End of Wave Price Projections

**How To Make High-Probability Price Targets
For Any Market Condition**

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A Special Tutorial Series for Subscribers to the DT Reports

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Introduction to Dynamic Price Analysis and End-of-Wave Price Projections

Lesson One

Dynamic Price Analysis: Retracements, Alternate Price Projections and Price Extensions

This tutorial will be a review for many subscribers of basic price projection techniques we use in the report, especially those who have taken the time to study my *Dynamic Trading* book. However, it is important to regularly review the basics to ensure subscribers easily follow along with the method and terminology we use in the DT Reports.

Price analysis measures and proportions the range in *price* of past cycles and projects forward to project the high probability support and resistance target zones. The Fib ratio series of .382, .618, 1.618, etc. are the most typical ratios used. With Dynamic Trading, we include a few additional ratios that are all geometrically related to the Fib series.

Pivots on the price chart identify the reference points used in the analysis. All price projections are made *in advance*. New projections are made as soon as a new swing is confirmed.

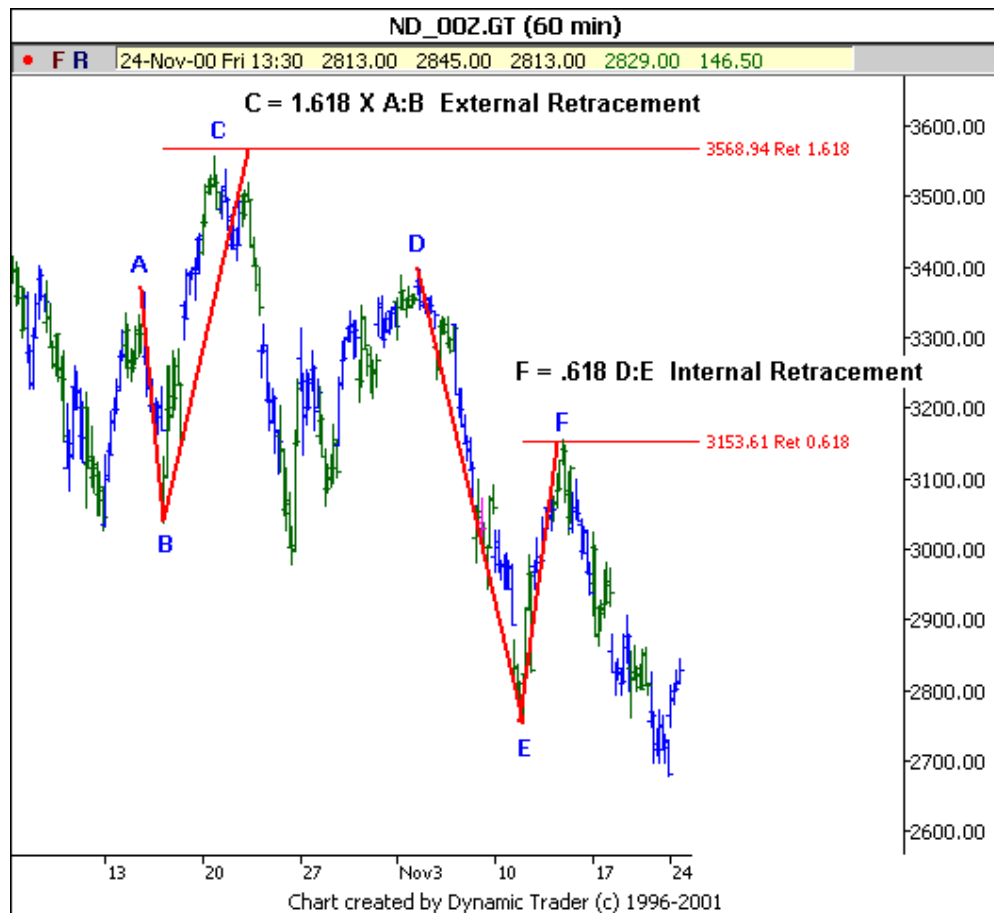The three key price projection techniques that make the price target zones are:

1) Retracements (Ret)
2) Alternate Price Projections (APP)
3) Price Expansions (Exp)

Retracements (Ret)

There are internal and external price retracements. *Internal* retracements are less than 100%. They are calculated *between* pivot points to help identify the target for a correction. The four most important internal retracements are: 38.2%, 50%, 61.8%, and 78.6%.

    External retracements are greater than 100%. They *extend* beyond the extreme of one of the pivot points. The most important external retracements are: 127%, 162%, 262%, and 424%.

    Let's look at a chart example:

In the sixty-minute chart of the December Nasdaq 100 above, the first projection is the 162% external retracement of A-B to point near C. It came within a fraction of the Wave-C high on the intra-day chart. A Wave-C is often either a 127% or 162% External Retracement of Wave-B.

The second projection on the chart above illustrates the internal retracement of D-E. The high at F tagged the .618 retracement before continuing the bear trend.

Alternate Price Projections (APP)

Alternate price projections (APP) project the range of a past swing that was in the same direction as the current swing. The three most important APP ratios are 62%, 100%, 162% followed by 200%, 262%, and 424%. Let's look at a chart example:

The Nasdaq sixty-minute chart above is for the same period we used for the retracement examples. The two swings measured are the A-B

advance projected from the pivot C-low and the C-D advance projected from the pivot E-low. The pivot-F high was made at the 100% APP of A-B projected from the pivot-C low and the 61.8% APP of C-D projected from the pivot-E low. This price target zone was identified *in advance* in the *Dynamic Trader Futures Report* as a target for a counter-trend high.

Price Expansions (Exp)

Price expansions expand the price range of a price swing by chosen ratios. Price expansions should be used to help confirm tops or bottoms projected by using retracements or alternate price projections. They do not identify tops or bottoms as often as the other two methods. The most important ratios to use for Price Expansion are: 62%, 100%, 162%, 200%, 262%, and 424%. Let's look at the chart example:

The same sixty-minute Nasdaq chart shows that each of the minor lows for this period was very close to a 2.618 expansion of the first minor leg down.

Lessons Learned

The three most important price projection techniques are Price Retracements (Ret), Alternate Price Projections (APP) and Price Expansions (Exp). Price retracements and alternate price projections are the most reliable of these three techniques. Price expansion should be used to confirm tops or bottoms that coincide with one of the other methods. All of the price projections are calculated *in advance*.

New projections are made as a new swing is confirmed. The high probability target zones are where two or more of the projections coincide relatively close together.

Internal and external retracements, alternate price projection and price expansion projections should be second nature to subscribers as well as the abbreviations we use in the commentary and charts. Each projection on a chart in the DT Futures Report is labeled with the ratio and type of projection (APP, Ret, Exp). There are not separate labels for internal or external retracements. Any retracement that is over 1.00 (100%) is an external retracement by definition.

The next tutorial in the price series will begin to teach you how to make the high probability End-of-Wave price target projections for each of the common Elliott wave structures. You should know the how the three different types of price projections are made that were taught in this tutorial and there abbreviations.

Lesson Two

End-of-Wave 1 or A Price Projections

This tutorial begins a series of weekly tutorials that will usually be included with each Monday or Tuesday Dynamic Trader Futures Reports to teach you how to project the high-probability targets for the end of any trend or counter-trend pattern based on Elliott wave structures.

If you are not familiar with the basic impulsive and corrective wave structures and guidelines, refer to chapter three in the *Dynamic Trading* book, *Dynamic Price Projections*. While there will be some discussion of wave structure, the main objective is to teach how to identify *in advance* the price targets zones for all of the typical wave structures.

Regarding Elliott wave – *don't get paralysis of analysis*. We are interested in tools that help us trade, not in predicting the future or having an academic wave count. A market almost always provides a strong pattern signal if it is in an impulsive-trend structure or one of the many corrective structures. We always assume a correction will be an ABC until proven other wise. Even if it becomes a "complex" correction, at least we are aware that it is more likely a correction and the main impulsive trend will eventually reassert itself. Sometimes the larger or smaller degree (time frame) of change will often help to clarify the wave structure.

The purpose of identifying the probable wave structure is we use the pivots to make the typical price targets for the end of that wave structure.

We will also teach you some basic trade management strategies to use if a market reaches the price targets.

Some wave structures allow projections of three target zones – minimum, typical and maximum.

Keep in mind that the real advantage of the Dynamic Trading approach is to consider all three dimensions of time, price and pattern in the analysis and trading strategies. This series of tutorials focuses on the price factor with a fair amount of discussion of pattern. A future series of tutorials will focus on the time factor.

We will use a variety of markets and time frames for the examples. The same principles and procedures apply regardless of the market – futures, stocks or mutual funds – and regardless of the time frame – intraday to monthly.

Why Project Price Target Zones?

We will have a framework to decide *which side of the market to trade* until the target is reached. We will avoid entering against the trend and have a better idea how long to hold a position to maximize profit until the target is reached.

We will have a framework how to *adjust the stop loss* depending on the position of the market relative to the minimum, typical and maximum price targets.

We will have a framework whether to consider trend-reversal or trend-continuation trades depending on where the market is positioned relative to the price targets.

Why Wave 1 or A?

Why do we usually label an initial trend either a Wave 1 or A and not one or the other? Both Waves 1 and A usually have the same pattern characteristics and price targets. From a *practical trading perspective, it doesn't matter* whether it is one or the other. We may have a strong opinion which it may be depending on the larger degree pattern prior to the beginning of the Wave 1 or A, but why prejudice ourselves by choosing one or the other early in the new trend?

As the trend or counter-trend progresses, it will usually reveal whether it is a 1 or A. We can then adjust our analysis and trading strategies when the market has provided enough information for an informed opinion.

Pattern

Wave 1 should subdivide into five-waves.

Wave-A usually subdivides into five waves but may subdivide into three waves. The initial assumption is a Wave-A will subdivide into five-waves.

Trading Strategies

One of the most useful W. D. Gann quotes is *"The safest time to enter is on the first reaction against the new trend."* In Elliott wave terms, near the Wave-2 or B low. Why? If a reaction against the old trend is a five-wave structure, it is probably a Wave 1 or A which will signal the larger degree trend has changed and, at the least, a larger degree correction in terms of time and price should be unfolding. Once we have this signal of a trend

change, we would look to enter on a trend-reversal entry strategy on the first correction against the new trend which is the Wave 2 or B. We should have at least one more swing in the counter-trend direction which will be a Wave 3 or C to trade.

Price Targets – The Coincidence of Price Projections

The objective of Dynamic Price analysis is to make the typical price projections for each end-of-wave and see if several projections fall near one or more relatively narrow price zones. The price targets are where two or more price projections fall near each other. Some end-of-wave (EOW) targets have one or two projections that are the most typical for that EOW. We will note those for each EOW in the tutorials.

As a trend or counter-trend progresses, there are more waves in the pattern structure to use to make price targets. By the time a Wave-4 of a five-wave impulse trend is complete, we have Waves 1-4 to make projections for the EOW-5 plus retracements of the prior trend.

There are no internal swings of the wave structure to make projections from with the EOW-1 or A price targets because they are the first wave in a wave structure. In a future tutorial, we will see how to use the subdivisions of a wave to help identify the price target. Without using the subdivisions of Wave 1 or A, we only have the retracements of the prior trend for potential targets.
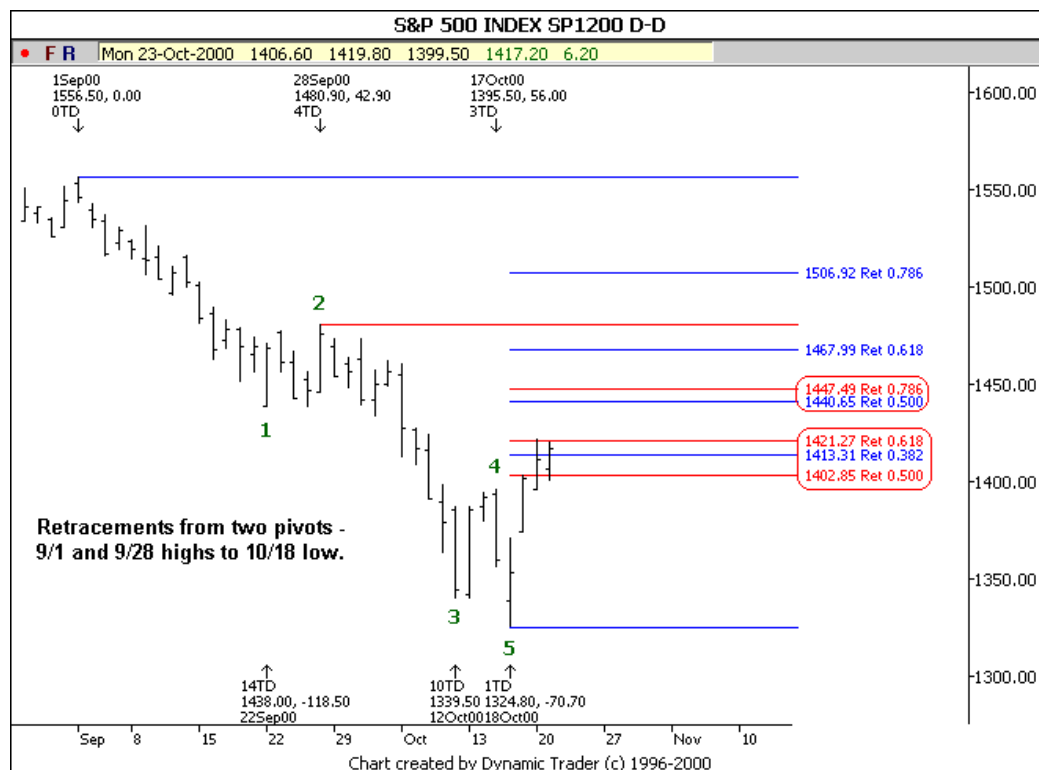
Wave 1 or A Price Targets

Retracements: 38.2%, 50%, 61.8%, 78.6%

Preferably, we make retracements of at least two degrees.

The daily S&P chart below shows retracements from the 9/1 and 9/28 highs to the 10/18 low.

Price Target Zones

There are two price zones in the chart above that include two or more retracements.

1402.8-1421.3: Includes the 50% and 61.8% Rets. of the 9/28H-10/18L and 38.2% Ret. 9/1H-10/18L.

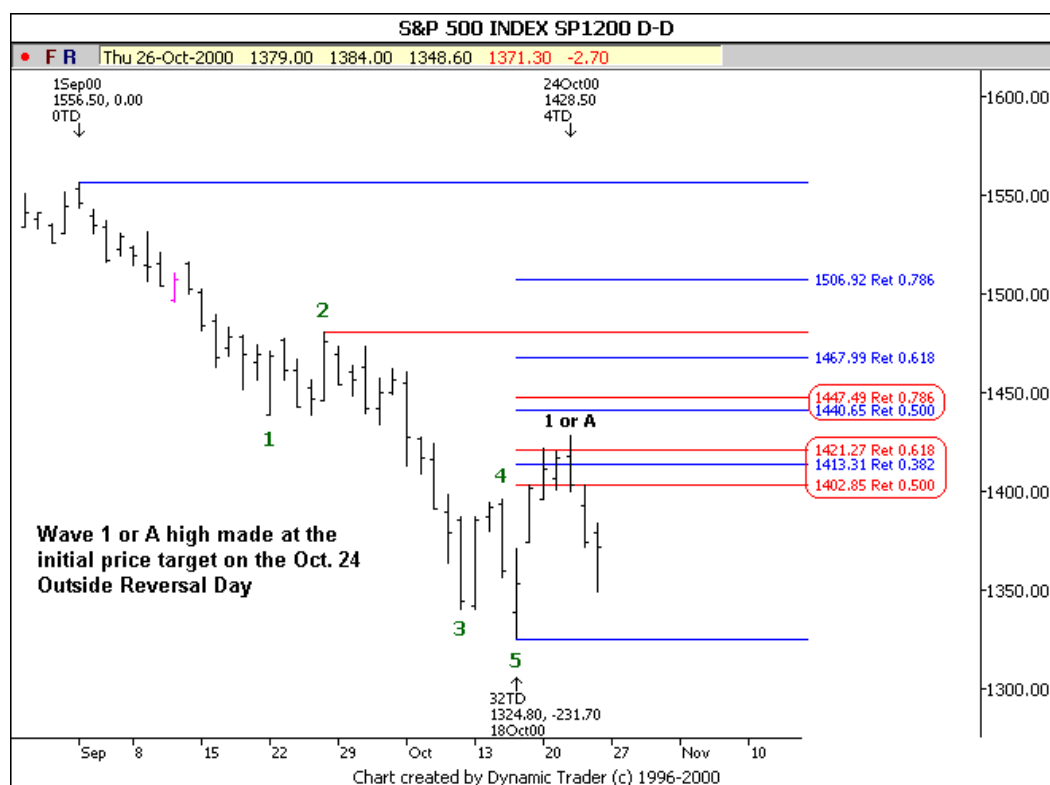1440.6-1447.5: Includes the 50% Ret. 9/1H-10/18L and 78.6% Ret. 9/28H-10/18L.

In this example, we make no assumption if the advance from the 10/18 low is a Wave 1 or A. We are not using any of the potential smaller degree

subdivisions of the Wave 1 or A to fine tune the projection. We just have the retracements of the two ranges for potential targets.
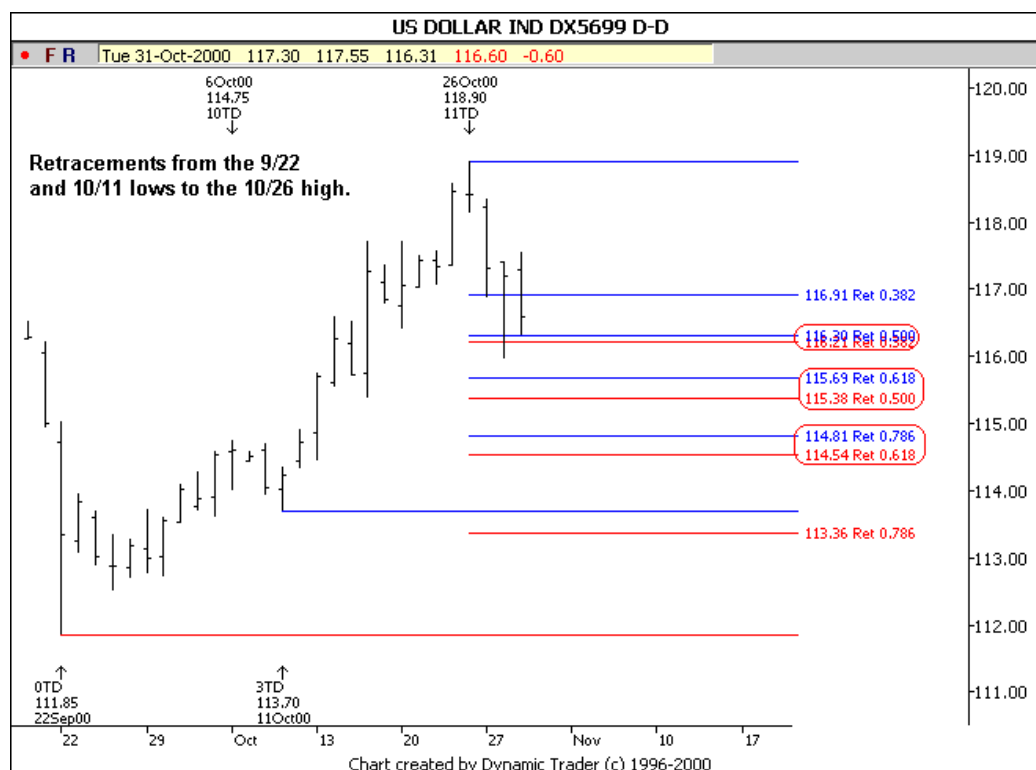
Wave 1 or A High

On Oct. 24, the S&P made an outside reversal day at the first target zone and declined sharply over the next two days. The Wave-1 or A high is complete. Next week's tutorial will teach how to make the high-probability Wave 2 or B price targets.

US Dollar Retracements

The chart below shows the retracements from the 9/22 and 10/11 lows to the 10/26 high. There are three price zones that include two retracements each. While the Wave 1 or A is likely to make a low in one of the price zones, we have no additional information which zone it will be. In a future tutorial, we will show how we may be able to use the subdivisions of Wave 1 or A (waves of lesser degree) to help identify which target is most likely to the Wave 1 or A low.

The chart below shows the Wave 1 or A low was made near the last potential target zone.

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                        US DOLLAR IND DX5699 D-D
● F R  Thu 9-Nov-2000  116.18  116.47  115.02  115.19  -0.99
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Wave 1 or A Price Target Summary

Retracements from one or more pivots: 38.2%, 50%, 61.8%, 78.6%. The ideal targets are where two or more retracements from different pivots fall near each other.

Wave 1 or A usually subdivides into five-waves, although a Wave-A may subdivide into three waves.

We usually do not make an assumption if it is a Wave-1 or a Wave-A. However, if it is preceded by a three-wave counter trend (ABC), it should be a Wave-1 of a new impulse trend. If it is preceded by a five-wave trend, it could be either a Wave-1 or A depending on how the preceding five-wave trend fits into the larger degree wave structure. We'll discuss more of the nuances of wave analysis in future tutorials.

Lessons Learned

We have learned how to make the retracements and identify those price zones where two or more retracements coincide. Without other information such as the projections of the subdivisions of the Wave 1 or A, we cannot make a firm opinion of which target zone is the most probable for the Wave 1 or A.

Lesson Three

End-of-Wave 2 or B Price Projections

This week we will take a look at how to make End-of-Wave (EOW) 2 or B price projections. W.2 or B is preceded by W.1 or A which usually subdivides into five waves. Why do we say end of 2 *or* B? It makes no difference whether it is a Wave-2 or B from a trading perspective, as the each wave should have the same structure and price targets.

Wave 2 or B Pattern: Typically an ABC. Wave-C should exceed the extreme of Wave-A.

EOW-2 or B Price Target Zone: **50%, 61.8%**, 78.6% retracements of Wave 1 or A, plus the targets for the Wave-c subdivision of Wave 2 or B.
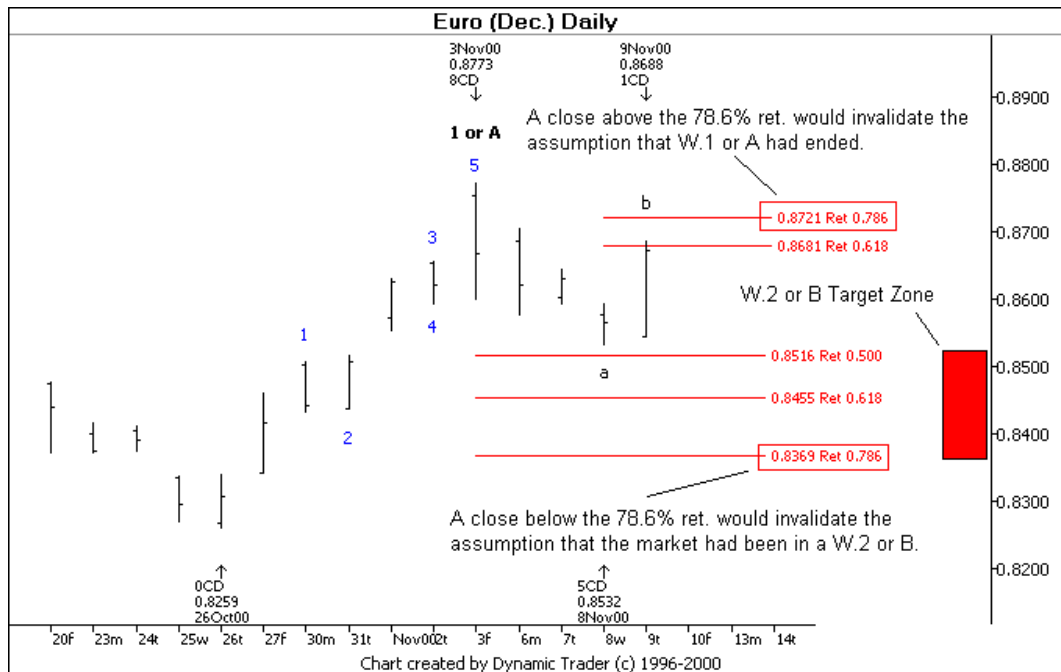
The retracement range for W.2 or B is 50% - 78.6% of W.1 or A. A Wave-2 or B will typically reach at least the 50% retracement but not make a daily close beyond the 78.6% retracement. Wave-2 or B typically subdivides into an ABC. W.A typically subdivides into five-waves but may subdivide into three waves. W.B is usually three waves and W.C should be five waves.

Identifying the W.2 or B price target gives the trader the discipline to wait for the high probability trade set-up to enter a trade on the first reaction against the new trend. We should not consider entering a trade until the minimum price objective for W.2 or B is met – the 50% retracement of W1 or A.

The daily chart below of the December Euro shows a five-wave sequence from the October 26 low to the November 3 high which we will assume is a Wave 1 or A. The Euro made a low on Nov. 8, just above the 50% retracement. Why would we assume the Nov. 8 low has not completed the Wave-2 or B low? It has not reached the minimum 50% retracement target. We should consider the Nov. 8 low a Wave-a of Wave-2 or B and not a completed Wave-2 or B.

A close above the 78.6% retracement of minor W.a at 87.21 would invalidate the count shown and suggest the correction is complete and the bull trend would continue. A Wave-2 or B typically will not close beyond the 78.6% retracement.
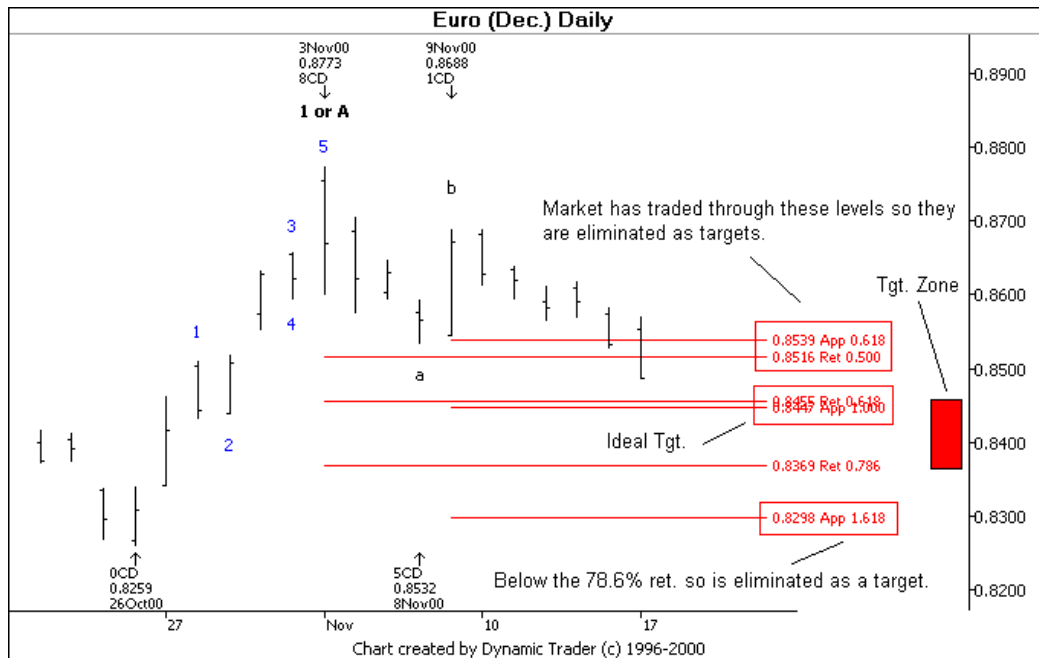
The 50%, 62% and 78.6% retracements of W.1 or A gives the broad price target zone for the end of W.2 or B. Wave-2 or B should not be considered complete until at least the 50% retracement is reached. A close beyond the 78.6% retracement will invalidate the assumption that the market is in a W.2 or B.

A Wave-C should exceed the extreme of the Wave-A. The chart below shows W.c traded below the extreme of W.a. We can now calculate the W.c of 2 or B price projections to fine-tune the end of W.2 or B retracement range. Ideally there will be at least two projections that fall close together. One projection would be from the W.1 or A retracements and one would be from the EOW-C projections.

The next tutorial in this series will go into more detail on the EOW-C or 3 price targets. For now we will make the basic Wave-C targets which are the 62%, 100% and 162% Alternate Price Projections (APP) of W.a for W.c. The 62% APP of W.c to W.a and the 50% retracement of W.1 or A can be eliminated because they coincide with the W.a low and W.c should exceed the extreme of W.a.

The 162% APP of W.c to W.a can be eliminated because it falls well below the 78.6% retracement of W.1 or A. This narrows the ideal W.2 or B target zone to 84.55–84.47 that includes the 62% retracement of W.1 or A and the 100% APP of W.c to W.a. The Wave 2 or B target zone falls as low as 83.69 the 78.6% retracement of W.1 or A.

Price Targets and Trading Strategies

The minimum target for EOW-2 or B was reached on Nov. 17 when the Euro declined below the W.a extreme to the 50% retracement. The ideal price target has been identified. The trading strategy is to go long on a daily reversal signal if the Euro reaches within a few ticks of the ideal W.2 or B price target.

The final chart below shows that W.2 or B terminated between the ideal and maximum price targets. There were two daily reversal signals

once the ideal price target was reached. The first trend-reversal trade at the Nov. 22 reversal day would have been stopped out for a small loss as the Euro continued to decline the next day. Trend-reversal long trades should continue to be taken as long as the Euro has not closed below the 78.6% retracement.

The second go-long signal on the Nov. 27 reversal-confirmation day close would have led to a profitable trade as the Euro continued to advance to above the Nov. 3 high. The final confirmation that W.C or 3 was in progress was given on the close above the W.1 or A high on December 1.

Chart created by Dynamic Trader (c) 1996-2000

Lessons Learned

We learned how to apply Dynamic Trading analysis to identify W.2 or B price targets from W.1 or A retracements and to fine-tune the targets with price projections from the subdivisions of the Wave-2 or B. Trend-reversal trades should not to be considered until the minimum W.2 or B price target – the 50% retracement level – has been reached. A close beyond the 78.6% retracement signals the market is probably not making a Wave-2 or B correction. We learned to use daily reversal signals to enter positions for the W.3 or C trend once the ideal price target has been reached.

Lesson Four

End-of-Wave 3 or C Price Projections

This week we will take a look at how to make End-of-Wave 3 or C price projections. The primary difference between W.3 and W.C is the typical W.3 price projection is greater than the typical W.C price projection. The typical difference between the two lies in the relationship to Wave 1 or A.

The typical W.C price projection includes the 100% APP (Alternate Price Projection) of W. A and the typical W.3 price projection includes the 162% APP of W.1. Both W.3 and W.C should subdivide into five-waves.

Why do we usually label it W.3 or C and not one or the other? Frequently we do not know for sure which it will be and from a trading perspective, it doesn't make much difference. Unless the wave pattern that precedes the W.3 or C clearly suggests it is one or the other, we use both labels.

Wave-3 or C Price Projections

Those shown in **BOLD** are the most important.

W.3 or C = (62%, **100%**, **162%**, 262%) W.1 or A (Alternate Price Projections)

W.3 or C = (127%, **162%**, **262%**, 424%) W.2 or B (External Retracements)

38%, **50%**, **62%**, 78.6% Retracements of Prior Trend

Minimum W.C Target: 62% APP W.A

Typical W.C and Minimum W.3 Target: 100% APP W.1

Maximum W.C and Typical W.3 Target: 162% APP W.1

100% and 162% APP

The two key projections are the 100% and 162% APPs. Key target zones will be if other projections fall near one or both of these two targets. We initially assume the market will reach at least near the 100% APP which is the typical W.C and minimum W.3 target. A close above the 100% APP target zone signals the market will usually continue to trend to the target zone near the 162% APP.

Target Zones

The high probability EOW targets are where projections from more than one swing relationship and more than one degree coincide within a relatively narrow range. The ideal price target zone for W.3 or C will include one projection from each swing relationship and one or more of the smaller degree EOW-5 projections for the end of the Wave-5 of 3 or C.
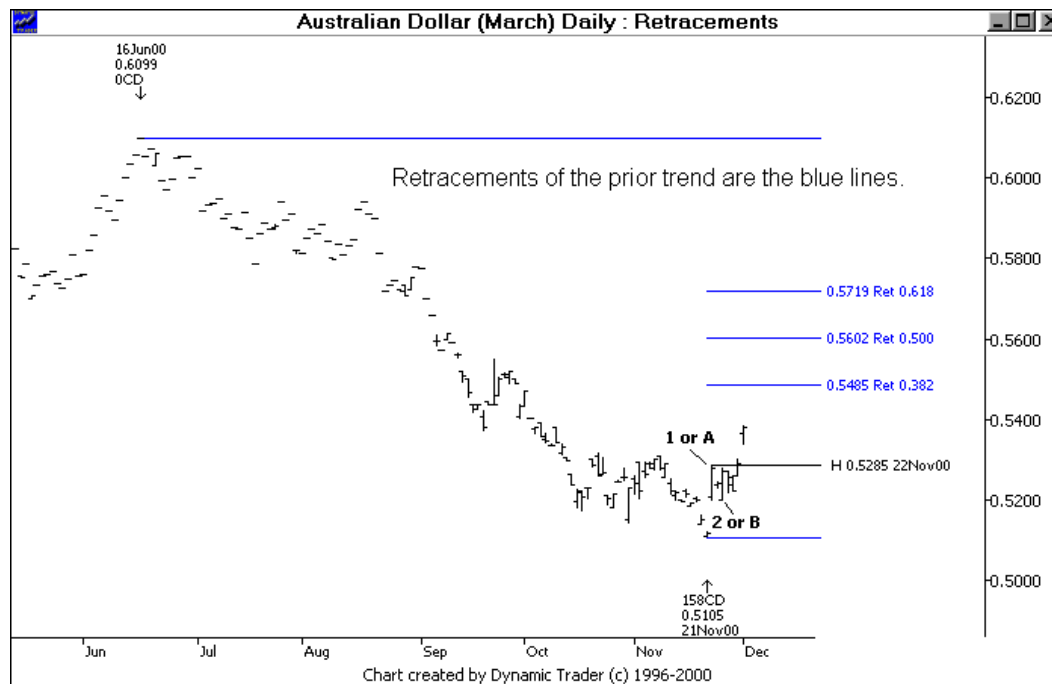
Let's take a look at the recent position of the March Australian Dollar showing each projection in progression on the daily chart. Notice how the projections combine to form price target zones for the End-Of-Wave 3 or C. We will also show how trading strategies for entry and protective stop placement may be integrated with the price target projections.

Retracements

Let's assume a long position is taken on the daily reversal signal at the W.2 or B low. The trade above the W.1 or A high at .5285 confirms W.3 or C is in progress.

The first price projections to make are the 38%, 50% and 62% retracements of the prior trend down from the June 16 high to the November low are shown on the chart above. These retracements are shown in blue. W.3 or C often terminates near one of these retracements. Now let's add the Alternate Price Projections of Wave 1 or A for W.3 or C to the chart.

Australian Dollar (March) Daily : Retracements

Retracements of the prior trend are the blue lines.

Alternate Price Projections

Austarlian Dollar (March) : Retracements & Alternate Price Projections

Retracements are blue lines.

Alternate Price Projections are red lines.

100% and 162% are the two key APPs which are circled.

1 or A

2 or B

APP's for W.3 or C are calculated from this range and projected from this level.

Chart created by Dynamic Trader (c) 1996-2000

The 62%, 100%, 162% and 262% Alternate Price Projections of Wave 1 or A are made from the Wave 2 or B low. They are the red projections in the chart above. It is simple to place the four APP's for W.3 or C on the chart using the Dynamic Trading software.

We have now made the retracements of the prior trend and the initial Alternate Price Projections of the prior swing (W.1 or A). What are the best potential target zones for EOW.3 or C? Where do projections from each of these two methods coincide?

The .5485-.5491 price zone includes the 38.2% retracement and where W.3 or C is the 162% APP of W.1 or A.

Now we will add the External Retracements of Wave-2 or B and see if any of them coincide with other projections already made.

External Retracements

Australian Dollar (March) Daily : Retracements, Alternate price Projections, & External Ret.

External Retracements of W.2 or B are the green lines.

0.5671 App 2.618
0.5602 Ret 0.500
0.5560 Ret 4.236
Probable Tgt.
0.5484 App 1.618 / 0.5485 Ret 0.382
0.5423 Ret 2.618
0.5380 App 1.000
0.5338 Ret 1.618
0.5304 App 0.618

1 or A

2 or B

This is the range used for the W.3 or C External Retracement price targets.

Min. Tgt.

0CD
0.5105
21Nov00

Chart created by Dynamic Trader (c) 1996-2000

I have added the 127%, 162%, 262% and 424% external retracements of W.2 or B above. They are the green projections.

We have now made all three projections used to make the EOW.3 or C targets (Retracements, Alternate Price Projections and External Retracements). What are the most probable EOW target zones?

W. C or 3 Key Price Targets

The two key projections for the EOW-3 or C are the 100% and 162% Alternate Price Projections. They are the first place we look for other projections that might fall near these two key projections.

While none of the other projections fall right at the 100% APP, the 162% external retracement of W.2 or B falls a bit below it. These two projections form a high-probability minimum target zone for a Wave-3 and typical target for a Wave-C.

The 162% APP coincides with the 38% retracement. These projections form the high-probability maximum target zone for a Wave-C and typical target zone for a Wave-3.
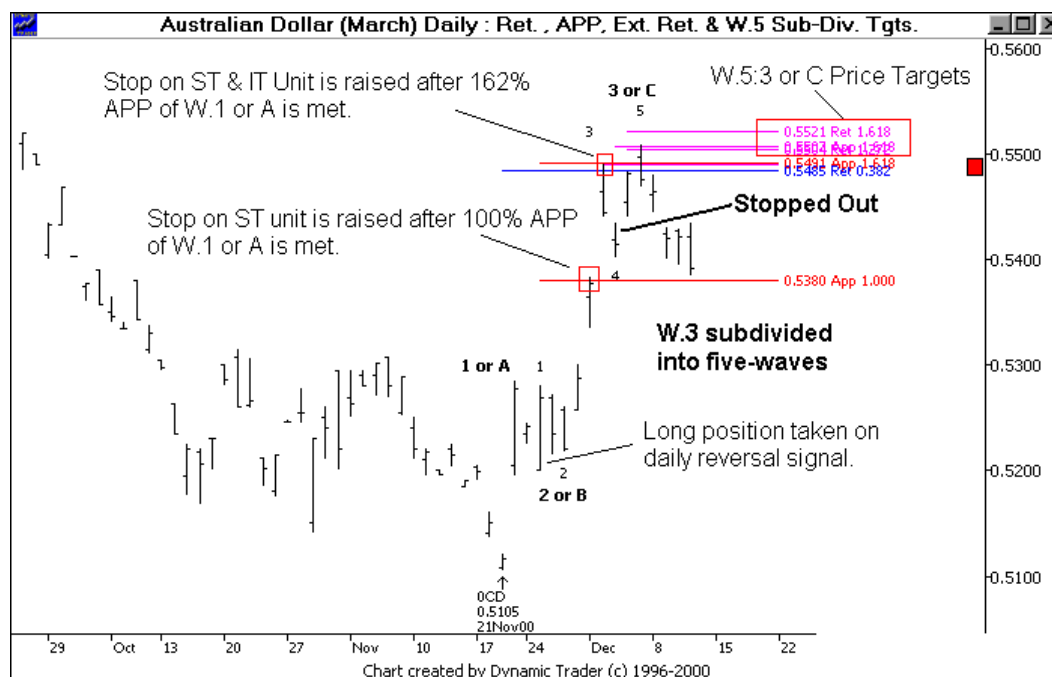
Ideally, a target zone includes one target from each of the three types of projections, but it doesn't always work out that way so we work with what we have.

Minimum Target Zone: .5338-.5380 Includes where W.C or 3 equals 100% W.A or 1 (APP) and 162% W.B or 2 (Ext. Ret.).

Probable Target Zone: .5485-.5491 Includes where W.C or 3 equals 162% W.A or 1 (APP) and the 38% retracement of the prior trend (Ret.).

If It's Not One, Then It's The Other

The trading assumption is always if a market closes above one target zone, the assumption is it should continue to trend at least to the n ext target zone.

The above chart shows the daily data through mid-Dec. This chart shows the sub-division labels of W.3 and some of the EOW-5 of 3 or C projections which fall just above the probable W.3 or C target shown earlier. A future tutorial will show how we do the EOW-5 projections.

Price Targets and Trading Strategies

On Dec. 1, the AD gapped up with a high at .5383, just above the minimum target zone at .5338-.5380. Once a minimum target is reached, the stop on the short-term unit is trailed relatively close to the market, often one tick below the one day low. One trading day later, the AD again gapped up with a high at .5490, right in the probable target zone at 5485-.5491. The stops on both units are now trailed one tick below the 1DL (one-day-low). Both long units would have been stopped out on the gap down open the following day.

The assumption is Dec. 7 is the Wave-3 high at .5500, less than ten ticks above the probable target zone at 5485-.5491

Lessons Learned

We learned how to make the W.3 or C price projections and how to identify the probable target zones where individual projections coincide. We learned how to adjust the stop on the short-term unit as soon as the typical W.C target (100% APP of W.1 or A) is reached and to adjust the stop on the remaining units when the typical W.3 target and maximum W.C target (162% APP of W.1 or A) is reached.

Projections and target zones may always be made *in advance* so you are prepared to adjust your trading strategy including protective stops if a market approaches a target zone.

Lesson Five

End-of-Wave 4 Price Projections

This week we will look at how to make End-of-Wave 4 price projections. We start with the assumption that W.4 will be at least a three-wave, ABC but recognize that W.4's have a tendency to form complex structures. Even though this tutorial is about W.4 price projections, let's first review some of the typical W.4 characteristics.

1. Wave-4 usually alternates its corrective pattern with Wave-2. For example, if Wave-2 is an ABC correction, Wave-4 will often be a "complex" correction, which is anything other than an ABC, zigzag. If Wave-2 is a complex correction, Wave-4 will probably be an ABC correction. This demonstrates the Principal of Alternation as described by R. N. Elliott and may be used as a guide to help determine the likely structure of Wave-4.

2. Wave-4 should not make a **daily close** into the daily closing range of Wave-1 and typically will not trade by more than a few ticks into the Wave-1 range. The typical retracement range is 38.2%-50% of Wave-3.

3. Wave-4 is often near equality in price to Wave-2 (W.4 = 100% W.2). If not, Wave-4 will usually be at or near 62% or 162% of Wave-2.

4. The Wave-4 retracement of Wave-3 will almost always be a smaller *percentage* than the Wave-2 retracement of wave one.

Wave-4 Price Projections

Those shown in **bold** are the most important.

W.4 = (62%, **100%**, 162%) W.2 (Alternate Price Projections)

W.4 = (**38.2%, 50%**, 61.8%%) W.3 (Retracements)

W.4 = (23.6%, **38.2%, 50%**, 61.8%%) W.1-3 (Retracements)

Typical W.4 Target Zone includes 100% APP W.2 and 38.2%-50% retracement zone of W.3.

Maximum W.4 Target Zone includes 162% APP W.2 and 61.8% retracement W.1-3.

Probable Target Zones and Key Projections

Copper began a sharp decline from the Dec. 11 high. On Dec. 15, copper completed the initial correction to the decline at the 61.8% retracement (not shown on the chart below) and continued to a new low. We would consider Dec. 15 the W.2 high.

Through Dec. 21, copper only made very minor corrections, none similar to the W.2 correction. Following the Dec. 21 low, copper made the largest rally in time and price since the Dec. 15, Wave-2 high which implied it should be making a W.4 correction.

The Dec. 21 low was a bit above the typical extreme target for a Wave-3 low at the 262% APP of W.1.
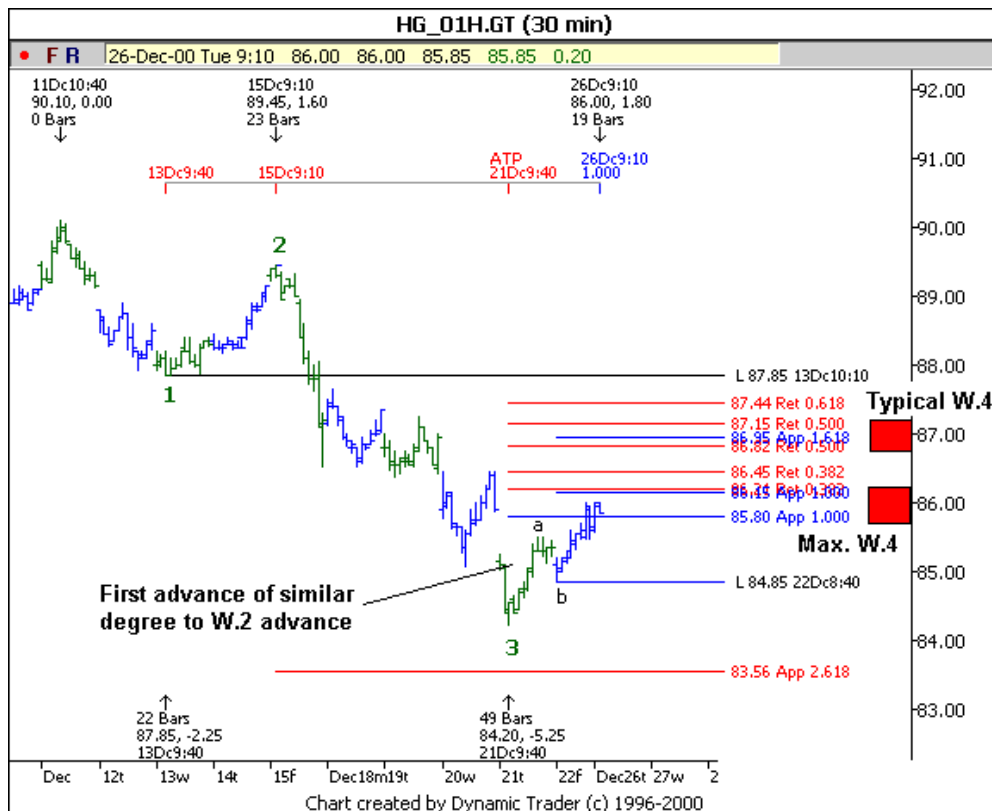
The 30-minute chart below shows all the typical Wave-4 projections including where:

W.4 = **100%** and 162% W.2

W.4 = **38.2%, 50%** and 61.8% W.3 and W.1-3

W.c:4 = **100%** and 162% W.a:4

With projections evenly spaced over a wide distance, how do we decide what is the probable target zones for a W.4? *First, focus in on the typical W.4 projections which include where W.4 = 100% W.2 and the 38%-50% retracements of W.3.*

85.80-86.35 (Typical W.4 Target): Includes where **W.4 = 100% W.2**, 38.2% retracement W.3 and where W.C = 100% W.B. This is the typical W.4 target zone.

86.80-87.15 (Maximum W.4 Target): Includes where **W.4 = 162% W.2**, W.C = 162% W.A and 50% retracements of W.3 and W.1-3. Since the 162% APP falls between the two 50% retracements, we make a zone with both of them.
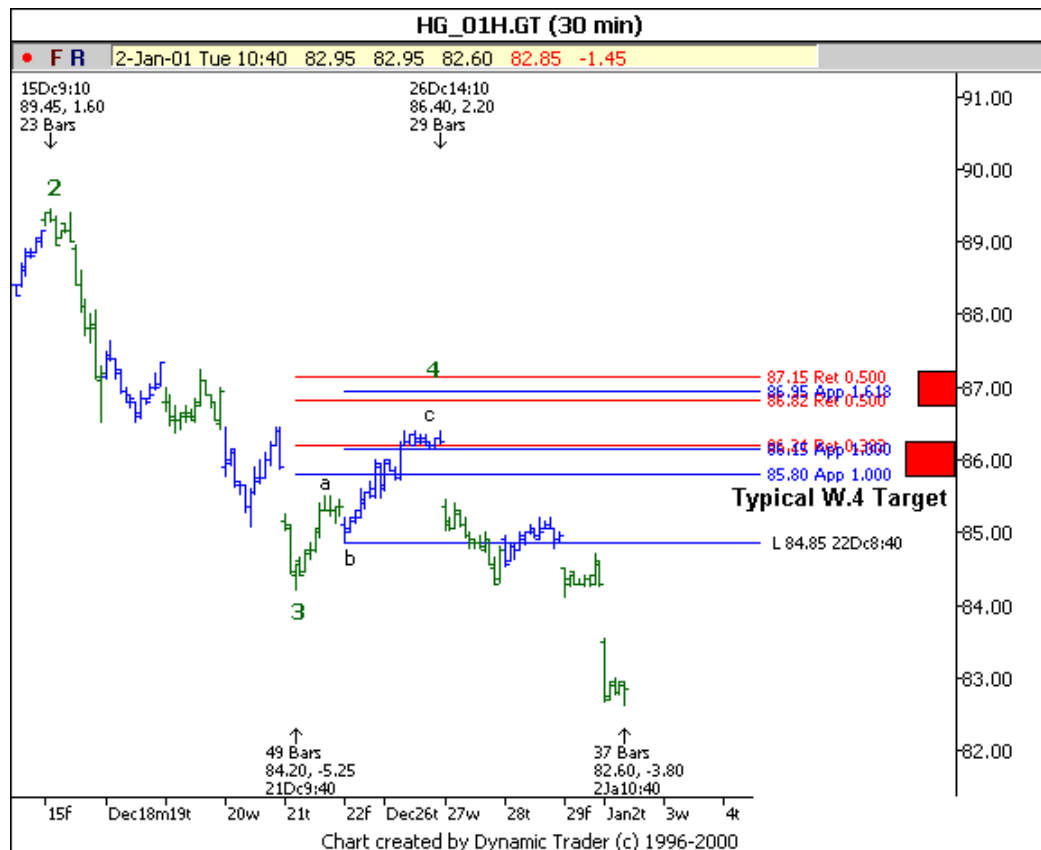
The Wave-4 target zones are projected *in advance*. What trading strategy should we use?

Trading Strategy: The trading strategy is also developed *in advance* and is completely objective. As of Dec. 26, we assume the minor swing low on Dec. 22 is the Wave-b:4 low. If copper reaches a Wave-4 target zone and makes a daily reversal signal, sell on the close of the reversal signal, OR

sell on a stop one tick below the Wave-b:4 low. A decline below the W.b:4 low signals the Wave-4 should be complete.

The chart below shows the data for the next several days. On Dec. 26, copper traded to just above the typical W.4 target zone. The following day copper gapped lower and traded below the W.b:4 low confirming the Wave-4 should be complete and copper should continue to decline to below the Dec. 21, W.3 low.

Keep It Simple

Last week's tutorial about how to make the Wave-3 price projections included the AD as an example. Let's follow up and see how we would make the Wave-4 projections.

If you will recall from last week's tutorial, the Dec. 7 reversal day high was made at the W.3 price target. What is the ideal W.4 target zone?
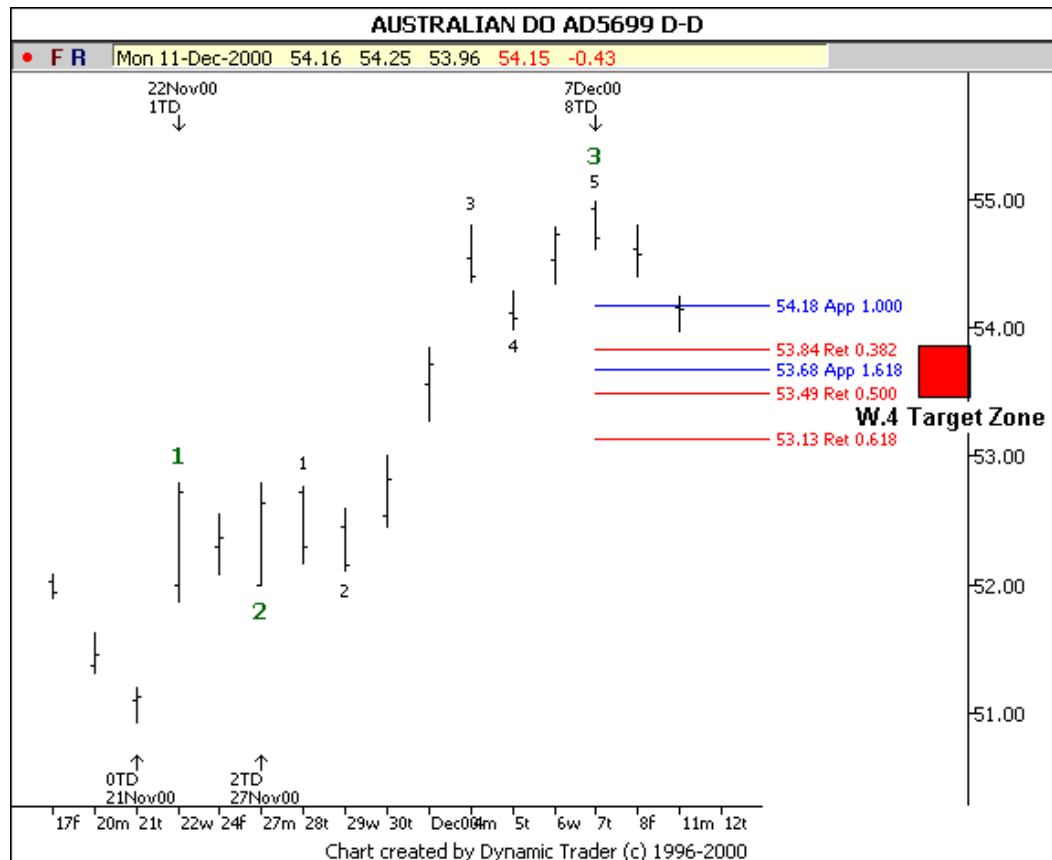
The daily chart below shows just the 100% and 162% APP of W.2 and the 38%, 50% and 62% retracements of W.3.

The key 100% APP W.2 does not come close to the 38% W.3 retracement which is usually considered the minimum W.4 target. The 162% APP W.2 falls right in the midpoint of the 38%-50% W.3 retracement zone.

The 38%-50% W.3 retracement zone is the typical target for a W.4 and the 162% APP W.2 is usually the maximum target for W.4. What is our W.4 target zone? This is an easy one - 53.84-53.49.
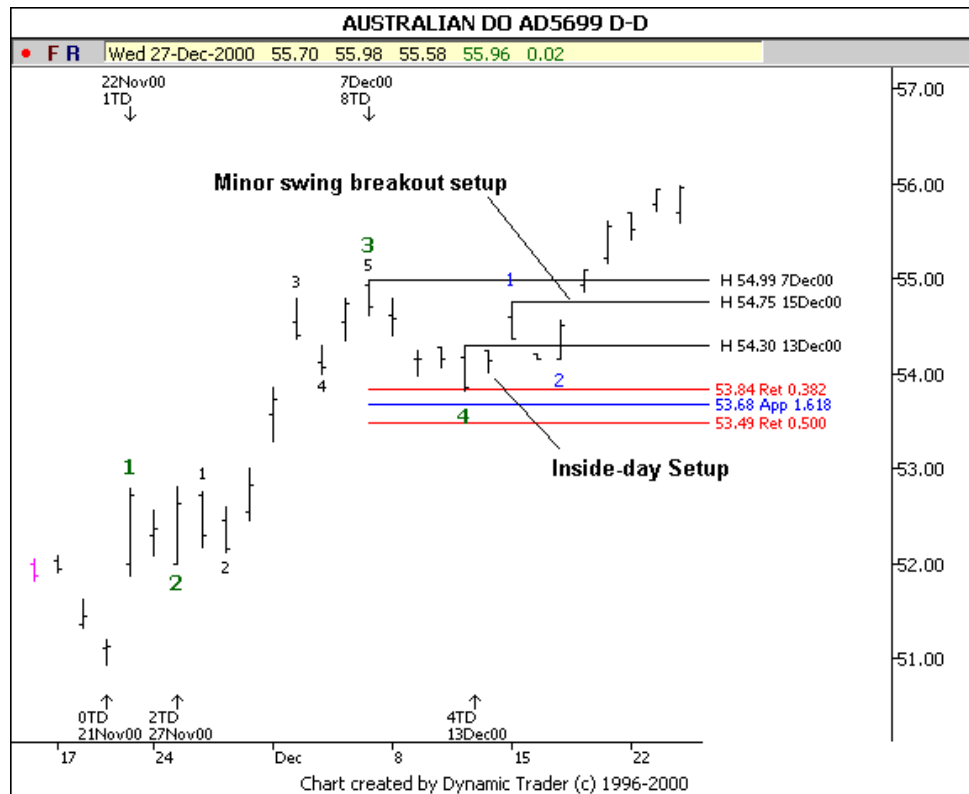
What is the trading strategy? If the AD reaches the W.4 target zone, buy on the close of a daily reversal signal or a trend continuation signal on an advance from the W.4 target zone. If the intraday data had shown a nice ABC subdivision of W.4, we would also buy on a stop one tick above the W.b:4 high.

AUSTRALIAN DO AD5699 D-D

Mon 11-Dec-2000 54.16 54.25 53.96 54.15 -0.43

Chart created by Dynamic Trader (c) 1996-2000

Price Targets and Trading Strategies

On Dec. 13, the AD reached the W.4 target zone. The following day was an inside-day setup for a potential long trade and the next day a gap opening to trigger the trade.

The next two potential setups for a long position were on the W.2:5 correction or the break above the W.1:5 high.

Lessons Learned

We learned how to make the W.4 price projections and how to identify the probable target zones which include the key W.4 targets. We learned how to prepare a trading strategy *in advance* how we might enter on a reversal in a W.4 target zone or on a stop on the initial confirmation the W.4 is complete.

Projections and target zones should always be made *in advance* so you may have an objective entry and stop strategy prepared *in advance*.

Lesson Six

End-of-Wave 5 Price Projections

Wave-5 is the last wave in a five-wave structure. It should be followed by the largest correction in price and time of any correction since the beginning of the five-wave trend.

Even though this tutorial is about W.5 price projections, let's first review some of the typical W.5 characteristics.

1. W.5 should exceed the extreme of W.3. While there are "fifth-wave-failures", they are only evident after-the-fact. The assumption always begins that W.5 will exceed the extreme of W.3.

2. W.5 should sub-divide into a smaller degree five-wave impulse structure. A W.5 may sub-divide into a "fifth-wave-diagonal" where the five-waves overlap similar to an ABCDE correction. See the *Dynamic Trading* book for descriptions of fifth-wave-diagonals and fifth-wave-failures.

3. In commodity bull markets, W.5 is often the "extended" wave or the longest of the three impulse waves, 1-2-3. In this case, the W.5 will exceed the typical Wave-5 price targets.

4. Wave-5 price targets are the most consistently reliable of any of the end-of-wave price targets. Why? By the time Wave-5 is underway, we have the more prior swings to work with to make projections than with any other end-of-wave target.

Wave-5 Price Projections

Those shown in **BOLD** are the most important.

W.5 = (62%, **100%**, 162%) W.1 (Alternate Price Projection)

W.5 = (**38.2%, 61.8%**, 100%) W.1-3 (Alternate Price Projection)

W.5 = (**127%**, **162%)** W.4 (External Retracements)

W.3-5 = (262%, 424%) W.2 (External Retracements)

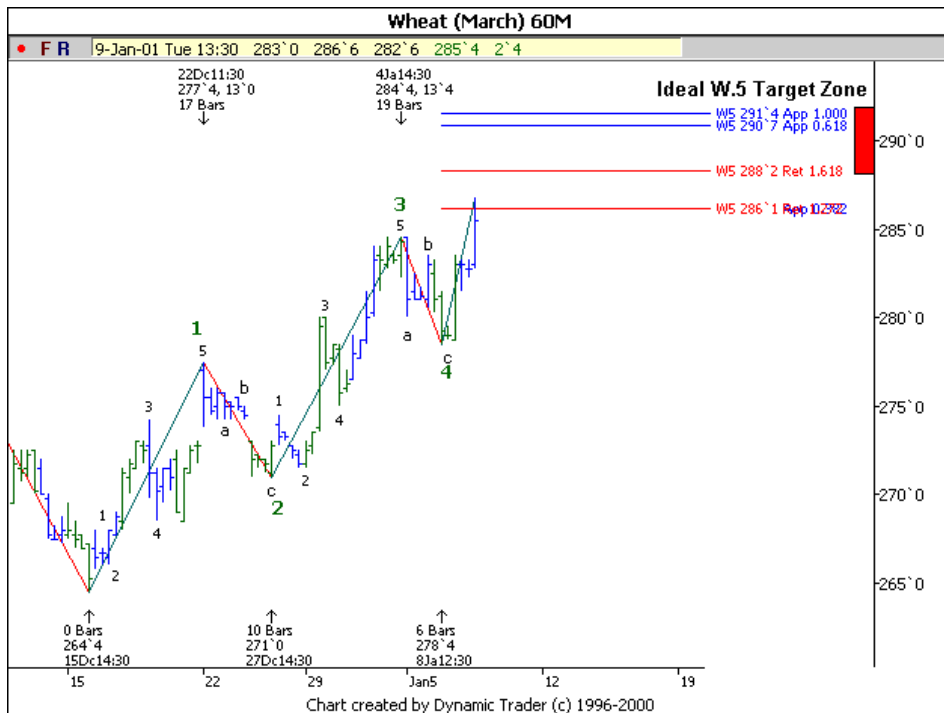## Probable Target Zones and Key Projections

As with all end-of-wave targets, the ideal targets are where projections from each of the two or three key relationships "cluster" in a relatively narrow price zone. If the Wave-5 is clearly sub-dividing into five-waves, the ideal W.5 target zone will overlap with the target for the Wave-5 of 5. The key projections for W.5 are those shown in bold above.

Let's take a look at a recent example from the report.

Continued on the next page.

W.5 Target Zone

On Jan. 9, it appeared wheat had completed a Wave-4 low and we can make the projections to help identify the target zone for Wave-5. The 60M chart below includes only those projections shown in bold in the Wave-5 projection list above. They appear fairly evenly spaced between 286-291'4. Two projections overlap at 266'1. If we only considered this relatively broad range as the Wave-5 target, it would be a very valuable piece of information where we would assume the five-wave advance from the Dec. 15 low should be complete without having made a close above 291'4.

The ideal EOW targets are those relatively narrow zones which include one projection from two or more of the key sets of projections. The 288-291'4 zone includes one projection from each of the three key sets of projections including:
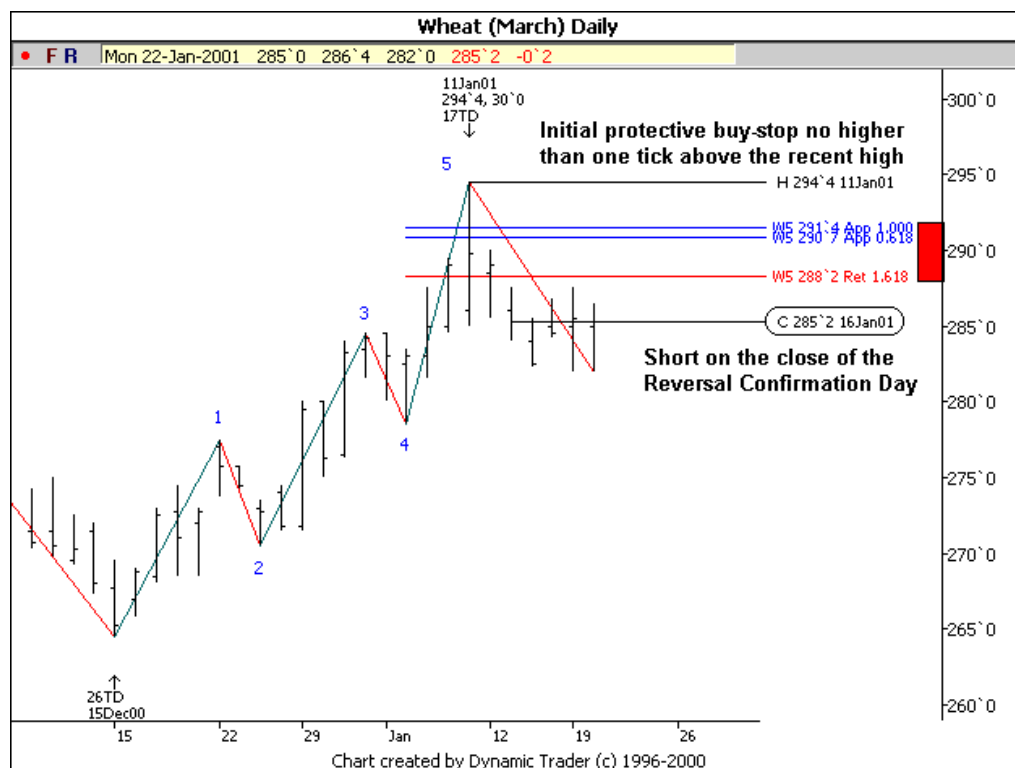
288'2: W.5 = 162% W.4

291'0: W.5 = 61.8% W.1-3

291'4: W.5 = 100% W.1

Trading Strategy

Trading strategies are *always* developed *in advance.* The trade-entry strategy and initial protective stop-loss are *always* objective. In this case, we would develop a trend-reversal entry strategy as wheat has reached the broad price target to complete a Wave-5 high and is only a couple cents below the ideal target zone.

If wheat reaches the W.5 target, *sell on a daily reversal signal or other trend-reversal entry strategy and place the initial protective buy-stop one tick above the recent high.*

On Jan. 11, wheat exceeded the W.5 target during the day but closed right in the middle of the range of the target. The DT Futures Report gave the recommendation to sell any day on the close if the close was below the current day's open and prior day's close. This is a *reversal-confirmation-day* as taught in the *Dynamic Trading* book. Traders could use any of the four daily reversal signals taught in *Dynamic Trading* for entry.
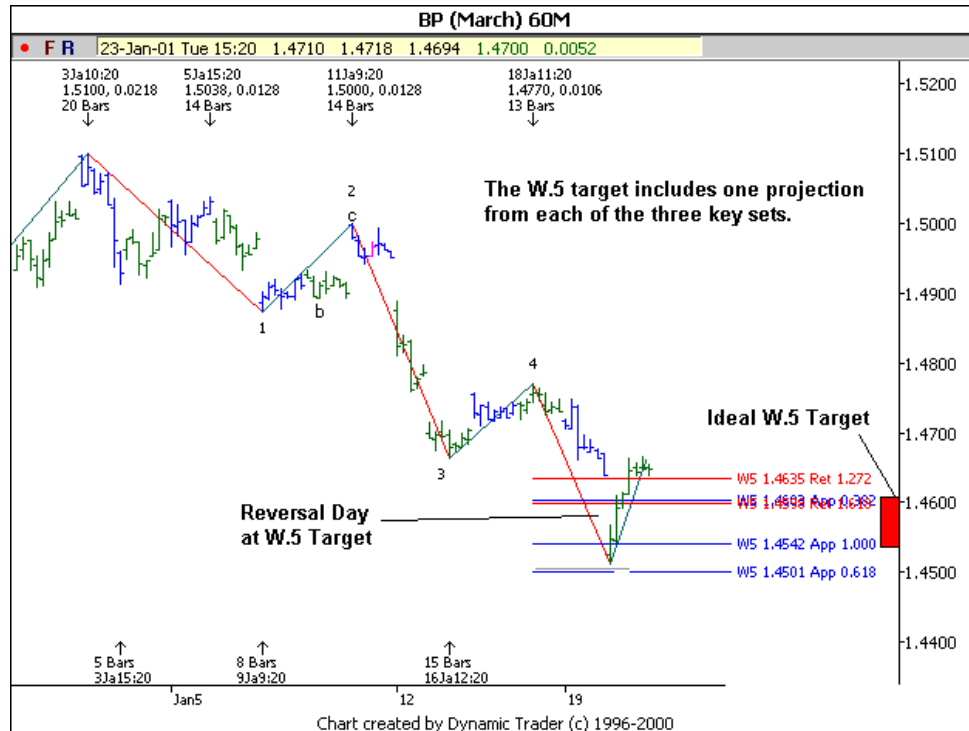
On Jan. 16, the entry signal was elected for a short position on the close. The initial protective buy-stop is placed one tick above the W.5 high.

As of this point in time, we don't know if Jan. 11 will remain a W.5 high. What we do know is that we identified a high probability reversal target zone and an objective trading strategy to enter with minimal capital exposure. That is what the business of trading is all about.

After studying this tutorial, you might want to take a look at the March 2001 wheat chart and see if the W.5 high held.

BP and W.5 Target

This is another example from a report just last week. On Jan. 18, it appeared the BP had completed a Wave-4 high. If so, the ideal Wave-5 target zone is at 1.4603-1.4542. This price zone includes where W.5 = 38.2% W.1-3, 162% W.4 and 100% W.1. One projection from each of the three key sets is included in the target zone. If Jan. 18 is the W.4 high, Wave-5 would typically not exceed 1.4501 which is the extreme price of all the key projections.

The trading strategy given in the DT Futures Report on Saturday, Jan. 20 was – *"If the BP has traded to 1.4603* (beginning of W.5 target zone), *buy on the close if the close is above the current day's open and prior day's close* (reversal confirmation day) *and place the initial protective sell-stop one tick below the recent low."*

As always, the trading strategy is completely objective and set *in advance*. The long trade was elected on the close on Monday, Jan. 22.
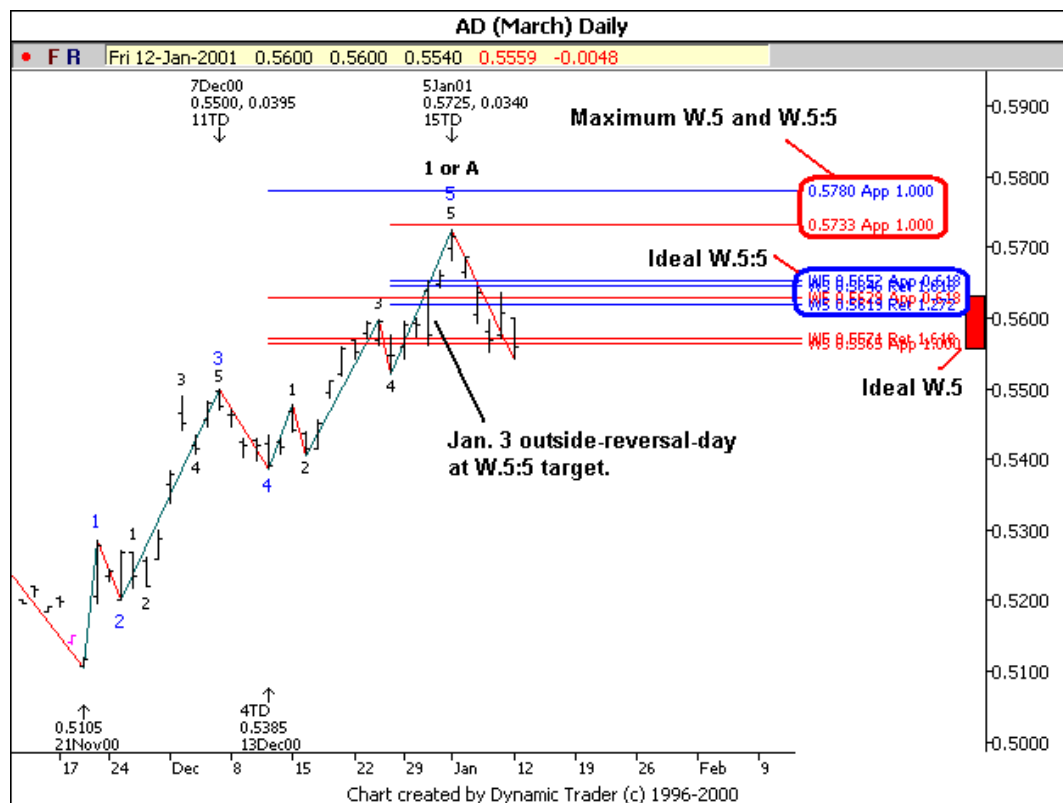
Is Monday, Jan. 22 a W.5 low? We don't know yet. What we do know is a reversal-day low was made at a high probability target zone for a W.5 low and a long trade could be initiated with acceptable capital exposure.

Continued on the next page.

The Imperfect World of Technical Analysis

In mid Dec., it appeared the AD had completed a Wave-4 low and the W.5 projections were made. The ideal W.5 target was at .5565-.5629 represented by the red box along the price scale. The AD traded to this zone but it appeared W.5 had only completed the Waves 1-4 subdivisions so the W.5:5 target was made.

The Wave 5:5 target was at .5619-.5652 which extended to just above the larger degree W.5 target. It would appear this zone would be the ideal target to complete the W.5:5. On Jan. 3, the AD made an *outside-reversal-day* with a high at .5653 just one tick above the ideal W.5:5 target zone! What a perfect go short signal!

The next day the AD traded higher to above the Jan. 3 high and closed above the extreme of the W.5:5 target zone. Unfortunately, the markets don't always unfold in the ideal manner. What would be the *maximum* W.5 target?

The *maximum* W.5 target is usually where W.5 equals 100% Waves 1-3. The chart above shows this target for both W.5 and W.5:5 at .5733-.5780. At the very least, we would know that this is likely the maximum target for the advance from the Nov. 21 low. If the AD reached this target, we would consider trend-reversal strategies. We would not want to consider a long trade as the AD approached this zone and would want to trail stops close to the market if long.

Every trend reversal is not made at an End-of-Wave target, but these targets may still provide us with important information that we can apply to practical trading strategies.

Lessons Learned

We learned how to make the W.5 price projections and how to identify the ideal W.5 target zone as that zone that includes one projection from each of the three key sets of projections.

We learned to consider a trend-reversal trading strategy *in advance* if the market makes a reversal signal at the W.5 target zone.

We also learned that the *maximum* Wave-5 target is usually where the range of W.5 equals 100% of the range of Waves 1-3.

For complete information how to make all of the End-of-Wave targets and the appropriate trading strategies, see the *Dynamic Trading* book.

End-of-Wave (EOW) Price Projection Summary Table

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EOW Label and Typical Subdivisions	EOW Price Projections Plus which sub-division projections to include.
EOW 1 or A W.1: Five-Waves W.A: Usually five-waves but may be three.	38.2%, 50%, 61.8%, 78.6% Retracements Do retracements of more than one prior trend (more than the most recent high or low). Best target zones are where retracements of two degrees coincide. Plus W.5 of 1 or A projections.
EOW 2 or B Usually an ABC correction.	W.2 or B = (**50%, 61.8%**, 78.6%) Wave-1 or A (Ret.). A daily close past the 78.6% retracement signals it is probably not a corrective Wave-2 or B and the prior trend should continue. Plus W.C of 2 or B projections.
EOW 3 or C Both typically sub-divide into five-waves.	W.3 or C = (62%, **100%**, **162%**, 262%) W.1 or A (Alternate Price Projections) W.3 or C = (127%, **162%**, **262%**, 424%) W.2 or B (External Retracements) 38%, **50%**, **62%**, 78.6% Retracements of Prior Trend <u>Minimum W.C Target</u>: 62% APP W.A <u>Typical W.C and Minimum W.3 Target</u>: 100% APP W.1 <u>Maximum W.C and Typical W.3 Target</u>: 162% APP W.1 Plus W.5 of 3 or C projections.
EOW 4 Often ABC but may take the form of any "complex" correction.	W.4 = (62%, **100%**, 162%) W.2 (APP) W.4 = (**38.2%, 50%**, 61.8%%) W.3 (Ret) W.4 = (23.6%, **38.2%, 50%**, 61.8%%) W.1-3 (Ret) <u>Typical W.4 Target Zone</u> includes 100% APP W.2 and 38.2%-50% retracement zone of W.3. <u>Maximum W.4 Target Zone</u> includes 162% APP W.2 and 61.8% retracement W.1-3. Plus W.C of 4 projections if it appears W.4 will be an ABC.
EOW 5 Five-Waves	W.5 = (62%, **100%**, 162%) W.1 (APP) W.5 = (**38.2%, 61.8%**, 100%) W.1-3 (APP) W.5 = (**127%**, **162%)** W.4 (Ext Ret) W.3-5 = (262%, 424%) W.2 (Ext Ret) <u>Ideal W.5 Target Zone</u> includes one of the bold projections from each of the first three sets. Plus W.5 of 5 projections.