

Jim Tillman

Jim Tillman entered Clemson University with the idea of obtaining a degree in electrical engineering when a class project in Economics 101 altered his ambitions. The project, which involved creating a hypothetical stock portfolio, triggered an immediate interest in the financial markets and more specifically, in technical analysis, because in order to efficiently select the strongest, healthiest stocks, he had relied on what was most familiar to him as an engineering student—charts. Anxious to become involved with the financial markets, he halted his engineering studies, opting to pursue a career as a stock broker instead. Unfortunately, legal age restrictions detained him from fulfilling his goal before age twenty-one.

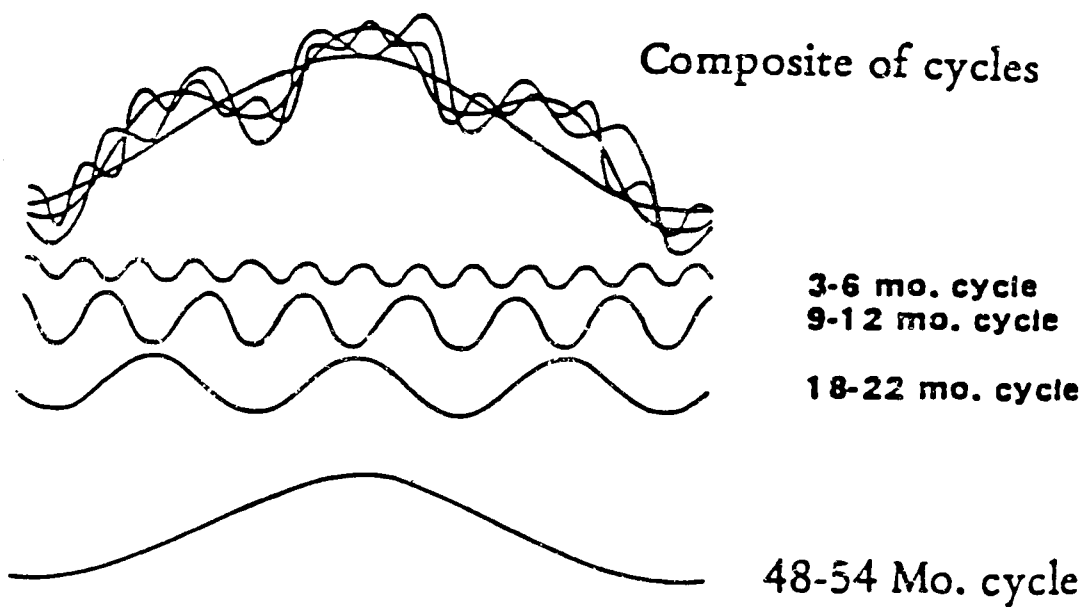
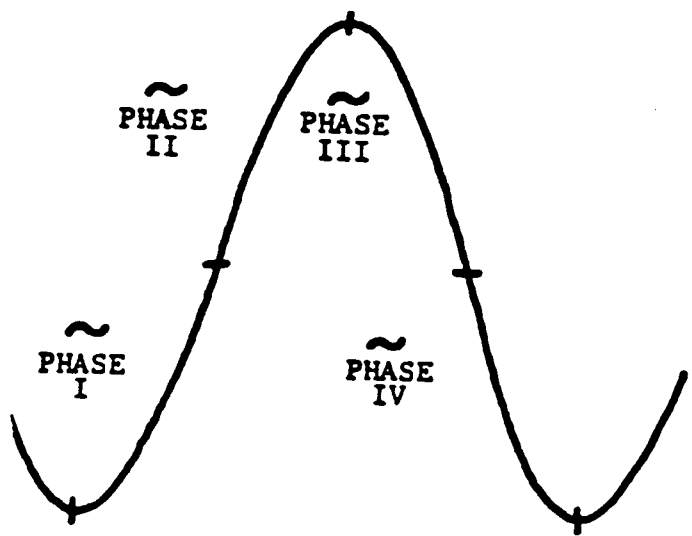
By 1961, technical analysis had only a limited following and the subject was still regarded as somewhat taboo in most investment circles; however, a devotee of technical analysis, Mr. Tillman found an open-minded and flexible brokerage firm who accepted his preference for this form of analysis and allowed him to use it as a basis for investment advice. After becoming a branch manager and having his firm bought out during the brokerage consolidations of the late Sixties and early Seventies, he settled with Interstate Securities in Charlotte, North Carolina, as an institutional broker in 1971. In that same year, he began writing a weekly market newsletter for institutional clients called *Cycletrend*. Now published every three weeks, *Cycletrend* focuses on market timing and is available to individuals as well as institutions.

The foundation of Mr. Tillman's analysis is built upon an integration of three complimentary methodologies: cycle analysis, Elliott wave analysis, and centered moving averages. Centered moving averages are valuable in that they can be used to project the completion of an uptrend or downtrend, often in terms of both time and price. Like many other technicians, Mr. Tillman respects the fundamentals and recognizes that a primary trend is established and remains in force based upon the fundamental outlook for a stock. But when technical analysis and fundamental analysis send conflicting messages, the technicals always take precedence. In cases where stocks reach extremes in valuations, technical analysis becomes indispensable.

According to *Timer Digest*, Mr. Tillman's forecasts for stocks, bonds, and gold since 1990 have consistently earned him a position in the top ten rankings. A quick rundown of his more prominent forecasts reveals why. In October 1974, investors faced a stock market that had been plunging since July of that year, with secondaries losing as much as 80% from their 1968 highs. Two events occurred that October convincing him that the market was on the verge of changing direction—the dominant four year cycle turned up and price objectives from centered moving averages reached their downside objectives. The next issue of *Cycletrend* announced, "The Bear is Gone," precisely catching the start of a long awaited bull market. Then in 1977, as a result of following the 60 year Kondratieff wave, he began heralding the commencement of a bull market of major proportions slated to begin between 1981 and 1983. In contrast to the trading environment of the Seventies, he emphasized that the best strategy for the Eighties would be a buy and hold approach. Soon after the crash of 1987, Mr. Tillman was interviewed on FNN and stated that over the next three to four months, the market would turn up. After the magnitude and severity of the market's collapse on October 19th, it was difficult to be bullish, but his cycle work indicated new highs extending into 1989 or 1990. The host, Bill Griffeth, pointed out the comparisons with 1929 but, relying on the convincing evidence before him, he stood firm and reiterated that his cycle work projected new stock market highs in the coming months. By June 1990, the Dow stood at 3,000.

Appearing on the Ira Epstein show, he projected a hard market decline to 2100 or 2200 by the year's end. As predicted, the market dropped until October 10, 1990, bottoming at 2353. On the eve of the U.S. invasion of Kuwait, January 16, 1991, he appeared on CNBC, outlining a bullish scenario. The market exploded upward the following day barely looking back for the next six years.

One of the first chartered market technicians (CMT), Mr. Tillman remains an active participant of the Market Technician's Association lecturing at their seminars and contributing to their quarterly journal. Today, Mr. Tillman works independently as a consultant for institutional clients and as editor of *Cycletrend*.



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How are cycles different from more traditional forms of technical analysis?

Cycles are a form of pattern recognition that I think is very helpful for people to understand how all chart patterns can be traced to the combination of cycles. The classic example is the large, perfect head and shoulders formation of the DJIA for each four year cycle from 1966 to 1974. The left shoulder is the first 18 month cycle high, the head was the second 18 month cycle and also the four year cycle peak, and the right shoulder was the third 18 month cycle high with the four year cycle going down hard. I think everything gets its foundation from the combination of the cycles and that is why I like them so well.

Your cycle analysis includes surveillance of 10 week cycles, 20 week cycles, 40 week cycles, 80 week cycles, 4 year cycles continuing up to the 60 year Kondratieff cycle. In terms of a starting point, what are your suggestions for investors beginning cycle analysis for the first time?

When I am looking at a chart, the first thing to do is find the last major low that is visible on a chart. If you are looking at a very longterm chart, the best thing to do is to find one point that could be classified as a four year cycle bottom, the largest cycle that tends to operate in the stock market. Because it can vary, find a low that is approximately three to four years from the previous low.

All starting points for cyclical analysis should begin at minimum with a four year cycle?

I believe so. If you are concentrating on where you are in a major trend, if you are two years away from a major low, then you should start thinking about a larger cycle high occurring which will change your investment method. Once you have had a major cycle low, you have wiped the slate clean. That is the reason you try to find a wash-out low. If you can find a four year cycle bottom or a major low which you think has occurred, then you can start observing the pullbacks that occur at 10 weeks, 20 weeks, and 40 weeks later. In other words, you can wait for your sequence of cycle lows to occur following a major four year cycle bottom. If you are a shortterm trader, use the 10 week cycle pullbacks to buy. If an intermediate investor, use the deeper 20 and 40 week cycle lows that occur two or three times each year to buy. That assumes that the four year cycle is up.

When did the last major cycle low occur prior to 1996?

From a four year cycle perspective, it was 1994 and then 1990.

In one of your market newsletters, you mentioned that 1889 was your “model” year. Is this still relevant?

Various markets from the past have served as models at different times. In the early 1970's, for example, I chose a period from 1908 to 1915-1916 as a model that the stock market cycles would go by. Sure enough, it was an exact profile. The market did repeat the pattern of that time period from about the early 1970's into the 1978-1979 period. That is where I got the idea that the market would change from its traditional four year cycle spike low and double bottom in the 1978-1979 period because that is what happened back in the 1910-1915 period, being just prior to and leading up to

the 1920's bull market. Later, there was another time period that caught my eye and that was 1887 to 1890, which was almost an exact model for 1987 to 1990. It served its purpose as an excellent road map for a good three years. Because it looked like we were on a 100 year repeating cycle, it made me become prematurely cautious in 1993. Of course, we didn't collapse in 1993 as we did in 1893. Different time periods from the past will set up the market exactly like the cycles were then but you have to be careful about following them 100%. Be aware that they can change. There are good patterns and models that you can simply pick out in the past where cycles were similar and they will work for a while but then they will dissipate at some point. We then have to go back to our current cycle analysis.

Once you enter a particular decade, is there a series of weeks or months that a cycle will follow consistently or is it random?

From the perspective of cycles, you should always be conscious of where you started from a major low that could have been a once in a generation kind of low. All through the 1800's and early 1900's, the clearest cycle is 17 to 18 years, but you never look at one cycle by itself. You would ask, "Where is the force coming from? What is the current trend?" In the 1950's, you had such a strong uptrend that your pullbacks occurred every 52 to 53 months. During that particular time, the market had small four year cycle corrections because the 17 year trend was so strong. The market went from bottom to top in 17 years, from the 1949 low to the 1966 high. From 1966 on, the four year cycle from low to low shortened to 48 months and then to 43 months indicating a change in the longer term trend support. The big change occurred after the uptrend had been broken in 1966 to 1968, proving that a cycle had rolled over. In the mid-1970's, it was tough to find out where the four year cycle was. You entered a large sideways market where the lows became slightly shorter. The point is that the longterm view should be kept in perspective but from a practical viewpoint, you simply go to the most dominant low that you see on a chart. If it is four years, then you can quickly start the sequence of looking for smaller and smaller cycles.

As a point of reference, would you define what you consider to be shortterm, intermediate-term, and longterm?

I would define longterm as approximately two years—from the low to the high of a four year cycle. I would classify intermediate as 6 months to 9 months, which is half of the dominant 12 month (40 week) or 18 month (80 week) cycles from the bottom to the top. In either one of those time frames, your stock may go six months or longer from low to high. Shortterm cycles run 10 to 20 weeks, the optimum shortterm trade tends to be 23 market days from bottom to top.

Is cycle analysis more difficult in raging bull markets?

When the trend is so powerful as it has been in the 1980's, yes. You get translation of the cycles in a strong trend because you are dealing with extremely longterm cycles. The biggest cycle is the predominant influence and the smaller cycles become less visual. First of all, it is good to have the big monthly picture in mind, then the weekly picture, and then the daily picture because you are dealing with monthly, weekly, and daily cycles. In the 1970's, it was a lot of fun to measure the four

year cycle high to high in stocks and then go from intervening low and invariably the stock would try to make that four year cycle low right where you would expect it to. That was extremely helpful when the market was going sideways through the late 1960's and all through the 1970's. Even though you have been in a powerful uptrend since 1982, if you measure obvious highs and then go from an intervening low, the next lows you will find are in that general area. It is something you just keep playing with but if you are looking for an entry point on a stock, especially one that has been going through a huge correction—it is not unusual for a stock to go from 50 down to 7 or 8 in a bear market—by using the monthly picture you get an idea of where a cycle low is going to occur just by measuring the high points. It doesn't always work but it's good to have as a tool. You can then apply other tools or a simple trendline break in that time frame to confirm a bottom may have occurred.

Do you think it will be trickier doing cycle analysis if and when we ever have a major correction?

Well, you only have two alternatives. One is that you have a downtrend similar to the uptrend, in which case, yes, it will be tricky. The alternative is that the market goes sideways like it did in the 1960's or 1970's. You had a strong uptrend and then when the major cycles reached their peak and started going sideways or turning down, it produced a flat market period. When we look at the 200 year history, the market has always been up on a longterm basis but it goes sideways sometimes for many years. It is when the market is going sideways that your three to four year cycle begins to show through and is very helpful.

The four year cycle becomes more apparent in a longterm sideways consolidation pattern?

Yes, that is its *forte*. This is when the value of the weekly and daily cycles increases because you can measure highs and begin to see that the lows start to occur on schedule.

What are your suggestions for spotting cycle lows on charts?

A quick and dirty approach is using two fingers. Find two previous lows and put a finger on each low. Lift your fingers up and move them forward to see if a time period for another low is coming due or, measure two previous highs and then measure forward from an intervening low. Quite often I use Hurst's suggestion of taking a strip of paper and with a pencil, make a little mark between two lows and then slide the strip of paper across the chart to see where other additional lows occur. Where you continue to find additional pullback lows at previous cycle bottoms, you form a cluster of little black marks or "synchronicity" on the right hand side of your strip. Projecting that into the future from some important low that occurred several weeks ago gives you a very quick method of looking for the next cycle bottom. You can do a dozen different stocks and often you will find that the commonality between lows of all those stocks occur within a window of about one week. Sometimes you can use that as the market's cycle. But be aware that quite often when your stock is going into the final high of an intermediate cycle, those little marks out in the future may turn out to be a high instead of a low. For this reason, a system to stay with the trend as long as possible may

also be used. This tends to happen in the late stage of a move and past the optimum combination of the bullish cycles. In another technical method, called Elliott wave, these extended moves tend to occur near the top of a wave 3, which is usually the longest and strongest portion of an advance. For those familiar with Elliott wave, if you measure time from the bottom of wave 1 to the end of wave 2, that distance is often when wave 3 ends at a top. The principle being that wave 3 is longer than wave 1, sometimes 1.618, and so timewise you might go low to low from the bottom of wave 1 and the bottom of the wave 2 pullback and then you may go low to high from the bottom of wave 2 to the top of wave 3.

What is the cycle sequence that you use?

The majority of cycles break up into two's—the 10 week, the 20 week, the 40 week and so forth—but I have always used 3, three week cycles to equal one 10 week cycle and three, 18 month cycles to equal one four year cycle.

You are coming just a little bit shy of the exact cycle period?

Right. I use three, 3 week cycles to equal one nominal ten week cycle. A 3 week cycle averages out to be 13 to 17 market days from cycle low to cycle low. Your 10 week cycle peak would occur after the second 3 week cycle has turned up. Half of 13 is 6.5 days, so if you had bottomed correctly in 13 days for a 3 week cycle low, 6½ days up from there or around 19 days, you could possibly be at the next 3 week and 10 week cycle high. Many moves end anywhere from 18 to 23 market days from low to high because it is the top of the second three week cycle and you are coming into the top of the 10 week cycle. When you extend into the high right on a chart longer than 10 weeks, it is because you have a very strong 20 week cycle or a very strong trend, period. You are translating to the high right on your chart from the strength of the other cycles. You will find however, that your oscillators will still try to turn down at the same points.

Will the strip of paper method work on a weekly chart as well as a longer term chart?

You can do all of this with weekly and monthly charts but it's always good to at least have looked at a monthly chart to see if the lows you are looking at are a four year cycle low, a two year cycle low, or a one year cycle low. First, see which direction those cycles might be moving in. When you are looking at a one year daily chart, if you have started to break trendlines that are six or eight months in length, you immediately know that a longer cycle is changing direction.

For those unfamiliar with the principles of Elliott wave, could you give us your rendition?

wave 1 is your first rally which breaks up into 5 smaller waves. This is how you tell which direction the true trend is in. On a daily chart, little wave one of five is called an impulsive wave and should be a clear, strong advance. It may be only several days in duration but stocks or indexes start breaking downtrend channels and volume increases. This is an indication of a definite change in trend and that the cycles have turned up. After the five waves, then you have an "a-b-c" correction of around 50% that takes the form of a zig-zag pullback or sideways consolidation. Either one is perfectly acceptable.

Countertrend moves are designated by letters instead of numbers, thus an a-b-c pullback is a countertrend move in an uptrend. That move is called wave 2. From there, the next advance would be called wave 3. After wave 3, there is another normal correction called wave 4 that pulls back an equivalent of .23 to .38 of your previous advance. The wave 4 correction could be a sideways consolidation or a zig-zag pullback but under the principle of alternation, if wave 2 is a zig-zag correction then wave 4 is a sideways consolidation. You won't get the same pattern in wave 2 and 4. Robert Prechter's book, *The Elliott Wave Principle*, is the best book around on Elliott wave analysis.

The third wave is the longest part of the move and the fifth wave is the final phase of the move.

Correct.

You once said that one of the benefits of cycles is that they present a "contrary view at proper times." Would you expand on that statement?

By empirical observation, they have found through the years that people tend to be most bullish at tops and most bearish at bottoms. Market tops and bottoms, in terms of bullish or bearish sentiment, basically line up with the cycles but sentiment is such a general indicator that it is most useful at four year cycle turning points. For example, when the market is at a high and a 4 year or 18 month cycle is entering its high mode, it is helpful to look at sentiment. This is when speculative juices are flowing the most and sentiment runs to enthusiastic levels. When a cycle is bottoming, sentiment is most bearish.

In other words, if you went back to a period where the sentiment numbers were extremely high or low and then compared that time period with the four year cycle time period, you would often find the cycle bottoming and topping about the same time sentiment numbers are reaching extremes?

Yes, sentiment should be making its extreme at a four year cycle low or high, but you can't count on it 100%. Frankly, I don't use sentiment very much because people follow these sentiment indicators so much that sometimes you are second guessing the second guessing but you have to be aware of them. I had rather look at the cycle objectives that come from the centered moving averages forming a focal point in the past. If they all formed a focal point at the center of an Elliott wave 3 and you know that you are going into a broadening trading range or top, you can figure that this is a wave 5. Then look at the cycle time periods, like the 4 year cycle or the 18 month cycle, averaging about 78 weeks. It was 78 weeks from the bottom in November 1994 to the top in July 1996. In a case like that where the market had been going straight up into that point, I don't think of a cycle low occurring. If a market is at a high during a time period where a cycle bottom is due to occur, I would immediately reverse my thinking and say it looks like the next longer cycle is dominant.

The prevailing trend should always override what the cycle is telling you?

Right, unless the market goes down at a cycle low, it is not a cycle bottom. Maybe you developed your framework several months ago but if the market keeps on going up into the cycle time frame and your other indicators would have you long, don't be a fool and fight the tape. Be aware of the cycle time frames but also be aware that the next longer cycles will not roll over until you break what Hurst referred to as a valid trendline. For example, you won't break two 20 week cycle bottoms unless the next longer cycle is turning down. This is helpful for individual stocks because people can draw trendlines very easily.

What was Hurst's definition of a valid trendline?

The trendlines that Hurst indicated as valid would connect two cycle bottoms approximately 10 weeks apart. Then you would extend that trendline into the future. When that line is broken, it would prove that the 20 week cycle is rolling over, that is, turning down. It may also prove that cycles longer than that are turning down. When you are drawing your trendlines, you need to think in terms of cycles.

If a trendline connecting two 10 week cycle bottoms is broken, that is telling you that the 20 week cycle is down. Does it follow that a broken trendline connecting two 20 week cycle bottoms indicates that the 40 week cycle is down?

Yes, it does. In this case, you would begin to sell intermediate positions as they also break trendlines or anticipate selling into strength near the next 10 week cycle high.

To locate where a 10 week cycle begins, would you simply find two previous low points on a chart that are approximately 10 weeks apart?

Yes, you would simply look back within the time frame of the last 20 weeks to find two bottoms that appear to be 10 week cycle bottoms and then connect those two points with a trendline.

If you are using a 52 week daily chart, realistically, the only repeating cycles visible would be the 10 week and 20 week, right?

Yes. If you are a longterm investor and interested in the four year cycle, then you would have to switch to a weekly chart which would give you at least three years because you are actually looking for a move that will last for two years, which is bottom to top of a four year cycle. It is best to use weekly charts instead of daily, unless you are a trader. The Mansfield charts are very good including their relative strength line. You will see relative strength change after you have broken the trendline because you are losing momentum.

With regard to cycle periods, is there one time where relative strength is more crucial than another?

I think it is most important at cycle tops. You can do the same thing with trendlines but relative strength is a good, quick method of seeing which stocks are becoming weaker earlier than the market. The other time relative strength is good is when you have made an important low like a 40 week cycle or more. Some people say go with the highest relative strength stocks at a market bottom but through the years, that has gotten me in a lot of trouble. The highest relative strength stock could be a utility and it doesn't go anywhere. In fact, when you are at an intermediate and longterm cycle bottom, I think it's best to choose the weakest shortterm relative strength stock but one that has good longterm monthly relative strength still intact. You are coming at it from two cycle viewpoints. A longer term relative strength indicates a four year cycle or longer trend is still up while on a shortterm basis, the weakest relative strength might indicate that you have cleaned this stock out. The relative strength line on a monthly longterm SRC chart is also very good at intermediate bottoms. After there has been a fairly sizeable correction, go to those stocks that have positive relative strength on a monthly basis. Years ago, I developed the swing factor to compare two time frames based on cycles to detect a slight change in relative strength. I would get buy signals on a stock or a group when other people were having to sell out because the relative strength had begun to fade. It was the exact opposite to what other methods of relative strength were doing and it worked beautifully.

What is the swing factor?

It is the second derivative of relative strength. Testing data of 20 years, I had come up with various cycles for different groups but in general, I took two time periods. I compared the relative strength of a group for the last year with the relative strength of the previous year. It detected a change in the current one year cycle versus the previous one year cycle. If the current one year cycle had better relative strength than the previous one year cycle, then the swing factor would be positive. Theoretically, once you have passed the centerpoint of that two year downtrend, you were coming into a four year cycle bottom. If I could detect a positive change in relative strength before it became noticeable on a chart, then I was detecting a bell curve bottoming versus the previous one year bell curve that had been topping and coming down to the centerpoint. My swing factor would go positive while the stock was still at a cycle low. I got away from using it in the 1980's but I used it in the 1970's because we were in such a trading market.

Is it only useful in a trading range market like the 1970's?

No, it is helpful for spotting a change in any longterm trend, but it is best in rotational markets when major groups are changing. For example, in October 1980, I was running my swing factor and the top five negative stock groups were all oils and gold and the top ten positive groups were all consumer stocks, department stores, retailers; stock groups that people had ignored for years. I could not understand what was going to happen to make the change. When President Reagan was elected, charts show that was the top in oils and the bottom for consumer stocks. The market, in its infinite wisdom, detected Reagan for what he was, free enterprise and pro-business. The oils were topping on inflation and the retailers and department stores and others became the darlings for the next several years. In the long trending market, the big monthly relative strength or swing factors continued to work but not as well because we did not have big swings back and forth like you have in a flat or sideways market.

Will the swing factor work again in the future?

Yes, we will go back into a time when it is very important. Now of course, in a trending market such as we have had, relative strength lines are good to look at to confirm the trend. Both price and relative strength should trend together. Relative strength usually will break a trend first and this is an alert to sell.

Going back to trendlines, there seems to be a very close relationship between the actual trendline and the cycles. If a valid trendline is broken, is it always true that the next longer cycle is turning down?

Yes, under the theory of cycles, once a trend is intact, it should only be broken when the cycle supporting that trend changes direction. Suppose, for example, you find a chart with a trendline that is six months in length. The market has respected that trendline on every correction and then the trendline is finally broken. Since it is six months in length, you have to consider that at least a one year or longer cycle has begun to turn down. The cycle turning down is longer than the time frame of the trendline. That is your first valid proof that a cycle is beginning to turn down. During the strong uptrend of 1996, it was difficult at times to find shortterm cycle bottoms because every correction held on a good longterm trendline drawn from December 1974. You didn't know if some of those touches were a 10 week, 20 week, or even a 40 week cycle because none of the trendlines were broken. That's a problem as far as validating which cycle bottom was where. As long as a trend is so strong that it almost completely ignores shortterm cycles with large amplitude. You just really have to stay with the trend and figure that the dominant cycle is one year or maybe even four years in length. This is a phenomenon that occurs when all of your centered moving averages are basically riding right on top of one another. They are forming a straight trend right through the center of all prices as almost a single line because all of the cycles are within one channel. In those cases, it is best to put your hands in your pockets and stay with the trend because a topping formation, or proof that the cycles are rolling over, obviously will not occur until a trendline is broken. Period. Until the trend is broken, one can use pullbacks to the trendline 8 to 10 weeks apart as buy signals.

When you say stay with the trend, are we basing the trend on the trendline emanating from the original two low points that were eight to ten weeks apart?

Yes, and then draw a 20 week trendline when time from a major low allows. They are often the same. Stay with the longer trend unless you are a trader. A pullback 17 to 23 weeks from an intermediate low qualifies for a 20 week cycle low.

Then the number "twenty" is not cast in stone?

It's always a nominal term and the cycle period actually averages between 17 and 23 weeks.

Let's say a 10 week valid trendline is broken. In order to stay in tune with the longer term trend, would you then need to draw another trendline connecting two 20 week cycle lows?

Yes, but not until it is proven to be a 20 week cycle low. For example, you could break the 10 week valid trendline briefly and that proves your 20 week cycle has turned down, but it does not tell you that the cycle will bottom and immediately turn back up. It just helps you identify that the 20 week cycle is down. Similarly, if you have a trendline connecting two 20 week cycle lows, if that trend is broken, you assume the 40 week cycle is down. However, if it is only briefly broken and it is 39 to 40 weeks from a previous low, you may also assume it may have bottomed and you may use this as a buy point.

If a break occurs in a 20 week or 40 week trendline, is that more significant than a break in the 10 week trendline?

It depends on your time frame of investing. If you are a shortterm investor, you are generally always interested in the 10 week cycle trendline. A broken trendline tells you that the next longer cycle is rolling over but that doesn't mean it's "just" started rolling over. It may be already bottoming just as your trendline is being broken. That's one of the tricky points. As I said, you would measure from your previous low. If you were 39 or 40 weeks from that low and the trendline is just barely broken then immediately reverses back up, that identifies it as a possible 40 week cycle bottom. The break identified that the cycle is down but it doesn't tell you whether or not you have more weeks of downward pressure. Let's use another example, this time with a 20 week trendline. If you are 15 weeks from a previous 20 week low and you break a valid 20 week cycle trendline, you know there is the possibility of 4 to 5 more weeks until you reach a 20 week cycle bottom. The trendline break proves that the market was becoming weaker not only from a 20 week cycle perspective but perhaps from even longer term cycles. Where you break the trendline in time in relation to where the cycle began helps determine how weak the market has become.

In other words, it's necessary to know where each previous cycle low occurred in order to project how much time is left until the next bottom. What other indications could you look for that might indicate a cycle bottom?

Actually, a full analysis of cycles requires knowing where all of the cycles are—the 10 week, the 20 week, the 40 week, the 80 week, and so forth. These trendline breaks are somewhat of a road map that keep telling you where you are. Yes, a trendline break is a caution flag but did you then get an oversold condition consistent with a 20 week and a 10 week cycle bottom? You can look back at the oscillators and compare oversold conditions at the previous 10 week and 20 week cycle bottoms. Cycles are not the end all. You have to use a combination of other tools to go with cycle analysis.

If I understand you correctly, you will use traditional forms of technical analysis first and then use cycles to corroborate or negate what your other indicators are telling you?

Yes. Cycles are helpful to keep things in perspective. You can look back at four year cycle lows in the past and in some cases, compare the statistics of oversold conditions or even sentiment at those times. I think it is more meaningful when you compare statistics for similar cycle time periods.

When you say compare statistics, what do you mean?

In the 1970's, the 18 month and four year cycle lows would be your most bearish time periods on an intermediate and longterm basis. So the 1974 low should compare in sentiment to the 1970 low. More recently, the 1984 low, the 1987 low, and the 1990 low were all somewhat 3 to 4 years apart so they are similar cycles. 1994 was different. Ninety percent of the time I use the Dow in my cycle analysis but other indexes can show the cycle influence as well. Looking at the November 1994 time period, the utilities, the advance/decline line, and bonds were all down 25% from their highs in September 1993. The Dow did not look like a normal four year cycle bottom from the 1990 low. By November, it had not even gone below its previous low of April or May 1994. This is where synchronicity, as it is referred to, comes in. If you concentrate on the Dow exclusively, it can throw you off. You have to look at the internal market also. So 1994 was as valid a four year cycle bottom as any other. It was not visible in the Dow but it was visible in other indexes.

When you don't get confirmation from all indexes or averages showing the same cycle patterns, how do you resolve the picture?

Commonality. In Hurst's book, he suggested running cycles on a portfolio of stocks and coming up with a time period which was common to the majority. I think that is a valid point because as I said, things which are not in the Dow Jones Industrial Average like secondaries, utilities, or bonds may in fact be getting washed out and forming a very clear cycle bottom, and yet the Dow does not follow suit. Obviously, the easiest cycle bottoms to identify are those where the Dow and the major averages have the profile you would expect; that is, a very long and steep decline. From a chart viewpoint, the period of 1978-1979 was also very different. Although it had been four years from the four year cycle bottom in 1974, it was a difficult time period to call because there was a double bottom—a low in the spring of 1978 and a low in the spring of 1979. For the previous 30 years, every bear market had simply been a nice clean wash-out, spike low. When there is a double bottom or a double top, you should consider that there might be a cycle changing direction half-way between those two points. In 1978, the centered moving averages finally defined where the four year cycle had bottomed and it bottomed basically on schedule, four years from the 1974 bottom.

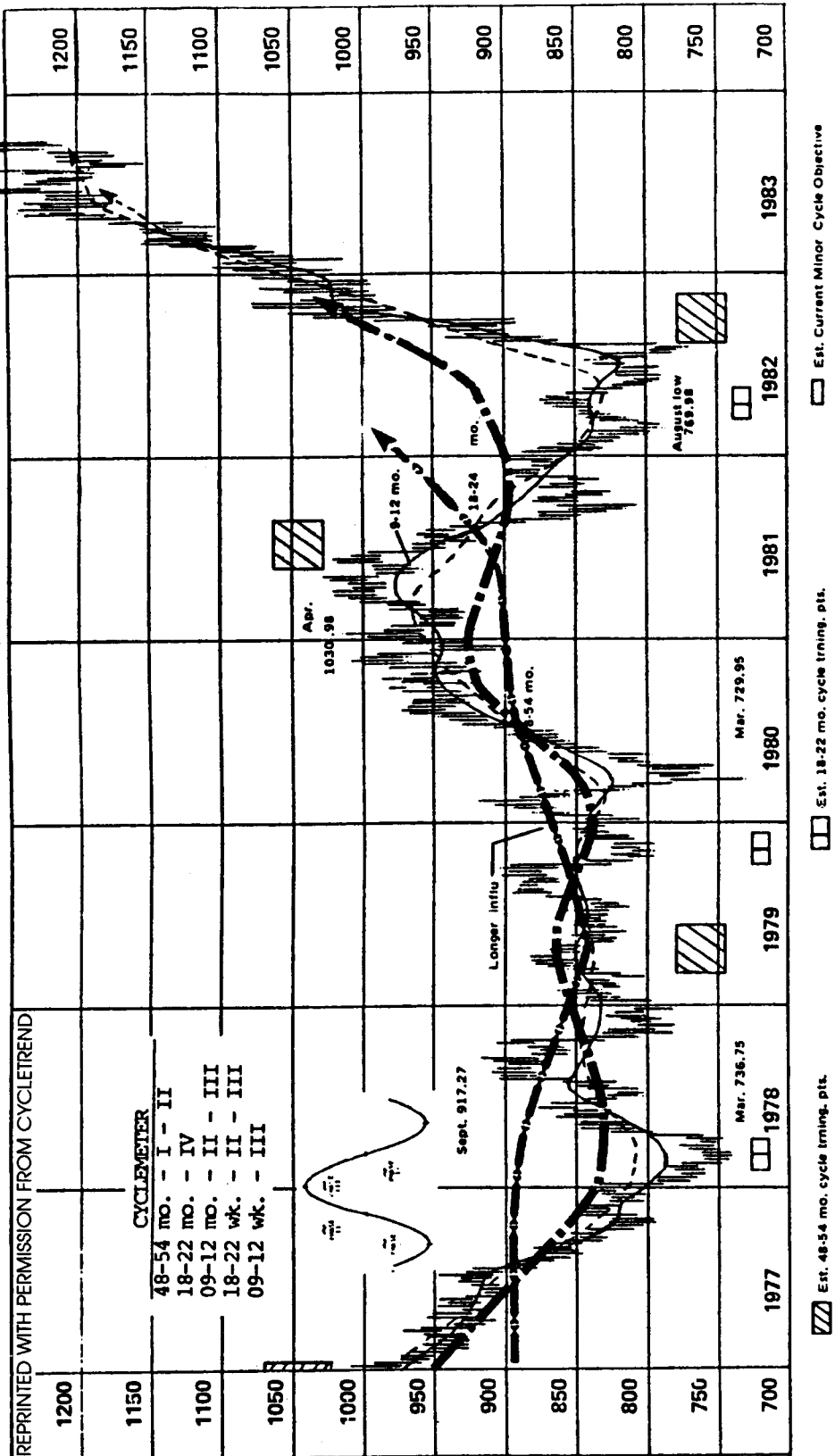
In most cases, will cycles bottom with a spike low or wash-out low in price?

Yes, that is what you would normally look for as a sign that all cycles have bottomed together.

What's a good method for spotting commonality among stocks and indexes?

As you are analyzing stocks from a cyclical viewpoint and measuring highs and lows, if you keep notes or make marks on the chartbook, you will begin to see individual stocks topping or bottoming, or due to top or bottom, in the same time frame. I use this method as a cross check to see what the internal market is doing versus the Dow or other indexes. You can even see cycles change by looking at relative strength. For example, in the last two years, the one year or 40 week cycle has tended to work very well for the OTC

“Cyclemeter showing cycle turning points and centered moving averages”



market. While the 40 week cycle was down, the relative strength on the OTC market was very poor but once the 40 week cycle turned up in November to December of 1994, then the relative strength improved. The OTC market, at least for the last several years, tends to be more sensitive to the one year cycle so you could avoid OTC stocks when that cycle is down and then consider the more volatile OTC stocks when the 40 week cycle turns up. You can also see that change in the relative strength line, which is a helpful clue that the 40 week cycle is working.

Investors must be resigned to the fact that individual indexes and particular sectors are going to be staggered in terms of cycle tops and bottoms.

That has always been the case and this is where the relative strength studies become important. Relative strength is one way you can tell whether a cycle is having an effect or not. For example, at the 1974 low, the best longterm relative strength group was the steels. There were very few others. In October and November of 1974, the market had tanked into the four year cycle bottom. Steel stocks made a large double bottom on monthly charts but were unable to go below their low of a year earlier in December 1973, while the market averages were substantially lower. Their longterm relative strength showed a very positive trend and they became the leaders of the new bull market.

There are different time periods of relative strength. What is the minimum you recommend using?

I think all analysis should start with longterm monthly charts to get the bigger, overall picture. A sector will tend to go through longterm changes in relative strength. Sometimes it almost takes 7 to 9 years for their relative strength to turn around. Strong relative strength stocks get to excessive prices and tend to top out last and relative strength always tends to go with the sector that is in vogue during a four year cycle. During the 1972-1973 period, it was the "Nifty-Fifty" stocks. Stocks like Xerox and Eastman Kodak were selling at 60 times earnings. These stocks made their highs in September 1973, after the Dow had already topped out in January. When the "Nifty-Fifty" stocks topped out in 1973, they had poor relative strength versus the other averages and sectors for the next six years, until the spring of 1979 when the 4 year cycle bottomed. If you look at monthly charts of the "Nifty-Fifty" stocks, all of them had created a five wave advance from the low that began in the mid-1960's. 1973 was their fifth wave blow-off move in the third, four year cycle top. You see, three, four year cycles would be 12 years but to the top of the third, four year cycle would be approximately nine years. So nine years tends to be a common time period for major moves from bottom to top. Three 4 year cycles, can produce a major 5 wave pattern in longterm charts.

As a shortterm guide, can readers use the relative strength found on daily charts or the numerical values of relative strength from *Investors Business Daily*?

Yes, and the relative strength from *Investors Business Daily* would bring in another technical method—the cup with handle approach from William O'Neil's book, *How To Make Money in Stocks*. If a stock rallies, forming a small double top, then has a pullback $\frac{1}{2}$ to $\frac{1}{3}$ of the previous advance, what you have is a rounding bottom that looks like a cup and the pullback looks like the handle of a cup. Basically the stock

is bottoming on a cycle. A trader looking at this stock might see a double top but when the stock pulls back, it doesn't pull back very much. If the relative strength line holds steady while the stock is correcting, then the stock tends to breakout on the next advance. If the relative strength line holds during a correction, some investors will buy before the breakout but I like to make sure that the longer term moving average is up. If you buy on the breakout, O'Neil recommends to buy within 10% of the breakout point and use a 7% stop-loss strategy. Positive relative strength and a double top pattern with a shortterm rounding bottom are all positive signs. If a 30 week or 200 day moving average is turning up, these indicate the longer term cycles are becoming stronger.

If you look at relative strength nine years back then you must use very longterm charts.

In 1978 to 1979, I started writing about a 61 to 63 year cycle that was due to bottom in 1981 to 1983. Instead of trading, as we had done in the 1970's, where market timing was important, I said that the 1980's would be a decade when a buy and hold approach would be the most important. Those concepts came from looking at 40 year charts. In the case of the blue chip stocks, you could go back and look at charts from the 1940's to the 1960's and draw a clear top to top longterm trendline that produced an upper trendline of a major parallel channel. That is where the Dow topped out in the mid-1960's. Then you could draw a parallel line from the 1942 low or maybe from the 1946 low to produce a longterm channel. By 1979 to 1981, many stocks like American Telephone, General Motors, Borden, Campbell Soup, had been out of favor for so long that none of them had made new highs in 17 years. They had worked sideways until they were at the bottom of their longterm upward channels. These were the stocks that began to move first at the 1982 bottom and were, of course, leaders for most of the decade in the 1980's. That prediction came from very longterm trends. I think someone should be aware of trends at least 10 years or longer in length.

Am I correct in assuming that you use charts from Securities Research Corporation?

Yes. I think they are an excellent source. Arithmetic charts in a long move become exaggerated. Shorter term, you can use arithmetic charts but the longer term channels that I am talking about become quite accurate with semi-logarithmic charts such as the SRC charts.

"Centered moving averages," which are a twist on the more traditional moving averages, are your mainstay and correlate with your cycle periods. How are they constructed?

First of all, you create moving averages of the stock or index prices that you want to analyze. Choose a moving average that is one-half of the cycle period that you want to observe. If you are looking at a four year cycle, you would use a two year moving average. A two year moving average will track a four year cycle. Then you place the two year moving average $\frac{1}{2}$ span back on your charts, in other words, you lag it one year on your charts. If you are looking at a 20 week cycle, you would use a 10 week moving average and place that average five weeks back on the chart. Every moving average that I use is one-half the length of the cycle and displaced one-half span.

What is the purpose of displacing the moving averages $\frac{1}{2}$ span back on the chart?

Because mathematically, that is tracking the exact cycle. You want to see visually how the cycle was unfolding in the past. You would think that putting them in past time is of little value but there is an interesting phenomenon that occurs with centered moving averages. When you have three or more centered moving averages on a chart, you will find that they will tend to go through one central price on the chart. Usually this is the middle of a nice acceleration move to the upside or downside. Amazingly, you will be able to tell quite often where that focal point is going to form days or weeks in advance from hourly charts. You don't have to wait for the daily and the weekly centered moving averages to tell you what the center of the move is. In the 1987 crash, the downward move formed a focal point in hourly centered moving averages and several months later, the monthly and weekly centered moving averages came through that same price. In other words, once the hourly cycles had formed a focal point and that objective had been met, it indicated that the downside move was basically over.

You are calling a convergence of several centered moving averages a focal point?

Yes, because it becomes the central point of several cycle channels.

How can you predict the resolution of a trend by looking at the focal point formed by something as short as hourly moving averages?

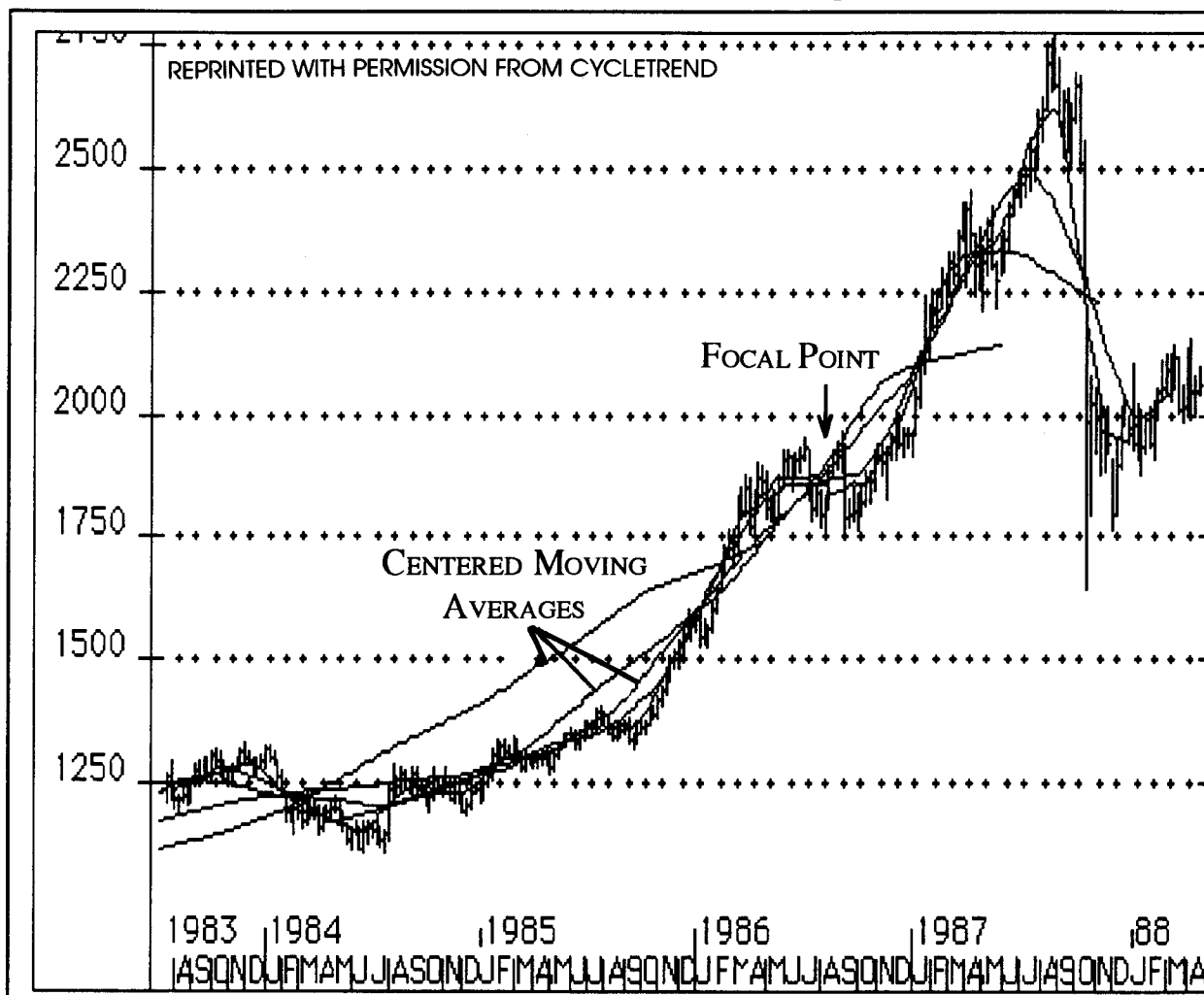
Hourly charts tend to form a focal point that your daily and even weekly centered moving averages possibly will go through later. This gives you an early idea of a daily or even weekly objective. You wouldn't apply hourly centered moving averages to a longterm weekly chart. I use the same centered moving averages on an hourly basis that I do on a daily chart. I use a 7 hour centered moving average, 13 hour, 25 hour and then I have a 50 hour centered moving average. I never use anything less than "hourly" for centered moving averages although they work for any time frame.

From what you have just described, these focal points appear to be very powerful timing tools.

Yes. The reason for the focal point is twofold. You can develop a time and price objective from previous lows by using that focal point to create a mirror image on the other side because cycles tend to unwind as they began. Measuring from a previous low to the focal point is the halfway point of a move so the second half of the move should equal the first and that will give you a price objective. It does not always work but if you see it unfolding, it is very helpful. For example, on September 3, 1996, a low occurred in the Dow Jones Industrial Average at 5550. Hourly centered moving averages crossed on September 11th at 5754 and the close and low for that day was at 5750. The previous low was 5550, a 200 point difference. Adding 200 points to the focal point at 5750 gives you a price target of 5950. When I switched to daily charts, the daily centered moving average lines pointed to the same 5750 area, the same price target as the hourly centered moving averages. The daily centered moving averages were just a few days behind the hourly but they came through the same focal point at 5750. The daily focal

Centered Moving Averages Converging to Form Focal Point

Dow Jones Industrial Average



points, hourly focal points, and even the weekly focal points (formed in mid-1995), all meshed together giving a price target in the area of 5950. I had objectives at 5922, 5924, 5956, and 5986. The 5986 came from measuring the hourly Elliott wave pattern of little wave 1 up. Since wave 5 is equal to wave 1, that gave me 5986. You can do the cycles and the Elliott wave measurements and generally come up with a “zone” of price targets.

For an upside price objective, you measure from the previous low to the focal point and double that distance?

Draw a straight line from a previous low through the focal point and extend the line on out. Take a caliper or two fingers, and measure from the low to the focal point and double it along that line. Put a little crosshatch at the top where the distances are equal between the focal point to the top and the focal point to the previous low. Don’t do this more than three times because when three centered moving averages have gone through one point, you are tracking three cycles. You would not want to go beyond three price or time objectives.

How would you obtain the time objective using this technique?

You measure the distance in time from a previous low to the focal point, and then project that same time frame forward.

In your previous example, you demonstrated that centered moving averages are clearly helpful in providing price objectives for the DJIA. Is this technique equally effective with individual stocks and bonds?

It is just as important in individual stocks and bonds.

In order to have a trustworthy focal point, would you recommend using a minimum of three centered moving averages?

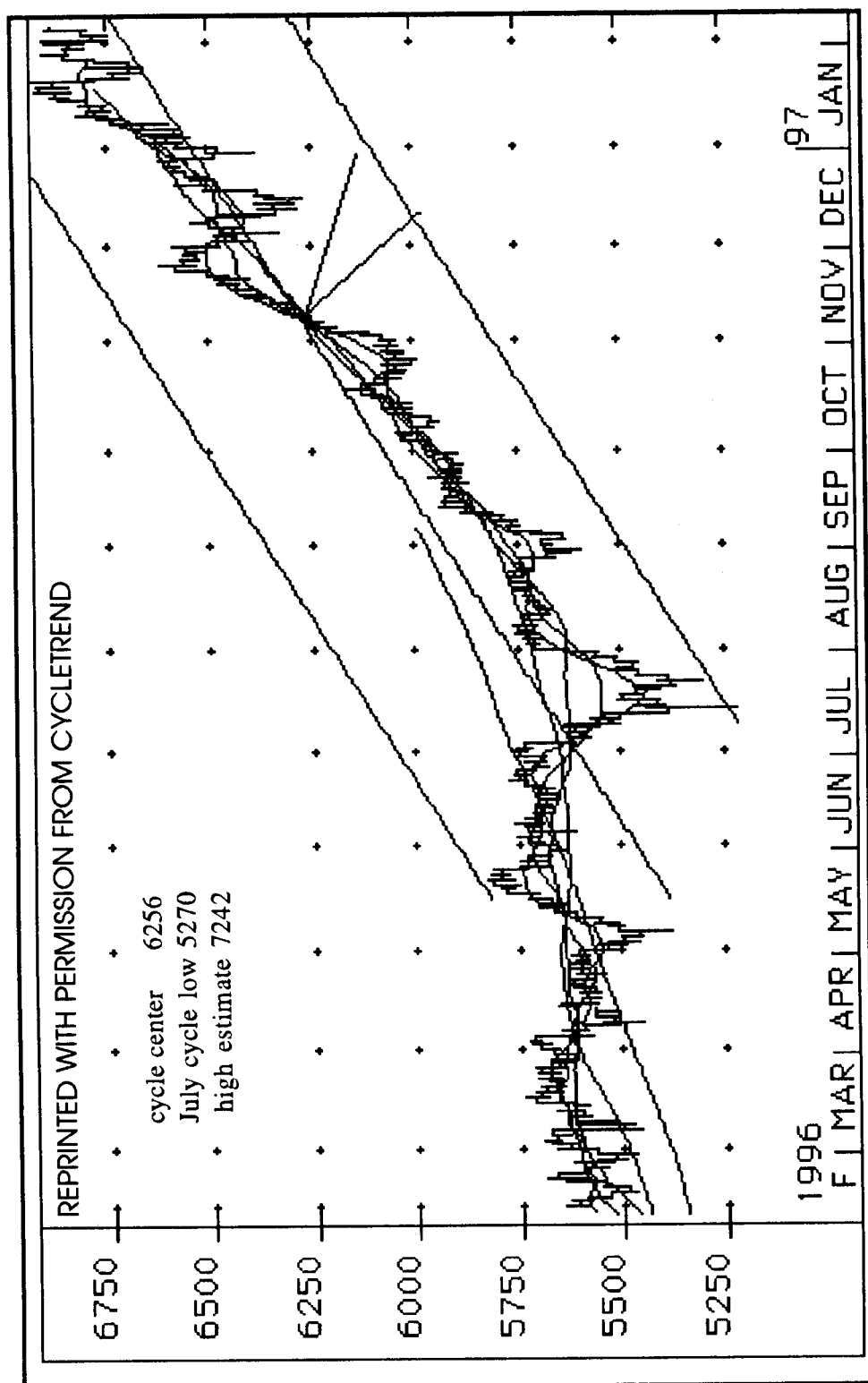
Yes, I think so and it comes somewhat from Elliott’s five wave principle.

How do they relate?

Your focal point is usually going to occur at the center of wave 3. First you have a wave 1 move up, followed by a pullback or sideways correction for wave 2, during which time your centered moving averages will try to bottom and then turn up slowly. Next you will have a wave 3 up, reach a high, and then go sideways, working into wave 4. By that time, your centered moving averages have come through the center of wave 3 and if you measure from that point back to the bottom of wave 1, generally you will get a price objective for wave 5. You will notice that before that final push up in wave 5, your centered moving averages will have gone through wave 3, still trending up strongly and about the time that they touch the bottom of the sideways consolidation in wave 4, the market takes off in wave 5. In other words, they are

“Price Objective of 7242 Using the Focal Point at 6256 and Cycle Low of 5270”

JIM TILLMAN / 407



about to form a focal point through the sideways portion of wave 4. The correction is over and the market takes off in wave 5. If you look back at the 1974-1975 market, you had a correction from June/July of 1975, sideways into December and you will notice that all centered moving averages were up strongly and had come through the center of wave 3, indicating that the consolidation should have been about over by December. The market exploded in January 1976. This was a very classic case but you will see it time and again on individual stocks. It helps you determine that wave 5 is over.

If you have a major focal point in the center of wave 3, can you draw a line from previous lows to obtain projections for time and price?

Yes, each time centered moving averages form a focal point, a line drawn from a previous low (if in an uptrend) through the focal point gives a good estimate of a price and time objective. The main focal point occurs in the center of the longest portion of an advance, generally wave 3. Three lines can be drawn through this point from recent lows. For the first objective, draw a line from the bottom of wave 2 (the last low) and extend it through the focal point. This generally will confirm the price and time objective for wave 3. Drawing a line from the very bottom of wave 1 through this same point at the center of wave 3 will give you the objective for wave 5—generally.

And that is both in price and time?

Yes, generally both price and time. Time will slip one way or the other a little in wave 5 because your peak of momentum stops at the top of wave 3, so from that point forward, the cycles have already started the process of rolling over.

At the “peak” of wave 3?

Yes. You will lose momentum from that point forward. Wave 4 will take about one-third longer to unfold because the uptrend is not quite as strong as it was at the bottom of wave 2. If it took two weeks for wave 2 to unfold then it might take 3 weeks for wave 4 to unfold. It may take longer but that would be a general rule. Now, remember that the centered moving averages are lagged in time. Day by day they continue to crawl up and about the time they touch wave 4, you are ready to advance in wave 5. You can draw your trendline through the center of wave 3 and wave 4 and that's going to be the center of your channel. Extend that trendline into the future and that's about where wave 5 will go to in the future because it is the centerline of the channel.

What are your suggestions for using centered moving averages?

You have to realize that you are generally near your upper price objective when all of the centered moving averages are crossing each other. People might ask, “What good is that?” Well, it basically tells you that this move is over so that you can expect a move to unfold in the opposite direction. When the price or time objective is met, then you simply start looking in the other direction. That's the value of the centered moving average approach. It tells you that the move is over and gives you confidence that you have met an objective. When you reach an upper objective, get ready to sell. You can bring in other indicators such as

oscillators, diverging sell signals, trendline breaks, moving average line breaks; anything that confirms that the move is over. The same thing is true on the downside. When you have had a focal point and you are meeting all of your objectives, that is when you would start looking for a reversal to the upside. It fits perfectly together if you are at a 10 week, 20 week or 40 week cycle time frame for a low. From January of 1984 until mid-year, the Dow went through a correction. All of the longer term moving averages of the Dow were in an extremely strong uptrend but the 10 day, 20 day, and 40 day centered moving averages, though small, formed a perfect focal point at the halfway point during a correction so shortterm objectives were being met. The longer term uptrend was still very strong and you had no change in momentum. So you simply used that as an intermediate buy point. I might mention something else. In the crash of 1987, many people were very bearish thinking that we had started another 1929. In comparing 1987 with 1929, it was important to know where the focal point was. There was one key difference in the focal points of those two periods. In 1987, the longer term moving averages that had not crossed through the focal point were still below the focal point and *rising*. What would it take to force them through that focal point? It would take a *higher* market "in the future" for them to go through that same focal point that the lesser moving averages had gone through (see chart of DJIA 1983-1988). In 1929, the longer term centered moving averages were *above* the focal point on the charts so what would it take to pull those longer term moving averages down through the focal point? It would take lower prices in the future. That is one of the subtle, but important key points about centered moving averages. When you are using centered moving averages, you have to think forward in time.

That example illustrates the importance of looking at longer term centered moving averages in relation to shorter term centered moving averages.

I think the magnet is strong enough to attract the longer averages through a focal point that is already formed.

So once you have pinpointed a focal point, is there much risk that the centered moving averages will reverse course and miss the focal point altogether?

They will if the market reverses because of unexpected news, but that is not normal. The worst thing that you can do is to obey them without caution. Let's say that you have several moving averages that you think should continue to rise through a focal point. That would be a good indication that your uptrend would continue but if a double top starts forming, that is an automatic clue to be cautious because a cycle can turn down halfway between a double top. The cycle centered moving averages will come up through the focal point, but then stall and go sideways before turning down halfway between a double top. This indicates a larger cycle is turning down. A double top is always possible so you have to watch for them. Since a final rally is usually over quickly in wave 5, stalling near a previous high is usually a warning to go ahead and take profits.

For best results, I believe you use 5 or more centered moving averages. Is that for longer term work?

If used on monthly charts, they provide longer term perspective but they may also be used on daily or

hourly charts for shorter term perspective. For example, longterm monthly centered moving averages intersected right through the center of the entire advance from 1949 to 1966. I said in the late 1960's that this was important because all of the longterm focal point objectives were met at a Dow level of 1,000. Once you meet major, longterm cycle objectives on the upside, what happens? The market either goes down or sideways. From 1966 until 1982, the market went sideways. There was a similar flat market from 1906 to 1914 and I was using that period as a comparison to the 1960's and 1970's.

In a situation like that, are there other indicators to give you advance warning as to whether the market would go down or sideways or do you have to wait and see how it resolves?

Other indicators are always used but here we are talking about cycles which are so large that you want to switch to more useful centered moving averages for shorter term cycles, such as the four year, 18 month, or one year. You are just keeping the big time frame and the big cycles in the back of your mind because they are not useful for anything except developing a major strategy.

That is, for determining the longterm secular trend?

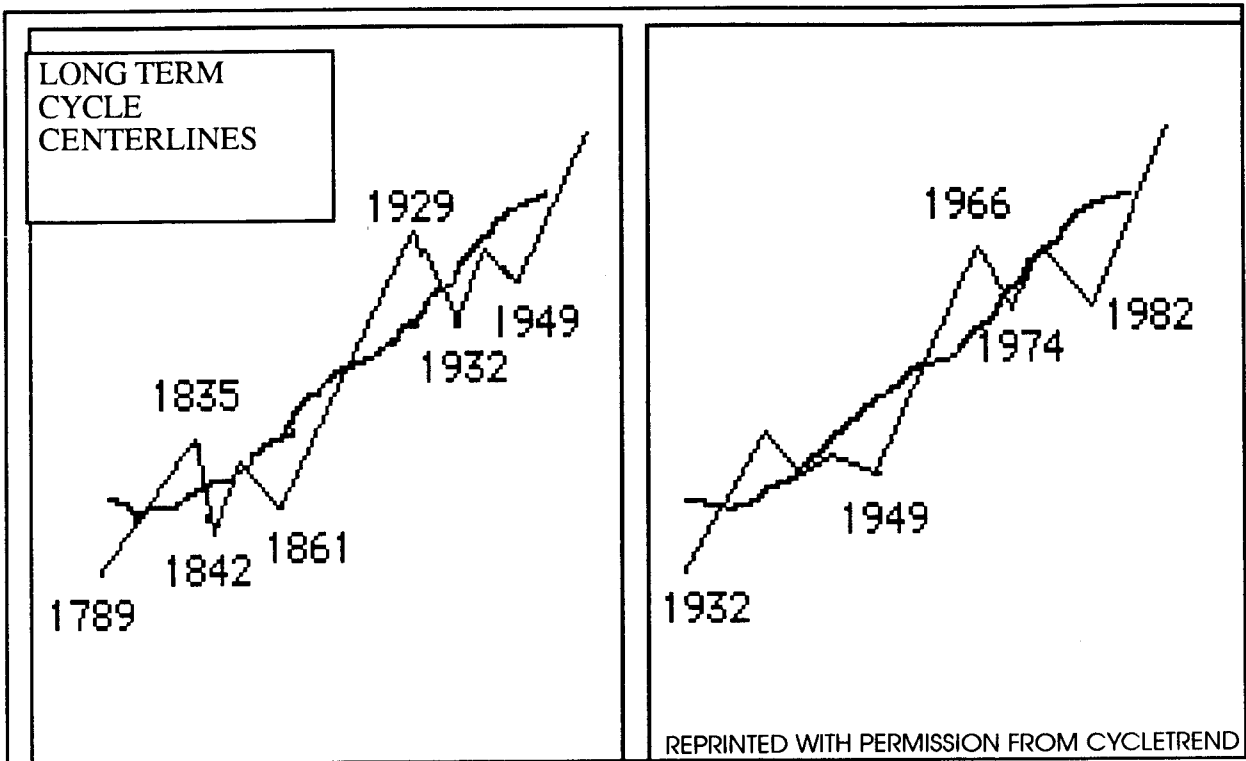
Correct.

In your own analysis, which centered moving averages do you rely on?

I use a 7 week centered moving average for tracking a cycle that is anywhere from 10 to 13 weeks. Then I use a 13 week average which tracks a 20 to 26 week cycle. Each moving average works as both a half-span and a full-span picture on your chart. For example, a 13 week moving average is going to show you the trend and profile of the 26 week cycle but it is also the full-span moving average of the 10 to 13 week cycle. It is the half-span moving average of the 26 week cycle and the full moving average of the 10 to 13 week cycle. At one glance it tells you the direction of the 20 week cycle and through its half-span measurement, it gives the price objective of that cycle from where it passes through the focal point. So I use 7, 13, 25, and 49 "days or weeks" for the moving averages. I shorten the number by one to make it an odd number because when I did charts by hand, this placed the average between the price bars exactly where they should be.

So far you have been talking about price targets for the upside. Will you get accurate downside objectives if you draw a line from a cycle peak down through a focal point?

Yes, but since cycles tend to bottom together, you have to allow for "overshoot." Shortterm cycles in a steep downtrend will temporarily overshoot more general longer cycle objectives. That is why cycle mirror images don't work as well at bottoms. These give you an approximation of price but you should be prepared for an overshoot because you have more than one cycle occurring at the same time. You tend to get a better mirror image objective at the high.



What do you mean by mirror image?

Mirror image is a very valid cyclical phenomenon. A pattern will often unfold at the top similar to how it was created at the bottom. Picture a sine wave going from its trough to the peak. When an advance is underway, the focal point of the centered moving averages helps to determine the halfway point of the move. You can then draw a straight line from previous lows through the focal point and project into the future. Measuring along these lines from the focal point gives you both a sense of time, pattern, and price for the expected high. I don't go beyond using three lows because cycles combine either in two's or three's. Three companion cycles or three tangent cycles generally produce the majority of the move for that time period. If you take the very first low prior to the centerpoint you will get your very first high, then you go back and maybe you had a previous low prior to that and you project your second high. Then you would connect the first low, normally at the bottom of wave 1, through the focal point and that would tend to point at the top of Elliott wave 5.

Would the actual chart pattern look similar also?

Yes. In fact, some computer programs allow you to flip or reverse chart patterns for this reason.

Using tracing paper, if you trace out the bottom of a pattern and mark the focal point, can you then rotate the paper, line up the focal point, and project how the pattern will appear at the top?

Yes, that's a good way. Flip it upside down and put that at the focal point of the centered moving averages. That is just as valid as using the centered moving averages.

Are there software programs which can calculate centered moving averages?

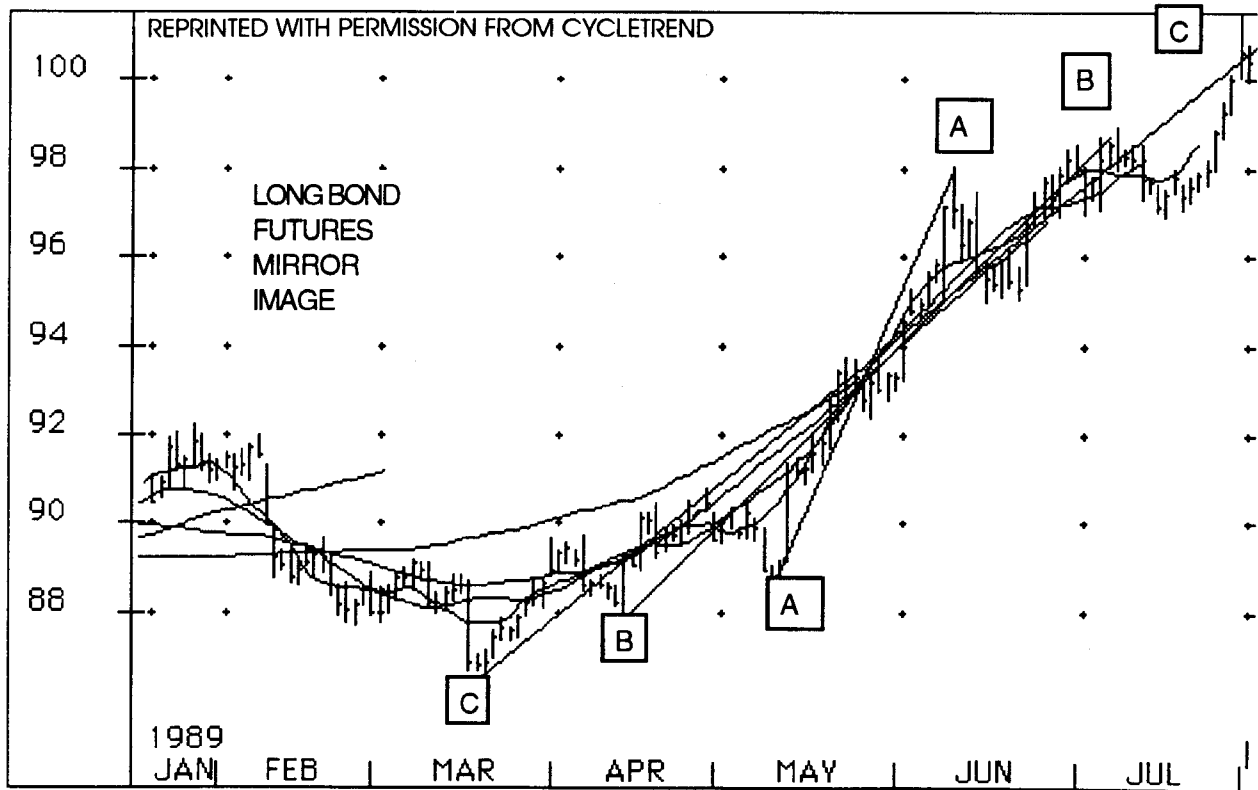
Nowadays, almost any program that people use has the capability of centering moving averages. All of the popular programs allow you to put your moving average wherever you want to.

Earlier, you mentioned using oscillators as a confirming tool for cycle tops and bottoms. What type of oscillator are you referring to?

Simple rate of change. In other words, taking the difference in today's price from the price 7 days ago, however, I smooth the rate of change with a 3 day moving average. Actually, I use a 3 day moving average of a 4 day rate of change. It gives me the same profile as a 7 day rate of change but it is more reliable and the reversal is not as sharp.

How are the oscillators constructed?

Construct a rate of change equal to $\frac{1}{4}$ of the length of your cycle if you want divergences at your cycle high and low or $\frac{1}{2}$ if you want to see the profile of the cycle. I like to use a rate of change that is $\frac{1}{4}$ of the cycle



period because I am visually accustomed to looking for divergences. For example, if you are looking at a 28 day cycle, you would use a 7 day oscillator. What occurs is a divergence at the bottom of the 10 week cycle and a divergence at the top of the 10 week cycle for somewhat mechanical buy and sell signals.

Would you describe what to look for in such divergences?

A divergence is any momentum oscillator that does not confirm a new high in the item it is tracking in an uptrend or a new low if in a downtrend. A cycle has to lose momentum before it changes direction so you want to see this momentum change. In an uptrend, making a second higher high in price with the downtrend over two oscillator peaks, produces a good sell signal as soon as the tightest uptrend on price lows is broken. This will generally occur near the top trend of a channel. You would expect to get the next positive divergence near the bottom of this channel approximately 4 to 5 weeks later.

Does this scenario only hold true if the parallel channel is trending up?

No, in fact, if you have the correct oscillator tracking a cycle, a flat trend would theoretically give perfect buy and sell signals at cycle turning points. The trend of the next longer cycle causes left or right translation in a cycle, which can cause signals to vary slightly.

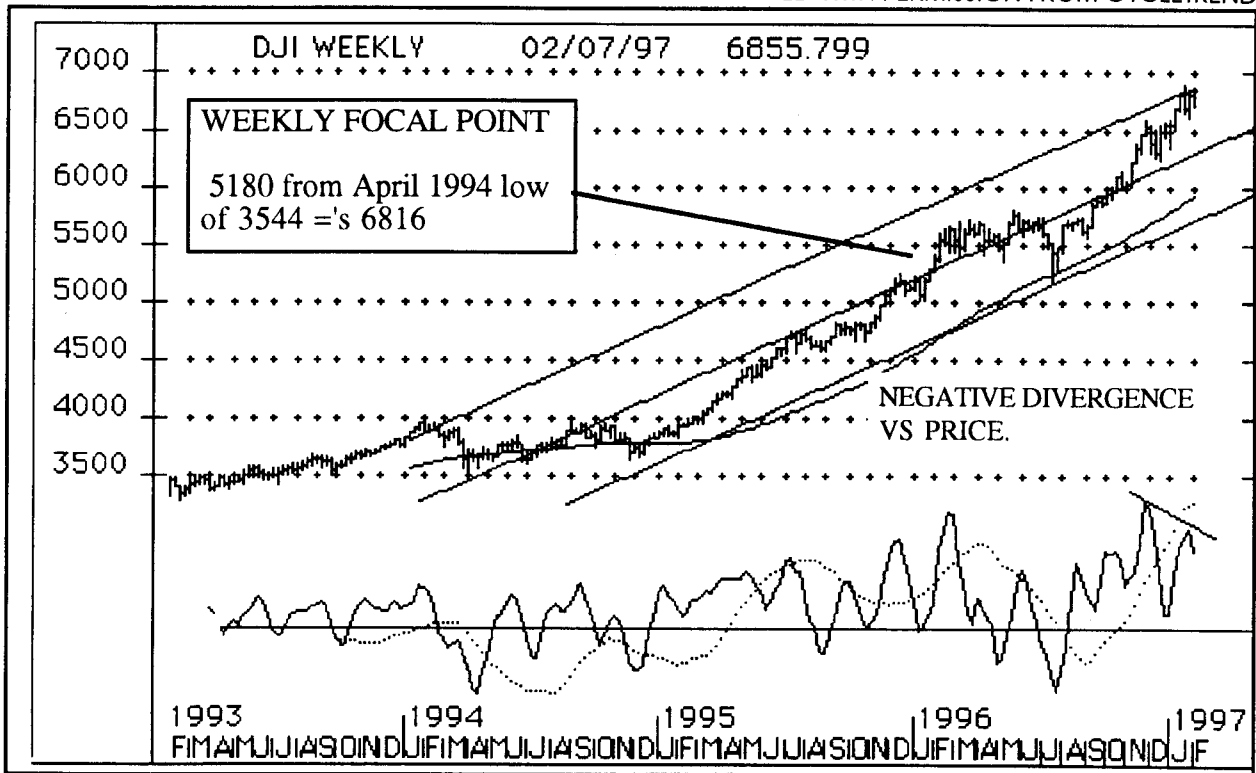
Going back to divergences at the top and bottom of 10 week cycles, can traders take positions based on these divergences?

Yes, because in a ten week cycle, upmoves tend to last approximately 23 market days. Through the years, the most common has been approximately 23 days but it can vary to as high as 30. In 1996, we had 32 to 33 days from low to high but those were unusual. Generally, whenever you are in a strong move you will find an hourly 5 wave advance from the bottom of a 10 week cycle to the top of the 10 week cycle. You are going to have minor focal points occur at the center of wave 3 and then you get a divergence in your oscillator at the top of the 10 week cycle. It fits together perfectly.

Of course, the same guidelines for keying in these momentum oscillators would apply to all cycle time periods?

Yes. If you are looking at a 20 day or 20 week cycle, you would use a rate of change oscillator of $\frac{1}{2}$ of the cycle period which would be 10 days or 10 weeks to get the profile of the cycle. Theoretically, the center point of your rising sine wave is within the first five days of a 20 day cycle. Then in the second five days, or at day 10, the oscillator would have gone down and then back up, perhaps making a lower peak than prices. Therefore you have a negative divergence and you can use that as a mechanical sell signal. When that oscillator turns down the second time, just go ahead and sell because you know that you are into your cycle peak. Same thing at a bottom. When you get a positive divergence, you buy. I like an oscillator because if your trend is extremely strong, the oscillator may make a new high the second time causing you to hold until you have a negative divergence. Wait until you get another new high in the stock

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and the oscillator makes a lower high. In that case, you can recognize that it might have made a five wave advance. It has gone up for wave 1, pull back for wave 2, up in wave 3, the trend is strong so it pulls back a little in wave 4, and then goes to a higher high in wave 5 and you get your divergence there instead of earlier in the cycle.

Breaking one 10 week cycle into three 3 week cycles allows you to identify where the rallies and corrections will occur. During which phase does the new high occur after the corrective pullback?

Following a 10 week cycle low, the first pullback is normally a three week cycle around 13 market days and you can generally figure that you are about at the halfway point in your rise. Then the stock may go to a new high, to make a 3 and 10 week cycle peak. When the oscillator turns down the second time from a lower peak and price is at a new high, that is a negative divergence and you sell. Signals through the years tend to occur 18 to 23 market days from a buy point because if the three week cycle were to pull back into the 13th day and then rise into the 18th day, that is five days up. That is just about where you would normally get a diverging sell signal, but if a new high occurs in the oscillator along with price, that tells you the trend is very strong and to stay with it a little longer. You might put a stop under a minor pullback, but stay with it. When it finally goes up into the 23rd day and you get a divergence, use that as a sell signal. It's just a mechanical approach. I remember in 1984, the 18 month cycle was due to bottom in June to July. On the pullback, weekly charts were giving positive divergences and then daily charts gave positive divergences giving a clue that intermediate and shortterm cycles were bottoming together. The most conservative and more accurate signals occur when you have a weekly divergence first and then a daily divergence.

Is this the only momentum measure that you use?

Yes, but any method used will work if it is based on the correct cycle.

As far as divergences are concerned, will the oscillators generate signals for longterm cycles such as the four year cycle?

Definitely. If you want a divergence at the four year cycle peak you would use a one year oscillator. To view the cycle itself, use a two year oscillator. If you want divergences, use $\frac{1}{4}$. If you want a full cycle, use one-half. You could run them both and that way you would have somewhat of a confirmation.

Will they conflict?

No, generally they will work together. Sometimes your eye misses the $\frac{1}{2}$ oscillator slowly rolling over. The divergence with the $\frac{1}{4}$ oscillator just pulls your eye to it more quickly.

Will these oscillators work well for individual stocks?

That is where it is so valuable because if you get lazy, you can actually just go with the oscillator by itself. I wrote the programs to give me diverging sell signals or buy signals automatically both on daily and weekly charts and it just works beautifully.

Are there periods of synchronicity in cycles, in other words, will a 10 week cycle coincide or intersect with a 20 week cycle and a 40 week cycle at peaks or troughs?

Yes, this is how you rank the importance of a cycle low or high. If you are looking for a 40, 20, and 10 week cycle to bottom together, you expect it to be much more important than say a 10 week by itself.

According to cycle analysis, the major trend is determined by drawing a trendline through two focal points formed by smaller cycles. Are those smaller cycles the 10 week and the 20 week cycles?

If you were on a daily chart, the focal point would be the 10, 20, and 40 week cycles. The center of wave 3 is usually where the focal point is formed. As the price works sideways in wave 4, it forms another focal point which may be less clear. You draw your trendline connecting the focal points at the center of wave 3 through the center of wave 4. That determines your major trend. Then you can draw an outside boundary trendline between the bottom of wave 2 and wave 4 and when that is broken, you will know that your 5th wave has passed.

Is that your method of constructing parallel channels?

Yes, the centerlines will always go up through the center of a parallel channel. You can first form your centerline through the focal points and then draw the parallel outside boundaries. You can draw straight line channels or channels that follow cycle centerlines. If you sketch in 3 or 4 channels following different centerlines, it is a great way to see how cycles mingle together.

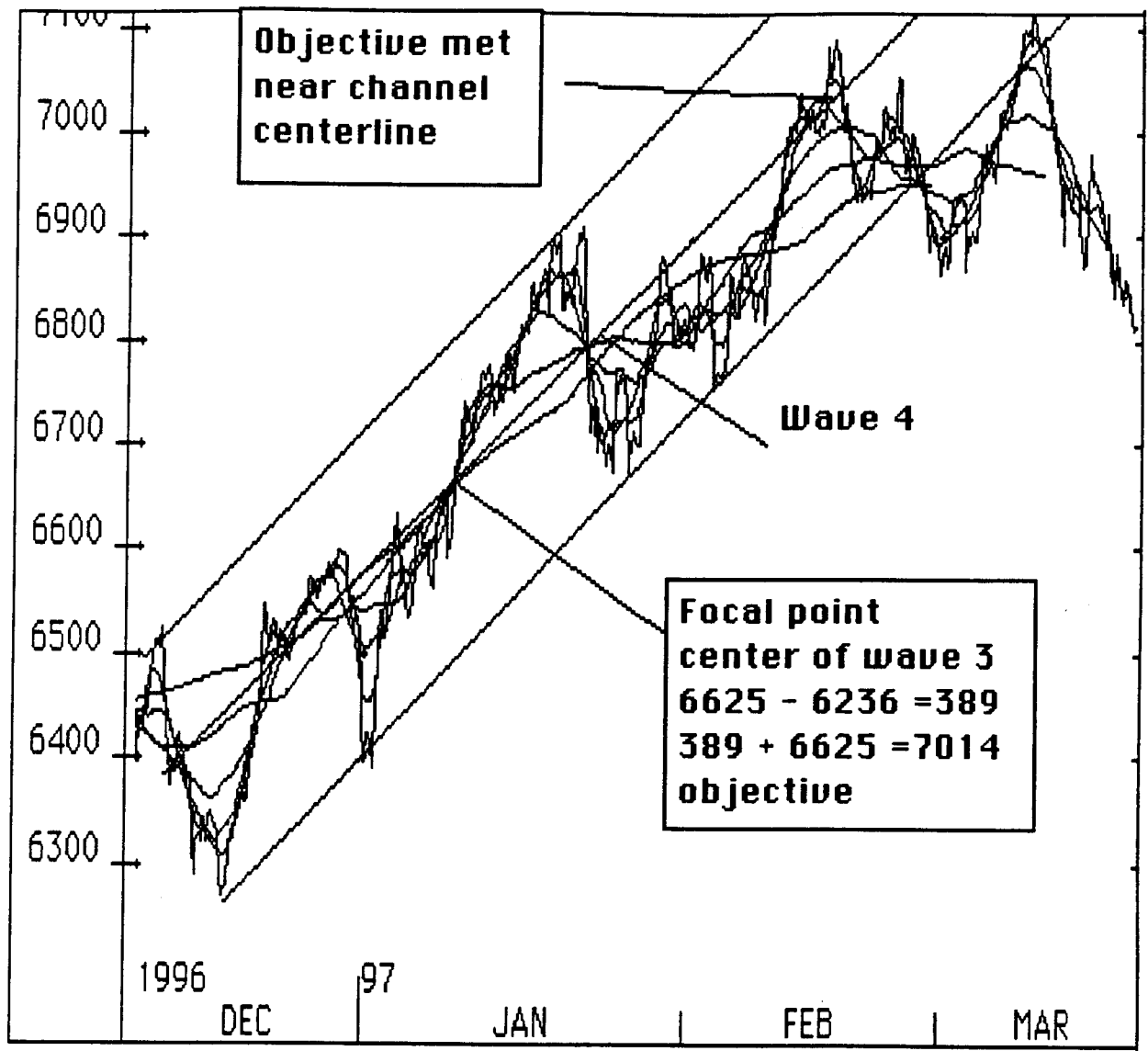
After wave 4, what scenario would unfold telling you that the end of an uptrend was over?

Assuming you have created about 4 waves of an expected 5 wave pattern, a focal point is already visible near the center of the last strong advance (wave 3) and the stock may be in a consolidation (wave 4). The next rally will generally stall at the centerline of your channel. You don't often reach the upper boundary of the channel in wave 5. You will have confirmation that it is a wave 5 if the stock or index goes up and touches the centerline and then falls, breaking the lower boundary of the parallel channel.

Would you wait until the lower parallel channel trendline is broken before reacting?

That depends. Generally, you give up a good 10% from the top of wave 5 before the trendline or moving average is broken. If you are convinced that you have gone up in five waves, you have a nice clear channel, a clear centerline and your last high was on the centerline at which point a negative divergence in momen-

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tum occurred, you have as much evidence as you could possibly need to sell there and not wait for a trendline break.

What you have just described is a “when to sell” strategy. Is there a reciprocal plan for “when to buy”?

Using the reverse method, stocks will generally complete a 5th wave down at a new low but stopping at the down channel centerline. A positive divergence should confirm this is a completed 5 wave pattern but a trigger could be the simple 1-2-3 method that traders use.

What is the 1-2-3 method?

Imagine a stock making a bottom, rallying, and then pulling back halfway. You would put a # 1 at the bottom. After the stock rallies, then that first little high off the bottom is a #2. If the stock pulls back and then moves higher than #2, then circle that point and put a # 3 there. Traders try to keep it simple so when a stock or index goes above point 2, that is their buy point. Now, don’t confuse this with Elliott. Point 2 or the first rally peak will probably top against a parallel downtrend channel. The pullback to point 3 is generally a retest of the channel centerline. As the stock goes back up, it will be breaking out of the channel. You can use the old 1-2-3 method, the breakout method, or buy in Elliott terms—wave 1 is up, wave 2 is the pullback, and by the time you break the previous high, you are in wave 3. Using any of these methods, your first price objective is double the width of your previous down channel. You measure from the bottom trendline of the channel to the top trendline of the channel. This method is also like the old measured move. Once you have broken out of the downtrend channel, pulled back to the center line, and then turned back up, you can start a new preliminary upchannel with those two lows.

How is the measured move different from what you just described?

Let’s approach it from an “a-b-c” pullback in Elliott terms. Let’s suppose that a stock or the market has gone up in a nice upward channel in five waves. Your first correction from the top is generally called an “a” pullback. Quite often a stock will break its uptrend channel and bottom shortly thereafter. Usually that becomes a halfway point from the centerline of the channel to the bottom of the channel. A stock moves that distance again but that is not the measured move, that is just the “a” wave down. A “b” rally will quite often go back just underneath the trendline break. This is the “b” move. The next decline, which would be wave “c” down, would generally be equal to the first decline. Therefore, “a” down and “c” down are equal measured moves, quite often both in time and price. Measuring from high to high from the top of five to the top of wave “b” in distance and then from the low of “a” over to the low of “c” in distance is sometimes exactly the same in price and time. The “b” move is that little corrective or “kickback” rally usually caused by a very shortterm cycle. This is generally the three week cycle rally in the down phase side of the 10 week cycle. Let’s say the 10 week cycle was up for 5 weeks and now it is going to be down for 5 weeks so your second three week cycle would try to rally somewhere around the 6 to 6½ week period. That is where you would normally have a kickback rally within your downtrend of the 10 week cycle.

What type of overbought/oversold oscillators do you use?

For years I have done the exact same 10 day overbought/oversold oscillator that is on the back page of Trendline. I take the net advances and declines for 10 days and keep that on a running total basis and that is your oscillator. For example, let's say you had 10 days with the following net difference between advances and declines: +404, -113, -99, + 418, -313, +227, +503, +107, -145, -992. For that 10 day period, the plurality would be -3 issues. You keep this on a cumulative basis. You can use an oscillator of this type for divergences or as a shortterm trading tool. I plot the oscillator right under the Dow Jones Average and at tops and bottoms it will often diverge, just like a momentum oscillator. You should reach a very oversold condition at a 20 week cycle bottom and you could use the A/D oscillator as an indication that the market is oversold.

How would you know for sure that you had a buy signal?

If the oscillator is deeply oversold and it has been 20 weeks from a previous low when a break in the trendline occurs, you can figure that you are at a 20 week cycle bottom. If so, you could buy on any shortterm positive divergence. If however, it is only 15 or 16 weeks into a 20 week cycle and a stock breaks a trendline, a more serious decline is perhaps underway. In this case, odds favor waiting for the market to become oversold nearer a projected low time period. Under those conditions, breaking a trendline is a sell signal.

Are there any other helpful breadth measures in your toolbox?

In 1970, I created what I call the volume/issues ratio or Tillman's VIR indicator. The VIR indicator is the volume ratio minus the issues ratio. The volume ratio is obtained by taking a 10 day total of all up volume and dividing it by a 10 day total of down volume. I do the same thing for the issues ratio—a 10 day total of up issues divided by a 10 day total of down issues. Then I simply subtract the issues ratio from the volume ratio. For example, if the volume ratio was .95 and the issues ratio was .96, the VIR would be -1 (.95 - .96). I buy the first day VIR goes positive from zero or below. My stop is that day's low. You would expect your issues ratio and volume ratio to move closely together but I observed many years ago that when the market is advancing, volume increases and the difference between the ratios goes up. On the NYSE in an up market, the ratio seldom reaches a net difference of 50 points and in a down market, it seldom returns to zero. For years it was a buy signal when the net difference between the volume issues ratio was zero. That signal often turned out to be the bottom day. Through the years, it has changed a little and has started staying under zero maybe two or three days after a deep oversold condition, but as soon as it popped back up above zero, the market turned up. It is a good buy signal. The reason for this is that volume tends to expand during a wash-out condition; some of the stocks hold while volume increases. That means that you are getting to a capitulation stage so the VIR ratio falls to zero or below.

If a move below zero indicates an oversold market, what level is considered overbought?

For the NYSE, when the ratio difference rises above 35 and then falls back under 30, it has led to tops in

the past. Sometimes in a screaming market the number will go to 40 or 50 and I have seen it as high as 70 before it begins to fall. Generally you are going to find this occurring within a 10 or 20 week cycle. The market usually starts topping out on less volume and the number of up issues will decline. Being very sensitive to either issues or volume, the oscillator will start down. Perhaps it is coincidental but often it will fall below the 30 level right around the high point.

Is there a particular analytical sequence that you go through each day?

If I were to come back off of a long vacation and wanted to catch up, the first thing I would do is bring the averages up to date. I would calculate the 10 day breadth oscillator and the cumulative advance/decline line to look at the basic health of the market. Then I would create the centered moving averages on a chart of the DJIA to see where the market was in relation to a previous move. Those three things, the breadth oscillator, the A/D line, and centered moving averages on the Dow, would give me a feeling of how healthy the market was and whether some price objectives had been met. After determining the general health of the Dow, I then scan about 1,000 stocks in Trendline for a feeling of the consensus pattern of individual issues. Next, I would focus on measuring 10 week, 20 week, and 40 week cycles for individual issues, very often by hand, to find stocks that I am interested in purchasing or selling short.

What factors determine whether you will go long or short?

I would first determine what phase the cycles are in. If the Dow is reaching a price objective, than nine times out of ten individual stocks will appear the same way. For opportunities to go short, I would scan for stocks that look like the Dow and have met their price objectives and their 10 week and/or 20 week cycles are beginning to turn down. On the long side, you want to see an oversold condition. It is just a matter of watching stocks that fit the pattern of the Dow and once the 10 week cycle has met its downside objective, getting a positive diverging buy signal from the momentum oscillator would compliment the picture. If you have a diverging buy signal that is usually good enough. To refine the signal to a daily basis, I have added a positive candlestick as added confirmation. Quite often the low day has a positive candlestick or on a chart that has the opening prices, the stock will open down on the low day, wash-out, and close up from the opening. I don't care whether it closes higher than the previous day's close. We can look at the big picture and talk about that all we want but on every chart, whether it is daily, weekly or monthly, there is "one" bar that is the high or low day. For years, I may have bought one or two days early looking for a cycle low only to get stopped out so I looked for one simple indication of a turn and the candlestick one day reversal works well. The principle is that a cycle low or high is an extreme and will produce a blow-off top or a key reversal. When all of the cycles are going down together and one of them is in a very strong "c" wave decline, or when you get a stock that has been down for 7 days in a row and it goes up on the 8th day, you have had a wash-out. You can use the standard MACD indicator as an additional tool. When the two lines cross, you are past the cycle low.

For your own investing purposes, you would want each of these indicators to be saying the same thing?

Yes. The combination of a positive divergence, a positive candlestick, crossover of centered moving

averages toward the downside are just three of the simplest things that you can use to go long. It would help if you are looking at an “a-b-c” Elliott wave pattern or if there had been a 50% correction of the previous advance. Through the years, I have tried a lot of sophisticated things and probably every system known and yet, quite often it can be boiled down to these very simple things. There are number of simple tools that from a cyclical viewpoint, adds some measure of knowledge about whether a cycle is bottoming or topping but if you can become familiar with the very basics, such as how the trendline channels and the centered moving averages operate together, you can go a long way with just those tools.

This is a lot of material for people to digest. Will Hurst’s book fill in any gaps that we might have left out or if they need clarification.

Yes, definitely.