the first mention that anyone made publicly of an impending banking crisis.

Richard:

Yes, some of us did see it coming, despite the generally held view that it came as a total surprise. You may remember my comment from our previous conversation about our work being akin to chemistry compared with the widespread use of alchemy? While modern chemistry grew out of alchemy 350 years ago, much market analysis is still stuck in the seventeenth century!

Quorum:

That's because Newton was at Cambridge and Fama was at Chicago.

Richard:

Oh! I thought it had more to do with his being the Master of the Mint rather than a commodity trader.

Quorum:

Either way, on July 12, 2007 you issued a report that said:

“We remain skeptical of the outlook for stocks and are waiting for the current compressions in the US to break (we expect downward, but let's wait and see). The reason for our longer-term bearishness is the recurrence of long-term top extensions in all the main geographic areas that we follow— the US, Europe and the far-East. It is time to refresh that view, so here are the most recent examples of those signals.”



Quorum

Here we have had two recent monthly extension tops, in the Dow and in the S&P500, both in May. These monthly tops are made from long-term data and so have a long, sometimes slow effect.

Typically for example, if a market were to end a bull period and start making a “top” before falling, we would expect to see a monthly (or weekly) extension top at the end of the main up-move. Subsequent small rallies may carry prices to slight new highs but they will not last.

The occurrence of these (and the others shown before) earlier this year led us to warn of the end of the bull market that started in 2003, even if markets make slight new highs from time to time. As time has gone by, we have even been able to spot several buying opportunities in the market's dips this year but with the ever-present caution that we were only calling for temporary rallies. This remains the case and we expect that a failure will soon lead to more severe weakness than we have seen so far.”

You ended your comment by saying:

“All this combines to reinforce our long-term pessimistic view. Monthly signals are not very useful when choosing the timing of trades but can prevent expensive mistakes that might be caused by short-term enthusiasm.” (July 12, 2007)

So these extensions set a larger context that the bull market in equities and real estate was coming to an end. Rather somber warning at the end of your report.

Richard:

Yes, somber indeed, but things didn't get desperate just yet. Just so it's clear that we were not just early bears, we even found another place to trade stocks from the long side late that summer.

Quorum:

Yes, you did — later on, after identifying an initial drop in US and European stocks that turned out to be a little over 10% from late July. On August 20th you then produced a small group of European stocks to buy, saying:

“These 11 European stocks all have reasonably current daily-scale signals that make them candidates to buy if you want to “play the bounce” that is likely.”

And then on August 20th, you sent out a much longer list of US stocks to buy. The markets then rallied strongly into their final high point six weeks later.

Richard:

We didn't recommend hanging on through that entire rally however—it was clearly a last gasp of the bull market and trying to make any profit on the long side was risky. We recommended flattening off after two very nervous weeks. The rally went on for another four!

Quorum

Quorum:

Then you made the call that has caused so much fuss. The eventual high point of US stock markets came on October 11, 2007. All through September, you continued to warn that an important high point was coming but also cautioned against selling too early. On September 26, you wrote:

“There is a much bigger turn in many world stock indices coming up in two weeks on October 10.”

And on October 10, 2007, you wrote:

“We are starting to see top extensions (in the US and far-East). This is all coming together to make a highly probable market high point here or hereabouts. The stock index turn cluster is heavily concentrated on today, October 10, but there is a secondary cluster in the far-East two days from now on Friday, October 12.”

Richard:

We are usually very reluctant to use the term “highly probable” in case our readers find it too inflammatory. But in this case the evidence was strong. The combination of lots of top extensions, showing too much bullish consensus with a big cycle turn due right then and there was quite conclusive. This is an example of where all of the tools and methods come together and provide that moment of insight about the inner dynamics of the market.

Quorum:

So it proved. The markets fell from then on, never seriously challenging those highs again. You then remained bearish until November 11, 2007 when you recommended covering all shorts and buying again for a two-week bounce.

Richard:

Once more we saw the same reliable combination of a cluster of turns in different indices all due around that time and some bottom extensions that kept happening day-by-day. It was the same situation as in late August. The bounce lasted eleven trading days, as I recall.

Quorum:

Indeed, you recommended taking profits on the high day of that bounce but then went quiet for a while.

Richard:

Just watching the markets it was obvious that some kind of shift was occurring but we couldn't tell for a few weeks what the landscape would look like afterward. We remained bearish because of the longer-term signals we had seen in the run-up to the highs but our analysis did not provide an immediate reason to sell short again. As it transpired, the market was just going to churn for a while.

Quorum

Quorum:

In fact, the next three quarters were a period of choppy price action in which stocks did go erratically lower but not by much. You kept well on top of things as I remember from your emails.

Richard:

Yes, we stayed nimble, advising of three occasions on which to sell and on six to buy during that nine-month time period. Totaling all those trades up, anyone following our advice would have made a little over 20% trading US stocks in those eight months or so, a bit less in Europe. There were two small losses and two “scratch” trades where our advice would have led to trades that neither made nor lost. None of these lasted more than a month or less than ten days. This was the kind of tactical trading advice which best suits trend-less conditions.

Quorum:

But all the time the life-raft was drifting toward the edge of the waterfall that came in September 2008.

Richard:

Yes, this churning period continued through the late summer of 2008. Then at the end of August and the very beginning of September, we started to see compression signals developing in stock indices around the world. That always means that a trading market is about to shift into a trending market. A new trend was about to start.

Quorum:

But did you know it would be a downtrend at that point?

Richard:

No. We had a preference for a down-move starting because of our remaining long-term bearishness. But, when there is a compression signal we always wait for the break. There are lots of contra-trend moves throughout any prolonged trend and we try not to get caught in them.

Quorum:

Then the market broke down. How soon did you realize it?

Richard:

It took two days. The market broke down through our compression signal on Thursday, September 4, 2008. It was plain that the break had happened by the end of the next day and there was a bounce on Monday, September 8, that we advised to sell. The S&P500 subsequently fell by 35% in the next four weeks. We recommended staying short for almost that entire move.

I should point out that we have identified several points where stocks could be bought and sold since then, including a long-term buy recommendation on March 10 of this year—one day after the absolute low point of the market’s drop.

Quorum

Quorum:

We should move on to other markets now before we close.

Richard:

Bonds? Currencies? Commodities?

Quorum:

Oil! There was a huge bubble and it burst. Now it seems to be inflating again. Can you talk us through your analysis of this market?

Richard:

Oil! This was interesting. Because we can measure the internal dynamics of what the crowd is doing when it pushes prices up like that, it was apparent that this was a bubble while it was inflating. It was a very big bubble and had seduced a lot of apparently sensible people into believing that there was some Malthusian phenomenon in process. There was a lot of talk of “peak oil” you may remember and we were all going to freeze to death. However, Hurst exponents don’t lie and we told everyone that this was going to end in a collapse from quite early on.

In 1798, [Thomas Malthus](#) published [An Essay on the Principle of Population](#) in which he wrote: “...I say that the power of population is indefinitely greater than the power in the earth to produce subsistence for man. Population, when unchecked, increases in a geometrical ratio.” Wikipedia

In a similar situation to the top in stocks, we saw monthly-scale top extensions in both crude and heating oil futures just before the highs. As usual, this warned that the bubble would soon burst.

Quorum:

Let’s show that:



Quorum

Now, you have said that these monthly-scale signals are difficult to trade on their own but provide warning of an upcoming shift. On June 27, 2008, you wrote:

“Prices may now spike higher but this will most likely be the last gasp as these markets are still in the grip of weekly and monthly-scale top extensions that will inhibit any lasting strength. Such volatile markets can travel a long way in a short time, however, so we will watch for signs that the rally is exhausted. Don't fight it yet.”

The actual highs were about two weeks away. Then, crude prices rose into their high on Friday, July 11, 2008. Early on the morning of Monday the 14th, you wrote:

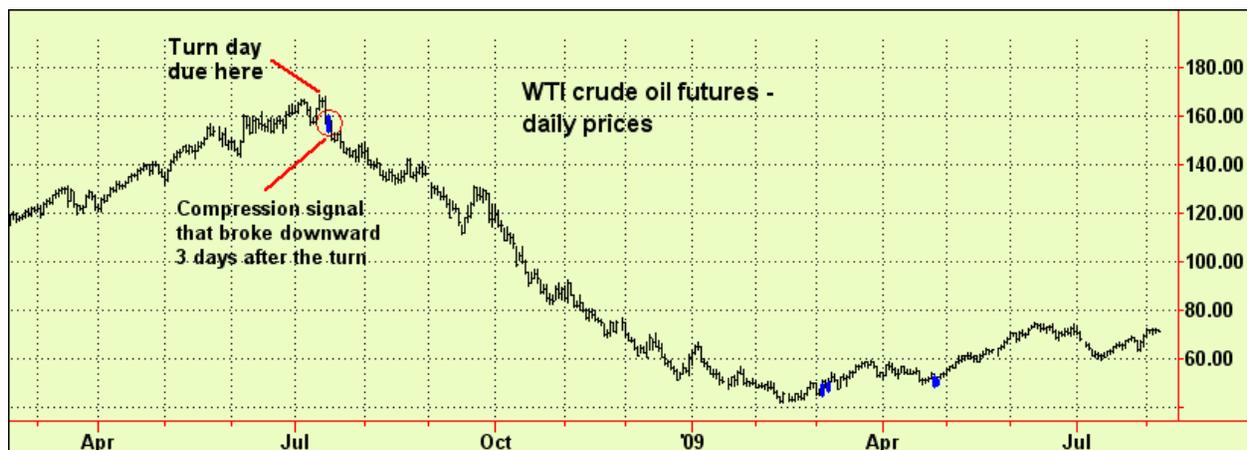
“There was a turn due in Heating and Crude Oil on Friday 11th (last Friday) which coincided with a high point... there is a good chance that it may be large enough to stall the current rally.”

Richard:

At the time it seemed a bit of an anticlimax actually. We had spent so many weeks advising that the market would drop but that the moment was not quite ripe, and then the all-time high occurred on a simple turn signal with no dramatic new top extension to reinforce the point. Three days later we got the confirmation that we needed—a compression signal that formed and immediately broke down.

Quorum:

Let's show that detail:



Richard:

Trends often start with compressions and the combination of this new signal with a turn within the last few days was conclusive.

Quorum

Quorum:

Looking back at the monthly-scale charts of crude and heating oil I see you've ringed the extensions that signaled the market highs but your readers may also notice that the end of the recent weakness was also marked by extensions.

Richard:

We haven't been bearish since those signals at the turn of the year. Since then prices almost doubled again. Not for long, we think.

Quorum:

Perhaps we'll get onto that. I would like to talk about one more market, currencies. Please walk us through your call on the dollar in 2008.

Richard:

The US dollar had been trending lower for almost seven years until the spring of 2008. The usual commentators were saying the usual things they say after a long-running trend. "There are structural reasons for the dollar's weakness." "This trend will continue or even get steeper," and so on. We started to see the tell-tale signs that precede an extension in early March—the quickening pace of ripples in the Hurst measures and then we got the actual signals on Monday, March 17, 2008.

Quorum:

Yes, you sent an email the next day saying:

"The US\$ made bottom extensions yesterday against the Swiss, the Yen and in the \$index. The £/Swiss (a proxy for the \$/€) did the same... Cover dollar shorts, look for places to buy and ponder the effect on other markets of a dollar bounce from here."

Richard:

This was just a daily-scale signal of course that might have meant a few weeks bounce within the prevailing dollar trend downwards. Then, at the end of the month we got a series of monthly-scale extensions, too. At that moment, we knew that something much bigger was happening and this needed a strategic re-evaluation rather than a merely tactical trade.

Quorum:

Your email on April 2, 2008 said:

"There was a series of monthly-scale US\$ extension. ... These complement last month's daily-scale bottom extension signals and so we should now expect an end to US\$ weakness ... for a long time to come. This will have considerable knock-on effect on other markets, not least in commodities, many of which are principally priced in dollars.... It is probably worth being outright long of the dollar but selling put options seems to best capture the contrarian nature of this analysis."

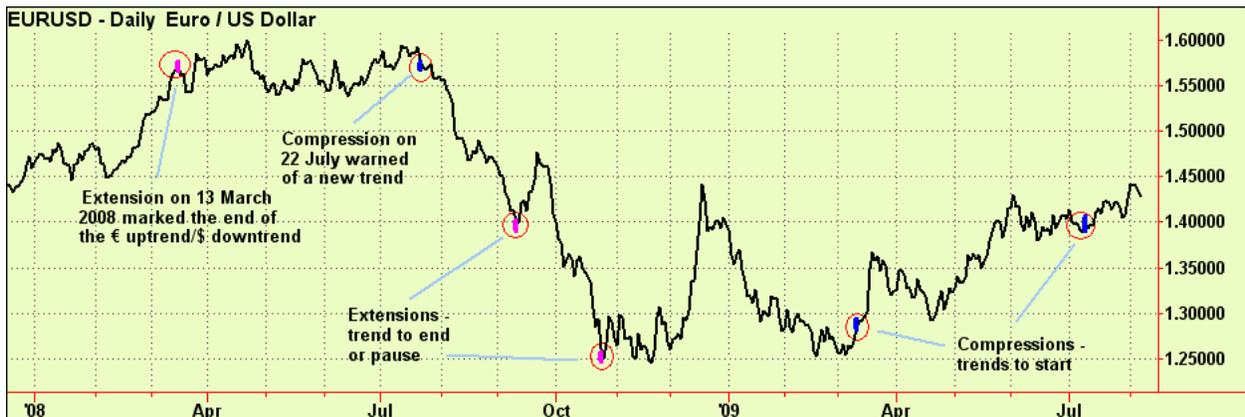
Quorum

Richard:

Let's see those two situations, firstly that of the monthly-scale extensions that provided the original warning that the dollar would soon perk up—there were several; this is the signal on the dollar index:



And now the daily-scale picture of the US\$ against the euro showing the original extension in March 2008 (the first signal on the left of the chart). This is a high point in the euro, which is the same as a low point in the dollar. The picture also shows several extension and compression signals since that time.



Quorum

The market just sat there for three months until we saw a couple of compressions in July 2008. There is one shown on this daily chart but there were weekly-scale compressions too. Those showed us that the move was about to start, which it duly did before the end of that month. The European currencies then dropped sharply against the dollar for the rest of the year as this chart of the euros shows.

Quorum;

Then on November 4, 2008, you wrote:

“...we have been US\$ bulls since earlier this year, following monthly and weekly-scale bottom extensions in the US\$ in the Spring. Since then the dollar has rallied sharply against the European currencies and briefly also against the Yen. It has been suggested that the reason for the dollar rally (and that in the Yen) is the unwinding of carry trades, in which these two low-interest currencies have been borrowed in order to invest in higher-yielding environments. This unwinding seems a natural consequence of the credit crunch and would also explain why the dollar has not sustained its rally against the Yen—they are both driven by the same forces. More recently, we have seen some daily and weekly scale extensions in various dollar pairs and so we expect some pause or retracement in the dollar strength (and probably that of the Yen too).”

Richard:

We don't usually comment on the fundamentals of markets, but in this case the arguments seemed sound—the dollar had risen strongly against European currencies but not against the Yen. We don't use these arguments in our own work but occasionally I do like to refer to them—even if only to show that we are aware of the world outside our work! However, to be very clear, the signals that made us want to sell the dollar here came solely from Hurst analysis—not from this economic reasoning.

Quorum:

Three weeks later on November 21, you wrote:

“There was an extension in the £/€ cross in the last few days.... This joins daily and weekly-scale extensions in the \$/£ ... and argues that the pound downtrend is over. It has also extended at a monthly scale ... and has been the weakest of the major currencies. If the poor battered pound is about to show some strength in the near future, this argues that many other current currency trends will also end. This calls into question the continued strength of the dollar itself and of course the Yen. We have been long-term bulls of the dollar since it made a low point in the spring and now are content to retire that view, for now at least.”

Richard:

Ten days later the euro compressed against the dollar as your chart above shows and immediately shot up, moving more than 15% in nine days. That move ended with an extension a week before Christmas. What a fantastic gift that was!

Quorum

Quorum:

Your reader who was probably the most voluble in your praise told me you moved their entire dollar balances into euros for that move, and then out again, catching the entire move—certainly a gift to them.

Richard:

Quite.

Quorum:

This is a good stopping point. In our next session, I would like to discuss three topics. The first are the calls you have made towards the very end of 2008 and in the year to date of 2009. Secondly, I would like discuss some non-trading applications of your work. Lastly, readers might be interested in hearing how this work can be used to create investment products, rather than trading advice. Is that alright with you?

Richard:

Splendid! There have been some interesting calls, some of which have played out and others that are still developing. As you know Kris and I feel this work has real applications in a number of areas where the historical or existing analytical tools have been shown to be wanting. As for product ideas, yes, we may actually have a few.

Quorum:

Great! I look forward to Part 3, our final installment.

Richard:

So do I.

Gazing into the Fractal Ball – *the Conclusion of Our Interview with Richard Edwards of HED Capital – Part 3*

A note to readers:

At the conclusion of Part 3 of our interview, we will provide you with a bibliography of the significant related work. Hopefully, this will stimulate further research and ideas from market participants and finance professionals, as well as academics.

In addition, we will share some links to other organizations that are studying complexity and its application to areas other than just financial markets.

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