

The Lucas Series: Part One

Jeff Greenblatt unlocks the key to market cycles with the Lucas Series.

This article discusses what may be the most important breakthrough in cycle analysis in financial markets in 25 years. Technical analysis using price and volume became very popular in the twentieth century. Japanese candlesticks were introduced to the west in the past quarter century, enabling traders to understand market behaviour more thoroughly than they could by using simple bars. While these methods were important in advancing our understanding of financial markets they did not determine when a market would reverse. My research has uncovered a simple yet powerful timing method so that I have never again looked at charts in the same way.

Cycle analysts track consistent intervals of time between highs and lows in the market to decide the most opportune time for entry. From historical data they calculate, on average, when a market may change direction. Overlapping cycles present a challenge. Analysts cannot agree about when a cycle has completed until weeks, if not months, have elapsed, because cycles tend to contract or expand from the mean.

What happens if we end up in a complex sideways period like 1966-82? As an example, take the last four-year cycle in the Dow. Most analysts agree the cycle peak was January 2000. What about the bottom? In hindsight we recognise October 2002 as the technical low, but in the months that followed, leading up to the Iraq war, sentiment was that the October low would be taken out decisively. Buyers took every low as a buying opportunity during the bear, without any certainty it was the bottom of a cycle. Even though we came close to creating a double bottom in March 2003, there is still disagreement about when the bottom of the cycle completed. Until recently, analysts thought the March 2005 high was the top of this Dow cycle.

Many cycle analysts have never been able to figure out precisely when is the proper time to enter a trade. While I believe cycle analysts do a great job quantifying historical cycles and come close to solving a trader's dilemma, it is still too complicated. I've looked for a way to simplify time analysis that anybody can use. My method, based upon recognisable and repeatable patterns, allows the trader to enter and exit trades more precisely in all degrees of trend.

Elliott first wrote about the Fibonacci sequence in Nature's Law. He explained that it was the mathematical basis for the Wave Principle. Elliotticians as well as Fibonacci analysts use basic wave calculations and retracements to measure price movement, but they have been missing an important piece of the puzzle. What they have not realised is the degree to which waves are moving in Fibonacci time sequences as well.

I became fascinated with Fibonacci when I discovered markets turned on Fibonacci dates (either calendar or trading days). I found that markets routinely turned on 34, 55, 89, 144, 233 or 377 days from an important pivot. My research discovered that markets would also turn on these numbers on intra-day times as well. In fact, the first leg of the rally off the bottom in the Dow (October 9-December 2, 2002) completed in 235 trading hours and the rally from March 2003-February 2004 completed in 234 trading days (market precision allowing for

half sessions due to holidays). It was this kind of 'completion' and 'precision' that gave me definitive evidence that an important high was in place that would last for 11 months.

Here was the degree of completion that dynamic cycle analysis failed to deliver. I found this level of completion on smaller cycles as well.

However, my search hit a roadblock when I discovered that patterns would not always turn on Fibonacci numbers. I found turns occurring on 11, 18, 29 and 47 number bars. It happened with such regularity that I concluded this Fibonacci stuff just didn't work. Then one day while I was surfing the Internet, I discovered the Lucas series. French mathematician Edouard Lucas (1842-1891) uncovered a series of numbers: 2, 1, 3, 4, 7, 11, 18, 29, 47, 76, 123, 199, 322, and so on, which is similar to the Fibonacci sequence beginning 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377. The importance of the Lucas series is that as we get higher in the sequence the ratio of the two numbers comes closer to a perfect 1.618/0.618. It was actually Lucas who gave the Fibonacci series its name.

When I discovered Lucas the light bulb really went on. I found that financial markets were turning according to Fibonacci numbered bars, and Lucas numbered bars as well. Uncovering these number patterns has enabled me to anticipate turns in the market ahead of time. It enabled me to anticipate the important August 2004 low to the day over a month in advance. I was also able to anticipate the high at the start of 2005, as well as many other smaller turns. We can scale down from weekly to daily to hourly and even to a five- or one-minute chart to anticipate turns. Using the time principle enables the trader to greatly increase his entry precision and confidence. This method is meant not to replace traditional technical analysis but to take it to a much higher level. I am going to take you through a series of examples that demonstrate how it works.

The first example can be found on the Nasdaq weekly chart. The first phase of the rally topped in January 2004 at 68 weeks off the low. 68 is significant for two reasons. First, it is a double 34 (Fibonacci) but also derived from the Fibonacci ratio of 6.84. From that high we dropped for 29 (Lucas) weeks into the August 2004 low. Next we rallied and topped on the 21st week of the move which was also the 118th (Lucas derivative) week off the low. Check out the chart (see Figure 1) and you will see a big black candle announcing the reversal. Had you waited for the completion of that candle to enter a short position you would already have been taking on a higher risk. Knowing the turn comes on an important cycle point gives one confidence to enter positions where the risk/reward ratio is more favourable. Recall we topped on the first trading day of the year. You could have entered this trade much sooner knowing the cycles confirmed momentum indicators which were overbought at the time. The next leg dropped 17 weeks to week 134 of the trend. All turn windows are plus or minus one unit. The next leg up is 14 weeks in duration and tops in the 148th week of the trend, which, in both cases, misses a Fibonacci (13) or Lucas derivative (147) by one bar.

The next leg down was 11 weeks in duration. All of the pieces of the puzzle are coming together. This pattern has three down legs, which are 29, 17 (18-1) and 11 weeks in duration. They are all Lucas series. When we total the whole pattern from the January 2004 high to the October 2005 low we get an 89 + 1 (Fibonacci) week triangle. If you follow the pattern very closely you will see that the combination of the three legs which have Lucas symmetry cluster with the larger degree 89-week pattern. The stronger the numerical cluster, the better chance there is of a change of direction. It is this powerful cluster that kicked off the current rally leg from October.

The significance of the 89-week triangle is a key to understanding corrective waves. Perhaps the trader's most difficult task is determining when a correction leg will end. This example shows an 89-week pattern coming to completion. Complex corrective legs are commonplace – an excellent way to recognise the end of a pattern is when a white candle buy signal occurs within one bar of the correct Fibonacci or Lucas number bar.

The next example concerns the US Treasury Bond futures contract. There was an initial high in early June, with a retest of resistance at the end of the month. Figure 2 shows that the retest failed on the 17th daily bar in a high to high cycle off the initial top. The secondary high was formed when the 18th (Lucas) bar began to fade the top. As the down leg progressed it formed a cluster low on a combination of the 47th (Lucas) bar off the top and 38th (Fibonacci derivative 38.6) bar in a low to low cycle off the first low. This cluster also coincides with the 50 per cent price retracement (a common retracement) of the prior spring rally leg. One might suggest that this pattern would quit going down on a 50 per cent retracement level but as all traders know, in the heat of the action this conclusion is far from certain. However, when we get a cluster of three relationships lining up in the same place (two time and one price), the probabilities increase that a bounce might stick and we need to cover our short positions. Once again, if you are not tuned into these time relationships, you may conclude that the only event worth noting at this level is the 50

per cent price retracement. Traders armed with knowledge of the time function gain a huge edge over the competition. At that point not only would you cover shorts, but you could also consider going long with greater confidence.

Two bars off the low we had two consecutive big white candles. Without understanding the time factor many traders might have gone long after the second white candle, but others would have gained the

confidence to go long after the first white candle. One big white candle makes the difference between a mediocre risk/reward ratio where you may elect to pass or pull the trigger on a good trade. Observe how these patterns line up with commonly used momentum indicators.

The next leg is 18 days up and also creates a 47-day high to high cycle. It is now high time to liquidate longs as we failed at resistance on a double Lucas cluster. A couple of days later there is a series of black candles. Once again, armed with time cycles the trader can get into the trade with a more favourable risk/reward ratio, ahead of the competition. Finally, the big leg ends on a 62-day (Fibonacci 61.8 derivative) low to low cycle with the first major pivot low.

This method is a leading indicator as distinct from other common market indicators, which lag. You will get stopped out more often with very small losses, but you will generally find yourself in high probability risk/reward situations of 4/1, 5/1 or even better, because most entries are so close to major pivot points. If you want to be more conservative and wait for confirmation by a stochastic, MACD or candle signal your risk reward ratios will generally be 2 or 3/1.

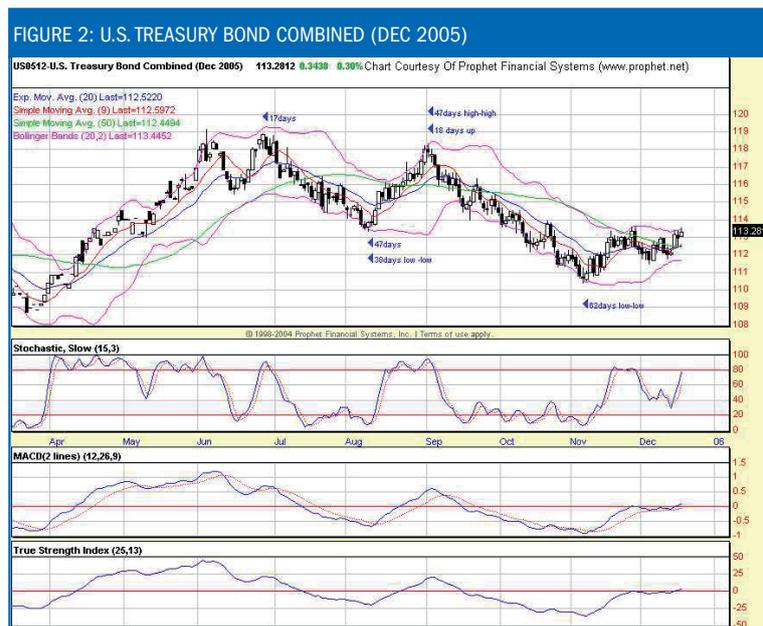
This method will enable the trader to gain greater understanding of the market and to have confidence to pull the trigger at the precise time when the move starts. In my opinion, once you start

following these sequences you'll never look at a chart the same way again.

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